

TECHNICAL SPECIFICATIONS



CORE



ULTIMATE



FIBEROPTIC



MINIMAX

THE RELIABLE EXPERT

fischer[®]
CONNECTORS

For over 60 years, you – our clients and partners – have been our main focus.

Finding ways to satisfy you has constantly and naturally guided the evolution of the Fischer Connectors global family business, whose strong culture is defined by these words: **Expertise, Reliability, Innovation.**

To date, we have placed our expertise at your service with **more than 30,000 references across our four product families:** Core, UltiMate, FiberOptic and MiniMax.

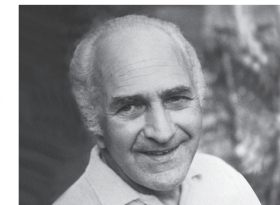
To give each of you easy access to these high-quality connectivity solutions, we have developed a **world-wide sales network** backed up by production and **cable assembly facilities in Europe, North America and Asia Pacific.** Aiming to continually improve your satisfaction, we have devoted the past decade to modernizing our company, innovating in both products and manufacturing systems, and meeting your quality and reliability requirements quickly and effectively.

Proud of satisfying more than 10,000 active clients per year, we look forward to partnering with you to grow your business with our reliable and innovative connectivity solutions.









Jonathan Brossard



*From left to right: Jonathan Brossard, CEO;
Sabrina Brossard-Fischer, Board of Directors; Peter Fischer, Chairman*



*Walter Werner Fischer,
Founder of Fischer Connectors*

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Expertise

Guiding you from concept to delivery:

- Sustainable **supply chain** efficiency
- Performance via **lean manufacturing**
- Process control and **continuous improvement**



Reliability

Getting you where you want to be:

- **Products** that deliver quality over time
- **Service** that ensures on-time deliveries
- **Support** that responds quickly to your requests



Innovation

Helping you work smarter:

- **Technology** that speeds up production and delivery
- **Solutions** that help you overcome your challenges
- **Customer-first approach** that saves you time and money



FISCHER
CORE SERIES

Any size
Any configuration
Any application



FISCHER
ULTIMATE™ SERIES

Rugged
Compact
Lightweight





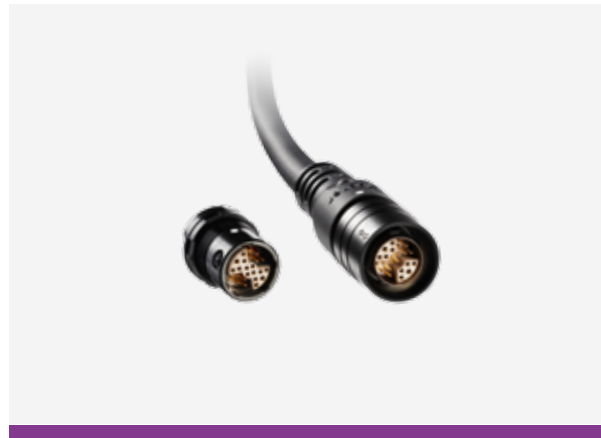
FISCHER
FIBEROPTIC SERIES

Robust
Optical performance
Easy cleaning










FISCHER
MINIMAX™ SERIES

High density
Signal & Power
Miniaturization





FISCHER **CORE** SERIES

			Locking	Shell material	Plug Ø [mm]
 <p>Any size Any configuration Any application</p>	FISCHER CORE SERIES BRASS		Push-pull Quick-release / Friction	Chromium Plated brass	9-34
	FISCHER CORE SERIES STAINLESS STEEL		Push-pull	Stainless Steel 316L	12-34
	FISCHER CORE SERIES ALULITE™		Push-pull	Aluminum	9-18
	FISCHER CORE SERIES PLASTIC		Push-pull	PBT / PEI	14.5-18.5
	FISCHER CORE SERIES DISPOSABLE		Friction	ABS	17.8
	FISCHER CORE SERIES BROADCAST		Push-pull	Brass	25.5

FISCHER **ULTIMATE™** SERIES

 <p>Rugged Compact Lightweight</p>	FISCHER ULTIMATE™ SERIES		Push-pull Quick-release	Brass Aluminum	12-29
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FISCHER **FIBEROPTIC** SERIES

 <p>Robust Optical performance Easy cleaning</p>	FISCHER FIBEROPTIC SERIES		Push-pull	Brass	24
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FISCHER **MINIMAX™** SERIES

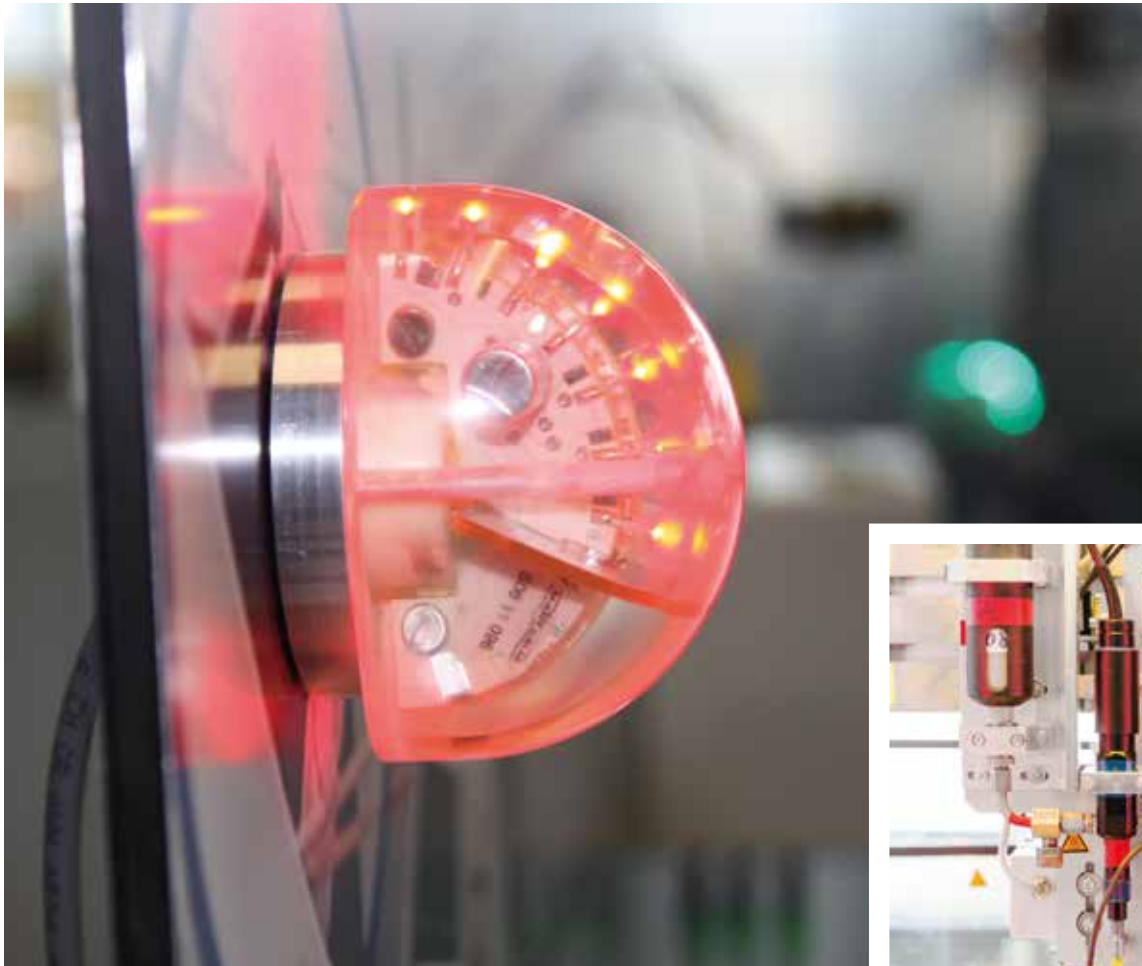
 <p>High density Signal & Power Miniaturization</p>	FISCHER MINIMAX™ SERIES		Push-pull Screw-locking Quick-release	Brass	12.9
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Number of contacts	Contact type	Test voltage DC [kV]	Current rating [A]	Contact termination	Sealing level	Mating cycles
1 to 55	Low voltage / High voltage Coax/Triax / Hybrid	Up to 50	Up to 60	Crimp / Solder / PCB	IP50 - IP68/69 Hermetic	10,000
1 to 55	Low voltage / High voltage Coax/Triax	Up to 50	Up to 60	Crimp / Solder / PCB	IP50 - IP68/69 Hermetic	5,000
2 to 27	Low voltage / High voltage Coax/Triax	Up to 14	Up to 32	Crimp / Solder / PCB	IP50 - IP68/69 Hermetic	10,000
2 to 27	Low voltage Hybrid	Up to 4	Up to 30	Crimp / Solder / PCB	IP67	5,000
6 to 19	Low voltage Hybrid	Up to 2.7	Up to 3	Crimp	IP30 - IP40	10
1	Triax	Up to 1.7	Up to 14	Crimp / Solder	IP68	5,000
2 to 42	Low voltage	Up to 2.5	Up to 9.2	Crimp Solder PCB	IP68/69 Hermetic	10,000
1 to 4 fibers Hybrid 2+2	Fiber optic Low voltage	Up to 2.8	Up to 10	Solder	IP67/68	1,000
19 and 24	Low voltage	Up to 1.5	Up to 5.0	Solder PCB	IP68	5,000

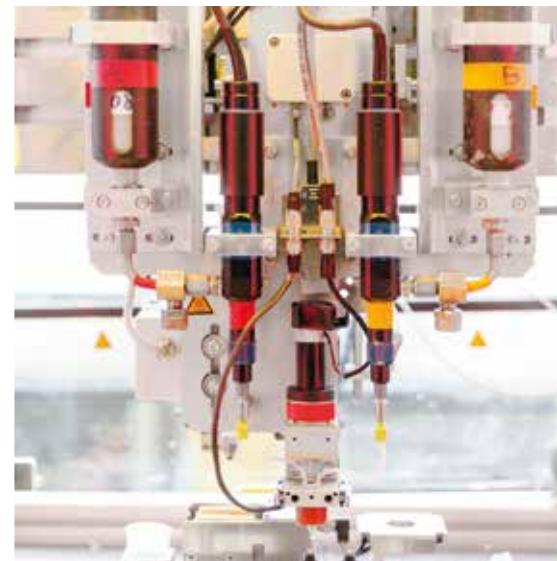
A9 > A20 | PAGES





Carefully defining your interconnection performance requirements is critical when selecting the ideal connector:

- Locking systems
- Sealing categories
- Materials
- Voltage limits
- Power and signal
- Contact types

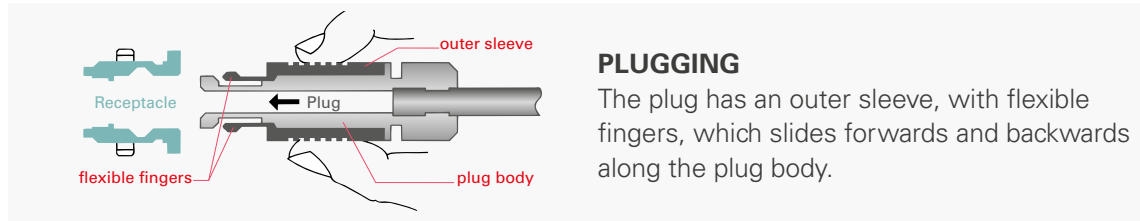




TECHNICAL INFORMATION

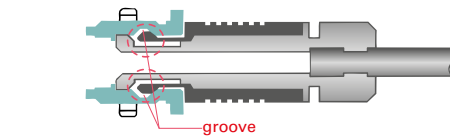
ORIGINAL PUSH-PULL LOCKING SYSTEMS

Fischer Connectors' original push-pull automatic locking is widely adopted by the industry for its ease of use, safety of mating and speed in connection and disconnection.



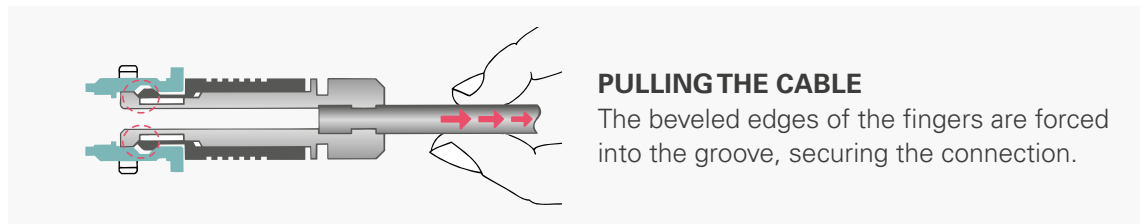
PLUGGING

The plug has an outer sleeve, with flexible fingers, which slides forwards and backwards along the plug body.



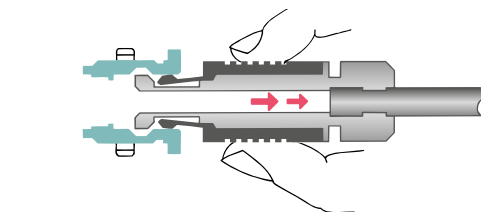
WHEN CONNECTED

The beveled edges are firmly captured by a locking groove located inside the receptacle.



PULLING THE CABLE

The beveled edges of the fingers are forced into the groove, securing the connection.



UNPLUGGING

Pulling on the outer sleeve of the plug unlocks the latching mechanism.

OTHER LOCKING SYSTEMS

LANYARD

Combines push-pull automatic locking with an emergency release lanyard.

QUICK-RELEASE

Designed without a locking mechanism for emergency release.

FRICTION

Designed without a snapping mechanism.

TAMPERPROOF

Features an integral safety locking ring to prevent unauthorized or unintentional disengagement.

SCREW-LOCKING

Enables firm locking by circular movement with the plug's outer sleeve and receptacle feature threading.



SEALING CATEGORIES

The IP (Ingress Protection) classification system provides a reliable method of comparing relative levels of sealing between various connector products.

The protection level offered by a typical envelope is described in IEC 60529, published by the International Electrotechnical Commission (IEC). While the first number describes the level of protection from solid objects, the second one relates to protection from liquids.

Tests performed during the design and qualification of Fischer Connectors' environmentally sealed products are standardized to IP68 at a depth of 2 meters and for duration of 24 hours. Fischer Connectors' hermetically sealed products achieve IP69.

The digits indicate conformity with the conditions summarized in the tables aside.

IP RATING

SOLIDS

0		Non-protected
1		Protected against solid objects greater than 50 mm
2		Protected against solid objects greater than 12 mm
3		Protected against solid objects greater than 2.5 mm
4		Protected against solid objects greater than 1.0 mm
5		Dust protected
6		Dust tight

WATER

0		Non-protected
1		Protected against dripping water
2		Protected against dripping water when filled, up to 15°
3		Protected against spraying water
4		Protected against splashing water
5		Protected against water jets
6		Protected against heavy jets
7		Protected against immersion effects
8		Protected against submersion
9		Protected against intense water jets

Example:

IP68

INGRESS PROTECTION

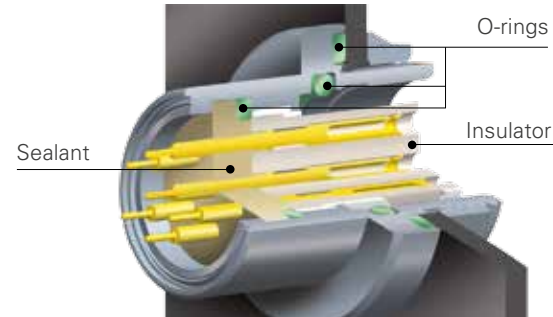


TECHNICAL INFORMATION

COMMONLY USED SEALING LEVELS

- IP50 indoor unexposed applications
- IP68 watertight sealing
- Hermetic sealing

Each requires different sealing levels and, therefore, different connector solutions.



IP50 INDOOR / UNEXPOSED APPLICATIONS

Typically for indoor or industrial applications, the required sealing level is IP50, since the device needs to be protected against dust but not exposed to water.

The IP50 rating can be improved with additional accessories like boots or protective sleeves.

IP68 WATERTIGHT SEALING

Typically for applications requiring outdoor use where they might be exposed to water submersion, rain, sand, mud or any other environmental stress.



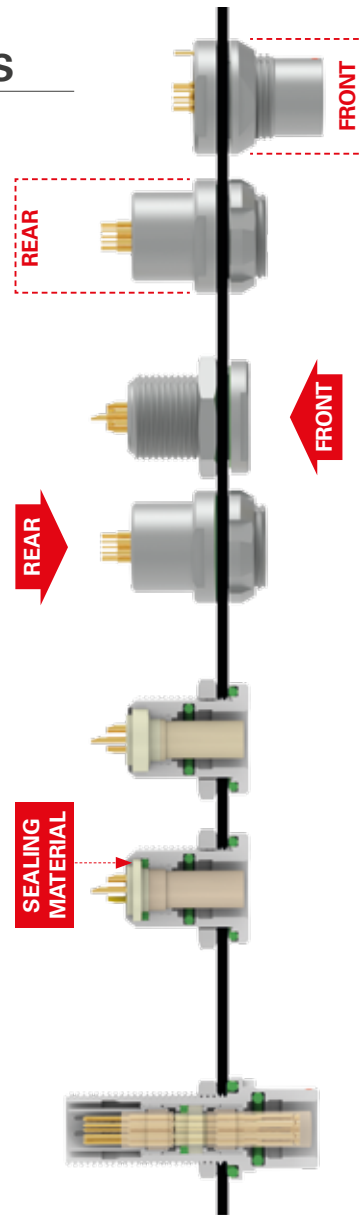
HERMETIC SEALING

Typically for applications requiring gas tightness like vacuum applications and pressurized vessels, immersed for long periods of time or exposed to strong jets.

100% of the hermetic pieces are tested with a leak testing instrument to ensure a leak smaller than 10^{-8} mbar l/s.



HOW TO CHOOSE YOUR RECEPTACLE BODY STYLES



Front and rear projecting

- Depending on whether you need the space saving inside or outside the device
- Also available in front or rear mounting

Front and rear mounting

- Depending on how you need to process your assembly
- Rear mounting is commonly used for PCB mount

IP68 watertight or hermetic designs

- Hermetic has a specific sealing material for best sealing under high pressures

Feedthrough

- Hermetic panel bulkhead feedthrough








MATERIALS

MATERIAL NAME	BEST FOR	TEMPERATURE	MAIN ATTRIBUTES
SHELL MATERIAL			
Chromium-plated brass	Ruggedness	-100 to +200°C	Salt mist and mechanical resistance, cost efficiency, electrical conductivity
Aluminum	Lightweight	-100 to +200°C	Lightweight
Stainless steel	Cleaning / Radiation	-100 to +350°C	Corrosion resistance, surface cleanability, nuclear radiation and mechanical resistance
PEI	Sterilization	-65 to +200°C	Sterilization in autoclave, EtO, Cidex, gamma radiation, Steris®, Sterrad®
PBT	Insulation	-65 to +135°C	Electrical insulation, low temperature manipulation
ABS	Cost efficiency	-20 to +65°C	Disposable solutions, medical applications
CONTACT BLOCK MATERIAL			
PEEK	High temperature	-65 to +200°C	High temperature, high chemical and high radiation resistance
LCP	High temperature	-65 to +200°C	High temperature and high chemical resistance
PBT	Cost efficiency	-65 to +135°C	High chemical resistance, cost efficiency
PTFE	Electrical insulation	-65 to +160°C	High dielectric strength, high chemical resistance
ABS	Cost efficiency	-20 to +65°C	Disposable solutions, good stability
O-RING & SEALING MATERIAL			
FPM (Viton®)	Hermeticity	-20 to +200°C	Acids, weather, ozone, fuels, mineral and silicone oils, high vacuum, gamma rays
EPDM	Low temperature	-50 to +160°C	Alcohol, weather, hot water, vapour, detergents, gamma rays
NBR	Oil resistance	-30 to +110°C	Acids, mineral oils, petrol, weather, detergents
FVMQ	High temperature oil resistance	-55 to +200°C	Mineral oils, alcohol, weather, hot water, detergents
TPE	Soft accessories	-55 to +130°C	Very resistant, except to aromatic and chlorinated hydrocarbon
Silicone based resin	IP68 sealing	-55 to +200°C	Mineral oils, acids, alkalines, inorganic saline solutions
Epoxy based resin	Hermeticity	-65 to +150°C	High chemical and radiation resistance



DATA TRANSMISSION

SYMBOL					
Protocol	USB 2.0	USB 3.0	Ethernet Cat 5	Ethernet Cat 6	HDMI
Speed	60 Mb/s	625 Mb/s	1Gb/s	10Gb/s	-
Required contacts	4	9	8	8	19

For more information, please visit www.fischerconnectors.com or contact our technical support team.

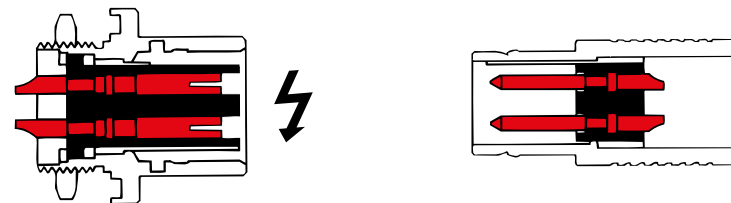
A/Z POLARITY

To protect users from contact with dangerous voltage, most of Fischer Connectors' products are available in two versions:

STANDARD A POLARITY

The contacts of the receptacle are protected against accidental touch.

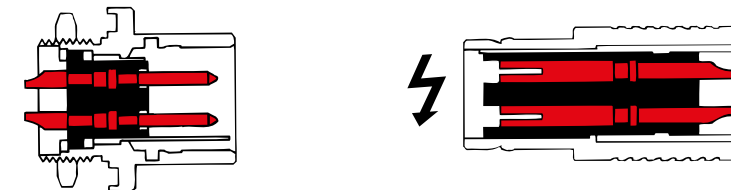
Recommended when voltage is present on the receptacle.



INVERTED Z POLARITY

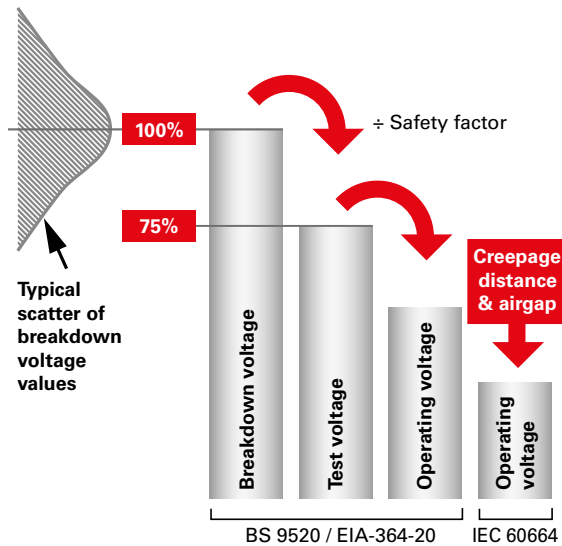
The contacts of the plug are protected against accidental touch.

Recommended when voltage is present on the plug.





TEST VOLTAGE & OPERATING VOLTAGE



BREAKDOWN VOLTAGE

Maximum voltage difference that can be applied before the occurrence of a disruptive discharge between mutually insulated portions of a connector or between insulated portions and the ground.

TEST VOLTAGE (or withstanding voltage)

Voltage level at which the connector is tested during the qualification test. This value represents the upper physical limit. It is usually set at 75% of breakdown value.

OPERATING VOLTAGE (or rated voltage)

Voltage under which the connector will actually work in the equipment over the normal expected lifetime and in typical environmental conditions.

General recommendation for connectors in common applications

For connectors in common applications, IEC60664 is in particular recommended. This specification uses creepage distance instead of test voltage as a calculation basis for the operating voltage, taking into account the above-mentioned long-term effects. It is similar to German VDE 0110; typical applications are classified in insulation groups depending on their exposure to pollution.

Fischer Connectors recommends the use of IEC60664 in general multipole connector specifications, unless other more specific standards or regulations are applicable to the design. For example, IEC 60601 provides adequate special guidelines for medical devices.

All values given here are valid for mated connectors, provided that termination of connectors has been completed with adequate cable and following correct termination procedures. Other standards recommend a calculation using the test voltage as a basis with the application of a safety factor.

For example, BS 9520 recommends setting the operating voltage at:

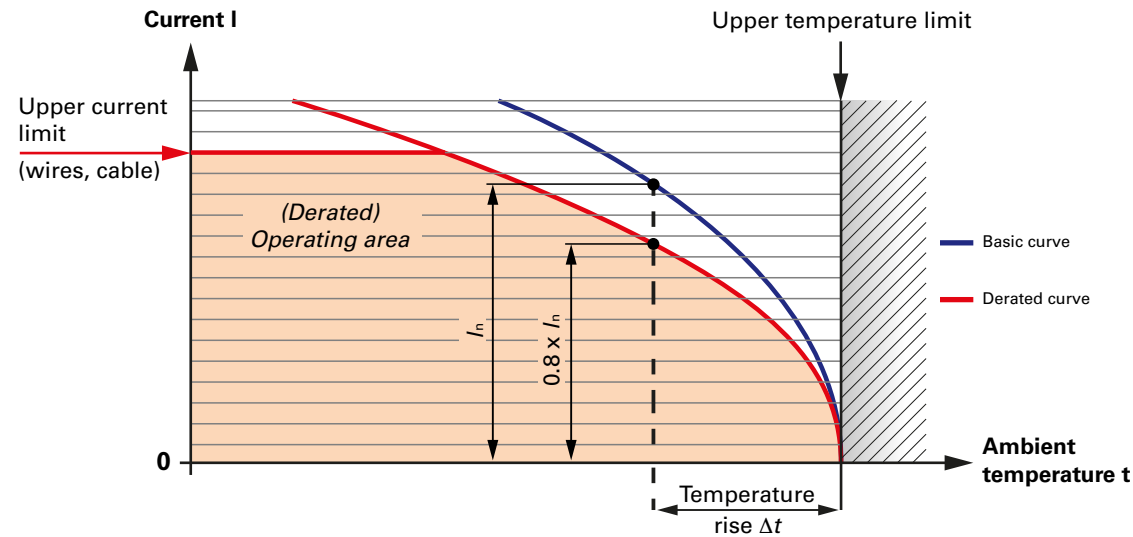
- 0.33 x test voltage for 500V <test voltage <3kV
- 0.66 x test voltage for test voltage >3kV

Similar recommendations are provided in EIA-364-20 and former MIL-STD-1344 method 3001.



CURRENT RATING (Maximum permissible current)

DERATING CURVE DERIVED FROM THE BASIC CURVE



The current values listed under “Electrical & contact configurations” were measured in our test laboratory according to IEC 60512-5-2: Current-carrying capacity test, Test 5b: Current-temperature derating. They are the currents that create a temperature rise of 40°C (unless otherwise specified) within the connectors due to the self-generated heat and they belong to the basic curve shown in figure 1 below.

The maximum permissible current (I) as defined by the above mentioned IEC standard is the basic curve derated by a factor of 0.8 to account for manufacturing tolerances and uncertainty in measurements.

When selecting a connector, attention must be paid to the fact that the temperature rise caused by current must be added to the ambient temperature and that the resulting value shall not exceed the upper temperature limit of the materials, listed under the “Operating temperatures” sections and plotted as a vertical line on the graphs shown in figure 1.

The current-carrying capacity may be further limited by external factors, for example the size of the wire and the cable characteristics.

This upper current limit is plotted as a horizontal line on the graphs shown in the graph above.

The operating area is defined by the surface below the derated curve and limited on top by the upper current limit.

The current values listed under “Electrical & contact configurations” are valid for each contact. For coaxial and triaxial connectors, the current is valid for the center and the outer contact.



CONTACTS & ACCESSORIES



SOLDER CONTACTS

Most versatile
Pre-installed contacts
Qualified assemblers required

- Can be produced with any type of contact block material and accept a wide range of wire sizes.
- Contacts are pre-installed in the insulator block, and the wires can be terminated with any appropriately sized soldering iron.
- May require operators who are qualified in specialized soldering techniques.



PCB CONTACTS

PCB or Flex circuit mount
Reduced pin diameter
Wave soldering

- Designed to be mounted directly onto a PCB or flex circuit, can be used in wave soldering operations for faster production assembly.
- Preferred for high rates of data transmission due to the low distance to the board that their integration allows. This helps reducing signal perturbations.
- PCB pins are generally used on rear mounted panel connectors.



CRIMP CONTACTS

Selectively annealed area
Special tools required
Limited range of wire sizes

- Each contact has a selectively annealed area which is deformed during assembly by specialized tooling to assure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering process is required.
- Not available for sealed or hermetic connectors.



CONTACTS & ACCESSORIES



STAMPED CONTACTS

High volume
Automated cable assembly
Disposable applications

- Optimized for very high volume and automated cable assembly.
- Come on specific reels to be accommodated in automated cable assembly machines.
- Mainly used in disposable applications due to their limited number of mating cycles.



FIBER OPTIC BUTT-JOINT CONTACTS

High optical performance
IP67 unmated
UPC & APC polishing

- The FiberOptic termini rely on butt-joint technology commonly used in the telecom industry to ensure ultra-low insertion and return losses.
- A unique sealing feature on the termini allows easy cleaning and device protection even unmated (IP67) without compromising on the alignment once mated.
- Guaranteed, tested and certified optical performance platform using high precision polishing process.
- The alignment sleeve parts are located in a removable mate adapter for easy maintenance, replacement and cleaning.



TECHNICAL INFORMATION

BEND RELIEFS



OVERMOLDED STRAIGHT & RIGHT ANGLE BEND RELIEF

- Can accommodate a wide range of cable diameters
- Wide choice of colors and materials (e.g. polyurethane, silicon, etc.)
- Best protection to improve cable flex life

CABLE BEND RELIEF

Tool-free terminations for field installations:

- High quality and improved protection
- Wide range of colors for easy cable identification
- Can accommodate a wide range of cable diameters

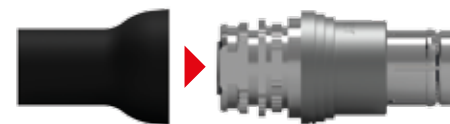
PROTECTIVE SLEEVE



Improves mechanical protection on the whole interface:

- Prevents contamination in highly dusty environments
- Protects both plug and receptacle
- Enhances sealing

HEAT SHRINKING TUBE



Allows submersion with adhesive versions:

- Ideal for quick prototyping
- Can accommodate a wide range of cable diameters and multiple cable output
- Protects exposed wires

NOTES



TECHNICAL SPECIFICATIONS

FISCHER CORE SERIES





ANY SIZE, ANY CONFIGURATION, ANY APPLICATION

Over 20,000 references covering a multitude of industrial applications:
from standard to highly technical or complex ones.

Broadcast | Defense & Security | Energy | Industrial | Instrumentation | Medical | Transportation

FISCHER **CORE** SERIES

BRASS

Key features	B1
General information	B2
Part numbering	B10
Multipole low voltage	B1-1
Multipole high voltage	B2-1
Coax low voltage	B3-1
Coax high voltage	B4-1
Triax	B5-1
Mixed high voltage	B6-1
Mixed coax	B7-1
Accessories	B8-1
Tooling	B9-1
Contact configurations	B10-1
Technical information	B11-1
Cross-line technical information	A9

STAINLESS STEEL

Key features	C1
Body style selection	C3
Sizes selection	C4
Contact configurations	C5
Options	C11
Technical dimensions	C12
Part numbering	C16
Cable clamp sets	C18
Accessories	C22
Tooling	C23
Technical information	C27
Cross-line technical information	A9

ALULITE

Key features	D1
Body style selection	D3
Technical dimensions	D6, D8, D10
Part numbering	D7, D9, D11
Contact configurations	D12
Cable clamp sets	D18
Accessories	D24

Tooling	D29
Technical information	D30
Cross-line technical information	A9

PLASTIC

Key features	E1
Body style selection	E3
Technical dimensions	E4, E12
Part numbering	E5, E13
Contact configurations	E6, E14
PCB hole pattern pin layout	E7, E15
Accessories	E8, E16
Cable clamp sets	E17
Tooling	E17
Technical information	E10, E18
Cross-line technical information	A9

DISPOSABLE

Key features	F1
Body style selection	F3
Technical dimensions	F4

Contact configurations	F7
Technical information	F9
Cross-line technical information	A9

BROADCAST

Key features	G1
Body style selection	G4
Technical dimensions	G6
Cable clamp sets	G18
Accessories	G21
Tooling	G24
Recommended cables	G26
Technical information	G28
Cross-line technical information	A9

CUSTOM SOLUTIONS

Custom solutions	G30
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FISCHER
CORE SERIES
BRASS



KEY FEATURES

RUGGED, COMPACT AND LIGHTWEIGHT



- Highly configurable
- High performance interconnections
- Available in sealed and vacuum tight versions

FULLY FLEXIBLE

- Any possible configuration or size
- Fully configurable to fulfill each of your needs
- Multi-polar, power, coax, fluid & mixed configurations available

EASY HANDLING

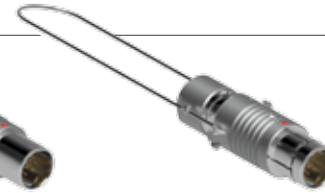
- Push-pull locking for easy & quick operation
- Mechanical & color coding for easy identification
- Easy cable assembly

SEALING

- High sealing performances for vacuum & underwater applications
- Up to IP68/69
- Hermetic

DURABILITY

- High temperature & chemical resistance
- Premium materials to resist most sterilization methods
- Marine grade applications

**PLUGS****CABLE MOUNTED**

BODY STYLES

	S	SC	SOV	SA	SV	SS
Locking system	Push-pull	Quick-release	Non-locking	Push-pull	Push-pull	Push-pull
Sealing	IP50 / IP68	IP50 / IP68	IP50 / IP68	IP50 / IP68	IP50 / IP68	IP50 / IP68
Design	Standard	Standard	Standard	Lanyard	Tamperproof	Short/Overmolding



BODY STYLES

	SSC	WSO
Locking system	Quick-release	Push-pull
Sealing	IP50 / IP68	IP50 / IP68
Design	Short/Overmolding	Right-angle

PANEL FRONT MOUNTED

BODY STYLES

	SF	SFU	SFE
Locking system	Non-locking	Non-locking	
Sealing	IP50	IP68	Hermetic
Design	Front-projecting	Front-projecting	

PANEL REAR MOUNTED

BODY STYLES

	SFPU	SFPE
Locking system	Non-locking	
Sealing	IP68	Hermetic
Design	Front-projecting	



RECEPTACLES

CABLE MOUNTED



BODY STYLES	K	KE	KS	KSE
Sealing	IP50	IP68	IP50	IP68
Design	Standard		Short/Overmolding	

RECEPTACLES & FEEDTHROUGH

SPECIAL DESIGN



BODY STYLES	DG	DGP	WDE
Sealing	IP50	IP50	Hermetic
Design	Completely threaded Solder/Crimp		Bulkhead feedthrough PCB

PANEL FRONT MOUNTED



BODY STYLES	D	DB	DEU	DEE	DBEU	DBEE	DK	DKE
Sealing	IP50	IP50	IP68	Hermetic	IP68	Hermetic	IP50	IP68
Design	Rear-projecting	Front-projecting	Rear-projecting		Front-projecting		Cable mounted	Cable mounted

PANEL REAR MOUNTED



BODY STYLES	DBP	DBPC	DBPU	DBPE	DBPLU	DBPLE	DKBE
Sealing	IP50	IP50	IP68	Hermetic	IP68	Hermetic	IP68
Design	Rear-projecting	Right-angle PCB	Rear-projecting		Front-projecting		Cable mounted

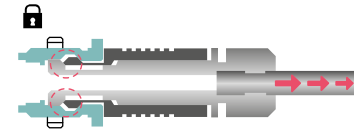


PUSH-PULL AUTOMATIC LOCKING PLUGS

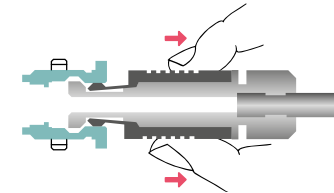
S - SS - WSO

Fischer Connectors' original push-pull automatic locking is widely adopted by the industry for its ease of use, safety of mating and speed in connection and disconnection.

- Fully secured against accidental disconnection, it provides unparalleled signal integrity.
- Integrated into the connector housing, it is ideal for compact product design.
- For more details on Fischer Connectors' locking systems, visit: www.fischerconnectors.com



Secure locking when cable pulled



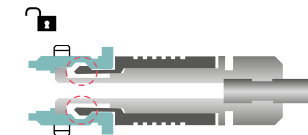
Pull the outer sleeve to unlock

QUICK-RELEASE PLUGS

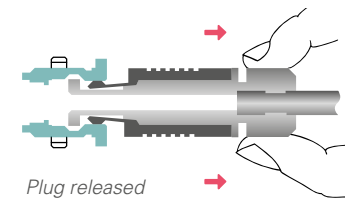
SC - SSC

Fischer quick-release plugs are designed without locking mechanism for emergency release.

- Quick-release plugs snap into the receptacle with an audible "click".
- A strong pull on the cable will allow unmating of the plug.
- Specially suited to avoid injuries to the users and damages to the material in case of accidental stress.



Snapping mechanism



Plug released when cable pulled

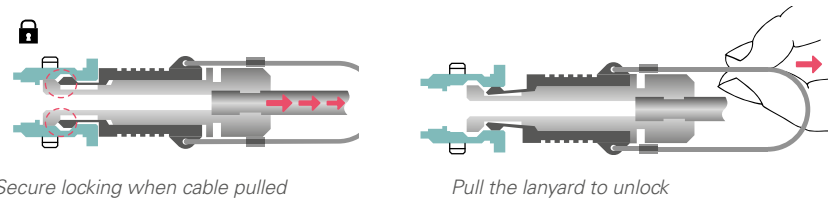


LANYARD PLUG

SA

The lanyard plug combines push-pull automatic locking with an emergency release lanyard.

- A strong pull on the lanyard will unlock the latching mechanism.
- Specially suited to allow quick unmating on the field.

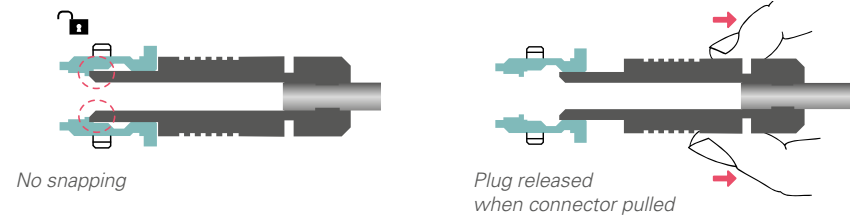


FRICTION PLUGS

SOV - SF - SFE/SFU - SFPE/SFPU

Our non-locking plugs are designed without snapping mechanism.

- A soft pull on the connector will release the plug.
- Specially suitable for connections with limited accessibility and/or requiring no locking.

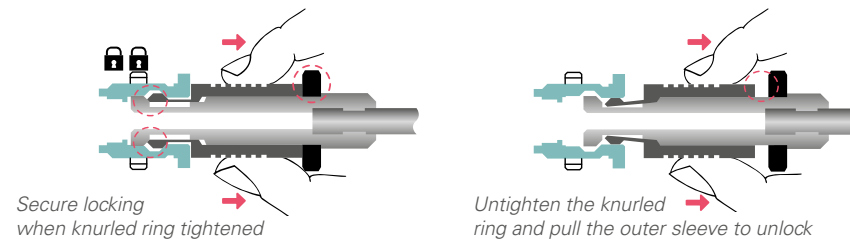


TAMPERPROOF PLUG

SV

Our tamperproof plug features an integral safety locking ring to prevent unauthorized or unintentional disengagement.

- When tightened, the knurled ring will prevent unmating of the plug.
- Specially suitable for applications involving high voltage or current.





CONNECTOR SIZE VERSUS CABLE DIAMETER

¹⁾ Pictures represent standard S plug, but values can be extended to all cable mounted plugs, except for SS/SSC body styles.

²⁾ For max cable \varnothing , values in parenthesis are valid for sealed connectors (IP68).



Series	Multipole low voltage		
	Min Cable \varnothing	Max Cable \varnothing	Nbr of Contacts
102	1.5	4.7 (4.3) ²⁾	2-9
103	1.7	6.7 (6.2) ²⁾	2-12
1031	2.2	7.2 (6.7) ²⁾	10-19
104	2.9	8.7	2-27
105	1.5	10.7	2-27
106	4.2	19.2	3-24
107	5.7	22.7	4-55

For more information see *Multipole low voltage* section, page B 1-39

Size selection

GENERAL INFORMATION – FISCHER CORE SERIES BRASS



LV = Low Voltage HV = High Voltage

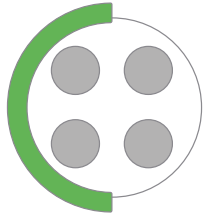
Multipole high voltage			Coax low voltage		Coax high voltage		Triax		Mixed high voltage			Mixed coax		
Min cable ø	Max cable ø	Nbr of contacts	Min cable ø	Max cable ø	Min cable ø	Max cable ø	Min cable ø	Max cable ø	Min cable ø	Max cable ø	Nbr of contacts	Min cable ø	Max cable ø	Nbr of contacts
			1.5	4.7 (4.3)	1.5	4.7 (4.3)	1.5	4.7 (4.3)						
			1.7	6.7 (6.2)	1.7	6.7 (6.2)	1.7	6.7 (6.2)						
2.9	8.7	4 HV	2.9	8.7	2.9	8.7			2.9	8.7	1 LV 2 HV	2.9	8.7	1 Coax 1-4 LV
3.2	10.7	3-5 HV	3.2	10.7	3.2	10.7			3.2	10.7	1-10 LV 1-4 HV	3.2	10.7	1 Coax 1-9 LV
4.2	19.2	6-7 HV							4.2	19.2	6 LV 2 HV			
5.7	22.7	7 HV			5.7	22.7								
For more information see <i>Multipole high voltage</i> section, page B 2-10			For more information see <i>Coax low voltage</i> section, page B 3-22		For more information see <i>Coax high voltage</i> section, page B 4-7		For more information see <i>Triax</i> section, page B 5-17		For more information see <i>Mixed high voltage</i> section, page B 6-7			For more information see <i>Mixed coax</i> section, page B 7-15		



MECHANICAL CODING

For easy connect / Disconnect operations

Our contact blocks are engineered with arc-shape metal guides, which ensure precise alignment of connectors during the mating process.



This guiding mechanism provides:

- Increased safety and user friendliness by preventing misconnection.
- Easy mating cycles, can be blind-mated.
- Increased equipment life span by optimally protecting the contacts.

Keying codes options

All Multipole body styles are mechanically coded. Code 1 is the standard, but other codes can be requested.

	Code 1	Code 2	Code 3
Receptacle			
Plug			

Other keying codes are available on request, please contact us.
Images are for reference only.





ORDERING INFORMATION

How to build a part number

Fischer Connectors Core Series Brass is built on a modular design and offers over 20,000 standard configurations. Refer to the table aside to find the information you need to build the part number to order your selected connector.

For customized solutions, please contact us.

CONNECTORS PARTS

Part system	Body style	Size	Polarity
-------------	------------	------	----------

PART NUMBER EXAMPLES

Plug	S	102	A
------	---	-----	---

S cable mounted plug in Series 102 with 7 (multipole) low voltage male contacts and following options.


Receptacle	D	102	A
------------	---	-----	---

D panel mounted receptacle in Series 102 with 7 (multipole) low voltage female contacts and following options.



Cable mounted plugs S/SC SOV SA SV SS/SSC WSO	Series 102 103 1031 104 105 106 107	As standard rule A = male contacts on plug and female contacts on receptacle Z = female contacts on plug and male contacts on receptacle
Cable mounted receptacles K/KE KS/KSE		Exceptions Multipole high voltage Mixed high voltage
Panel mounted cable receptacles DK/DKE DKBE		
Panel mounted receptacles D DEU/DEE DB DBEU/DBEE DBP DBPU/DBPE DBPLU/ DBPLE DG/DGP DBPC WDE		
Panel mounted plugs SF SFU/SFE SFPU/SFPE		

Part numbering



Contact configuration	Options*	Cable clamp sets for cable mounted plugs & receptacles
056	130	+
056	130	Not applicable as panel mounted
▼	▼	▼
Three-digit number specific for each pin layout	Specific suffix corresponding to selected options	Below cable clamp sets should be ordered separately
	Housing color Natural chrome Black chrome	Multipole low voltage Triax Example: S 102 A056 - 130 +
	Contact block insulating material PEEK PTFE PBT	Clamp set ordering line E3 102.5/2.0 See page B 1-39
	Contact type Solder Crimp PCB	Below cable clamp sets are included with connector
	Mechanical coding of the contact block	Coax low voltage Coax high voltage
	Clamp nut type & color	Multipole high voltage Mixed high voltage Mixed coax
	Other options	Shielded (S) or Environmental (E) cable clamp set diameter should be added to the connector part number separated by ø. Examples: for Shielded S clamp sets K 103 A002-600 ø6.2 or environmental E clamp sets KE 103 A002-600 ø6.2
		Insulating clamp set ø (104, 105 and 106 Series) should be added to the connector part number separated by ø and followed by UI (Unshielded Insulated). Example: S 104 A062-130 ø6.6 - UI

RELATED ITEMS

Accessories	Tooling
	
Example 102.785	Example TX00.240
Protective sleeve	Crimping tool
▼	▼
Cable bend reliefs Protective sleeves Soft caps Metal caps Spacers Washers Mounting nuts	Spanners / Wrenches Crimping tools Tools for crimp contacts and high voltage contacts

See *Accessories* section, page B 8-1.

See *Tooling* section, page B 9-1.



FISCHER CORE SERIES **BRASS** – **MULTIPOLE LOW VOLTAGE**

KEY FEATURES

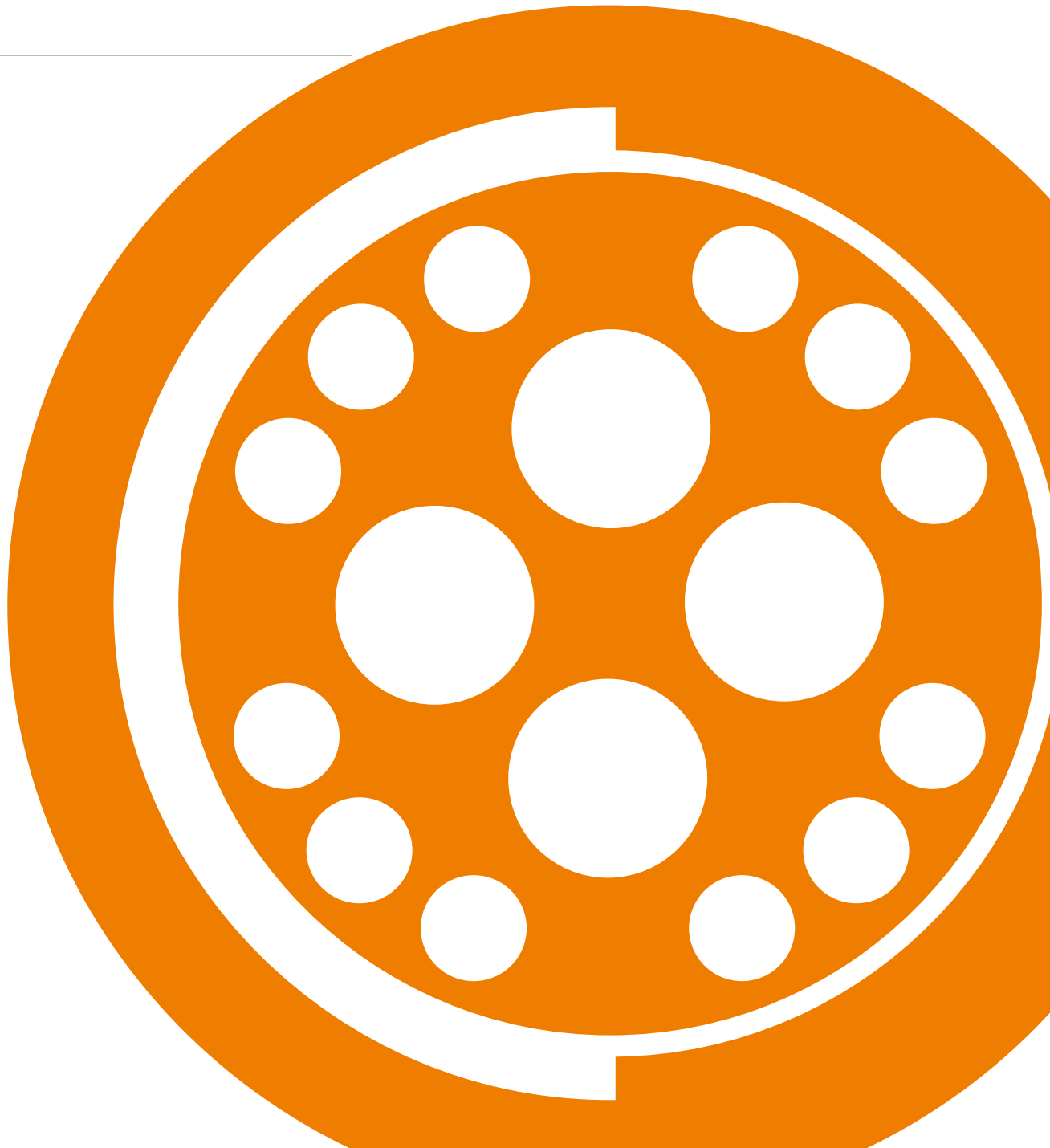
- Wide range of body styles and sizes
- Unsealed, sealed or hermetic
- Signal or power
- Multipole up to 55 contacts
- Up to 30 A
- Standard or inverted polarity
- Solder, crimp or PCB contacts
- Mechanical and color coding

This catalog covers our standard connector solutions.

For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S/SC; SOV; SA; SV; SS/SSC; WSO)..... B 1-2
- Technical dimensions..... B 1-3

PANEL MOUNTED



- Body style selection (SF; SFU/E; SFPU/E)..... B 1-16
- Technical dimensions..... B 1-17

RECEPTACLES

CABLE MOUNTED



- Body style selection (K/KE; KS/KSE)..... B 1-6
- Technical dimensions..... B 1-7

PANEL MOUNTED



- Body style selection (D; DEU/E; DB; DBEU/E; DBP; DBPU/E; DBPLU/E; DG; DGP; DBPC; WDE)..... B 1-8
- Technical dimensions..... B 1-10

PANEL MOUNTED CABLE



- Body style selection (DKBE; DK; DKE)..... B 1-19
- Technical dimensions..... B 1-20

FOR ALL MULTIPOLE LOW VOLTAGE

- Electrical & contact configurations..... B 1-23
- Options..... B 1-35
- Cable clamp sets..... B 1-39
- Cable assembly..... K 1

- Accessories..... B 8-1
- Tooling..... B 9-1
- Technical information..... B 11-1
- Cross-line technical information..... A 9



PLUGS

CABLE MOUNTED



Body style		S	SC	SOV	SA	SV	SS	SSC	WSO	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68	●	●	●	●	●	●	●	●	
Locking system	Friction			●						Locking systems, section A, page A 11
	Push-pull	●			●	●	●		●	
	Quick-release		●					●		
	Lanyard				●					
Contacts	Tamperproof					●				Electrical & configurations, page B 1-23
	Crimp	●	●	●	●	●	●	●	●	
Housing color	Solder	●	●	●	●	●	●	●	●	Options, page B 1-35
	Natural chrome	●	●	●	●	●	●	●	●	
Design	Black chrome	●	●	●	●		●	●	●	Body style selection, section B 2
	Shortened body						●	●		
	Straight	●	●	●	●	●	●	●		
Cabling	Right-angle						●	●	●	Cable clamp sets, page B 1-39 Cable assembly, section K 1
	Cable clamp sets	●	●	●	●	●			●	
	Overmoldable						●	●		
Accessories	Heat shrinkable						●	●		Accessories, section B 8-1
	Cable bend reliefs	●	●	●	●	●			●	
	Protective sleeves	●	●	●	●	●			●	
Size	Sealing caps	●	●	●	●	●	●	●	●	Technical dimensions, page B 1-3 For more information visit our website www.fischerconnectors.com/technical
	102 Series	●	●	●	●	●	●	●	●	
	103 Series	●	●	●	●	●	●	●	●	
	1031 Series	●	●	●	●	●	●	●	●	
	104 Series	●	●	●	●	●	●	●	●	
	105 Series	●	●	●	●	●	●	●	●	
106 Series	●				●					
107 Series	●					●				

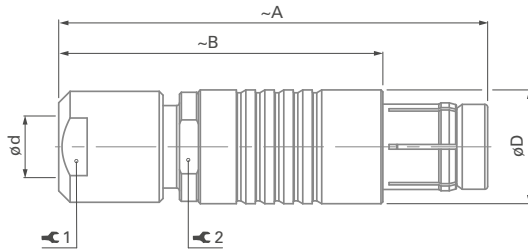


PLUGS

CABLE MOUNTED

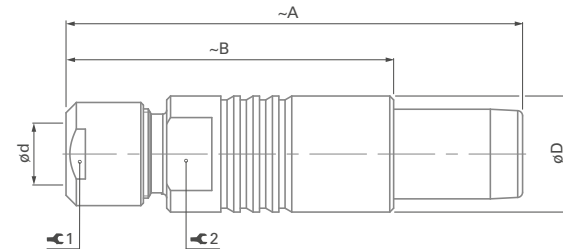
S/SC

BODY STYLES



SOV

BODY STYLE



Series	A	B	D	d max		⌀1	Torque 1 [Nm]	⌀2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
1031	48	38	13	7.2	6.7	12	1.5	11
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	80	55	28	19.2	19.2	22	8.0	-
107	110	85	34	22.7	22.7	32	10.0	32

Series	A	B	D	d max		⌀1	Torque 1 [Nm]	⌀2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
1031	48	38	13	7.2	6.7	12	1.5	11
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	Please contact us for additional information							
107								

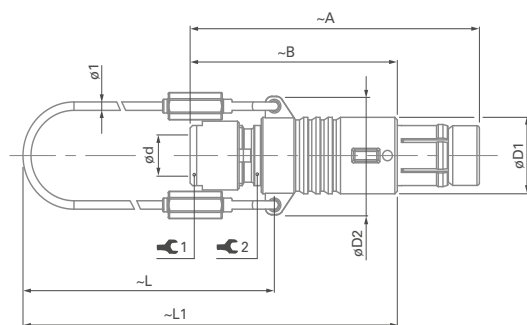
All dimensions and images shown are in millimeters and are for reference only.



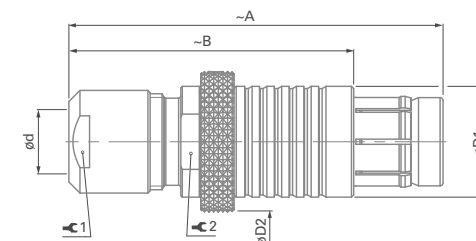
PLUGS

CABLE MOUNTED

SA
BODY STYLE



SV
BODY STYLE



Series	A	B	D1	D2	L	L1	d max		⌀1	Torque 1 [Nm]	⌀2
							Unsealed	Sealed			
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10
1031	48	38	13	18	55	75	7.2	6.7	12	1.5	11
104	50	38	15	21	65	84	8.7	8.7	12	2.0	13
105	62	47	18	25	70	94	10.7	10.7	15	3.5	16
106	Please contact us for additional information										
107											

Series	A	B	D1	D2	d max		⌀1	Torque 1 [Nm]	⌀2
					Unsealed	Sealed			
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-
1031	Please contact us for additional information								
104	50	38	15	20	8.7	8.7	12	2.0	13
105	62	47	18	22	10.7	10.7	15	3.5	16
106	80	55	30	35	19.2	19.2	22	8.0	-
107	110	85	34	38	22.7	22.7	32	10.0	32

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

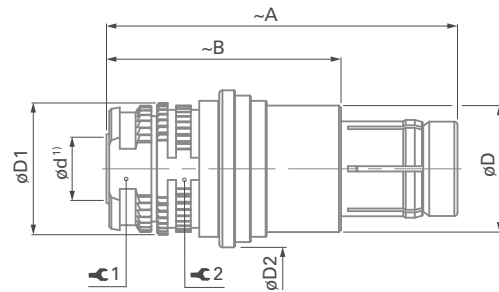


PLUGS

CABLE MOUNTED

SS/SSC

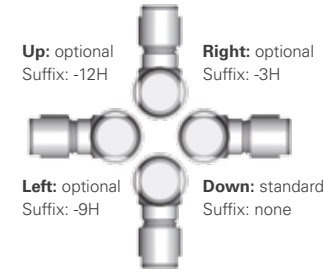
BODY STYLES



Series	A	B	D	D1	D2	d max	1	Torque 1 [Nm]	2
102	30	20	9.0	9.5	12.0	3.8	7	0.6	8
103	33	22	12.0	12.5	15.0	6.0	10	1.0	11
1031	33	23	12.4	13.0	15.5	6.2	10	1.0	11
104	38	26	15.0	15.3	18.0	8.0	12	2.0	13
105	44	29	18.0	18.4	21.2	10.0	15	3.5	16
106	Please contact us for additional information								
107	Please contact us for additional information								

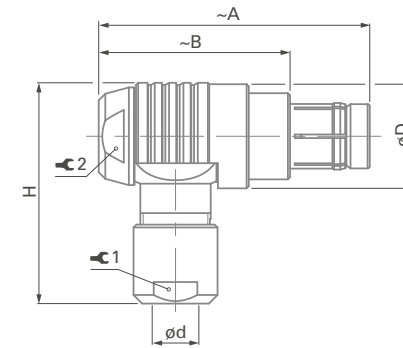
¹⁾ Max. cable diameter below shield.

Cable orientations: view from the back



WSO

BODY STYLE



Series	A	B	D	H	d max		1	Torque 1 [Nm]	2	Torque 2 [Nm]
					Unsealed	Sealed				
102	33	23	12	25	4.7	4.3	7	0.6	8	1.0
103	38	27	15	31	6.7	6.2	10	1.0	11	1.3
1031	39	29	17	33	7.2	6.7	12	1.5	12	2.0
104	45	32	19	37	8.7	8.7	12	2.0	14	2.5
105	53	38	23	45	10.7	10.7	15	3.5	17	3.5
106	Please contact us for additional information									
107	Please contact us for additional information									

WSO is available for different cable orientations.

When ordering, choose which suffix to use in cable orientations figure.

Example: WSO 102 A056 -130+ with standard down cable orientation
 WSO 102 A056 -130 -9H with left cable orientation

**RECEPTACLES****CABLE
MOUNTED**

Body style		K	KE	KS	KSE	Links to detailed information
Protection	Unsealed (IP50)	●		●		Sealing categories, section A, page A 12
	Sealed up to IP68		●		●	
Contacts	Crimp	●	●	●	●	Electrical & contact configurations, page B 1-23
	Solder	●	●	●	●	
Housing	Natural chrome	●	●	●	●	Options, page B 1-35 Body style selection, B 2
	Black chrome	●	●	●	●	
	Shortened body			●	●	
Design	Straight			●	●	Body style selection, section B 2
	Right-angle			●	●	
Cabling	Cable clamp sets	●	●			Cable clamp sets, page B 1-40 Cable assembly, section K 1
	Overmoldable			●	●	
	Heat shrinkable			●	●	
Accessories	Cable bend reliefs	●	●			Accessories, section B 8-1
	Protective sleeves	●	●			
	Sealing caps	●	●	●	●	
Size	102 Series	●	●	●	●	Technical dimensions, page B 1-7 For more information visit our website www.fischerconnectors.com/technical
	103 Series	●	●	●	●	
	1031 Series	●	●	●	●	
	104 Series	●	●	●	●	
	105 Series	●	●	●	●	
	106 Series	●	●			
	107 Series	●	●			

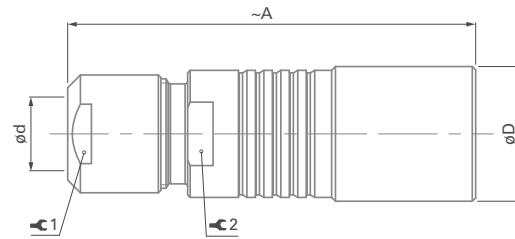


RECEPTACLES

CABLE MOUNTED

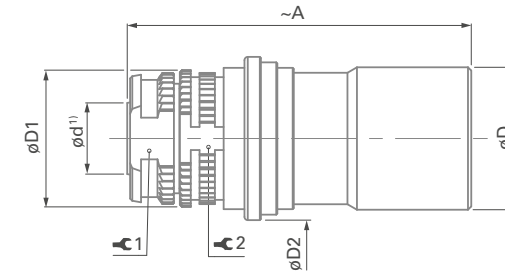
K/KE

BODY STYLES



KS/KSE

BODY STYLES



Series	A	D	d max		Wrench 1	Torque 1 [Nm]	Wrench 2
			Unsealed	Sealed			
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10
1031	46	13.5	7.2	6.7	12	1.5	11
104	50	16	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16
106	79	33	19.2	19.2	25	8	25
107	105	36	22.7	22.7	32	10	32

Series	A	D	D1	D2	d max	Wrench 1	Torque 1 [Nm]	Wrench 2
103	32	13.0	13.0	15.0	6.0	10	1.0	11
1031	31	13.5	13.5	15.5	6.2	10	1.0	11
104	35	16.0	16.0	18.0	8.0	12	2.0	13
105	43	19.0	18.0	21.2	10.0	15	3.5	16
106	Please contact us for additional information							
107								

¹⁾ Max. cable diameter below shield.

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

All dimensions and images shown are in millimeters and are for reference only.



RECEPTACLES

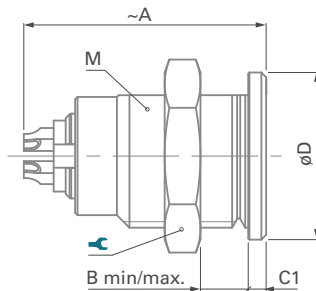
PANEL MOUNTED



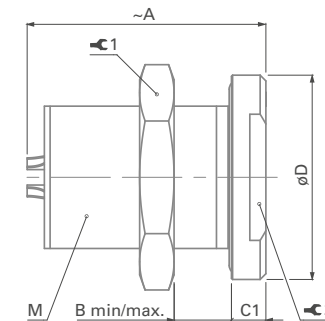
Body style		D	DEU	DEE	DB	DBEU	DBEE	DBP
Protection	Unsealed (IP50)	●			●			●
	Sealed up to IP68		●	●		●	●	
	Hermetic			●			●	
Contacts	Crimp	●			●			●
	Solder	●	●	●	●	●	●	●
	PCB	●	●	●	●	●	●	●
Housing color	Natural chrome	●	●	●	●	●	●	●
	Black chrome	●	●	●	●	●	●	●
Design	Right-angle							
	Flush	●	●	●				●
	Front-projecting				●	●	●	
	Bulkhead feedthrough							
Assembly	Front-mounting	●	●	●	●	●	●	
	Rear-mounting							●
Accessories	Sealing caps	●	●	●	●	●	●	●
	Spacers		●	●				
	Color-coded washers	●			●			●
	Grounding washers	●	●	●	●	●	●	●
	Locking washers	●	●	●	●	●	●	●
Size	102 Series	●	●	●	●	●	●	●
	103 Series	●	●	●	●	●	●	●
	1031 Series	●	●	●	●	●	●	●
	104 Series	●	●	●	●	●	●	●
	105 Series	●	●	●	●	●	●	●
	106 Series	●		●			●	
	107 Series	●		●			●	

**RECEPTACLES****PANEL
MOUNTED****D**

BODY STYLE

**DEU/DEE**

BODY STYLES



Series	A	B max.	C1	D	M	⌘	Torque [Nm]
102	19	9	1.5	11	9x0.5	11	1.3
103	23	8	1.5	14	12x1	14	2.5
1031	25	10	2.0	16	14x1	17	3.0
104	25	11	2.2	19	15x1	17	4.0
105	32	15	2.0	22	18x1	22	6.0
106	50	18	3.0	37	32x1	TX00.106	15
107	46	18	4.0	40	35x1	TX00.107	16

Series	A	B min / max.	C1	D	M	⌘ 1	Torque 1 [Nm]	⌘ 2
102	20	8/10	2.5	14	9x0.5	11	1.3	11
103	23	0/12	3.0	18	14x1	17	3.0	14
1031	25	0/12	3.0	19	14x1	17	3.0	15
104	25	0/15	4.0	22	16x1	19	4.5	17
105	33	10.5/18	4.0	27	20x1	25	6.5	-
106	50	19/24	5.0	41	32x1	TX00.106	15	-
107	47	19.2/22	5.0	45	35x1	TX00.107	16	-

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests have to be made to evaluate the exact values.

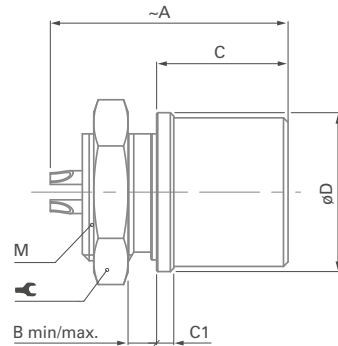


RECEPTACLES

PANEL MOUNTED

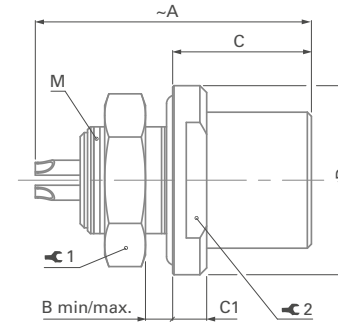
DB

BODY STYLE



DBEU/DBEE

BODY STYLES



Series	A	B max.	C	C1	D	M	⚙	Torque [Nm]
102	18	3	11.0	1.0	11	9x0.5	11	1.3
103	21	4	11.5	1.5	14	12x1	14	2.5
1031	Please contact us for additional information							
104	26	3	14.5	2.5	19	16x1	19	4.5
105	33	7	19.0	2.0	22	18x1	22	6.0
106	Please contact us for additional information							
107	Please contact us for additional information							

Series	A	B max.	C	C1	D	M	⚙ ₁	Torque 1 [Nm]	⚙ ₂
102	20	3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14
1031	24	4.0	12.0	3.0	19	14x1	17	3.0	15
104	30	3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	5.0	19.0	4.0	27	18x1	22	6.0	22
106	50	6.5	25.5	7.0	40	32x1	TX00.106	15	-
107	47	5.0	24.0	5.0	45	35x1	TX00.107	16	38

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut. Tests have to be made to evaluate the exact values.

All dimensions and images shown are in millimeters and are for reference only.

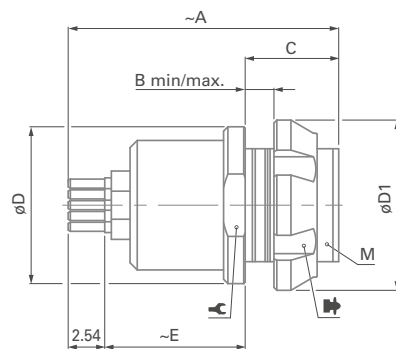


RECEPTACLES

PANEL MOUNTED

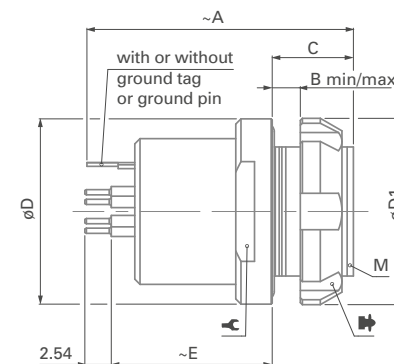
DBP

BODY STYLE



DBPU/DBPE

BODY STYLES



Series	A	B max.	C	D	D1	E	M		1)	Torque [Nm]
102	20	3.5	6.5	11	12	10.0	9x0.5	10	TC00.000	1.3
103	23	4.0	8.0	14	15	12.0	12x1	-	TF00.001	2.5
1031	23	3.0	7.0	16	18	13.0	14x1	-	TG00.001	3.0
104	26	5.0	9.0	19	19	11.5	15x1	-	TK00.000	4.0
105	30	12.0	17.0	22	23	10.0	18x1	-	TP00.011	6.0
106	Please contact us for additional information									
107	Please contact us for additional information									

Series	A	B max.	C	D	D1	E	M		1)	Torque [Nm]
102	20	3.5	6.5	14	12	13.0	9x0.5	11	TC00.000	1.3
103	26	3.0	7.8	18	18	15.5	14x1	15	TG00.001	3.0
1031	23	3.0	7.0	19	18	13.0	14x1	15	TG00.001	3.0
104	26	4.0	8.0	22	20	15.5	16x1	-	TK00.002	4.5
105	30	5.0	10.0	27	25	18.0	20x1	-	TP00.005	6.5
106	Please contact us for additional information									
107	Please contact us for additional information									

¹⁾ Assembly tool for decorative slotted nut, see Tooling section, page B 9-1, for details.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut. Tests have to be made to evaluate the exact values.

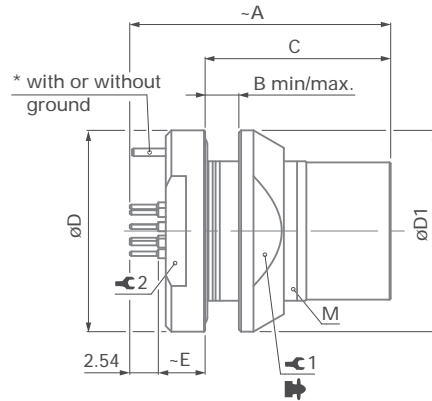





RECEPTACLES

PANEL MOUNTED

DBPLU/DBPLE

BODY STYLES



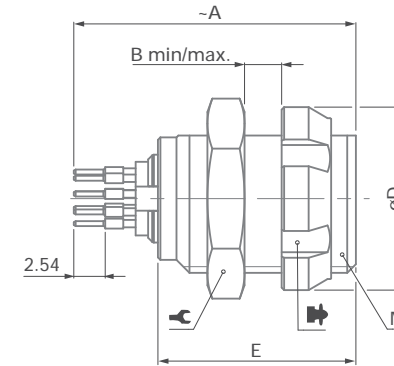
Series	A	B max.	C	D	D1	E	M	 1)	 1	Torque 1 [Nm]	 2
102	21	4.5	14.2	14	13	3.6	10x0.5	TC00.007	11	1.5	11
103	24	5.0	16.5	18	18	4.2	14x1	TG00.001	15	3.0	15
1031	23	5.5	16.0	19	20	4.2	15x1	TK00.000	17	4.0	15
104	27	6.5	18.5	22	20	5.0	16x1	TK00.002	17	4.5	17
105	31	7.0	22.5	27	25	5.5	20x1	TP00.005	22	6.5	22
106	Please contact us for additional information										
107	Please contact us for additional information										



- * - Pin for PCB contacts versions; all Series.
- Tag for solder contact versions; Series 103 to 107.
- Barrel for solder contact versions; Series 102.

¹⁾ Assembly tool for decorative slotted nut, see Tooling section, page B 9-1, for details.

DG/DGP

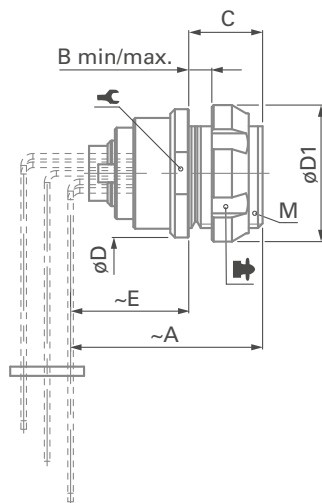
BODY STYLES



Series	A	B max.	D	E	M		 1)	Torque [Nm]
102	20	6	12	14	9x0.5	11	TC00.000	1.3
103	23	7	15	15	12x1	14	TF00.001	2.5
1031	23	7	18	18	14x1	17	TG00.001	3.0
104	26	9	19	18	15x1	17	TK00.000	4.0
105	30	15	23	24	18x1	22	TP00.011	6.0
106	Please contact us for additional information							
107	Please contact us for additional information							

**RECEPTACLES****PANEL
MOUNTED****DBPC**

BODY STYLE



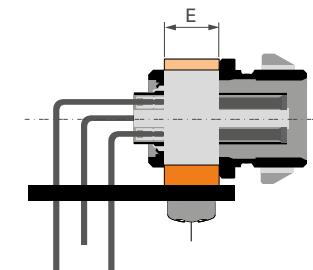
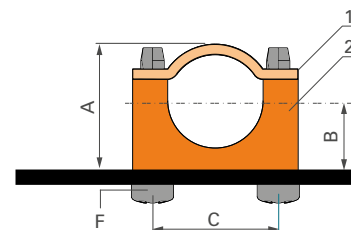
Series	A	B max.	C	D	D1	E ¹⁾	M			Torque [Nm]
102	20.0	3.5	6.5	11	12	13	9x0.5	10	TC00.000	1.3
103	22.0	4.0	8.0	14	15	13	12x1	-	TF00.001	2.5
1031	21.5	3.0	7.0	16	18	14	14x1	-	TG00.001	3.0

¹⁾Please refer to online technical drawings for precise value and layout dimensions.

²⁾Assembly tool for decorative slotted nut, see Tooling section, page B 9-1, for details.

DBPC

MOUNTING CLAMP



- Enables mounting directly to PCB with two screws
- Improves grounding of body to the PCB

Series	A	B	C	E	F	Part Number
102	11.5	6.0	12	3.8	∅ 2.2x13	102.1943
103	15.2	8.2	16	4.9	∅ 2.9x16	103.2253
1031	15.2	8.2	16	4.9	∅ 2.9x16	103.2253

Material:

- 1 - Nickel plated brass copper
2 - PBT

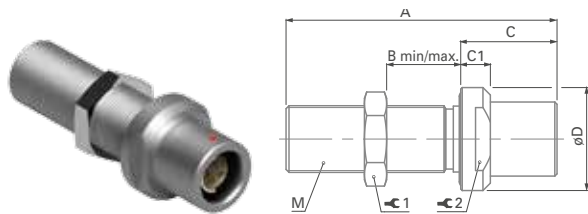


FEEDTHROUGH

PANEL MOUNTED

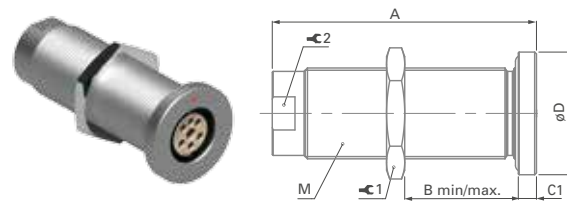
WDE : 102, 103 & 104 SERIES

BODY STYLE



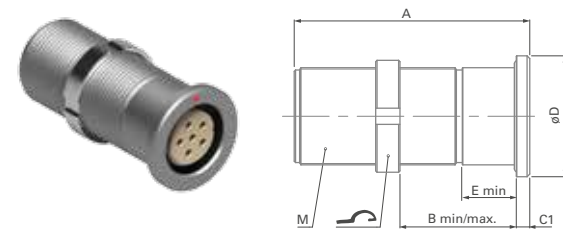
WDE : 105 SERIES

BODY STYLE



WDE : 106 & 107 SERIES¹⁾

BODY STYLE



Series	A	B min/max	C	C1	D	E min	M	1 2)	Torque 1 [Nm]	2
102	39	23	13	4	14	-	9x0.5	11	1.3	11
103	40	23	14	4	17	-	12x1	14	2.5	14
1031	Please contact us for additional information									
104	40	21	16	4	22	-	15x1	17	4.0	17
105	62	47	-	4	27	-	20x1	22	6.5	-
106 ¹⁾	74	30/39	-	12	42	30	32x1	TX00.106	15	-
107 ¹⁾	92	20/76	-	5	45	20	36x1	TX00.107	17	-

The bulkhead feedthrough connector allows the passing of electrical signals and power through a panel via two cable plugs.

The "AZ" version of the feedthrough accepts a type "A" plug on the flange side and a type "Z" plug on the threaded end, which is typically oriented toward the interior of the chassis. In the version "ZA" the connections "A" and "Z" are inverted.

Dimension "B max" specifies the maximum panel thickness. For panels thinner than the unthreaded section "E min", we can provide spacers as shown in Accessories section, page B 8.

¹⁾ Feedthroughs of series 106 and 107 are supplied with slotted nuts. For nuts dimensions see Accessories section B 8-1.

²⁾ Assembly tool for side slotted nut, see Tooling section, section B 9-1, for details.

All dimensions and images shown are in millimeters and are for reference only.

**PLUGS****PANEL
MOUNTED**

Body style		SF	SFU	SFE	SFPU	SFPE	Links to detailed information
Protection	Unsealed (IP50)	●					Sealing categories, section A, page A 12
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp	●					Electrical & contact configurations, B 1-23
	Solder	●	●	●	●	●	
	PCB	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	Options, page B 1-35
	Black chrome	●	●	●	●	●	
Assembly	Front-mounting	●	●	●			Body style selection, section B 2
	Rear-mounting				●	●	
Accessories	Sealing caps	●	●	●	●	●	Accessories, section B 8-1
	Spacers						
	Color-coded washers	●					
	Insulating washers	●					
	Grounding washers	●	●	●			
	Locking washers	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	Technical dimensions, page B 1-17 For more information visit our website www.fischerconnectors.com/technical
	103 Series	●	●	●	●	●	
	1031 Series	●	●	●	●	●	
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series	●					
	107 Series	●					

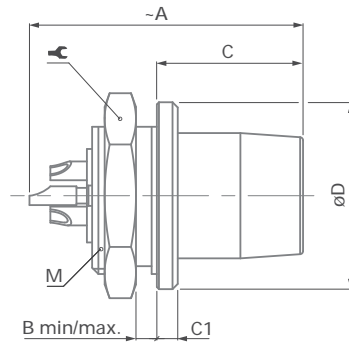


PLUGS

PANEL MOUNTED

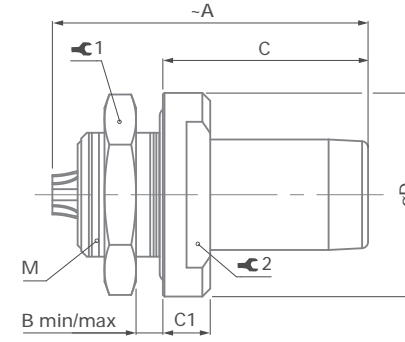
SF

BODY STYLE



SFU/SFE

BODY STYLES



Series	A	B max.	C	C1	D	M	⌘	Torque [Nm]
102	20.0	3.5	11.0	1.0	10	9x0.5	11	1.3
103	23.5	3.0	12.5	1.5	14	12x1	14	2.5
1031	26.0	4.0	12.0	2.0	16	14x1	17	3.0
104	28.0	3.0	14.0	2.0	18	15x1	17	4.0
105	30.5	5.5	16.8	1.2	22	16x1	19	4.5
106	42.5	5.5	27.5	2.5	34	30x1	TX00.106	14
107	50.0	6.0	28.0	3.0	36	32x1	TX00.106	15

Series	A	B max.	C	C1	D	M	⌘1	Torque 1 [Nm]	⌘2
102	21	2.5	13.0	3.0	13	9x0.5	11	1.3	9
103	26	5.0	14.0	3.0	17	12x1	14	2.5	12
1031	26.5	4.0	13.7	3.7	19	14x1	17	3.0	12
104	28	7.5	15.5	3.5	22	16x1	19	4.5	17
105	32	6.0	19.0	4.0	27	20x1	25	6.5	-
106	Please contact us for additional information								
107									

All dimensions and images shown are in millimeters and are for reference only.

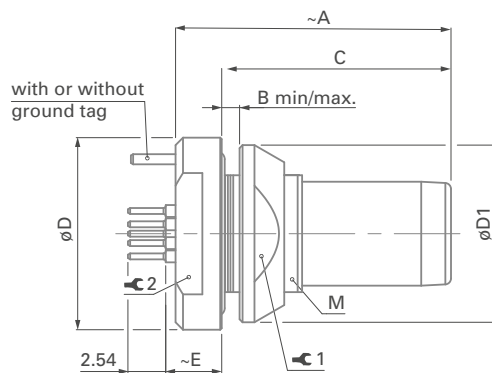


PLUGS

PANEL MOUNTED

SFPU/SFPE

BODY STYLES






Series	A	B max.	C	D	D1	E	M	🔧 ₁	Torque 1 [Nm]	🔧 ₂
102	18.5	2.5	15.4	13	12	3.8	9x0.5	10	1.3	10
103	22.0	4.0	18.5	17	16	4.5	12x1	13	2.5	12
1031	21.5	4.0	18.0	19	18	4.5	14x1	15	3.0	15
104	25.5	6.0	22.0	22	20	4.2	16x1	17	4.5	17
105	29.0	5.0	25.0	27	25	5.0	20x1	22	6.5	19
106	Please contact us for additional information									
107										

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut. Tests have to be made to evaluate the exact values.



RECEPTACLES

PANEL MOUNTED CABLE					
Body style		DKBE	DK	DKE	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, section A 12
	Sealed up to IP68	●		●	
Contacts	Crimp	●	●	●	Electrical & contact configurations, page B1-23
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B1-35
	Black chrome	●	●	●	
Design	Flush		●		Body style selection, section B 2
	Front-projecting	●		●	
Assembly	Panel mounted	●	●	●	Cable clamp sets, page B1-40
	Front-mounting		●	●	
	Rear-mounting	●			
Accessories	Cable clamp sets	●	●	●	Accessories, section B8-1
	Cable bend reliefs	●	●	●	
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●		
	Insulating washers				
	Grounding washers	●	●	●	
Size	Locking washers	●	●	●	Technical dimensions, page B1-20 For more information visit our website www.fischerconnectors.com/technical
	102 Series	●	●	●	
	103 Series	●	●	●	
	1031 Series	●			
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series	●	●	●	
107 Series	●	●	●		

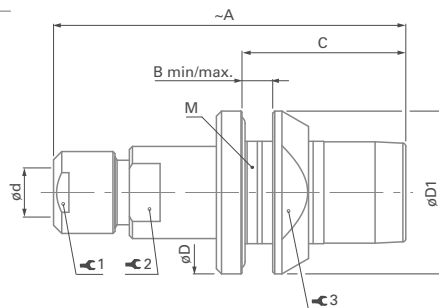


RECEPTACLES

PANEL REAR MOUNTED CABLE

DKBE

BODY STYLE

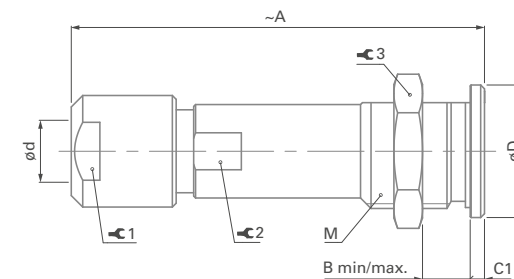


Series	A	B max.	C	D	d max	D1	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	35	3.5	16.0	16	4.3	16	12x1	7	0.6	7	13	2.5
103	43	4.0	19.0	19	6.2	20	15x1	10	1.0	10	17	4.0
1031	46	4.0	18.0	21	6.7	20	16x1	12	1.5	11	17	4.5
104	50	5.0	22.5	23	8.7	23	18x1	12	2.0	13	20	6.0
105	60	5.0	26.0	28	10.7	27	22x1	15	3.5	16	24	8.0
106	101	6.5	32.0	41	19.2	40	34x1	25	8.0	25	36	15
107	105	8.0	34.0	45	22.7	45	38x1	32	10.0	30	40	18

PANEL FRONT MOUNTED CABLE

DK

BODY STYLE



Series	A	B max.	C1	D	d max	M	1	Torque1 [Nm]	2	3	Torque 3 [Nm]
102	35	9	1.5	11	4.7	9x0.5	7	0.6	-	11	1.3
103	44	10	1.5	14	6.7	12x1	10	1.0	9	14	2.5
1031	Please contact us for additional information										
104	50	11	2.0	19	8.7	15x1	12	2.0	12	17	4.0
105	60	16	2.0	22	10.7	18x1	15	3.5	14	22	6.0
106	80	21	3.0	37	19.2	32x1	25	8.0	25	TX00.106	15
107	105	17	4.0	40	22.7	35x1	32	10.0	30	TX00.107	16

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable.

Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

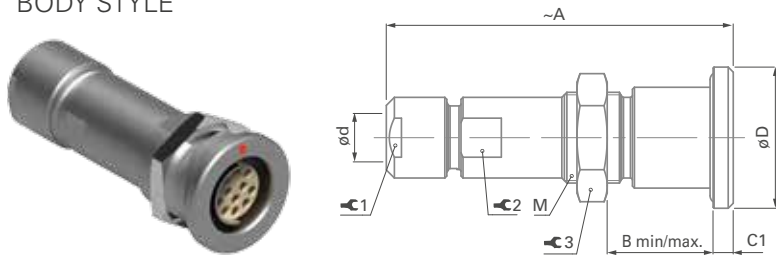


RECEPTACLES

PANEL FRONT MOUNTED CABLE

DKE - 102, 103 & 1031 SERIES

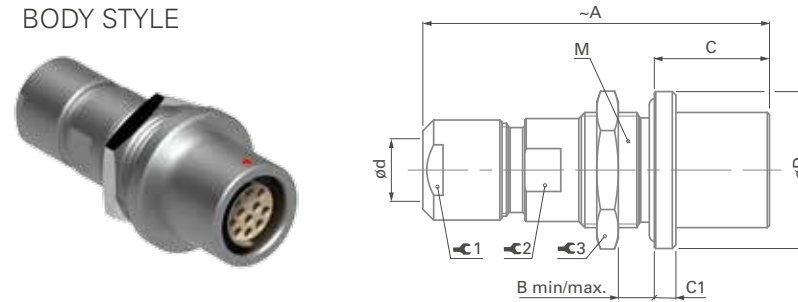
BODY STYLE



Series	A	B min/max.	C	C1	D	d max	M	🔧 ₁	Torque 1 [Nm]	🔧 ₂	🔧 ₃	Torque 3 [Nm]
102	35	9/12	-	2	14	4.3	9x0.5	7	0.6	7	11	1.3
103	45	9/14	-	3	17	6.2	14x1	10	1.0	10	17	3.0
1031	Please contact us for additional information											

DKE - 104, 105, 106 & 107 SERIES

BODY STYLE

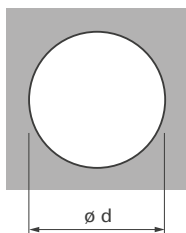


Series	A	B max.	C	C1	D	d max	M	🔧 ₁	Torque 1 [Nm]	🔧 ₂	🔧 ₃	Torque 3 [Nm]
104	50	8	16.0	3	22	8.7	16x1	12	2.0	13	19	4.5
105	61	9	19.0	4	27	10.7	20x1	15	3.5	16	25	6.5
106	85	9	25.5	7	37	19.2	30x1	25	8.0	25	TX00.106	14
107	110	21	25.0	5	45	22.7	35x1	32	10.0	30	TX00.107	16

All dimensions and images shown are in millimeters and are for reference only.



PANEL CUT-OUTS



The dimension of panel cut-outs varies according to the body style and size of the panel mounted connector.

Refer to the tables aside and below for more details.

Check details in technical drawings on our web site:

www.fischerconnectors.com

PANEL MOUNTED PLUGS

Series	SF	SFU/SFE	SFPU /SFPE
	ø d		
102	9.1	9.1	9.1
103	12.1	12.1	12.1
1031	14.1	14.1	14.1
104	15.1	16.1	16.1
105	16.1	20.1	20.1
106	30.2	-	-
107	32.2	-	-

PANEL MOUNTED RECEPTACLES

Series	D	DEU DEE	DB	DBEU DBEE	DBP	DBPU DBPE	DBPLU DBPLE	DG DGP	DBPC	WDE
	ø d									
102	9.1	10.1 ¹⁾	9.1	9.1	9.1	9.1	10.1	9.1	9.1	9.1
103	12.1	14.1	12.1	14.1	12.1	14.1	14.1	12.1	12.1	12.1
1031	14.1	14.1	-	14.1	14.1	14.1	15.1	14.1	14.1	-
104	15.1	16.1	16.1	16.1	15.1	16.1	16.1	15.1	-	15.1
105	18.1	20.1	18.1	18.1	18.1	20.1	20.1	18.1	-	20.1
106	32.2	34.2	-	32.2	-	-	-	32.2	-	32.2
107	35.2	36.2	-	35.2	-	35.2	-	-	-	36.2

¹⁾Coax High Voltage DEE 102 AZ 025: ø11.1 (see page B4-6).

PANEL MOUNTED CABLE RECEPTACLES

Series	DK	DKBE	DKE
	ø d		
102	9.1	12.1	10.1
103	12.1	15.1	14.1
1031	-	16.1	-
104	15.1	18.1	16.1
105	18.1	22.1	20.1
106	32.2	34.2	30.2
107	35.2	38.2	35.2



ELECTRICAL & CONTACT CONFIGURATIONS

A/Z POLARITY

- For all body styles (except WDE) B 1-24
- For WDE body style B 1-24

CONTACT TYPES

- Solder contacts B 1-25
- PCB contacts B 1-25
- Crimp contacts, tooling B 1-25

CONTACT CONFIGURATIONS

- 102 Series B 1-27
- 103 & 1031 Series B 1-28
- 104 Series B 1-29
- 105 Series B 1-31
- 106 Series B 1-33
- 107 Series B 1-34



A/Z POLARITY

To protect users from contact with dangerous voltages, most of our connectors exist in two versions:

STANDARD "A" POLARITY

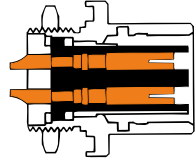
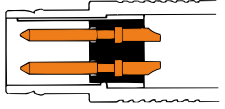
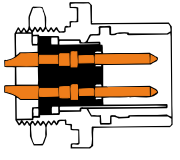
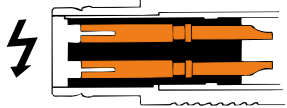
The contacts of the receptacle are protected against accidental touch.

Recommended when voltage is present on the receptacle.

INVERTED "Z" POLARITY

The contacts of the plug are protected against accidental touch.

Recommended when voltage is present on the plug.

	Receptacle D	Plug S
Type "A" Standard Polarity		
Type "Z" Inverted Polarity		

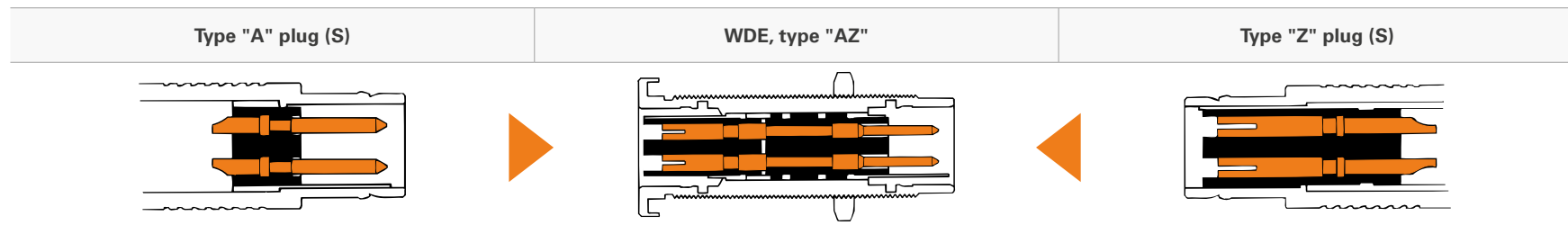
IMPORTANT: AN "A" TYPE CONNECTOR CAN NEVER BE MATED WITH A "Z" TYPE CONNECTOR.

A plug "S" has the same housing in type "A" as in type "Z", but type "A" comes with unprotected contacts while type "Z" is equipped with touch-

protected contacts. In most cases these are female contacts which are recessed in the insulator.

BULKHEAD FEEDTHROUGH WDE

Type "AZ" is the standard version of the WDE. The flange side accepts an "A" type plug, and the threaded side accepts a "Z" type plug.



The "ZA" version of the WDE accepts a type "Z" plug at the flange side and accepts a type "A" plug at the threaded end.



CONTACT TYPES

The Fischer Connectors' contacts are highly reliable and are guaranteed up to 10,000 mating cycles.

All standard brass and bronze contacts for use in the Core Series Brass are screw machined, and all are gold plated over a nickel underplate.

Most connectors are available with solder, crimp or PCB contacts, and each type is optimized for a particular application.

SOLDER CONTACTS

Most versatile
Pre-installed contacts
Qualified assemblers required



- Can be produced with any type of contact block material and accept a wide range of wire sizes.
- Contacts are pre-installed in the insulator block, and the wires can be terminated with any appropriately sized soldering iron.
- May require operators who are qualified in specialized soldering techniques.

PCB CONTACTS

PCB or Flex circuit mount
Reduced pin diameter
Wave soldering



- Designed to be mounted directly onto a PCB or flex circuit; can be used in wave soldering operations for faster production assembly.
- Preferred for high rates of data transmission due to the low distance to the board that their integration allows. This helps reducing signal interferences.
- PCB pins are generally used on rear mounted panel connectors.

CRIMP CONTACTS

Selectively annealed area
Special tools required
Limited range of wire sizes



- Each contact has a selectively annealed area which is deformed during assembly by specialized tooling to assure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering process is required.
- Not available for sealed or hermetic connectors.

**TOOLING FOR CRIMP CONTACTS**

Series	Polarity	Contact diameter (mm)									
		0.5		0.7		0.9		1.3		1.6	
		Part number		Part number		Part number		Part number		Part number	
		Contact	Positioner	Contact	Positioner	Contact	Positioner	Contact	Positioner	Contact	Positioner
102	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	-	-	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	-	-	-	-
103	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
1031	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
104	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	200.1653	TX00.313
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	200.1654	TX00.314
105	Male	-	-	200.2884	TX00.304	200.2891	TX00.308	200.2403	TX00.338	200.1653	TX00.313
	Female	-	-	200.2886	TX00.306	200.2893	TX00.310	200.2214	TX00.312	200.1654	TX00.314
Crimp tool part number		TX00.240		TX00.240		TX00.240		TX00.240		TX00.242	

See section Tooling, section B 9-1, for description of Crimping Tool and Positioner.



102 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁵⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp ⁶⁾	PCB			Solder contacts ¹⁾⁸⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
102 A Z 051		2	●	● ⁷⁾	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.3	1.7	1.8	2.4	≤ 250	9.2
102 A Z 052		3	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.3	1.8	1.6	≤ 250	8.2
102 A Z 053		4	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.2	1.7	1.8	≤ 200	5.5
102 A Z 054		5	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.0	1.3	1.8	≤ 160	5.2
102 A Z 056		7	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	0.8	1.0	1.3	1.8	≤ 160	4.0
102 A Z 059		9	●		●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.8	1.1	1.2	1.8	≤ 160	3.1

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle. Please contact us for ratings for WSO right-angle plugs and WDE bulkhead feedthroughs.

⁶⁾ Plug with crimp contacts must be used with unshielded clamps only. See page B1-41.

⁷⁾ Only available for A polarity plugs.

⁸⁾ Solder contact version of DBPLE/DBPLU with ground contact: Ground contact for wire size: max 0.79mm / AWG 21 [1] / AWG 22 [7/30].



103 & 1031 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact \varnothing [mm]	Wire size ²⁾		Test voltage ³⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
103 ^A / _Z 051		2	●	●	●	PEEK	1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	max \varnothing 1.18mm min \varnothing 0.58mm AWG18-24	1.5	2.2	2.2	3.0	\leq 250	13
103 ^A / _Z 052		3	●		●	PEEK	1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.5	1.8	2.0	\leq 250	12
103 ^A / _Z 053		4	●		●	PEEK	0.9	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.6	2.0	2.4	\leq 250	7.0
103 ^A / _Z 054		5	●	●	●	PEEK	0.9	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.83mm min \varnothing 0.48mm AWG22-26	1.1	1.4	1.9	2.2	\leq 250	6.8
103 ^A / _Z 056		6	●	●	●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	1.0	1.3	2.0	2.0	\leq 250	5.2
103 ^A / _Z 057		7	●	●	●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	1.0	1.3	2.0	2.0	\leq 250	5.0
103 ^A / _Z 058		8	●		●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	0.8	1.1	1.4	1.9	\leq 200	3.8
103 ^A / _Z 062		12	●	●	●	PEEK	0.5	max \varnothing 0.43mm AWG26 [1] AWG28 [19/40]	max \varnothing 0.43mm min \varnothing 0.20mm AWG28-32	0.9	1.2	1.5	1.8	\leq 200	2.0
1031 ^A / _Z 010		10	●	●	●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	1.4	1.5	2.0	2.2	\leq 250	4.5
1031 ^A / _Z 012		12	●	●	●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	1.4	1.5	2.0	2.2	\leq 250	4.2
1031 ^A / _Z 019		19	●	●	●	PEEK	0.5	max \varnothing 0.43mm AWG26 [1] AWG28 [19/40]	max \varnothing 0.43mm min \varnothing 0.20mm AWG28-32	1.2	0.9	2.0	1.5	\leq 250	2.5

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.



104 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁹⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
104 A Z 051		2	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.8	2.2	2.8	3.2	≤ 500	20
104 A Z 040		3	○ ●		●	PEEK PBT	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	max ø1.78mm min ø1.17mm AWG14-18	1.6	2.0	2.6	3.0	≤ 500	18
104 A Z 037		4	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.8	2.2	2.5	3.0	≤ 500	12
104 A Z 087		2	●		●	PBT	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.5	1.6	2.2	2.5	≤ 400	28
		0.9					max ø0.79mm AWG21 [1] AWG22 [7/30]	-	2.0			2.8			
104 A Z 053		5	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.7	2.4	2.7	≤ 320	11
104 A Z 065		6	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.7	2.0	2.4	2.6	≤ 400	6.5
104 A Z 054		7	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.5	1.8 ⁵⁾	2.2	2.0 ⁵⁾	≤ 320	6.5
										2.1	2.8				

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Test voltages between the contacts with the shortest distance.

⁶⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.

**104 SERIES**

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
104 A Z 066		8	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.5	1.5	2.5	2.5	≤ 320	6.2
104 A Z 055		1	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.4	2.2	3.8	3.6	≤ 250	12
		8					0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.4	1.5	2.0	2.4		6.0
104 A Z 056		11	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.5	2.1	2.2	≤ 250	5.8
104 A Z 086		16	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.5	1.6	2.2	≤ 200	4.0
104 A Z 092		19	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.2	1.2	1.8	≤ 200	3.5
104 A124 ⁵⁾		27	●	●	●	PEEK	0.5	-	max ø0.43mm min ø0.20mm AWG28-32	1.2	0.5	1.8	0.5	≤ 200	2.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Solder and PCB contact types available only for DBPU and DBPLU receptacles. Crimp contact type available only for plugs.

⁶⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contact ¹⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 051		2	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.5	3.0	4.0	4.0	≤ 630	26
105 A Z 087		2	●			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	-	1.2	1.6	2.3	3.0	≤ 400	30
105 A Z 052		3	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.0	2.5	3.0	3.5	≤ 400	23
105 A Z 053		4	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	1.8	1.8	2.6	2.6	≤ 320	20
105 A Z 054 ⁵⁾		7	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
		6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		7.0
105 A Z 067		8	●			PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.7	2.0	2.5	2.8	≤ 320	10
105 A 124		8	●			PEEK	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.2	2.2	1.8	3.2	≤ 250	18.5
		6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.2	1.8	1.8		7.5
105 A Z 101 ⁵⁾		9	●		●	PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
		8					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		5.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contact dia. 2.0 is positioned to make contact first and break last.

⁶⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁸⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 062		10		●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.7	2.0	2.5	2.7	≤ 320	9.0
105 A Z 069		12		●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.5	1.8	2.0	≤ 250	8.0
105 A Z 104 ⁵⁾		13	3	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.5	1.5	3.8	2.2	≤ 320	14
			10					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.5	1.8	2.2		1.0
105 A 127 ⁷⁾		13	3		●		PEEK	1.3	-	max ø1.18mm min ø0.58mm AWG18-24	3.0	2.8	4.8	3.9	≤ 320	14
			10					0.7	-	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9		1.0
105 A Z 058		15		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 250	5.3
105 A Z 110 ⁶⁾		16	4	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.6	1.3	2.8	2.1	≤ 250	14
			12					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.0	1.2	1.5	2.0		1.0
105 A Z 038		18		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 200	4.5
105 A Z 093		24		●		●	PBT	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.5	1.5	2.0	≤ 250	3.5
105 A Z 102		27		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.5	1.5	2.0	≤ 250	3.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contacts dia. 1.3 are positioned to make contact first and break last.

⁶⁾ Contacts dia. 1.6 are positioned to make contact first and break last.

⁷⁾ Inverted polarity: female contacts on plug/male contact on receptacle

⁸⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.



106 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁷⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Male solder contacts ¹⁾	Female solder contacts ¹⁾	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
106 A Z 003 ⁵⁾		3	● ○			PTFE PEEK	2.3	max ø2.13mm AWG12 [1] AWG14 [7/22]	max ø2.28mm AWG12 [1] AWG14 [105/34]	3.5	5.0	6.0	6.5	≤ 1000	26
106 A Z 007 ⁵⁾⁶⁾		7	● ○			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	2.5	3.0	4.5	4.5	≤ 800	20
106 A Z 019		8	● ○			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	2.2	2.2	4.0	3.0	≤ 630	19
106 A Z 015		12	● ○			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	1.8	2.2	2.5	3.0	≤ 500	16
106 A Z 018		17	● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.23mm AWG17 [1] AWG18 [16/30]	1.8	2.2	2.5	3.0	≤ 500	8.0
106 A Z 017		24	● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	1.8	1.5	2.5	2.1	≤ 400	7.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ The contact solder cups are specially insulated.

⁶⁾ Contact Number 1 is positioned to make contact first and break last.

⁷⁾ Measured with S plug and D receptacle. Please contact us for rating for WDE bulkhead feedthroughs.

**107 SERIES**

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁵⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Male solder contacts ¹⁾	Female solder contacts ¹⁾	AC r.m.s		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
107 A Z 013		4		●			PTFE	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	6.5	7.0	10	11	≤ 1000	26
107 A Z 018		6		● ○			PTFE PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	4.5	4.5	6.0	6.0	≤ 800	25
107 A Z 015		19		● ○			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	2.0	2.5	2.5	3.2	≤ 500	13
107 A Z 051		27		● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	2.0	3.0	3.2	≤ 400	7.5
107 A Z 052		40		● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	1.8	1.5	2.5	2.0	≤ 320	6.5
107 A Z 023		8		●			PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	1.8	2.8	2.5	≤ 400	7.0
		47		○			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.88mm AWG20 [1] AWG22 [19/34]	1.7	1.5	2.5	2.1		3.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle. Please contact us for rating for WDE bulkhead feedthroughs.



OPTIONS

- Housing colors B 1-36
- Cable reliefs and clamp nut types B 1-36

OPTIONS **PART NUMBERING**

- Bend relief part numbering B 1-38



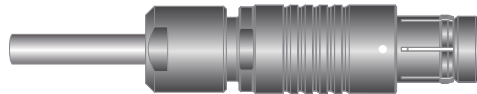
HOUSING COLORS & CABLE BEND RELIEFS

CONNECTOR HOUSING COLORS

All the body styles of our Core Series Brass Product Line are available in two colors:



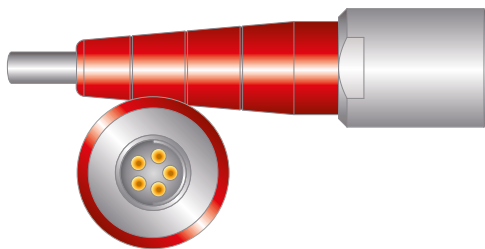
- Natural chrome connector housing with red guide mark.



- Non reflective black chrome housing with white guide mark.

Guide mark is standard for Multipole Low and High Voltage, Mixed Multipole and Mixed Coax connectors.

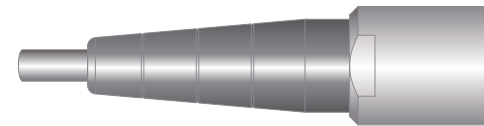
Color-coding is achieved by using accessories:



- Cable bend reliefs for cable connectors.
- Washers for panel receptacles.

CABLE BEND RELIEFS & CLAMP NUT TYPES

A cable bend relief is a useful accessory for connectors mounted with cable clamp sets (S/SC; SOV; SA; SV; WSO; K/KE; DK; DKE; DBKE).



It helps to:

- Reduce bending stress on the cable and inner wires, enhancing durability
- Color-code your connectors for easy identification.



Cable bend reliefs require special clamp nuts, thus are linked with your selection of options.



HOUSING COLORS & CABLE BEND RELIEFS

1	Housing color Which housing color do you need?	NATURAL CHROME with red guide mark					BLACK CHROME with white guide mark					
2	Contact block material Which contact block material do you need?	PTFE	PBT		PEEK		PTFE	PBT		PEEK		
3	Contact type Which contact type do you need?	Solder	Solder	Crimp ¹⁾	Solder	Crimp ¹⁾	Solder	Solder	Crimp ¹⁾	Solder	Crimp ¹⁾	
4	Keying code Which keying code do you need?	Code 1	-60	-80	-100	-130	-150	-70	-90	-110	-140	-160
		Code 2	-2060	-2080	-2100	-230	-250	-2070	-2090	-2100	-240	-260
		Code 3	-3060	-3080	-3100	-330	-350	-3070	-3090	-3100	-340	-360

¹⁾ Crimp contacts are not an option for sealed or hermetic connectors.

CONTACT TYPE FOR PANEL MOUNTED CONNECTORS

Applicable for	Last digit	Description
Front mounted: D - DEU/E - DB - DBEU/E - DG - SF - SFU/E	0	Standard: solder contacts
	9	With PCB (Printed Circuit Board) contacts instead of solder contacts
Rear mounted: DBP - DBPU/E - DBPLU/E - DGP - SFPU/E	0	Standard: PCB (Printed Circuit Board) contacts
	9	With solder contacts instead of PCB (Printed Circuit Board) contacts

Options are available on request, please contact us.

DESIGN AND ACCESSORIES








Applicable for	Extensions	Description
Receptacles	N	Nickel plated body with bright finish
	E	EPDM interface O-ring
	G	Ground tag if solder contact or ground pin if PCB contact
	B	Black nut
	D	Decorative slotted nut
	F	Decorative nut (with 2 flats)



HOUSING COLORS & CABLE BEND RELIEFS

CABLE BEND RELIEF

Do you need a cable bend relief, and if yes which color ?

Applicable for	Last digit	Description
Cable mounted plugs & receptacles using cable clamp sets except SS/SSC-KS/KSE	0	Clamp nut without bend relief
	1	Clamp nut with white bend relief 
	2	Clamp nut with black bend relief 
	3	Clamp nut with green bend relief 
	4	Clamp nut with blue bend relief 
	5	Clamp nut with yellow bend relief 
	6	Clamp nut with red bend relief 
	7	Clamp nut with grey bend relief 

EXAMPLES

PLUGS

S 102 A056 - 130+

Natural chrome housing color with PEEK contact block, solder contacts, keying code 1, clamp nut without bend relief and without cable clamp set (To be ordered separately)

S 102 A056 - 232+

Natural chrome housing color with PEEK contact block, solder contacts, keying code 2, clamp nut with black bend relief, without cable clamp set

SS 102 A056 - 260

Black chrome housing color with PEEK contact block, crimp contacts, keying code 2

RECEPTACLES

D 102 A056 - 130

Natural chrome housing color with PEEK contact block, solder contacts, keying code 1

D 102 A056 - 260

Black chrome housing color with PEEK contact block, crimp contacts, keying code 2

DBPU 102 A056 - 130G

Natural chrome housing color with PEEK contact block, PCB contacts, keying code 1 and ground pin

DBPU 102 A056 - 130NBE

Nickel plated body with PEEK contact block, PCB contacts, keying code 1, with black nut and EPDM interface O-ring



CABLE CLAMP SETS

INTRODUCTION

- Range overview: S, U & E types B 1-40
- Part numbering B 1-40

DIMENSIONS

S/SC; SOV; SA; SV; K/KE; DK; DKE & DKBE; BODY STYLES

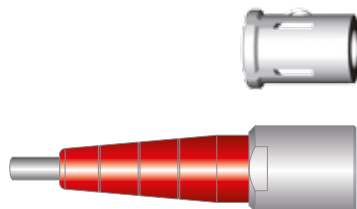
- 102 Series B 1-41
- 103 Series B 1-42
- 1031 Series B 1-43
- 104 Series B 1-44
- 105 Series B 1-45
- 106 Series B 1-46
- 107 Series B 1-47

DIMENSIONS WSO BODY STYLE

- 102, 103, 1031, 104 & 105 Series B 1-48



CABLE CLAMP SETS



To guarantee excellent cable retention and strain relief, Fischer Connectors provides robust and high quality cable clamp sets :

- Collet style clamp system retaining cable over large jacket surface area.
- Protection of small diameters and delicate conductors.
- Can be combined with cable bend reliefs for optimal performance.

Cable clamp sets are suitable for all cable mounted connectors, except SS/SSC and KS/KSE.

RANGE OVERVIEW: S, U & E CABLE CLAMP SETS

Fischer Connectors offers three types of cable clamps sets.
The table below will help you select the one corresponding to your needs.

Cable clamp set	Do you need the interface between the cable and the connector to be sealed?		Do you need the connector to be terminated to the cable shield?	
	Unsealed	Sealed	Unshielded	Shielded
S - Shielded	●			●
U - Unshielded	●		●	
E - Environmental		●	●	●

For 106 and 107 connector series, only S and E cable clamp sets are available.

PART NUMBERING

Below cable clamp sets should be ordered separately	
Multipole low voltage	Triax
S 102 A056-130 +	
Examples connector ordering line	
S 102 A056-130 +	
Clamp set ordering line	
E3 102.5/2.0	

See following pages for cable clamp sets set selection.

Below cable clamp sets are included with connector	
Coax low voltage	Coax high voltage
Shielded (S) or Environmental (E) cable clamp set diameter should be added to the connector part number separated by \emptyset .	
Examples for S - Shielded clamp sets	
K 103 A002-600 $\emptyset 6.2$	
For E - Environmental clamp sets	
KE 103 A002-600 $\emptyset 6.2$	

See following pages for S or E cable clamp sets set selection.



102 SERIES

S SHIELDED

Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
1.5 - 2.1	2.1	E32 102.1/2.1 + A
2.1 - 2.6	2.6	E32 102.1/2.6 + A
2.6 - 3.1	3.1	E32 102.1/3.1 + A
3.1 - 3.6	3.6	E32 102.1/3.6 + A
3.6 - 4.1	4.1	E32 102.1/4.1 + A
4.1 - 4.3	4.3	E32 102.1/4.3 + A
4.3 - 4.7	4.7	E3 102.248 + A

U UNSHIELDED

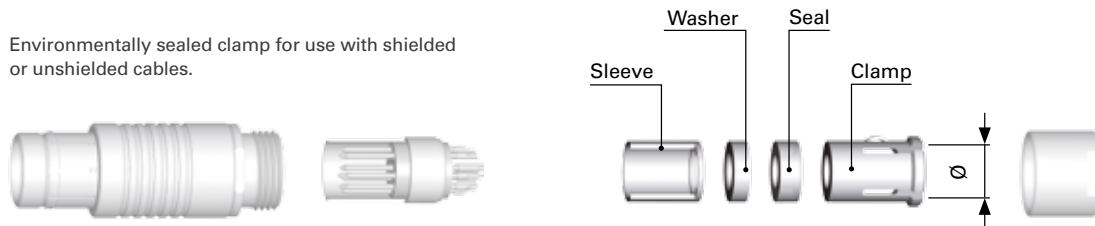
Unshielded, one-piece cable clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
1.4 - 2.0	2.0	E3 102.5/2.0
2.0 - 2.7	2.7	E3 102.5/2.7
2.7 - 3.5	3.5	E3 102.5/3.5
3.5 - 4.2	4.2	E3 102.5/4.2
4.2 - 4.7	4.7	E3 102.5/4.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.

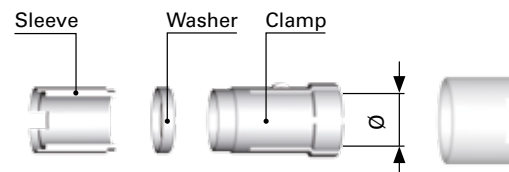


Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
1.5 - 2.1	2.1	E31 102.2/2.1 + B
2.1 - 2.6	2.6	E31 102.2/2.6 + B
2.6 - 3.1	3.1	E31 102.2/3.1 + B
3.1 - 3.6	3.6	E31 102.2/3.6 + B
3.6 - 4.1	4.1	E31 102.2/4.1 + B
4.1 - 4.3	4.3	E31 102.2/4.3 + B

¹⁾ For ordering information see page B 1-40.

**103 SERIES****S**
SHIELDED

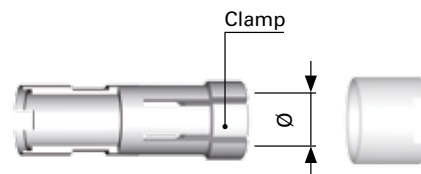
Shielded cable clamp with with sleeve, washer and clamp.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.1/2.2 + B
2.2 - 2.7	2.7	E31 103.1/2.7 + B
2.7 - 3.2	3.2	E31 103.1/3.2 + B
3.2 - 3.7	3.7	E31 103.1/3.7 + B
3.7 - 4.2	4.2	E31 103.1/4.2 + B
4.2 - 4.7	4.7	E31 103.1/4.7 + B
4.7 - 5.2	5.2	E31 103.1/5.2 + B
5.2 - 5.7	5.7	E31 103.1/5.7 + B
5.7 - 6.2	6.2	E31 103.1/6.2 + B
6.2 - 6.7	6.7	E31 103.1/6.7 + B

U
UNSHIELDED

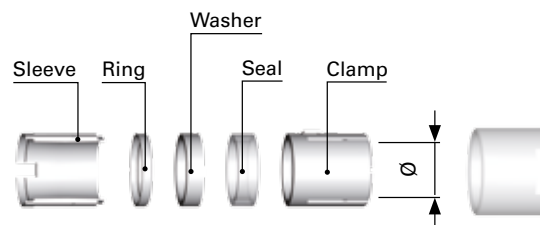
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
2.2 - 3.2	3.2	E3 103.6/3.2
3.2 - 4.2	4.2	E3 103.6/4.2
4.2 - 4.7	4.7	E3 103.6/4.7
4.7 - 5.2	5.2	E3 103.6/5.2
5.2 - 5.7	5.7	E3 103.6/5.7
5.7 - 6.2	6.2	E3 103.6/6.2
6.2 - 6.7	6.7	E3 103.6/6.7

E
ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.2/2.2 + B
2.2 - 2.7	2.7	E31 103.2/2.7 + B
2.7 - 3.2	3.2	E31 103.2/3.2 + B
3.2 - 3.7	3.7	E31 103.2/3.7 + B
3.7 - 4.2	4.2	E31 103.2/4.2 + B
4.2 - 4.7	4.7	E31 103.2/4.7 + B
4.7 - 5.2	5.2	E31 103.2/5.2 + B
5.2 - 5.7	5.7	E31 103.2/5.7 + B
5.7 - 6.2	6.2	E31 103.2/6.2 + B

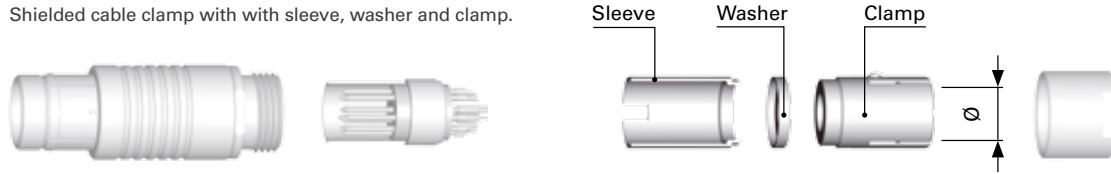
¹⁾ For ordering information see page B1-40.



1031 SERIES

S SHIELDED

Shielded cable clamp with with sleeve, washer and clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
2.2 - 2.7	2.7	E3 1031.1/2.7
2.7 - 3.2	3.2	E3 1031.1/3.2
3.2 - 3.7	3.7	E3 1031.1/3.7
3.7 - 4.2	4.2	E3 1031.1/4.2
4.2 - 4.7	4.7	E3 1031.1/4.7
4.7 - 5.2	5.2	E3 1031.1/5.2
5.2 - 5.7	5.7	E3 1031.1/5.7
5.7 - 6.2	6.2	E3 1031.1/6.2
6.2 - 6.7	6.7	E3 1031.1/6.7
6.7 - 7.2	7.2	E3 1031.1/7.2

U UNSHIELDED

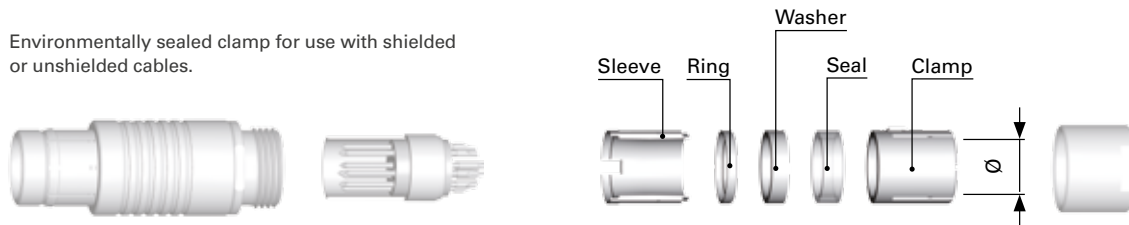
Unshielded, one-piece cable clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
2.2 - 2.7	2.7	E3 1031.6/2.7
2.7 - 3.2	3.2	E3 1031.6/3.2
3.2 - 3.7	3.7	E3 1031.6/3.7
3.7 - 4.2	4.2	E3 1031.6/4.2
4.2 - 4.7	4.7	E3 1031.6/4.7
4.7 - 5.2	5.2	E3 1031.6/5.2
5.2 - 5.7	5.7	E3 1031.6/5.7
5.7 - 6.2	6.2	E3 1031.6/6.2
6.2 - 6.7	6.7	E3 1031.6/6.7
6.7 - 7.2	7.2	E3 1031.6/7.2

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾
2.2 - 2.7	2.7	E3 1031.2/2.7
2.7 - 3.2	3.2	E3 1031.2/3.2
3.2 - 3.7	3.7	E3 1031.2/3.7
3.7 - 4.2	4.2	E3 1031.2/4.2
4.2 - 4.7	4.7	E3 1031.2/4.7
4.7 - 5.2	5.2	E3 1031.2/5.2
5.2 - 5.7	5.7	E3 1031.2/5.7
5.7 - 6.2	6.2	E3 1031.2/6.2
6.2 - 6.7	6.7	E3 1031.2/6.7

¹⁾ For ordering information see page B 1-40.

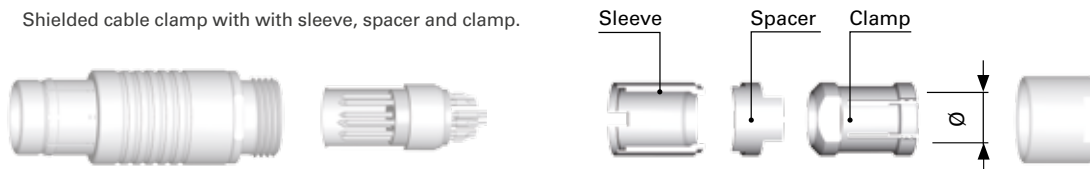
All dimensions and images shown are in millimeters and are for reference only.



104 SERIES

S SHIELDED

Shielded cable clamp with with sleeve, spacer and clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾ PEEK or PBT insulator	
		Plug	Receptacle
2.9 - 4.0	4.0	E3 104.3/4.0 + B	E3 104.4/4.0 + C
4.0 - 4.7	4.7	E3 104.3/4.7 + B	E3 104.4/4.7 + C
4.7 - 5.7	5.7	E3 104.3/5.7 + B	E3 104.4/5.7 + C
5.7 - 6.7	6.7	E3 104.3/6.7 + B	E3 104.4/6.7 + C
6.7 - 7.7	7.7	E3 104.3/7.7 + B	E3 104.4/7.7 + C
7.7 - 8.7	8.7	E3 104.3/8.7 + B	E3 104.4/8.7 + C
8.7 - 9.1	9.1	E3 104.3/9.1 + B	E3 104.4/9.1 + C

U UNSHIELDED

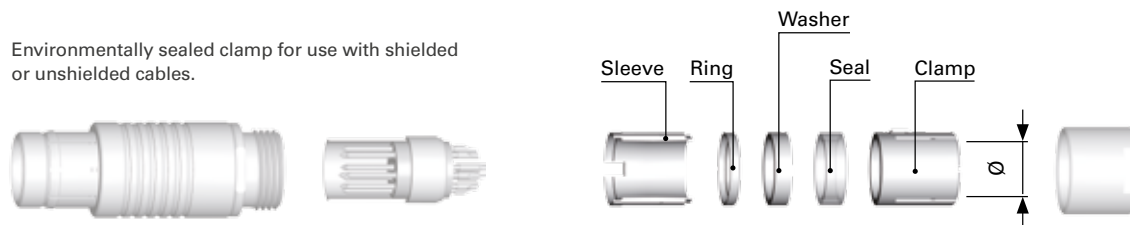
Unshielded, one-piece cable clamp.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾ PEEK or PBT insulator	
		Plug	Receptacle
4.2 - 4.7	4.7	E3 104.6/4.7	
4.7 - 5.7	5.7	E3 104.6/5.7	
5.7 - 6.7	6.7	E3 104.6/6.7	
6.7 - 7.7	7.7	E3 104.6/7.7	
7.7 - 8.2	8.2	E3 104.6/8.2	
8.2 - 8.7	8.7	E3 104.6/8.7	

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet \varnothing	Cable clamp set ¹⁾ PEEK or PBT insulator	
		Plug	Receptacle
2.9 - 4.0	4.0	E3 104.2/4.0 + B	E3 104.2/4.0 + C
4.0 - 4.7	4.7	E3 104.2/4.7 + B	E3 104.2/4.7 + C
4.7 - 5.7	5.7	E3 104.2/5.7 + B	E3 104.2/5.7 + C
5.7 - 6.7	6.7	E3 104.2/6.7 + B	E3 104.2/6.7 + C
6.7 - 7.7	7.7	E3 104.2/7.7 + B	E3 104.2/7.7 + C
7.7 - 8.7	8.7	E3 104.2/8.7 + B	E3 104.2/8.7 + C

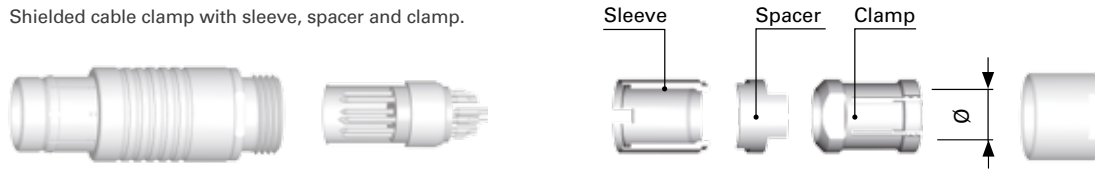
¹⁾ For ordering information see page B 1-40.



105 SERIES

S SHIELDED

Shielded cable clamp with sleeve, spacer and clamp.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
3.2 - 4.2	4.2	E3 105.1/4.2 + B
4.2 - 5.2	5.2	E3 105.1/5.2 + B
5.2 - 6.2	6.2	E3 105.1/6.2 + B
6.2 - 7.2	7.2	E3 105.1/7.2 + B
7.2 - 8.2	8.2	E3 105.1/8.2 + B
8.2 - 9.2	9.2	E3 105.1/9.2 + B
9.2 - 10.0	10.0	E3 105.1/10.0 + B
10.0 - 10.7	10.7	E3 105.1/10.7 + B

U UNSHIELDED

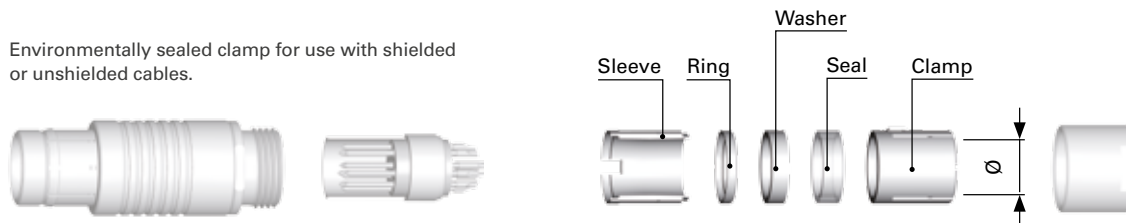
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
2.5 - 3.5	3.5	E3 105.6/3.5
3.5 - 4.5	4.5	E3 105.6/4.5
4.5 - 5.5	5.5	E3 105.6/5.5
5.5 - 6.5	6.5	E3 105.6/6.5
6.5 - 7.5	7.5	E3 105.6/7.5
7.5 - 8.5	8.5	E3 105.6/8.5
8.5 - 9.5	9.5	E3 105.6/9.5
9.5 - 10.5	10.5	E3 105.6/10.5

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PEEK or PBT insulator
3.2 - 4.2	4.2	E31 105.2/4.2 + B
4.2 - 5.2	5.2	E31 105.2/5.2 + B
5.2 - 6.2	6.2	E31 105.2/6.2 + B
6.2 - 7.2	7.2	E31 105.2/7.2 + B
7.2 - 8.2	8.2	E31 105.2/8.2 + B
8.2 - 9.2	9.2	E31 105.2/9.2 + B
9.2 - 10.0	10.0	E31 105.2/10.0 + B
10.0 - 10.7	10.7	E31 105.2/10.7 + B

¹⁾ For ordering information see page B 1-40.

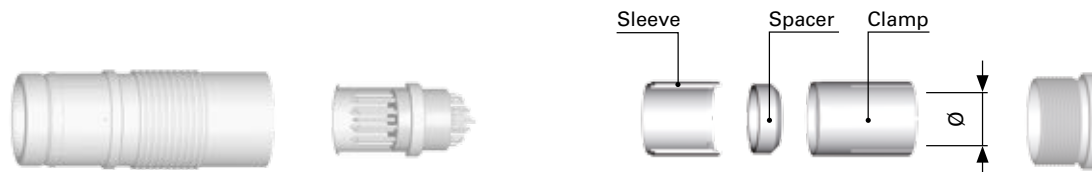
All dimensions and images shown are in millimeters and are for reference only.



106 SERIES

S
SHIELDED

Shielded cable clamp with sleeve, spacer and clamp.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
4.2 - 5.2	5.2	E3 106.1/5.2	E3 106.3/5.2
5.2 - 6.2	6.2	E3 106.1/6.2	E3 106.3/6.2
6.2 - 7.2	7.2	E3 106.1/7.2	E3 106.3/7.2
7.2 - 8.2	8.2	E3 106.1/8.2	E3 106.3/8.2
8.2 - 9.2	9.2	E3 106.1/9.2	E3 106.3/9.2

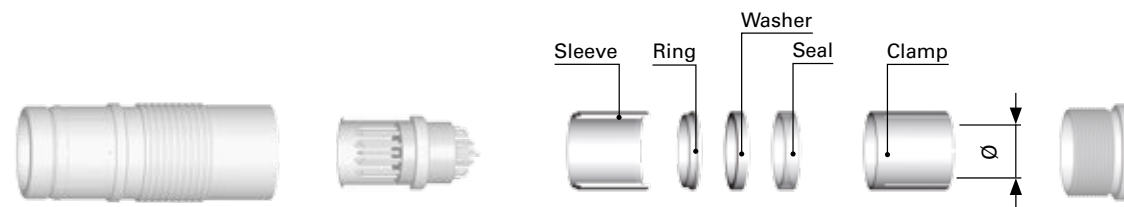
Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
9.2 - 10.2	10.2	E3 106.1/10.2	E3 106.3/10.2
10.2 - 11.2	11.2	E3 106.1/11.2	E3 106.3/11.2
11.2 - 12.2	12.2	E3 106.1/12.2	E3 106.3/12.2
12.2 - 13.2	13.2	E3 106.1/13.2	E3 106.3/13.2
13.2 - 14.2	14.2	E3 106.1/14.2	E3 106.3/14.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
14.2 - 15.2	15.2	E3 106.1/15.2	E3 106.3/15.2
15.2 - 16.2	16.2	E3 106.1/16.2	E3 106.3/16.2
16.2 - 17.2	17.2	E3 106.1/17.2	E3 106.3/17.2
17.2 - 18.2	18.2	E3 106.1/18.2	E3 106.3/18.2
18.2 - 19.2	19.2	E3 106.1/19.2	E3 106.3/19.2

Shielded cable clamps with washers and sleeves.

E
ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
4.2 - 5.2	5.2	E3 106.2/5.2	E3 106.4/5.2
5.2 - 6.2	6.2	E3 106.2/6.2	E3 106.4/6.2
6.2 - 7.2	7.2	E3 106.2/7.2	E3 106.4/7.2
7.2 - 8.2	8.2	E3 106.2/8.2	E3 106.4/8.2
8.2 - 9.2	9.2	E3 106.2/9.2	E3 106.4/9.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
9.2 - 10.2	10.2	E3 106.2/10.2	E3 106.4/10.2
10.2 - 11.2	11.2	E3 106.2/11.2	E3 106.4/11.2
11.2 - 12.2	12.2	E3 106.2/12.2	E3 106.4/12.2
12.2 - 13.2	13.2	E3 106.2/13.2	E3 106.4/13.2
13.2 - 14.2	14.2	E3 106.2/14.2	E3 106.4/14.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator	
		Standard	DKBE long housings
14.2 - 15.2	15.2	E3 106.2/15.2	E3 106.4/15.2
15.2 - 16.2	16.2	E3 106.2/16.2	E3 106.4/16.2
16.2 - 17.2	17.2	E3 106.2/17.2	E3 106.4/17.2
17.2 - 18.2	18.2	E3 106.2/18.2	E3 106.4/18.2

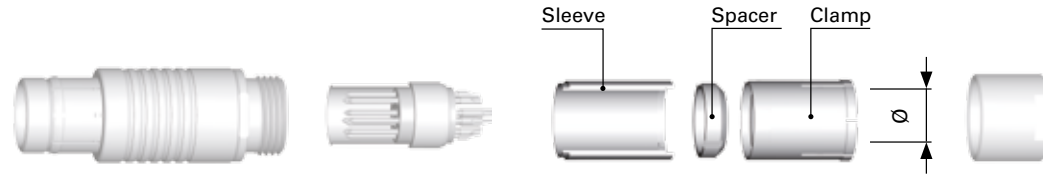
¹⁾ For ordering information see page B 1-40.



107 SERIES

S SHIELDED

Shielded cable clamp with sleeve, spacer and clamp.



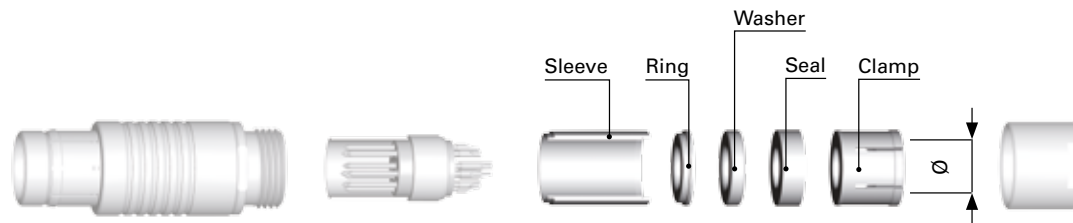
Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
5.7 - 7.2	7.2	E3 107.1/7.2
7.2 - 8.2	8.2	E3 107.1/8.2
8.2 - 9.2	9.2	E3 107.1/9.2
9.2 - 10.2	10.2	E3 107.1/10.2
10.2 - 11.2	11.2	E3 107.1/11.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
11.2 - 12.2	12.2	E3 107.1/12.2
12.2 - 13.2	13.2	E3 107.1/13.2
13.2 - 14.2	14.2	E3 107.1/14.2
14.2 - 15.2	15.2	E3 107.1/15.2
15.2 - 16.2	16.2	E3 107.1/16.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
16.2 - 17.2	17.2	E3 107.1/17.2
17.2 - 18.2	18.2	E3 107.1/18.2
18.2 - 19.2	19.2	E3 107.1/19.2
19.2 - 20.2	20.2	E3 107.1/20.2
20.2 - 21.2	21.2	E3 107.1/21.2
21.2 - 22.7	22.7	E3 107.1/22.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
5.7 - 7.2	7.2	E3 107.2/7.2
7.2 - 8.2	8.2	E3 107.2/8.2
8.2 - 9.2	9.2	E3 107.2/9.2
9.2 - 10.2	10.2	E3 107.2/10.2
10.2 - 11.2	11.2	E3 107.2/11.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
11.2 - 12.2	12.2	E3 107.2/12.2
12.2 - 13.2	13.2	E3 107.2/13.2
13.2 - 14.2	14.2	E3 107.2/14.2
14.2 - 15.2	15.2	E3 107.2/15.2
15.2 - 16.2	16.2	E3 107.2/16.2

Cable dia. range	Collet Ø	Cable clamp set ¹⁾ PTFE insulator
16.2 - 17.2	17.2	E3 107.2/17.2
17.2 - 18.2	18.2	E3 107.2/18.2
18.2 - 19.2	19.2	E3 107.2/19.2
19.2 - 20.2	20.2	E3 107.2/20.2
20.2 - 21.2	21.2	E3 107.2/21.2
21.2 - 22.7	22.7	E3 107.2/22.7

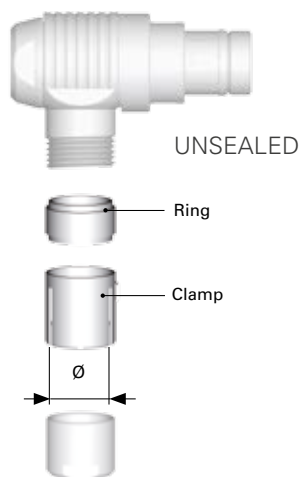
¹⁾ For ordering information see page B 1-40.

All dimensions and images shown are in millimeters and are for reference only.

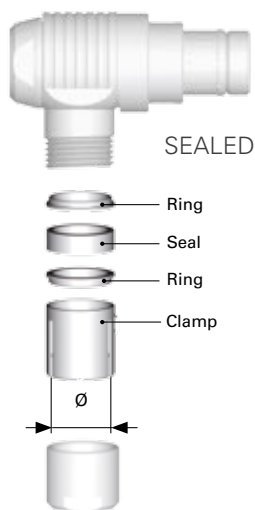


WSO 102, 103, 1031, 104 & 105 SERIES

S/U
SHIELDED/UNSHIELDED



E
ENVIRONMENTAL



Series	Cable dia. range	Clamp Ø	Cable clamp set ¹⁾	
			Unsealed	Sealed
102	1.5 - 2.1	2.1	E3 102.12/2.1	E3 102.13/2.1
	2.1 - 2.6	2.6	E3 102.12/2.6	E3 102.13/2.6
	2.6 - 3.1	3.1	E3 102.12/3.1	E3 102.13/3.1
	3.1 - 3.6	3.6	E3 102.12/3.6	E3 102.13/3.6
	3.6 - 4.1	4.1	E3 102.12/4.1	E3 102.13/4.1
	4.1 - 4.3	4.3	E3 102.12/4.3	E3 102.13/4.3
	4.3 - 4.7	4.7	E3 102.12/4.7	-
103	1.7 - 2.2	2.2	E3 103.12/2.2	E3 103.13/2.2
	2.2 - 2.7	2.7	E3 103.12/2.7	E3 103.13/2.7
	2.7 - 3.2	3.2	E3 103.12/3.2	E3 103.13/3.2
	3.2 - 3.7	3.7	E3 103.12/3.7	E3 103.13/3.7
	3.7 - 4.2	4.2	E3 103.12/4.2	E3 103.13/4.2
	4.2 - 4.7	4.7	E3 103.12/4.7	E3 103.13/4.7
	4.7 - 5.2	5.2	E3 103.12/5.2	E3 103.13/5.2
	5.2 - 5.7	5.7	E3 103.12/5.7	E3 103.13/5.7
	5.7 - 6.2	6.2	E3 103.12/6.2	E3 103.13/6.2
	6.2 - 6.7	6.7	E3 103.12/6.7	-

Series	Cable dia. range	Clamp Ø	Cable clamp set ¹⁾	
			Unsealed	Sealed
1031	2.2 - 2.7	2.7	E3 1031.12/2.7	E3 1031.13/2.7
	2.7 - 3.2	3.2	E3 1031.12/3.2	E3 1031.13/3.2
	3.2 - 3.7	3.7	E3 1031.12/3.7	E3 1031.13/3.7
	3.7 - 4.2	4.2	E3 1031.12/4.2	E3 1031.13/4.2
	4.2 - 4.7	4.7	E3 1031.12/4.7	E3 1031.13/4.7
	4.7 - 5.2	5.2	E3 1031.12/5.2	E3 1031.13/5.2
	5.2 - 5.7	5.7	E3 1031.12/5.7	E3 1031.13/5.7
	5.7 - 6.2	6.2	E3 1031.12/6.2	E3 1031.13/6.2
	6.2 - 6.7	6.7	E3 1031.12/6.7	E3 1031.13/6.7
	6.7 - 7.2	7.2	E3 1031.12/7.2	-

Series	Cable dia. range	Clamp Ø	Cable clamp set ¹⁾	
			Unsealed	Sealed
104	2.9 - 4.0	4.0	E3 104.12/4.0	E3 104.13/4.0
	4.0 - 4.7	4.7	E3 104.12/4.7	E3 104.13/4.7
	4.7 - 5.7	5.7	E3 104.12/5.7	E3 104.13/5.7
	5.7 - 6.7	6.7	E3 104.12/6.7	E3 104.13/6.7
	6.7 - 7.7	7.7	E3 104.12/7.7	E3 104.13/7.7
	7.7 - 8.7	8.7	E3 104.12/8.7	E3 104.13/8.7

Series	Cable dia. range	Clamp Ø	Cable clamp set ¹⁾	
			Unsealed	Sealed
105	3.2 - 4.2	4.2	E3 105.12/4.2	E3 105.13/4.2
	4.2 - 5.2	5.2	E3 105.12/5.2	E3 105.13/5.2
	5.2 - 6.2	6.2	E3 105.12/6.2	E3 105.13/6.2
	6.2 - 7.2	7.2	E3 105.12/7.2	E3 105.13/7.2
	7.2 - 8.2	8.2	E3 105.12/8.2	E3 105.13/8.2
	8.2 - 9.2	9.2	E3 105.12/9.2	E3 105.13/9.2
	9.2 - 10.0	10.0	E3 105.12/10.0	E3 105.13/10.0
	10.0 - 10.7	10.7	E3 105.12/10.7	E3 105.13/10.7

¹⁾ For ordering information see page B 1-40.



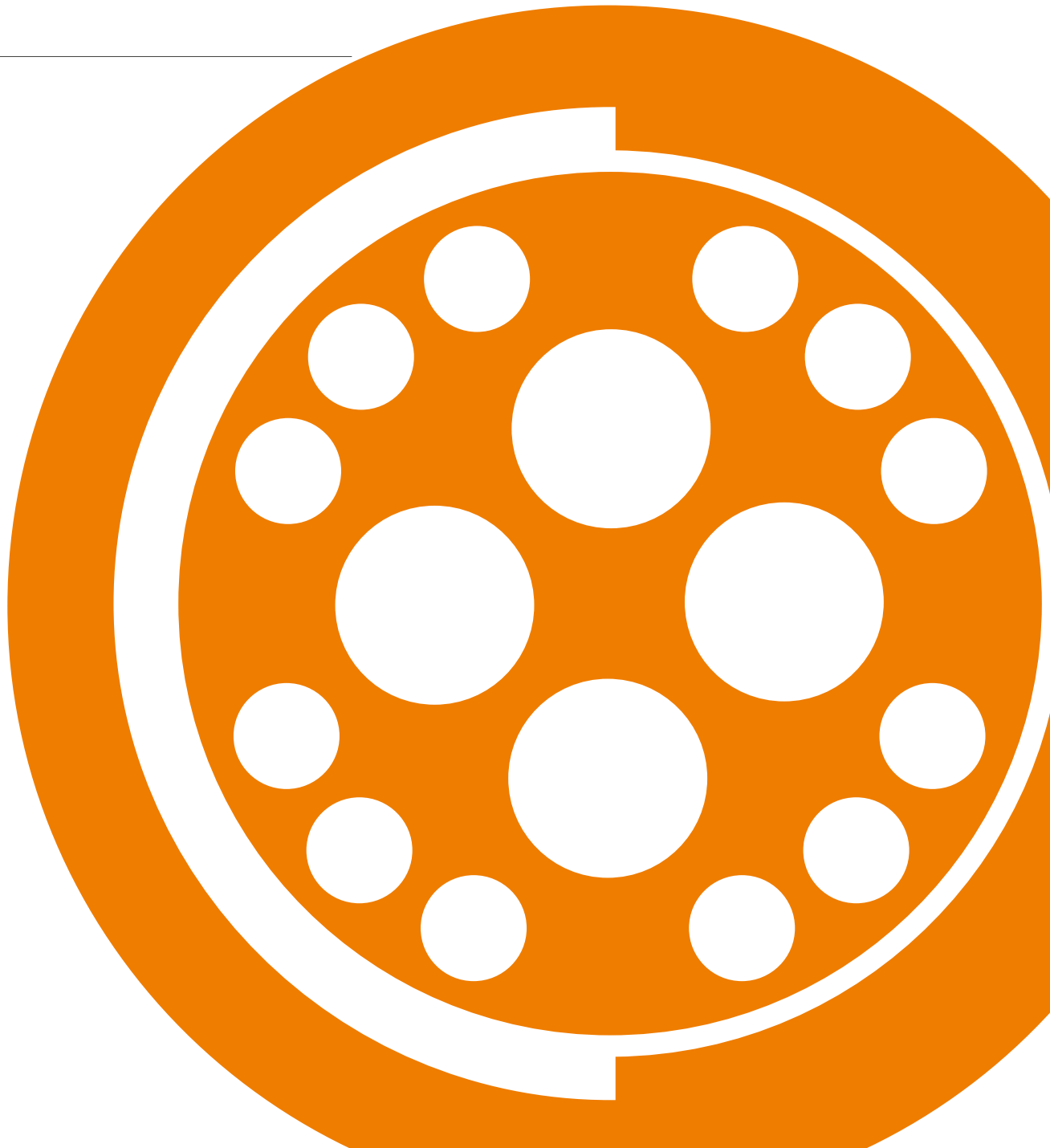


KEY FEATURES

- Wide range of body styles and sizes
- Unsealed or hermetic
- Power
- Up to 14 kV
- Standard or inverted polarity
- Individually insulated contacts
- Locking ring for integral safety

This catalog covers our standard connector solutions.

For specific requests, including hybrid or custom connectors, please contact your local sales representative.





PLUGS

CABLE MOUNTED



- Body style selection (S; SA; SV) B 2-2
- Technical dimensions B 2-3

RECEPTACLES

PANEL MOUNTED



- Body style selection (D; DEE; DBEE) B 2-5
- Technical dimensions B 2-6

FOR ALL MULTIPOLE HIGH VOLTAGE

- Electrical & contact configurations B 2-8
- Options B 1-36
- Insulating cable clamp sets B 2-10
- Cable assembly K 1
- Accessories B 8-1
- Tooling B 9-1
- Technical information B 11-1
- Cross-line technical information A 9



PLUGS

CABLE MOUNTED



Body style		S	SA	SV	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68	1)	1)	1)	
Locking system	Friction				Locking systems, section A, page A 11
	Push-pull	●	●	●	
	Quick-release				
	Lanyard		●		
	Tamperproof			●	
Contacts	Crimp				Electrical & contact configurations, page B6-6
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B1-35
	Black chrome	●	●		
Design	Shortened body				Body style selection, section B 2
	Right-angle				
Cabling	Cable clamp sets	●	●	●	Insulating cable clamps, B 2-10
	Overmoldable				
	Heat shrinkable				
Accessories	Cable bend reliefs	●	●	●	Accessories, section B 8-1
	Protective sleeves	●			
	Sealing caps	●	●	●	
Size	102 Series				Dimensions, page B 2-3
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series	●		●	
	107 Series	●		●	For more Information visit our website www.fischerconnectors.com/technical

¹⁾ Clamp sets for sealed or shielded connectors are available on request.

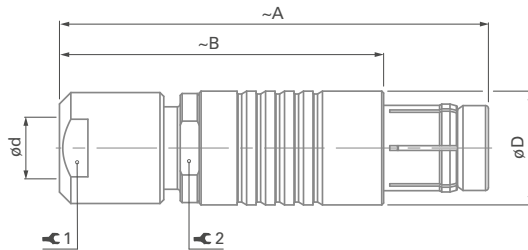


PLUGS

CABLE MOUNTED

S

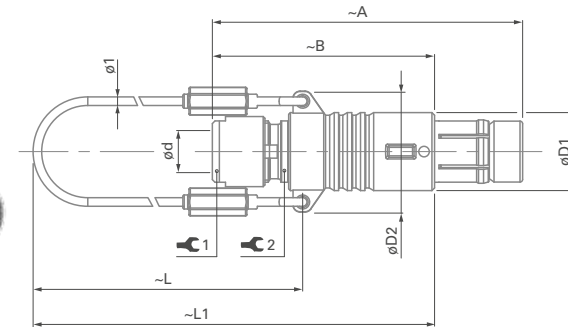
BODY STYLE



Series	A	B	D	d max	1	Torque 1 [Nm]	2
104	50	38	15	8.6	12	2.0	13
105	62	47	18	10.5	15	3.5	16
106	80	55	30	18.5	22	8.0	-
107	110	85	34	22.7	32	10.0	32

SA

BODY STYLE



Series	A	B	D1	D2	L	L1	d max	1	Torque 1 [Nm]	2
104	50	38	15	21	65	83	8.6	12	2.0	13
105	62	47	18	25	70	96	10.5	15	3.5	16
106	Please contact us for additional information									
107										

All dimensions and images shown are in millimeters and are for reference only.

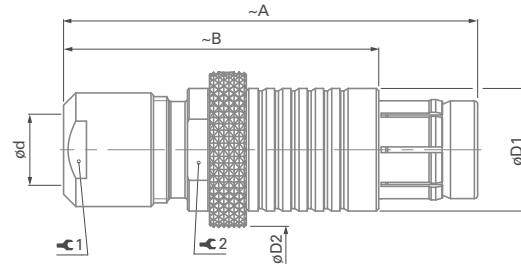


PLUGS

CABLE MOUNTED

SV

BODY STYLE



Series	A	B	D1	D2	d max	🔧 ₁	Torque 1 [Nm]	🔧 ₂
104	50	38	15	20	8.6	12	2.0	13
105	62	47	18	22	10.5	15	3.5	16
106	80	55	30	35	18.5	22	8.0	-
107	110	85	34	38	22.7	32	10	32

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



RECEPTACLES

PANEL MOUNTED



Body style		D	DEE	DBEE	Links to detailed information
Protection	Unsealed (IP50)	●			Sealing categories, section A, page A 12
	Sealed up to IP68 ¹⁾		●	●	
	Hermetic ¹⁾		●	●	
Contacts	Crimp				Electrical & contact configurations, page B 2-8
	Solder	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B 1-35
	Black chrome	●	●	●	
Design	Right-angle				Body style selection, section B 2
	Flush	●	●		
	Front-projecting			●	
	Bulkhead feedthrough				
Assembly	Front-mounting	●	●	●	
	Rear-mounting				
Accessories	Sealing caps	●	●	●	Accessories, section B 8-1
	Spacers		●		
	Color-coded washers	●			
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Series				Technical dimensions, page B 2-3 For more Information visit our website www.fischerconnectors.com/technical
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series	●	●	●	
	107 Series	●	●	●	

¹⁾ Please contact us.

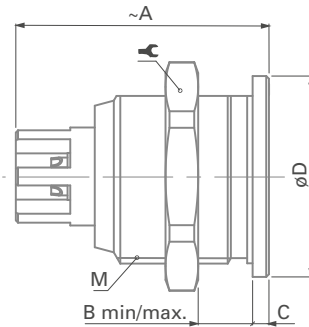


RECEPTACLES

PANEL MOUNTED

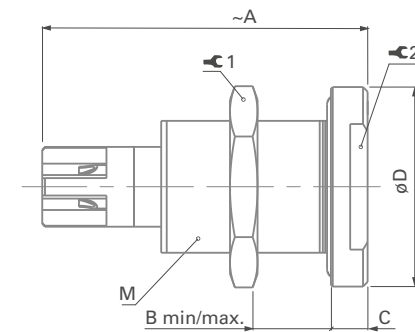
D

BODY STYLE



DEE

BODY STYLE



Series	A	B max.	C	D	M	⚗	Torque [Nm]
104	28	10.5	2.2	19	15x1	17	4.0
105	34	15.0	2	22	18x1	22	6.0
106	51	18.0	3	37	32x1	TX00.106	15
107	63	18.0	4	40	35x1	TX00.107	16

Series	A	B min/max.	C	D	M	⚗ ₁	Torque [Nm]	⚗ ₂
104	35	0/15.5	4	22	16x1	19	4.5	17
105	Please contact us for additional information							
106	54	19/24	5	41	32x1	TX00.106	15	-
107	64	19.2/22	5	45	35x1	TX00.107	16	-

Receptacles of 106 and 107 Series are supplied with slotted nuts.

For nut dimensions see Accessories section, page B 8-1.

For wrenches see section Tooling section, page B 9-1.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut.

Tests have to be made to evaluate the exact values.

Other connector styles and contact configurations are available on request.

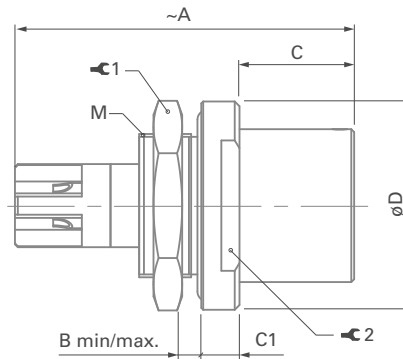


RECEPTACLES

PANEL MOUNTED

DBEE

BODY STYLE



Series	A	B max.	C	C1	D	M	⌘ 1	Torque [Nm]	⌘ 2
104	35.5	3.5	16	4	22	16x1	19	4.5	17
105	Please contact us for additional information								
106	54	6.5	25.5	7	40	32x1	TX00.106	15	–
107	64	5	24	5	45	35x1	TX00.107	16	38

All dimensions and images shown are in millimeters and are for reference only.



A/Z POLARITY

For Multipole High Voltage connectors, it is essential to pay attention to the differences between type "A" and "Z".

Type "A" standard polarity

The contacts of the receptacle are recessed to reduce the possibility of electric shock in the unmated position.

This version should be used when the voltage is sourced from the receptacle.

Type "Z" inverted polarity

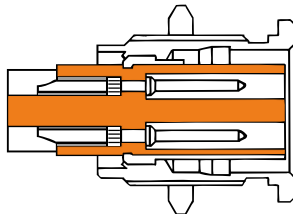
The contacts of the plug are recessed to reduce the possibility of electric shock in the unmated position.

This version should be used when the voltage is sourced from the plug.

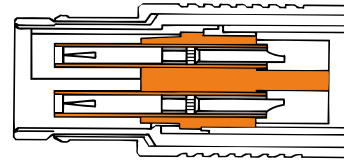
Protected contacts are usually female contacts recessed in the insulator. For Multipole High Voltage connectors, however, it is safer to recess the male contacts. In these cases, the plug type "A" is equipped with female contacts and the receptacle with protected male contacts.

EXAMPLE

**receptacle
type "A"**
D 105 A039



**plug
type "A"**
S 105 A039





104, 105, 106 & 107 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact termination		Insulating material	Contact ø [mm]	Wire barrel ø [mm]	Test voltage [kV] in mated position ⁴⁾				Current ¹⁾ [A]
			Solder	Crimp				AC rms		DC		
								Contact to body	Contact to contact	Contact to body	Contact to contact	
104 A ⁵⁾ Z 062		4	●		PEEK ⁵⁾	0.9	0.8	4.5	4.0	7.5	6.0	8.0
105 A 057 ⁶⁾		3	●		PTFE	1.3	1.2	4.5	6.0	6.0	8.0	14
105 A Z 039 ⁷⁾		5	●		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11
106 A Z 013 ⁸⁾⁹⁾		6	●		PTFE	1.3	1.2	8.0	8.0	12	12	12
107 A 034 ^{2) 3) 10)}		7	●		PTFE	2.0	2.0	8.0	7.5	14	14	20

¹⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

²⁾ For clamp sets selection see page B 1-47.

³⁾ See Tooling section, page B 9-6, for insertion tool of contacts.

⁴⁾ Measured with S plug and D receptacle.

⁵⁾ Only PTFE insulator and "A" polarity for DEE and DBEE body styles.

⁶⁾ Only available in D body style with "A" polarity.

⁷⁾ Only available in D body style. Contact us for other body style additional information.

⁸⁾ For DEE "A" polarity, the contact block is composed of two parts : one is PEEK and the second one is PTFE.

⁹⁾ DBEE only available with PEEK insulator and "A" polarity.

¹⁰⁾ Only available "A" polarity.



Multipole High Voltage connectors, as well as Mixed High Voltage and Mixed Coax connectors, are equipped with POM (Delrin®) collet type cable clamps.

These insulated one-piece clamps are fitted for optimal High-Voltage ratings.

Material

POM (Polyoxymethylene) Delrin®

Insulating cable clamp set is included with connector		
Multipole high voltage	Mixed high voltage	Mixed coax
Insulating clamp set \emptyset should be added to the connector part number separated by \emptyset (select the collet \emptyset according to the cable clamping range) and followed by - UI (Unshielded Insulated).		
Example		
S 104 A062-130 \emptyset 6.6 - UI		

104 series 4 pole high voltage S plug with insulating cable clamp set allowing cable diameter included between 4.7 & 6.6 mm

CONNECTOR TYPES WITH INSULATING CABLE CLAMPS

Series	Multipole high voltage	Mixed high voltage	Mixed coax
104	104 $\frac{A}{Z}$ 062	104 $\frac{A}{Z}$ 083	104 A 078
			104 A 093
105	105 $\frac{A}{Z}$ 039	105 A 020	105 A 074
	105 A 057	105 A 036	105 A 089
		105 A 060	105 A 095
		105 A 112	
106	106 $\frac{A}{Z}$ 013	106 A 014	
107	Insulating cable clamps set, not available. See page B1-47.		

Series	Cable dia. range	Collet \emptyset
104	2.4 - 3.4	3.4
	3.0 - 4.0	4.0
	3.6 - 4.6	4.6
	4.7 - 5.7	5.7
	4.7 - 6.6	6.6
	5.8 - 7.7	7.7
	6.2 - 8.1	8.1
	6.7 - 8.6	8.6
105	2.8 - 4.2	4.2
	4.1 - 5.5	5.5
	5.1 - 6.5	6.5
	6.1 - 7.5	7.5
	6.6 - 8.0	8.0
	7.1 - 8.5	8.5
	8.3 - 9.7	9.7
	9.1 - 10.5	10.5

Series	Cable dia. range	Collet \emptyset
106	4.3 - 5.7	5.7
	5.3 - 6.7	6.7
	5.8 - 7.2	7.2
	7.8 - 9.2	9.2
	9.8 - 11.2	11.2
	11.8 - 13.2	13.2
	13.8 - 15.2	15.2
	14.8 - 17.2	17.2
	17.1 - 18.5	18.5
107	Insulating cable clamps set. Not available.	





FISCHER CORE SERIES **BRASS** – **COAX LOW VOLTAGE**

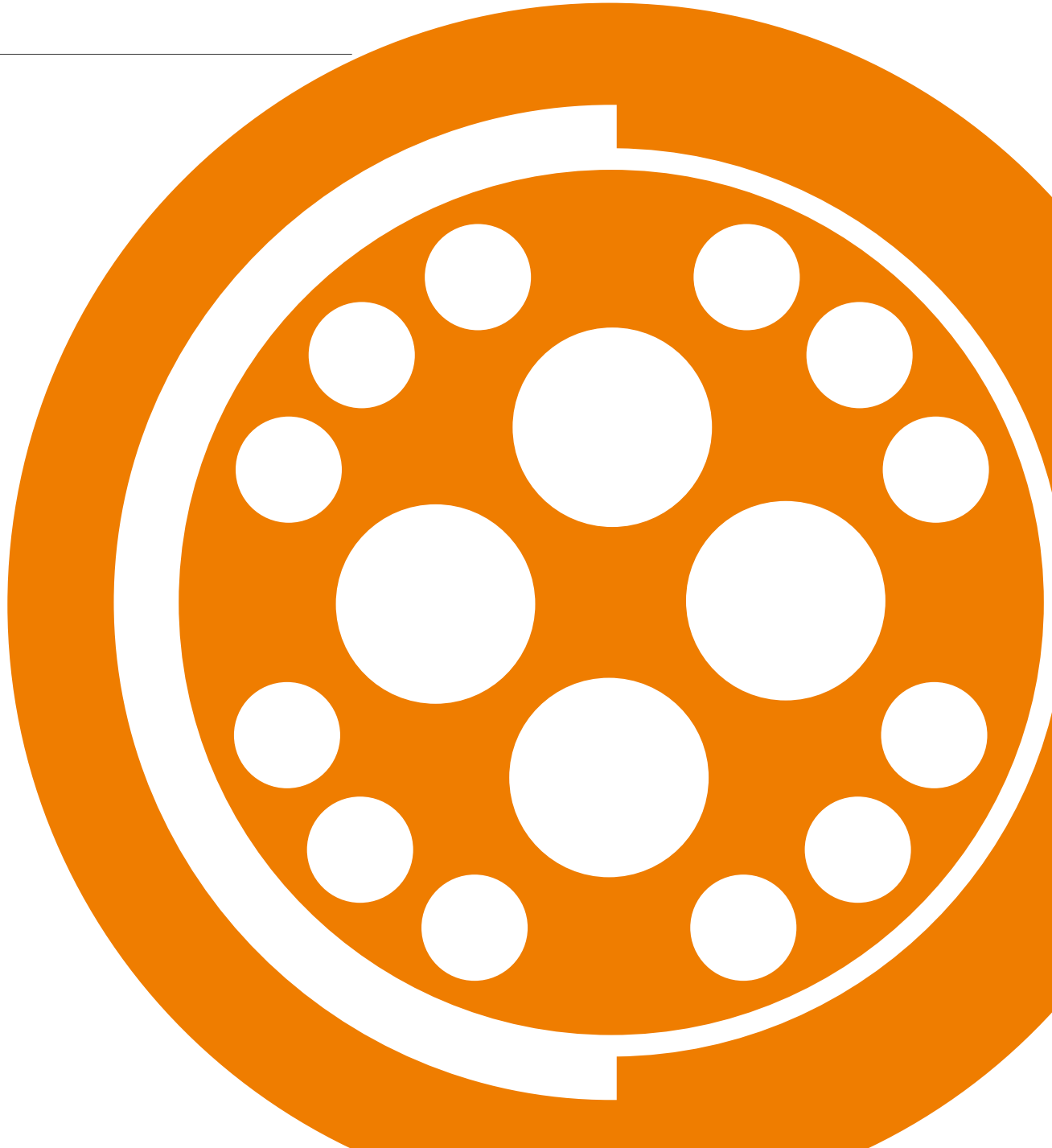
KEY FEATURES

- Wide range of body styles and sizes
- Unsealed, sealed or hermetic
- RF signal or power
- 50 and 75 Ohms impedance
- Up to 2GHz
- Standard or inverted polarity

This catalog covers our standard connector solutions. For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S/SC; SOV; SA; SV; WSO) B 3-2
- Technical dimensions B 3-3

PANEL MOUNTED



- Body style selection (SF; SFU/E; SFPU/E)..... B 3-15
- Technical dimensions B 3-16

RECEPTACLES

CABLE MOUNTED



- Body style selection (K/KE) B 3-6
- Technical dimensions B 3-7

PANEL MOUNTED



- Body style selection (D; DEU/E; DB; DBEU/E; DBP; DBPU/E; DBPLU/E; DG; WDE)..... B 3-8
- Technical dimensions B 3-10

PANEL MOUNTED CABLE



- Body style selection (DKBE; DK; DKE) B 3-18
- Technical dimensions B 3-19

FOR ALL COAX LOW VOLTAGE

- Electrical & contact configurations B 3-21
- Cable groups B 3-22
- Options B 3-24
- Cable clamp sets B 1-48

- Cable assembly K 1
- Accessories B 8-1
- Tooling B 9-1
- Technical information B 11-1
- Cross-line technical information A 9

**PLUGS****CABLE
MOUNTED**

Body style		S	SC	SOV	SA	SV	WSO	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68	●	●	●	●	●	●	
Locking system	Friction			●				Locking systems, section A, page A 11
	Push-pull	●			●	●	●	
	Quick-release		●					
	Lanyard				●			
Contacts	Tamperproof					●		Electrical & contact configurations, page B 3-21
	Crimp							
Housing color	Solder	●	●	●	●	●	●	Options, page B 3-24
	Natural chrome	●	●	●	●	●	●	
Design	Black chrome	●	●	●	●		●	Body style selection, B 2
	Shortened body							
Cabling	Right-angle						●	Cable clamp sets, B 1-40 Cable Assembly, section K 1
	Cable clamp sets	●	●	●	●	●	●	
	Overmoldable							
Accessories	Heat shrinkable							Accessories, section B 8-1
	Cable bend reliefs	●	●	●	●	●	●	
	Protective sleeves	●	●	●				
Size	Sealing caps	●	●	●	●	●	●	Technical dimensions, page B 3-3 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	●	●	●	
	103 Series	●	●	●	●	●	●	
	1031 Series							
	104 Series	●	●	●	●	●	●	
	105 Series	●	●	●	●	●	●	
106 Series								
	107 Series							

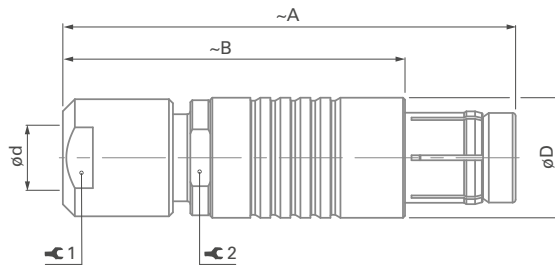


PLUGS

CABLE MOUNTED

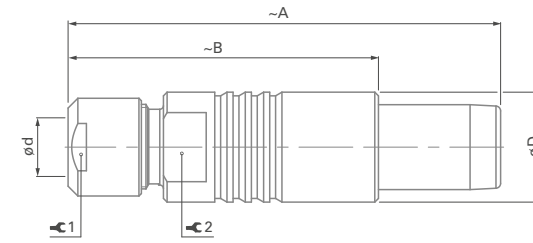
S/SC

BODY STYLES



SOV

BODY STYLE



Series	A	B	D	d _{max}		⚙️ 1	Torque 1 [Nm]	⚙️ 2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.7	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

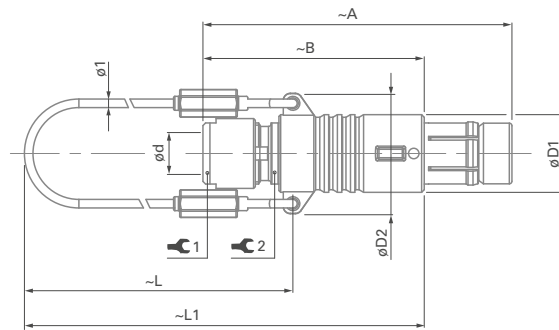
Series	A	B	D	d _{max}		⚙️ 1	Torque 1 [Nm]	⚙️ 2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.7	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

All dimensions and images shown are in millimeters and are for reference only.

**PLUGS****CABLE
MOUNTED****SA**

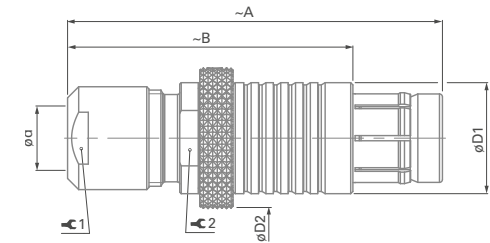
BODY STYLE



Series	A	B	D1	D2	L	L1	dmax		⌀ 1	Torque 1 [Nm]	⌀ 2
							Unsealed	Sealed			
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10
104	50	38	15	21	65	84	8.7	8.7	12	2.0	13
105	62	47	18	25	70	94	10.7	10.7	15	3.5	16

SV

BODY STYLE



Series	A	B	D1	D2	dmax		⌀ 1	Torque 1 [Nm]	⌀ 2
					Unsealed	Sealed			
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-
104	50	38	15	20	8.7	8.7	12	2.0	13
105	62	47	18	22	10.7	10.7	15	3.5	16

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket.

Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

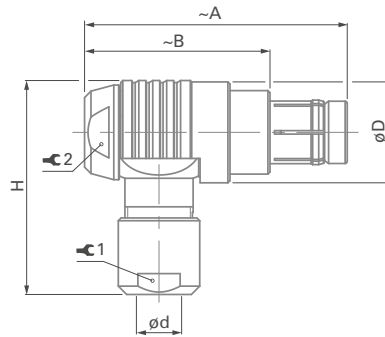


PLUGS

CABLE MOUNTED

WSO

BODY STYLE



Series	A	B	D	H	dmax		⚙ 1	Torque 1 [Nm]	⚙ 2	Torque 2 [Nm]
					Unsealed	Sealed				
102	33	23	12	25	4.7	4.3	7	0.6	8	1.0
103	38	27	15	31	6.7	6.2	10	1.0	11	1.3
104	45	32	19	37	8.7	8.7	12	2.0	14	2.5
105	53	38	23	45	10.7	10.7	15	3.5	17	3.5

All dimensions and images shown are in millimeters and are for reference only.

**RECEPTACLES****CABLE
MOUNTED**

Body style		K	KE	Links to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, section A, page A 12
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & contact configurations, page B3-21
	Solder	●	●	
Housing	Natural chrome	●	●	Options, page B3-24 Body style selection, section B2
	Black chrome	●	●	
	Shortened body			
Cabling	Cable clamp sets	●	●	Cable clamp sets, B 1-40 Cable assembly, section K 1
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, section B 8-1
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	102 Series	●	●	Technical dimensions, page B3-7 For more information visit: www.fischerconnectors.com/technical
	103 Series	●	●	
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series			

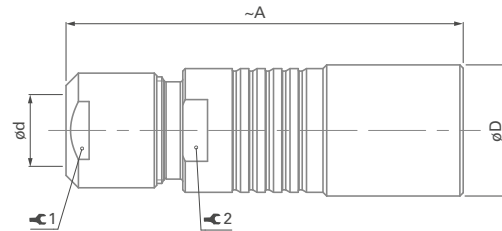


RECEPTACLES

CABLE MOUNTED

K/KE

BODY STYLES



Series	A	B	d _{max}		⚙️ 1	Torque 1 [Nm]	⚙️ 2
			Unsealed	Sealed			
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10
104	50	16	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16

Recommended values that may be influenced by the characteristics of the cable jacket.

Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



RECEPTACLES

PANEL MOUNTED



Body style		D	DEU	DEE	DB	DBEU	DBEE	DBP
Protection	Unsealed (IP50)	●			●			●
	Sealed up to IP68		●	●		●	●	
	Hermetic			●			●	
Contacts	Crimp							
	Solder	●	●	●	●	●	●	●
	PCB							
Housing color	Natural chrome	●	●	●	●	●	●	●
	Black chrome	●	●	●	●	●	●	●
Design	Right-angle							
	Flush	●	●	●				●
	Front projecting				●	●	●	
	Bulkhead feedthrough							
Assembly	Front-mounting	●	●	●	●	●	●	
	Rear-mounting							●
Accessories	Sealing caps	●	●	●	●	●	●	●
	Spacers		●	●				
	Color-coded washers	●			●			●
	Grounding washers	●	●	●	●	●	●	●
	Locking washers	●	●	●	●	●	●	●
Size	102 Series	●	●	●	●	●	●	●
	103 Series	●	●	●	●	●	●	●
	1031 Series							
	104 Series	●	●	●	●	●	●	●
	105 Series	●	●	●	●	●	●	●
	106 Series							
	107 Series							

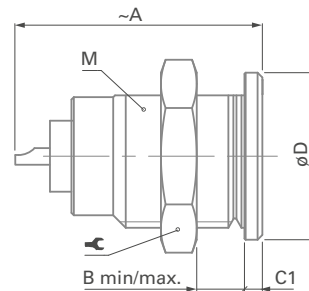
Body style selection



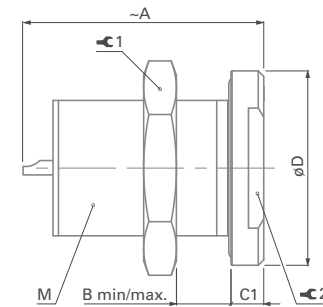
										
DBPU	DBPE	DBPLU	DBPLE	DG	WDE	Links to detailed information				
				•		Sealing categories, section A, page A 12				
•	•	•	•		•					
	•		•		•	Electrical & contact configurations, page B3-21				
•	•	•	•	•	•					
•	•	•	•	•	•	Options, page B3-24				
•	•	•	•	•	•					
•	•			•	•	Body style selection, section B 2				
		•	•	•	•					
				•	•					
•	•	•	•	•	•					
•	•	•	•	•	•	Accessories, section B 8-1				
				•	•					
•	•			•	•	Technical dimensions, page B3-10				
•	•	•	•	•	•					
•	•	•	•	•	•					
•	•	•	•	•	•					
•	•	•	•	•	•	For more information visit: www.fischerconnectors.com/technical				
•	•	•	•	•	•					

**RECEPTACLES****PANEL
MOUNTED****D**



BODY STYLE

**DEU/DEE**

BODY STYLES



Series	A	B max.	C1	D	M		Torque 1 [Nm]
102	19	9	1.5	11	9x0.5	11	1.3
103	23	8	1.5	14	12x1	14	2.5
104	25	11	2.2	19	15x1	17	4.0
105	32	15	2.0	22	18x1	22	6.0

Series	A	B min/max.	C1	D	M		Torque 1 [Nm]	
102	20	8/10	2.5	14	9x0.5	11	1.3	-
103	23	0/12	3.0	18	14x1	17	3.0	14
104	25	0/15	4.0	22	16x1	19	4.5	17
105	33	10.5/18	4.0	27	20x1	25	6.5	-

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests must be conducted to evaluate the exact values.

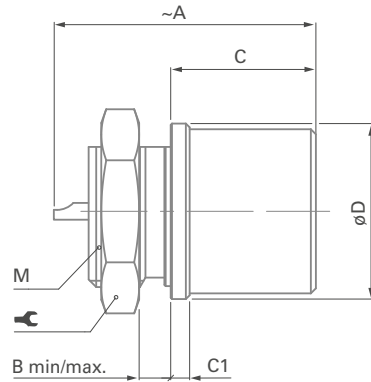


RECEPTACLES

PANEL MOUNTED

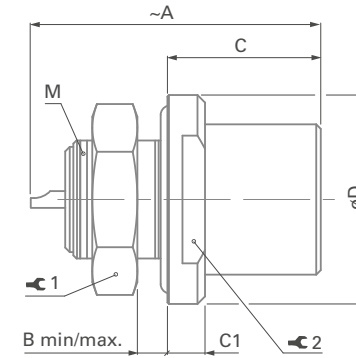
DB

BODY STYLE



DBEU/DBEE

BODY STYLES



Series	A	B _{max.}	C	C1	D	M	⌘	Torque [Nm]
102	18	3	11.0	1.0	11	9x0.5	11	1.3
103	21	4	11.5	1.5	14	12x1	14	2.5
104	26	3	14.5	2.5	19	16x1	19	4.5
105	33	7	19.0	2.0	22	18x1	22	6.0

Series	A	B _{max.}	C	C1	D	M	⌘ ₁	Torque 1 [Nm]	⌘ ₂
102	20	3.5	10.2	2.5	14	9x0.5	11	1.3	-
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14
104	30	3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	5.0	19.0	4.0	27	18x1	22	6.0	22

All dimensions and images shown are in millimeters and are for reference only.

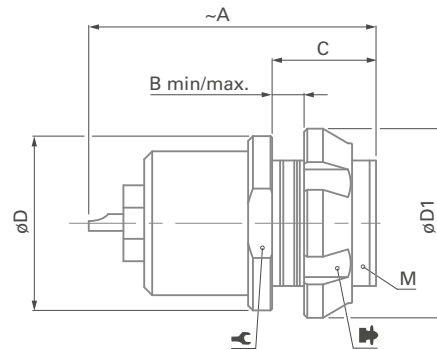


RECEPTACLES

PANEL MOUNTED

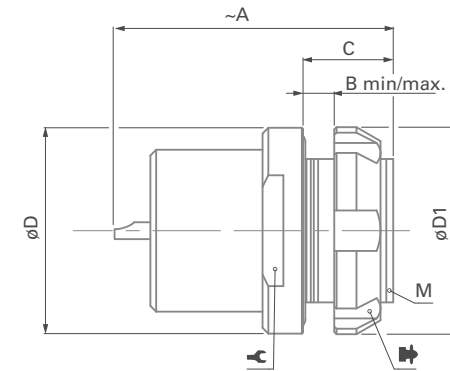
DBP

BODY STYLE



DBPU/DBPE

BODY STYLES



Series	A	B max.	C	D	D1	M		¹⁾	Torque [Nm]
102	20	3.5	6.5	11	12	9x0.5	10	TC00.000	1.3
103	23	4.0	8.0	14	15	12x1	-	TF00.001	2.5
104	26	5.0	9.0	19	19	15x1	-	TK00.000	4.0
105	30	12.0	17.0	22	23	18x1	-	TP00.011	6.0

Series	A	B max.	C	D	D1	M		¹⁾	Torque [Nm]
102	20	3.5	6.5	14	12	9x0.5	11	TC00.000	1.3
103	26	3.0	7.8	18	18	14x1	15	TG00.001	3.0
104	26	4.0	8.0	22	20	16x1	-	TK00.002	4.5
105	30	5.0	10.0	27	25	20x1	-	TP00.005	6.5

¹⁾ Assembly tool for decorative slotted nut, see Tooling session B 9-1 for details.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut.

Tests must be conducted to evaluate the exact values.

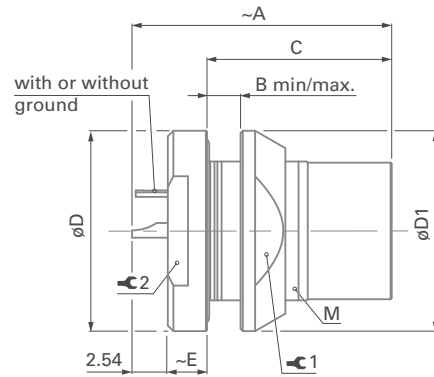


RECEPTACLES

PANEL MOUNTED

DBPLU/DBPLE

BODY STYLES

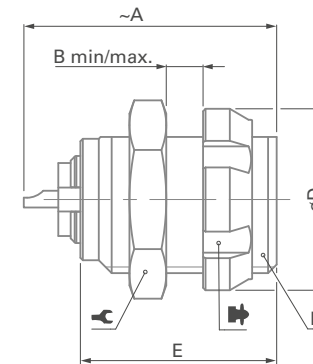


Series	A	B max.	C	D	D1	M	⌘ 1	Torque 1 [Nm]	⌘ 2
102	21	4.5	14.2	14	13	10x0.5	11	1.5	11
103	24	5.0	16.5	18	18	14x1	15	3.0	15
104	27	6.5	18.5	22	20	16x1	17	4.5	17
105	31	7.0	22.5	27	25	20x1	22	6.5	22

¹⁾ Assembly tool for decorative slotted nut, see Tooling section B 9, page B 9-1, for details.

DG

BODY STYLE



Series	A	B max.	D	E	M	⌘	⌘ ¹⁾	Torque [Nm]
102	20	6	12	14	9x0.5	11	TC00.000	1.3
103	23	7	15	15	12x1	14	TF00.001	2.5
104	26	9	19	18	15x1	17	TK00.000	4.0
105	30	15	23	24	18x1	22	TP00.011	6.0

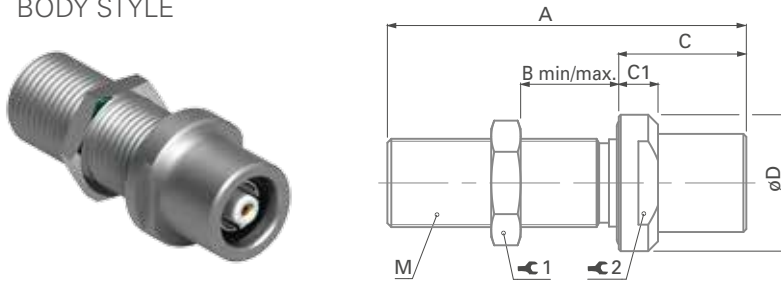


RECEPTACLES

PANEL MOUNTED

WDE FOR 102, 103 & 104 SERIES

BODY STYLE



Series	A	B _{max}	C	C1	D	M	⚙️ 1	Torque 1 [Nm]	⚙️ 2
102	39	23	13	4	14	9x0.5	11	1.3	11
103	40	23	14	4	17	12x1	14	2.5	14
104	40	21	16	4	22	15x1	17	4.0	17

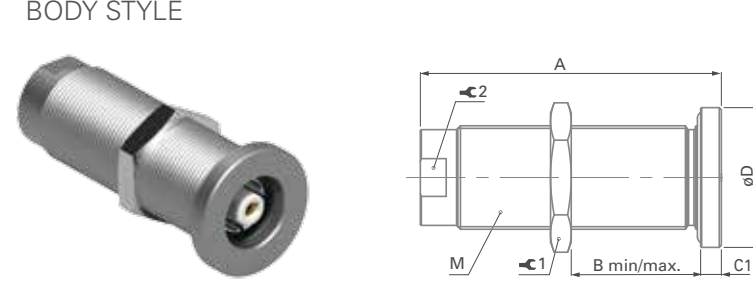
The bulkhead feedthrough connector allows the passing of electrical signals and power through a panel via two cable plugs.

The "AZ" version of the feedthrough accepts a type "A" plug on the flange side and a type "Z" plug on the threaded end, which is typically oriented toward the interior of the chassis. In the version "ZA", the connections "A" and "Z" are inverted, see "A/Z Polarity" on page A 16.

Dimension "B max" specifies the maximum panel thickness.

WDE FOR 105 SERIES

BODY STYLE



Series	A	B _{max}	C	C1	D	M	⚙️ 1	Torque 1 [Nm]	⚙️ 2
105	62	47	-	4	27	20x1	22	6.5	-



PLUGS

PANEL MOUNTED



Body style		SF	SFU	SFE	SFPU	SFPE	Links to detailed information
Protection	Unsealed (IP50)	●					Sealing categories, section A, page A 12
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp						Electrical & contact configurations, page B3-21
	Solder	●	●	●	●	●	
	PCB						
Housing color	Natural chrome	●	●	●	●	●	Options, page B3-24
	Black chrome	●	●	●	●	●	
Assembly	Front-mounting	●	●	●			Body style selection, section B 2
	Rear-mounting				●	●	
Accessories	Sealing caps	●	●	●	●	●	Accessories, section B 8-1
	Spacers						
	Color-coded washers	●					
	Insulating washers	●					
	Grounding washers	●	●	●			
	Locking washers	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	Technical dimensions, page B3-16 For more information visit: www.fischerconnectors.com/technical
	103 Series	●	●	●	●	●	
	1031 Series						
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series						
	107 Series						

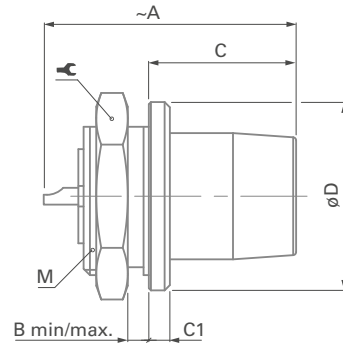


PLUGS

PANEL MOUNTED

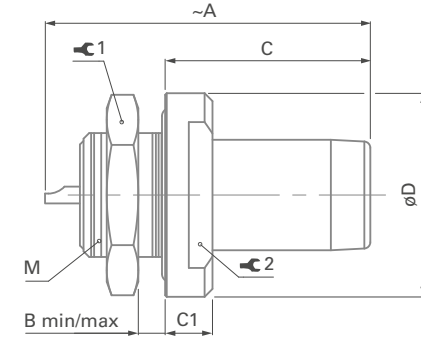
SF

BODY STYLE



SFU/SFE

BODY STYLES



Series	A	B _{max.}	C	C1	D	M	⌘	Torque [Nm]
102	20.0	4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	3.0	12.5	1.5	14	12x1	14	2.5
104	28.0	3.0	14.0	2.0	18	15x1	17	4.0
105	30.5	5.5	16.8	1.2	22	16x1	19	4.5

Series	A	B _{max.}	C	C1	D	M	⌘ ₁	Torque 1 [Nm]	⌘ ₂
102	21	2.5	13	3	13	9x0.5	11	1.3	9
103	26	5.0	14	3	17	12x1	14	2.5	12
104	28	7.5	15	3	22	16x1	19	4.5	-
105	32	6.0	19	4	27	20x1	25	6.5	-

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests must be conducted to evaluate the exact values.

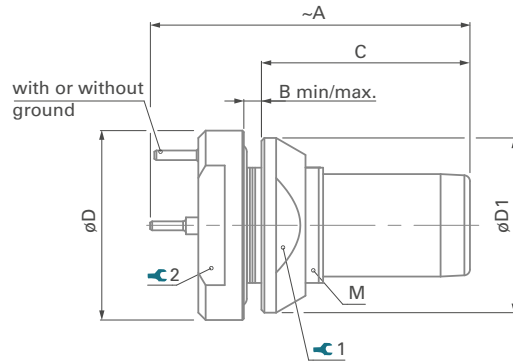


PLUGS

PANEL MOUNTED

SFPU/SFPE

BODY STYLES



Series	A	B _{max.}	C	D	D1	M	⌘ 1	Torque 1 [Nm]	⌘ 2
102	26.0	2.5	15.4	13	12	9x0.5	10	1.3	9
103	29.5	4.0	18.5	17	16	12x1	13	2.5	12
104	33.0	6.0	22.0	22	20	16x1	17	4.5	17
105	36.5	5.0	25.0	27	25	20x1	22	6.5	19

All dimensions and images shown are in millimeters and are for reference only.

**RECEPTACLES****PANEL
MOUNTED CABLE**

Body style		DKBE	DK	DKE	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, section A, page A 12
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & contact configurations, page B 3-21
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B 3-24
	Black chrome	●	●	●	
Design	Flush		●		Body style selection, section B 2
	Front-projecting	●		●	
Assembly	Panel-mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable mounted	●	●	●	
	Cable clamp sets	●	●	●	Cable clamp sets, B 1-40
Accessories	Cable bend reliefs	●	●	●	Accessories, section B 8-1
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●	●	
	Insulating washers				
	Grounding washers	●	●	●	
Size	Locking washers	●	●	●	Technical dimensions, page B 3-19 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	
	103 Series	●	●	●	
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
107 Series					

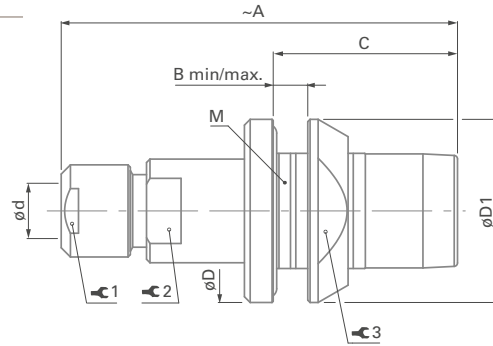


RECEPTACLES

PANEL MOUNTED CABLE

DKBE

BODY STYLE



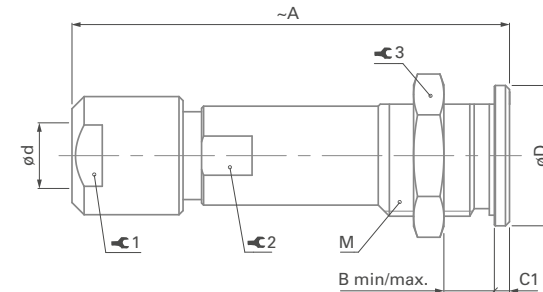
Series	A	B max.	C	D	dmax	D1	M
102	35	3.5	16.0	16	4.3	16	12x1
103	43	4.0	19.0	19	6.2	20	15x1
104	50	5.0	22.5	23	8.7	23	18x1
105	60	5.0	26.0	28	10.7	27	22x1

Series	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	7	0.6	7	13	2.5
103	10	1.0	10	17	4.0
104	12	2.0	13	20	6.0
105	15	3.5	16	24	8.0

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

DK

BODY STYLE



Series	A	B max.	C1	D	dmax	M
102	35	9	1.5	11	4.7	9x0.5
103	44	10	1.5	14	6.7	12x1
104	50	11	2.0	19	8.7	15x1
105	60	16	2.0	22	10.7	18x1

Series	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	7	0.6	-	11	1.3
103	10	1.0	9	14	2.5
104	12	2.0	12	17	4.0
105	15	3.5	14	22	6.0

All dimensions and images shown are in millimeters and are for reference only.

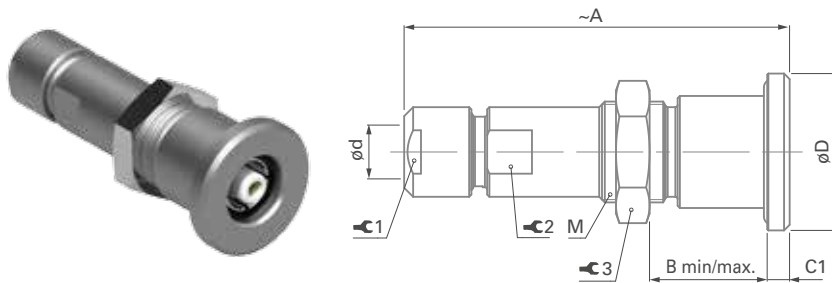


RECEPTACLES

PANEL MOUNTED CABLE

DKE FOR 102 & 103 SERIES

BODY STYLES

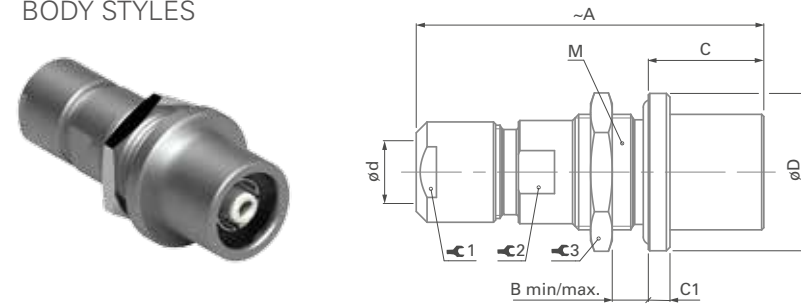


Series	A	B min/max.	C	C1	D	dmax	M
102	35	9/12	-	2	14	4.3	9x0.5
103	45	9/14	-	3	17	6.2	14x1

Series	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	7	0.6	7	11	1.3
103	10	1.0	10	17	3.0

DKE FOR 104 & 105 SERIES

BODY STYLES



Series	A	B max.	C	C1	D	dmax	M
104	50	8	16.0	3	22	8.7	16x1
105	61	9	19.0	4	27	10.7	20x1

Series	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
104	12	2.0	13	19	4.5
105	15	3.5	16	25	6.5



102, 103, 104 & 105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Contact types		Insulating material	Cable group ¹⁾	Contact ø [mm]	Wire barrel ø [mm]	Impedance [ohms]	Test voltage ³⁾ [kV] in mated position				Current ²⁾ [A]
		Solder ⁵⁾	Crimp						AC r.m.s.		DC		
									Contact to body	Contact to contact	Contact to body	Contact to contact	
102 A 001		●		PTFE	1/3/5	1.6	1.2	-	1.8	-	2.5	-	14
102 A Z 002		●		PTFE	1/2/3	0.9	0.8	50	3.0	-	5.0	-	10
102 A 017		●		PTFE ⁴⁾	1/2/3	0.7	0.6	75	1.7	-	2.8	-	7.0
103 A Z 001		●		PTFE	3/4/5	2.0	2.0	-	2.2	-	4.2	-	19
103 A Z 002		●		PTFE	1/2/6	1.3	1.2	75	3.8	-	5.4	-	12
103 A 026		●		PTFE	4/5/6	1.6	1.9	50	1.8	-	2.4	-	15
104 A 002		●		PTFE	6/7	1.6	1.9	75	4.8	-	6.8	-	15
104 A 012		●		PTFE	4/5/6/7	4.0	2.5	-	2.7	-	4.3	-	22
104 A 060		●		PTFE ⁴⁾	4/5/6/7	2.0	1.9	50	4.5	-	6.5	-	13
105 A Z 002		●		PTFE ⁴⁾	5/6/7/8	3.0	2.8	50	4.8	-	7.0	-	30
105 A Z 090		●		PTFE	6/7	1.3	1.2	75	6.4	-	11	-	13

¹⁾ See list of recommended cables on page B 3-22.

²⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

³⁾ Measured with S plug and D receptacle. Please contact us for ratings for WSO right-angle plugs and WDE bulkhead feedthroughs.

⁴⁾ PEEK is mainly used for hermetic connectors.

⁵⁾ Solder contact version of DBPLE/DBPLU with ground contact: Ground contact for wire size: max 0.79mm / AWG 21 [1] / AWG 22 [7/30].



FOR COAX, TRIAX & MIXED COAX CONNECTORS

Gr. No	Designation US MIL-C-17	Impedance ohms	Center conductor		Dielectric			Cable screen		Cable jacket		IEC publication 60096-2 or manufacturer
			Construction	ø [mm]	ø [mm]	Material	ø [mm]	Material	ø [mm]	Material		
0	RG-178B/U	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	1.8	FEP	50-1-1
	RG-196A/U	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	2.0	PTFE	50-1-2
1	RG-174A/U	50±2	7 x 0.16	AcCu	0.48	1.5	PE	2.0	CuSn	2.8	PVC	50-2-1
	RG-174/U	50±2	7 x 0.16	AcCu	0.48	1.5	PE	2.0	CuSn	2.6	PVC	
	RG-178B/U	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	1.8	FEP	50-1-1
	RG-188A/U	50±2	7 x 0.18	AcCuAg	0.54	1.5	PTFE	2.0	CuAg	2.6	FEP	50-2-3
	RG-196A/U	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	2.0	PTFE	50-1-2
	RG-316/U	50±2	7 x 0.18	AcCuAg	0.54	1.5	PTFE	2.0	CuAg	2.5	FEP	50-2-2
	RG-179B/U	75±3	7 x 0.1	AcCuAg	0.3	1.5	PTFE	2.0	CuAg	2.6	FEP	75-2-1
	LiYCY 1 x 0.14 mm ²	¹⁾	18 x 0.1	CuSn	0.5	1.1	PVC	1.6	CuSn	2.4	PVC	
LifYCY 1 x 0.04 mm ²	²⁾	20 x 0.05	CuSn	0.4	0.8	PVC	1.3	CuSn	1.6	PVC		
2	RG-180B/U	95±5	7 x 0.1	AcCuAg	0.3	2.6	PTFE	3.1	CuAg	3.6	FEP	Belden(USA)
	BELDEN 8218	75±3	7 x 0.14	AcCu	0.43	2.54	PE	3.0	CuSn	3.81	PVC	
3	RG-122/U	50±2	27 x 0.13	CuSn	0.8	2.5	PE	3.2	CuSn	4.1	PVC	
	LiYCY 1 x 0.25 mm ²	¹⁾	14 x 0.15	CuSn	0.66	1.3	PVC	1.8	CuSn	2.6	PVC	
	LiYCY 1 x 0.38 mm ²	²⁾	19 x 0.16	CuSn	0.8	1.4	PVC	2.0	CuSn	2.9	PVC	
4	RG-58C/U	50±2	19 x 0.18	CuSn	0.9	2.95	PE	3.6	CuSn	5.0	PVC	50-3-1
	RG-141A/U	50±2	1 x 0.95	AcCuAg	0.95	2.95	PTFE	3.6	CuAg	4.8	PTFE	50-3-7
	RG-142B/U	50±2	1 x 0.95	AcCuAg	0.95	2.95	PTFE	4.3	2x CuAg	5.0	FEP	
	RG-303/U	50±2	1 x 0.95	AcCuAg	0.95	2.95	PTFE	3.6	CuAg	4.3	FEP	
	RG-400/U	50±2	19 x 0.2	CuAg	1.0	2.95	PTFE	4.3	2x CuAg	5.0	FEP	
5	LiYCY 1 x 0.50 mm ²	¹⁾	16 x 0.2	CuSn	0.95	1.8	PVC	2.4	CuSn	3.1	PVC	
	LiYCY 1 x 0.75 mm ²	¹⁾	24 x 0.2	CuSn	1.2	2.0	PVC	2.6	CuSn	3.2	PVC	
	LifYCY 1 x 0.50 mm ²	²⁾	256 x 0.05	CuSn	1.0	2.0	PVC	2.6	CuSn	3.2	PVC	
	LifYCY 1 x 0.75 mm ²	²⁾	384 x 0.05	CuSn	1.2	2.2	PVC	2.8	CuSn	3.6	PVC	
6	RG-59B/U	75±3	1 x 0.6	AcCu	0.6	3.7	PE	4.5	Cu	6.1	PVC	50-3-5
	RG-223/U	50±2	1 x 0.89	CuAg	0.89	2.95	PE	4.2	2x CuAg	5.4	PVC	
	RG-302/U	75±3	1 x 0.64	AcCuAg	0.64	3.7	PTFE	4.4	CuAg	5.1	FEP	

¹⁾ Insulated, stranded wires with screen and jacket, standardized by the German VDE 0812, for low frequency applications when no defined impedance is required.

²⁾ Insulated, highly flexible stranded wires with screen and jacket, for low frequency applications when no defined impedance is required.

Legend

Cu	Plain copper wire	FEP	Fluorethylenpropylene	CSM	Hypalon® (DuPont)
CuAg	Silver plated copper wire	FPE	Foam polyethylene		
CuSn	Tin plated copper wire	PE	Polyethylene		
StCu	Copper-clad steel wire	PTFE	Polytetrafluorethylene		
StCuAg	Copper-clad steel wire, silver plated	PVC	Polyvinyl chloride		



Gr. No	Designation US MIL-C-17	Impedance ohms	Center conductor		Dielectric		Cable screen		Cable jacket		IEC publication 60096-2 or manufacturer	
			Construction	ø [mm]	ø [mm]	Material	ø [mm]	Material	ø [mm]	Material		
7	RG-212/U	50±2	1 x 1.35	CuAg	1.35	4.7	PE	6.2	2x CuAg	8.5	PVC	Suhner (CH)
	RG-222/U	50±2	1 x 1.37	CrNi	1.37	4.7	PE	6.2	2x CuAg	8.5	PVC	
	SUHNER G 05232	50±2	7 x 0.5	Cu	1.5	4.8	PE	5.6	Cu	7.4	PVC	
	RG-6A/U	75±3	1 x 0.73	AcCu	0.73	4.7	PE	6.2	CuAg	8.5	PVC	
8	RG-115A/U	50±2	7 x 0.75	CuAg	2.25	6.5	PTFE	8.0	2 x CuAg	10.5	PTFE	50-7-8 50-7-1 75-7-1
	RG-165/U	50±2	7 x 0.82	CuAg	2.46	7.25	PTFE	8.0	CuAg	10.4	PTFE	
	RG-213/U	50±2	7 x 0.75	Cu	2.25	7.25	PE	8.2	Cu	10.3	PVC	
	RG-11A/U	75±3	7 x 0.4	CuSn	1.2	7.25	PTFE	8.2	Cu	10.3	PVC	
9	RG-214/U	50±2	7 x 0.75	CuAg	2.25	7.25	PE	8.7	2 x CuAg	10.8	PVC	
	RG-217/U	50±2	1 x 2.7	Cu	2.7	9.4	PE	11.2	2 x Cu	13.8	PVC	
	RG-280/U	50±2	1 x 2.9	Cu	2.9	8.3	PTFE	9.8	2 x CuAg	12.2	PVC	
	RG-12A/U	75±3	RG-11A/U	armoured with zinc plated steel braid		11.8	FeZn	14.0	PVC			
RG-34B/U	75±3	7 x 0.62	Cu	1.86	11.5	PE	12.4	Cu	16.0	PVC		
10	RG-177/U	50±2	1 x 5.0	Cu	5.0	17.3	PE	18.8	2x CuAg	22.7	PVC	50-17-1 75-17-1
	RG-218/U	50±2	1 x 5.0	Cu	5.0	17.3	PE	18.6	Cu	22.1	PVC	
	RG-164/U	75±3	1 x 2.65	Cu	2.65	17.3	PE	18.6	Cu	22.1	PVC	
11	RG-403/U	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	1.9	FEP	Habia (UK)
	Triaxial					2. screen and jacket :	2.4	CuAg	3.1	FEP		
	RG-178	50±2	7 x 0.1	AcCuAg	0.3	1.6	PTFE	1.8	CuAg	2.6	FEP	Filotex (F)
	Type Triax					2. screen and jacket :	2.9	CuAg	3.6	FEP		
SUHNER G 02332	50±2	7 x 0.15	Cu	0.49	1.5	PE	2.0	Cu	2.55	PVC	Suhner (CH)	
Triaxial					2. screen and jacket :	3.0	Cu	4.25	PVC			
12	BELDEN 9222	50±2	7 x 0.32	CuSn	0.93	2.95	PE	3.5	CuSn	4.65	PE	Belden (USA)
	RG-58 Type Triax					2. screen and jacket :	5.2	CuSn	6.1	PVC		



COAX LOW & HIGH VOLTAGE, TRIAX & MIXED COAX

		NATURAL CHROME without guide mark	BLACK CHROME without guide mark
1	Housing color Which housing color do you need?		
2	Contact block material	PTFE	PTFE
3	Contact type	Solder	Solder
4	Keying code None	-600	-700

CONTACT TYPES FOR PANEL MOUNTED CONNECTORS

Applicable for	Last digit	Description
Front mounted: D - DEU/E - DB - DBEU/E - DG - SF - SFU/E	0	Solder contacts
Rear mounted: DBP - DBPU/E - DBPLU/E - DGP - SFPU/E	9	Solder contacts

DESIGN AND ACCESSORIES

Applicable for	Extensions	Description
Receptacles	N	Nickel plated body with bright finish
	E	EPDM interface O-ring
	G	Ground tag
	B	Black nut
	D	Decorative slotted nut
	F	Decorative nut (with 2 flats)

Other options are available on request, please contact us.



EXAMPLES

Plugs

SV 103 A002 - 600 Ø6.7

Natural chrome housing color with PTFE contact block, solder contacts and cable clamp set (diameter 6.7 mm)

S 104 A060 - 600 Ø3.4-UI

Natural chrome housing color with PTFE contact block, solder contacts and insulating clamp set (diameter 3.4 mm)

Receptacles

DBPLE 102 A002 - 709EGD

Black chrome housing color with PTFE contact block, solder contacts, EPDM interface O-ring, ground tag and decorative slotted nut

DKBE 103 A026 - 600 Ø6.2E

Natural chrome housing color with PTFE contact block, solder contacts, cable clamp set (diameter 6.2 mm) and EPDM interface O-ring



FISCHER CORE SERIES **BRASS** – **COAX HIGH VOLTAGE**

KEY FEATURES

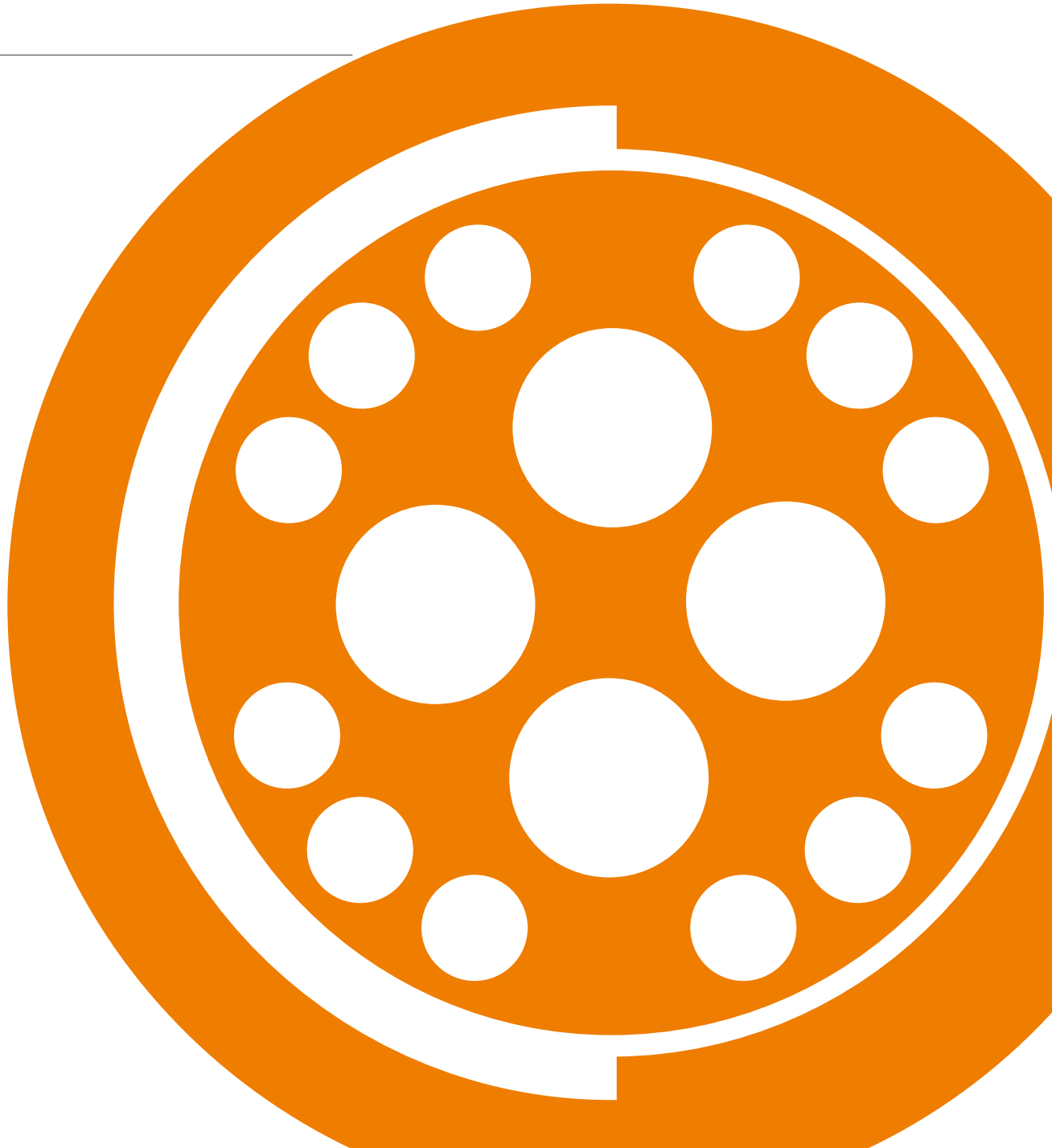
- Unsealed, sealed or hermetic
- RF signal or power
- 50 and 75 Ohms impedance
- Standard or inverted polarity
- No guide mark is standard
- Up to 50kV

This catalog covers our standard connector solutions.

For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S; SE; SV; SVE) B 4-2
- Technical dimensions B 4-3

RECEPTACLES

PANEL MOUNTED



- Body style selection (D; DEE) B 4-4
- Technical dimensions B 4-5

FOR ALL COAX HIGH VOLTAGE

- Electrical & contact configurations B 4-7
- Cable groups B 3-22
- Options B 3-24
- Cable clamp sets B 1-39

- Cable assembly K 1
- Accessories B 8-1
- Tooling B 9-1
- Technical information B 11-1
- Cross-line technical information A 9



PLUGS

CABLE MOUNTED



Body style		S	SE	SV	SVE	Links to detailed information
Protection	Unsealed (IP50)	●		●		Sealing categories, section A, page A 12
	Sealed up to IP68		●		●	
Locking system	None					Locking systems, section A, page A 11
	Push-pull	●	●	●	●	
	Quick-release					
	Lanyard					
Contacts	Tamperproof			●	●	Electrical & contact configurations, page B 4-7
	Crimp					
Housing color	Solder	●	●	●	●	Options, page B 3-24
	Natural chrome	●	●	●	●	
Design	Black chrome	●	●			Body style selection, section B 2
	Shortened body					
Cabling	Right-angle					Cable clamp sets, page B 1-39 Cable assembly, section K 1
	Cable clamp sets	●	●	●	●	
	Overmoldable					
Accessories	Heat shrinkable					Accessories, section B 8-1
	Cable bend reliefs	●	●	●	●	
	Protective sleeves	●	●			
Size	Sealing caps	●	●	●	●	Technical dimensions, page B 4-3 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	●	
	103 Series	●	●	●	●	
	1031 Series					
	104 Series	●	●	●	●	
	105 Series	●	●	●	●	
	106 Series					
107 Series	●	●	●	●		

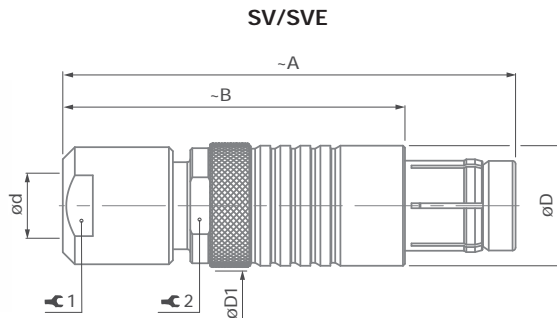
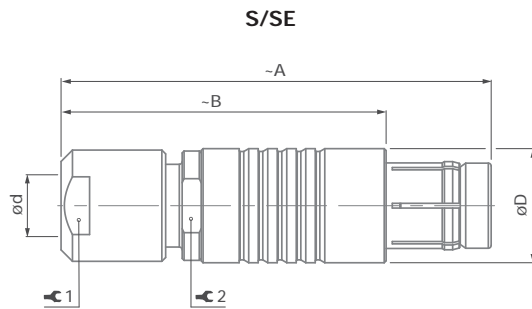


PLUGS

CABLE MOUNTED

S/SE & SV/SVE

BODY STYLES



¹ Cable screen and jacket (e.g. RG-58) are retained by hex-crimp to the plug shell.

² For improved safety, the center contact is further recessed than in the S 105 A049.

³ Two wrenches with an opening of 32 mm are required for SV/SVE 107 series.

⁴ For insertion of center contact which has to be assembled after wiring, we recommend tool TP00.000, as shown on the Tooling section, page B 9-6.

All dimensions and images shown are in millimeters and are for reference only.

Type	A	B	D	D1	Dmax		⚙️ 1	Torque 1 [Nm]	⚙️ 2
					Unsealed	Sealed			
102 A Z 018	36	26	9	11	4.7	4.3	7	0.6	7
102 A Z 025	60	46	9	-	5.2	-	Crimping tool and dies ¹⁾ TX00.241 & TX00.251		
103 A Z 023	46	35	12	13	6.7	6.2	10	1.0	10
104 A Z 010	50	38	15	20	8.7	8.7	12	2.0	13
105 A Z 004	62	47	18	22	10.7	10.7	15	3.5	16
105 A Z 005	62	47	18	22	10.7	10.7	15	3.5	16
105 A Z ⁴⁾ 049	90	60	18	22	10.7	10.7	15	3.5	16
105 A 108 ²⁾	100	60	18	-	10.7	-	15	3.5	16
107 A Z 003	110	85	34	38	22.7	-	32	10	32
107 A 004	137	112	34	38	22.7	-	30	10	32
107 A Z 017	137	112	34	38	22.7	22.7	30 ³⁾	10	32

Suitable Coax cables are indicated in the column "Cable Group" in Electrical & Contact specifications. The cable specifications are listed on page B 3-22. If required, we will supply adapter sleeves which must be placed over the cable dielectric during assembly in order to guarantee proper performance. For cable clamps sets see page B 1-39. For non-sealed Coax connectors, the collet diameter has to be selected from the tables of type "S-Shielded", and for sealed Coax connectors from the tables of type "Environmental".

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



RECEPTACLES

PANEL MOUNTED



Body style		D	DEE	Links to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, section A, page A 12
	Sealed up to IP68		●	
	Hermetic		●	
Contacts	Crimp			Electrical & contact configurations, page B 4-7
	Solder	●	●	
	PCB			
Housing color	Natural chrome	●	●	Options, page B 3-24
	Black chrome	●	●	
Design	Right-angle			Body style selection, section B 2
	Flush	●	●	
	Front-projecting			
	Bulkhead feedthrough			
Assembly	Front-mounting	●	●	
	Rear-mounting			
Accessories	Sealing caps	●	●	Accessories, section B 8-1
	Spacers		●	
	Color-coded washers	●		
	Grounding washers	●	●	
	Locking washers	●	●	
Size	102 Series	●	●	Technical dimensions, page B 4-3
	103 Series	●	●	
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series	●	●	
				For more information visit: www.fischerconnectors.com/technical

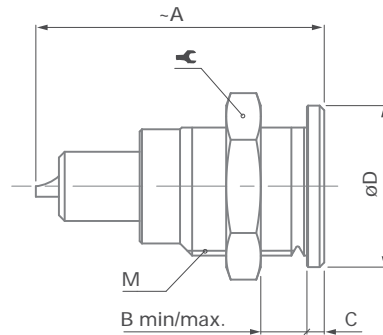


RECEPTACLES

PANEL MOUNTED

D

BODY STYLE



Types	A	B max.	C	D	M		Torque [Nm]
102 $\frac{A}{Z}$ 018	24	8	1.5	11	9x0.5	11	1.3
102 $\frac{A}{Z}$ 025	45	7	2.0	11	9x0.5	11	1.3
103 $\frac{A}{Z}$ 023	27	7	1.5	14	12x1	14	2.5
104 $\frac{A}{Z}$ 010	35	10	2.5	19	15x1	17	4.0
105 $\frac{A}{Z}$ 004	46	15	2.0	22	18x1	22	6.0
105 $\frac{A}{Z}$ 005 ¹⁾	46	15	2.0	22	18x1	22	6.0
105 $\frac{A^2}{Z}$ 049 ¹⁾	63 68	13	2.0	22	18x1	22	6.0
105 A 108 ²⁾	59	13	2.0	22	18x1	22	6.0
107 $\frac{A}{Z}$ 003	72	18	4.0	40	35x1	TX00.107	16
107 A 004	89	18	4.0	40	35x1	TX00.107	16
107 $\frac{A}{Z}$ 017	89	18	4.0	40	35x1	TX00.107	16

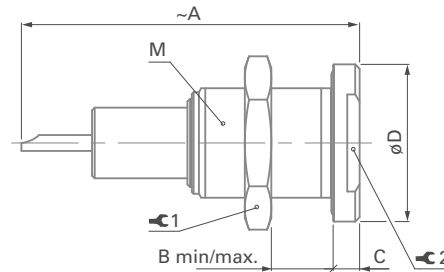
¹⁾ Also available with an optional micro switch.

²⁾ For insertion of center contact which has to be assembled after wiring we recommend tool TP00.000, as shown on the Tooling section, page B9-6.

All dimensions and images shown are in millimeters and are for reference only.

**RECEPTACLES****PANEL MOUNTED****DEE**

BODY STYLE



Types	A	B min/max.	C	D	M	⚙️ 1	Torque 1 [Nm]	⚙️ 2
102 $\frac{A}{Z}$ 018	26	8/12	2	14	9x0.5	11	1.3	11
102 $\frac{A}{Z}$ 025 ¹⁾	45	0.5/7	2	15	11x0.75	14	2.0	-
103 $\frac{A}{Z}$ 023	39 38	12	3	18	14x1	17	3.0	14
104 $\frac{A}{Z}$ 010	41 40	15	4	22	16x1	19	4.5	17
105 $\frac{A}{Z}$ 005 ²⁾	46 50	10.5/18	4	27	20x1	25	6.5	-
105 $\frac{A}{Z}$ 049 ²⁾	72 74	10.5/30	4	27	20x1	25	6.5	-
107 $\frac{A}{Z}$ 003	73	19.2/22	5	45	35x1	TX00.107	16	-
107 $\frac{A}{Z}$ 017	90 95	19.2/22	5	45	35x1	TX00.107	16	-

¹⁾ Non standard dimension of panel cut-out: ø11.1²⁾ Also available with an optional micro switch.

Receptacles of 106 and 107 series are supplied with slotted nuts.
For wrenches see Tooling section page B 9-1.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.



102, 103, 104, 105 & 107 SERIES

● = Standard ○ = Option

Reference	Pin layout	Contact types		Insulating material ⁷⁾	Cable group ¹⁾	Contact \varnothing [mm]	Wire barrel \varnothing [mm]	Impedance [ohms]	Test voltage ⁶⁾ [kV] in mated position				Current ²⁾ [A]
		Solder	Crimp						AC r.m.s		DC		
									Contact to body	Contact to contact	Contact to body	Contact to contact	
102 A Z 018		●	●	PTFE	1/2	0.9	0.8	-	5.0	-	8.0	-	10
102 A Z 025		●	● ³⁾	PTFE	4	0.9	0.8	50	7.0	-	11	-	10
103 A Z 023		●		PTFE	4/6	1.3	1.2	50	6.0	-	10	-	12
104 A Z 010		●		PTFE	4/5/6/7	2.0	1.9	-	7.0	-	10	-	13
105 A Z 004		●		PTFE	5/7/8	4.0	3.0	40	9.0	-	13	-	32
105 A Z 005 ⁵⁾		● ○		PTFE PEEK	4/6/7	2.0	2.1	75	9.0	-	14	-	20
105 A Z 049 ⁵⁾		●		PTFE	4/6/7/8	2.0	2.3	-	11	-	19	-	35
105 A 108 ⁴⁾⁵⁾		●		PTFE	4/6/7/8	2.0	2.5	-	14	-	20	-	23
107 A Z 003		●		PTFE	7/8/9	4.0	2.8	75	14	-	25	-	45
107 A 004		●		PTFE	7/8/9	4.0	2.8	75	30	-	50	-	45
107 A Z 017		●		PTFE	7/8/9/10	5.0	5.1	50	30	-	50	-	60

¹⁾ See list of recommended cables on page B3-22.

²⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

³⁾ Plug: center contact-crimp / Outer contact-crimp ferrule.
Receptacle: center contact-solder / Outer contact-washer with solder tag.

⁴⁾ Plug contains additionally recessed contacts.

⁵⁾ See Tooling section, page B9-6, for insertion tool of contact.

⁶⁾ Measured with S plug and D receptacle.

⁷⁾ PEEK is mainly used for hermetic connectors.



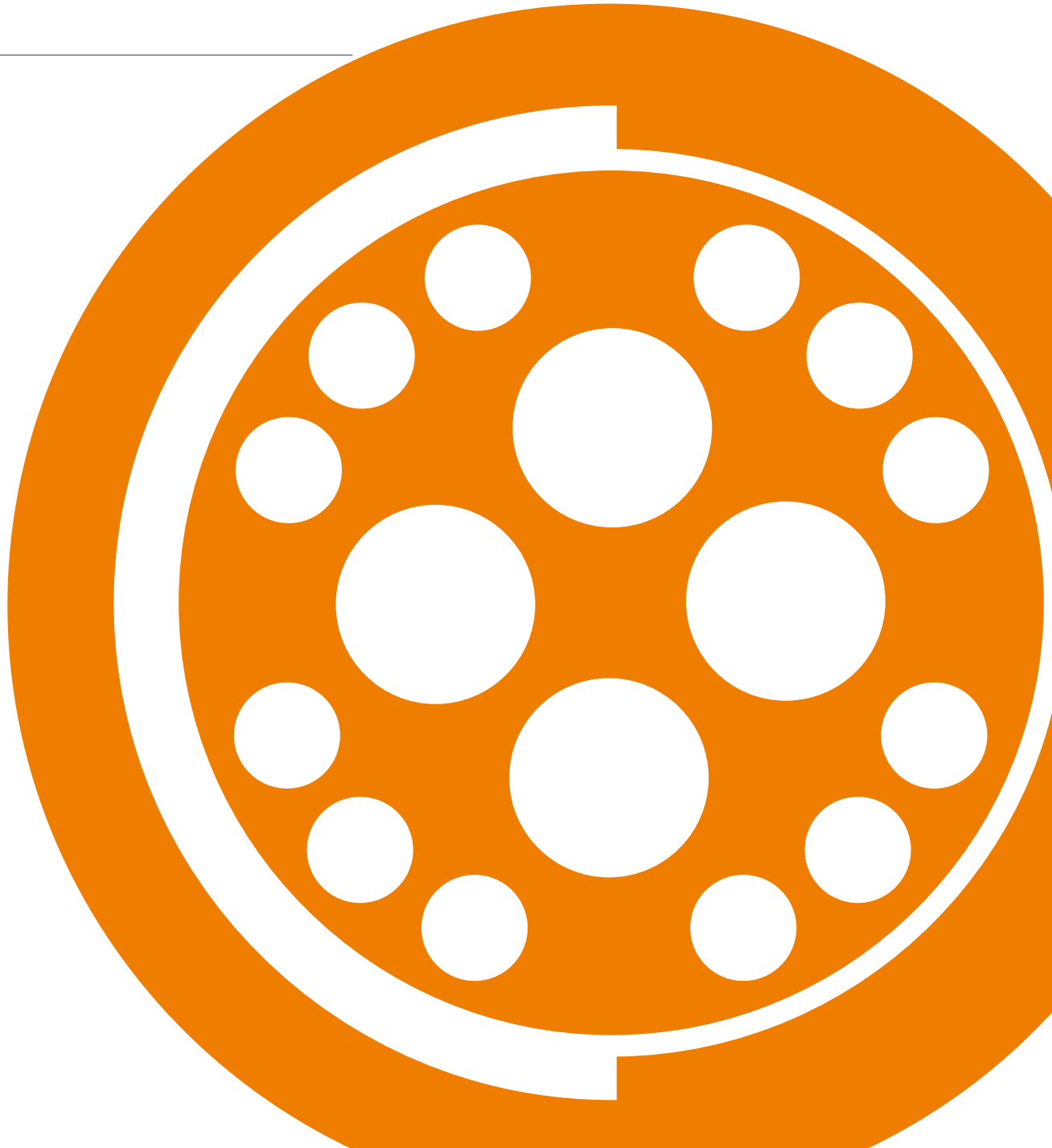
KEY FEATURES

- Wide range of body styles and sizes
- Unsealed, sealed or hermetic
- RF signal or power
- 50 Ohms impedance
- No guide mark is standard

This catalog covers our standard connector solutions. For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S/SC; SOV; SA; SV; WSO)..... B 5-2
- Technical dimensions..... B 5-3

PANEL MOUNTED



- Body style selection (SF; SFU; SFE)..... B 5-12
- Technical dimensions..... B 5-13

RECEPTACLES

CABLE MOUNTED



- Body style selection (K; KE)..... B 5-6
- Technical dimensions..... B 5-7

PANEL MOUNTED



- Body style selection (D; DEU; DEE; DB; DBEU; DBEE; DG)..... B 5-8
- Technical dimensions..... B 5-9

PANEL MOUNTED CABLE



- Body style selection (DKBE; DK; DKE)..... B 5-14
- Technical dimensions..... B 5-15

FOR ALL TRIAX

- Electrical & contact configurations..... B 5-17
- Cable groups..... B 3-22
- Options..... B 3-24
- Cable clamp sets..... B 1-39

- Cable assembly..... K 1
- Accessories..... B 8-1
- Tooling..... B 9-1
- Technical information..... B 11-1
- Cross-line technical information..... A 9



PLUGS

CABLE MOUNTED



Body style		S	SC	SOV	SA	SV	WSO	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68	●	●	●	●	●	●	
Locking system	Friction			●				Locking systems, page A 10
	Push-pull	●			●	●	●	
	Quick-release		●					
	Lanyard				●			
Contacts	Tamperproof					●		Electrical & contact configurations, page B 5-17
	Crimp							
Housing color	Solder	●	●	●	●	●	●	Options, page B 3-24
	Natural chrome	●	●	●	●	●	●	
Design	Black chrome	●	●	●	●		●	Body style selection, section B 2
	Shortened body						●	
Cabling	Right-angle						●	Cable clamp sets, page B 1-40 Cable assembly, section K 1
	Cable clamp sets	●	●	●	●	●	●	
	Overmoldable							
Accessories	Heat shrinkable							Accessories, section B 8-1
	Cable bend reliefs	●	●	●	●	●	●	
	Protective sleeves	●	●	●	●	●	●	
Size	Sealing caps	●	●	●	●	●	●	Technical dimensions, page B 5-3 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	●	●	●	
	103 Series	●	●	●	●	●	●	
	1031 Series							
	104 Series							
	105 Series							
106 Series								
107 Series								

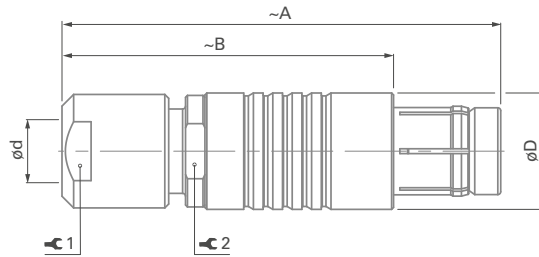


PLUGS

CABLE MOUNTED

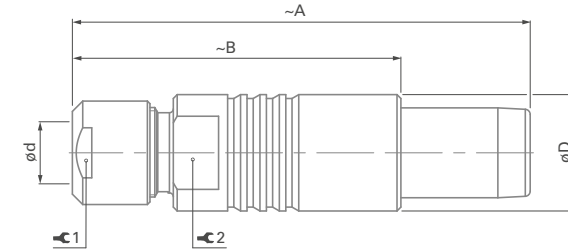
S/SC

BODY STYLES



SOV

BODY STYLE



Series	A	B	D	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

Series	A	B	D	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

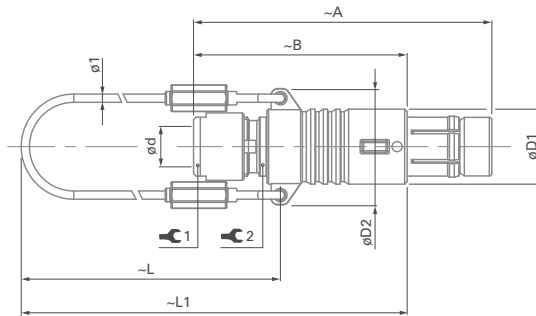
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PLUGS

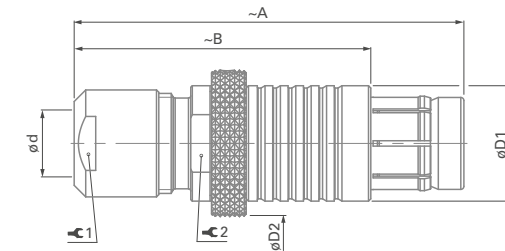
CABLE MOUNTED

SA
BODY STYLE



Series	A	B	D1	D2	L	L1	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
							Unsealed	Sealed			
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10

SV
BODY STYLE



Series	A	B	D1	D2	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
					Unsealed	Sealed			
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket.
Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

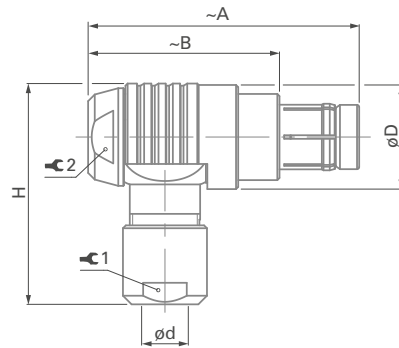


PLUGS

CABLE MOUNTED

WSO

BODY STYLE



Series	A	B	D	H	d max		1	Torque 1 [Nm]	2	Torque 2 [Nm]
					Unsealed	Sealed				
102	33	23	12	25	4.7	4.3	7	0.6	8	1.0
103	38	27	15	31	6.7	6.2	10	1.0	11	1.3

All dimensions and images shown are in millimeters and are for reference only.



RECEPTACLES

CABLE MOUNTED



Body style		K	KE	Links to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, section A, page A 12
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & contact configurations, page B5-17
	Solder	●	●	
Housing	Natural chrome	●	●	Options, page B3-24
	Black chrome	●	●	
	Shortened body			
Cabling	Cable clamp sets	●	●	Cable clamp sets, page B 1-40 Cable assembly, section K 1
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, section B 8-1
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	102 Series	●	●	Technical dimensions, page B5-7
	103 Series	●	●	
	1031 Series			
	104 Series			For more information visit: www.fischerconnectors.com/technical
	105 Series			
	106 Series			
	107 Series			

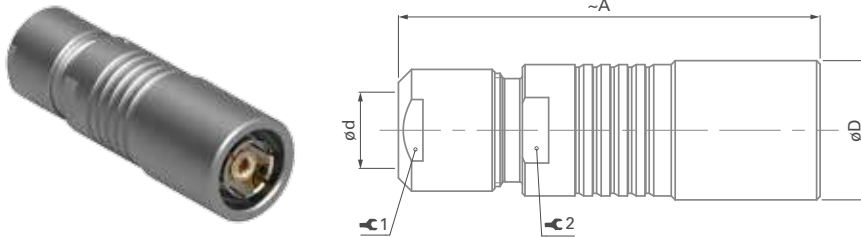


RECEPTACLES

CABLE MOUNTED

K/KE

BODY STYLES



Series	A	D	d max		🔧 1	Torque 1 [Nm]	🔧 2
			Unsealed	Sealed			
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

All dimensions and images shown are in millimeters and are for reference only.



RECEPTACLES

PANEL MOUNTED



Body style		D	DEU	DEE	DB	DBEU	DBEE	DG	Links to detailed information
Protection	Unsealed (IP50)	●			●			●	Sealing categories, section A, page A 12
	Sealed up to IP68		●	●		●	●		
	Hermetic			●			●		
Contacts	Crimp								Electrical & contact configurations, page B5-17
	Solder	●	●	●	●	●	●	●	
	PCB								
Housing color	Natural chrome	●	●	●	●	●	●	●	Options, page B3-24
	Black chrome	●	●	●	●	●	●	●	
Design	Right-angle								Body style selection, section B2
	Flush	●	●	●				●	
	Front projecting				●	●	●	●	
	Bulkhead feedthrough								
Assembly	Front-mounting	●	●	●	●	●	●	●	
	Rear-mounting							●	
Accessories	Sealing caps	●	●	●	●	●	●	●	Accessories, section B 8-1
	Spacers		●	●					
	Color-coded washers	●			●			●	
	Insulating washers	●	●	●	●	●	●	●	
	Grounding washers	●	●	●	●	●	●	●	
	Locking washers	●	●	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	●	●	Technical dimensions, page B5-9 For more information visit: www.fischerconnectors.com/technical
	103 Series	●	●	●	●	●	●	●	
	1031 Series								
	104 Series								
	105 Series								
	106 Series								
	107 Series								

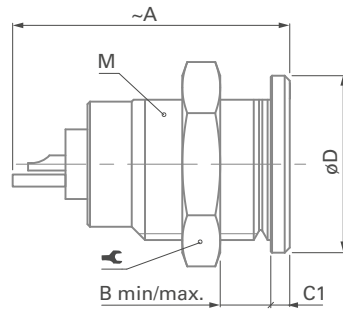


RECEPTACLES

PANEL MOUNTED

D

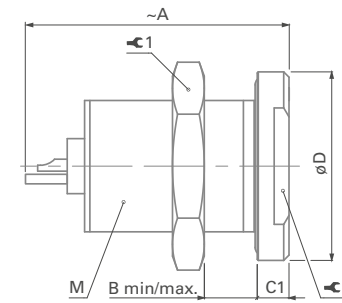
BODY STYLE



Series	A	B _{max}	C1	D	M		Torque [Nm]
102	19	9	1.5	11	9x0.5	11	1.3
103	23	8	1.5	14	12x1	14	2.5

DEU/DEE

BODY STYLES



Series	A	B _{min/max}	C1	D	M		Torque1 [Nm]	
102	20	8/10	2.5	14	9x0.5	11	1.3	11 ¹⁾
103	23	12	3.0	18	14x1	17	3.0	14

¹⁾Not applicable for 102 A021.

All dimensions and images shown are in millimeters and are for reference only.

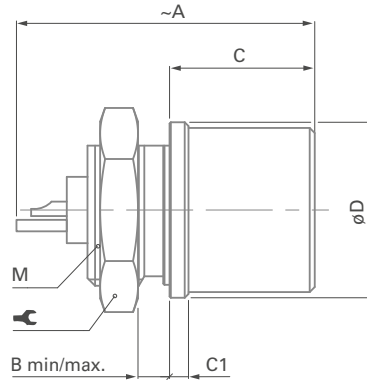


RECEPTACLES

PANEL MOUNTED

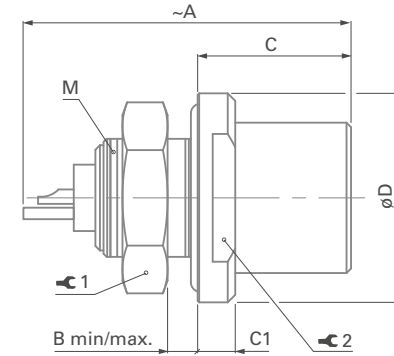
DB

BODY STYLE



DBEU/DBEE

BODY STYLES



Series	A	B _{max.}	C	C1	D	M	⚙	Torque [Nm]
102	18	3	11.0	1.0	11	9x0.5	11	1.3
103	21	4	11.5	1.5	14	12x1	14	2.5

Series	A	B _{max.}	C	C1	D	M	⚙ ₁	Torque 1 [Nm]	⚙ ₂
102	20	3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests must be conducted to evaluate the exact values.

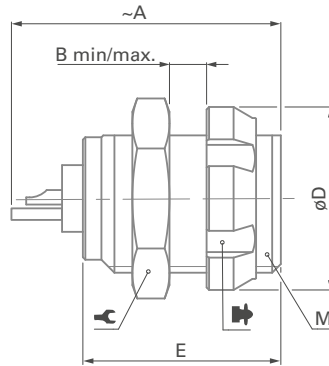


RECEPTACLES

PANEL MOUNTED

DG

BODY STYLE



Series	A	B _{max.}	D	E	M			Torque [Nm]
102	20	6	12	14	9x0.5	11	TC00.000	1.3
103	23	7	15	15	12x1	14	TF00.001	2.5

All dimensions and images shown are in millimeters and are for reference only.



PLUGS

PANEL MOUNTED



Body style		SF	SFU	SFE	Links to detailed information
Protection	Unsealed (IP50)	●			Sealing categories, section A, page A 12
	Sealed up to IP68		●	●	
	Hermetic			●	
Contacts	Crimp				Electrical & contact configurations, page B5-17
	Solder	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B3-24
	Black chrome	●	●	●	
Assembly	Front-mounting	●	●	●	Body style selection, section B 2
	Rear-mounting				
Accessories	Sealing caps	●	●	●	Accessories, section B 8-1
	Spacers				
	Color-coded washers	●			
	Insulating washers	●			
	Grounding washers	●			
Size	Locking washers	●			Technical dimensions, page B5-13 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	
	103 Series	●	●	●	
	1031 Series				
	104 Series				
	105 Series				
	106 Series				
107 Series					

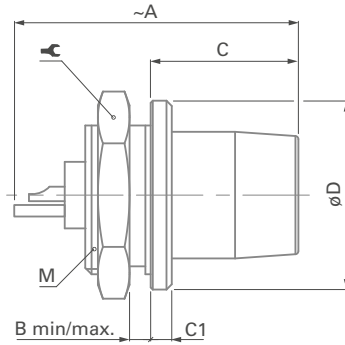


PLUGS

PANEL MOUNTED

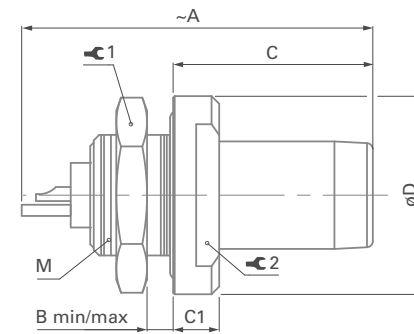
SF

BODY STYLE



SFU/SFE

BODY STYLES



Series	A	B _{max.}	C	C1	D	M	1	Torque [Nm]
102	20.0	4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	3.0	12.5	1.5	14	12x1	14	2.5

Series	A	B _{max.}	C	C1	D	M	1	Torque 1 [Nm]	2
102	21	2.5	13	3	13	9x0.5	11	1.3	9
103	26	5.0	14	3	17	12x1	14	2.5	12

Torque [Nm] are recommended values that may be influenced by the quality of the pnael surface. Tests must be conducted to evaluate the exact values.

All dimensions and images shown are in millimeters and are for reference only.



RECEPTACLES

PANEL MOUNTED CABLE



Body style		DKBE	DK	DKE	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, section A, page A 12
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & contact configurations, page B5-17
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B3-24
	Black chrome	●	●	●	
Design	Flush		●		Body style selection, section B 2
	Front-projecting	●		●	
Assembly	Panel mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable mounted	●	●	●	
	Cable clamp sets	●	●	●	Cable clamp sets, page B 1-39
Accessories	Cable bend reliefs	●	●	●	Accessories, section B 8-1
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●		
	Insulating washers				
	Grounding washers	●	●	●	
Size	Locking washers	●	●	●	Technical dimensions, page B5-15 For more information visit: www.fischerconnectors.com/technical
	102 Series	●	●	●	
	103 Series	●	●	●	
	1031 Series				
	104 Series				
	105 Series				
	106 Series				
107 Series					

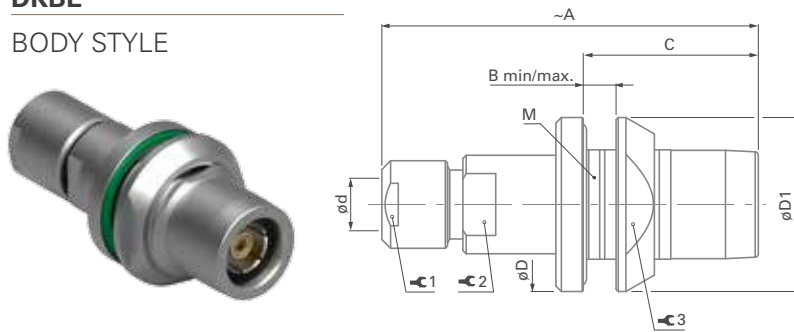


RECEPTACLES

PANEL
MOUNTED CABLE

DKBE

BODY STYLE

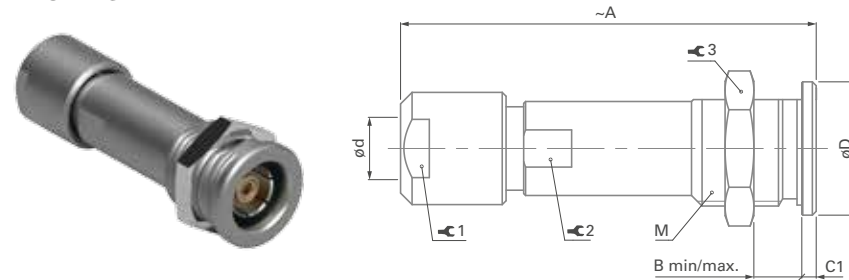


Series	A	B max.	C	D	dmax	D1	M
102	35	3.5	16.0	16	4.3	16	12x1
103	43	4.0	19.0	19	6.2	20	15x1

Series	⌘ ₁	Torque 1 [Nm]	⌘ ₂	⌘ ₃	Torque 3 [Nm]
102	7	0.6	7	13	2.5
103	10	1.0	10	17	4.0

DK

BODY STYLE



Series	A	B max.	C1	D	dmax	M
102	35	9	1.5	11	4.7	9x0.5
103	44	10	1.5	14	6.7	12x1

Series	⌘ ₁	Torque 1 [Nm]	⌘ ₂	⌘ ₃	Torque 3 [Nm]
102	7	0.6	-	11	1.3
103	10	1.0	9	14	2.5

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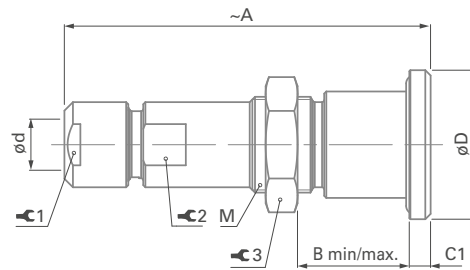


RECEPTACLES

PANEL MOUNTED CABLE

DKE

BODY STYLE



Series	A	B min/max.	C	C1	D	dmax	M	⌘ ₁	Torque 1 [Nm]	⌘ ₂	⌘ ₃	Torque 3 [Nm]
102	35	9/12	-	2	14	4.3	9x0.5	7	0.6	7	11	1.3
103	45	9/14	-	3	17	6.2	14x1	10	1.0	10	17	3.0

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket and the quality of the panel surface. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



102 & 103 SERIES

● = Standard ○ = Option

Reference	Pin layout	Contact type		Insulating material	Cable group ¹⁾	Contact ø [mm]	Wire barrel ø [mm]	Impedance [ohms]	Test voltage ³⁾ [kV] in mated position				Current ²⁾ [A]
		Solder	Crimp						AC r.m.s		DC		
									Contact to body	Contact to contact	Contact to body	Contact to contact	
102 A014		● ○		PTFE PEEK	11	0.9	0.8	-	1.1	1.2	1.5	1.7	10
102 A021 ⁴⁾		●		PTFE	11	0.9	0.8	50	1.2	1.0	1.7	1.5	10
103 A015		● ○		PTFE PEEK	12	1.3	1.0	50	1.2	1.5	1.6	2.4	12

¹⁾ See list of recommended cables on page B 3-23.

²⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

³⁾ Measured with S plug and D receptacle. Please contact us for ratings for WSO right-angle plugs.

⁴⁾ Inverted polarity: female contact on plug/male contact on receptacle.



FISCHER CORE SERIES **BRASS** – **MIXED HIGH VOLTAGE**

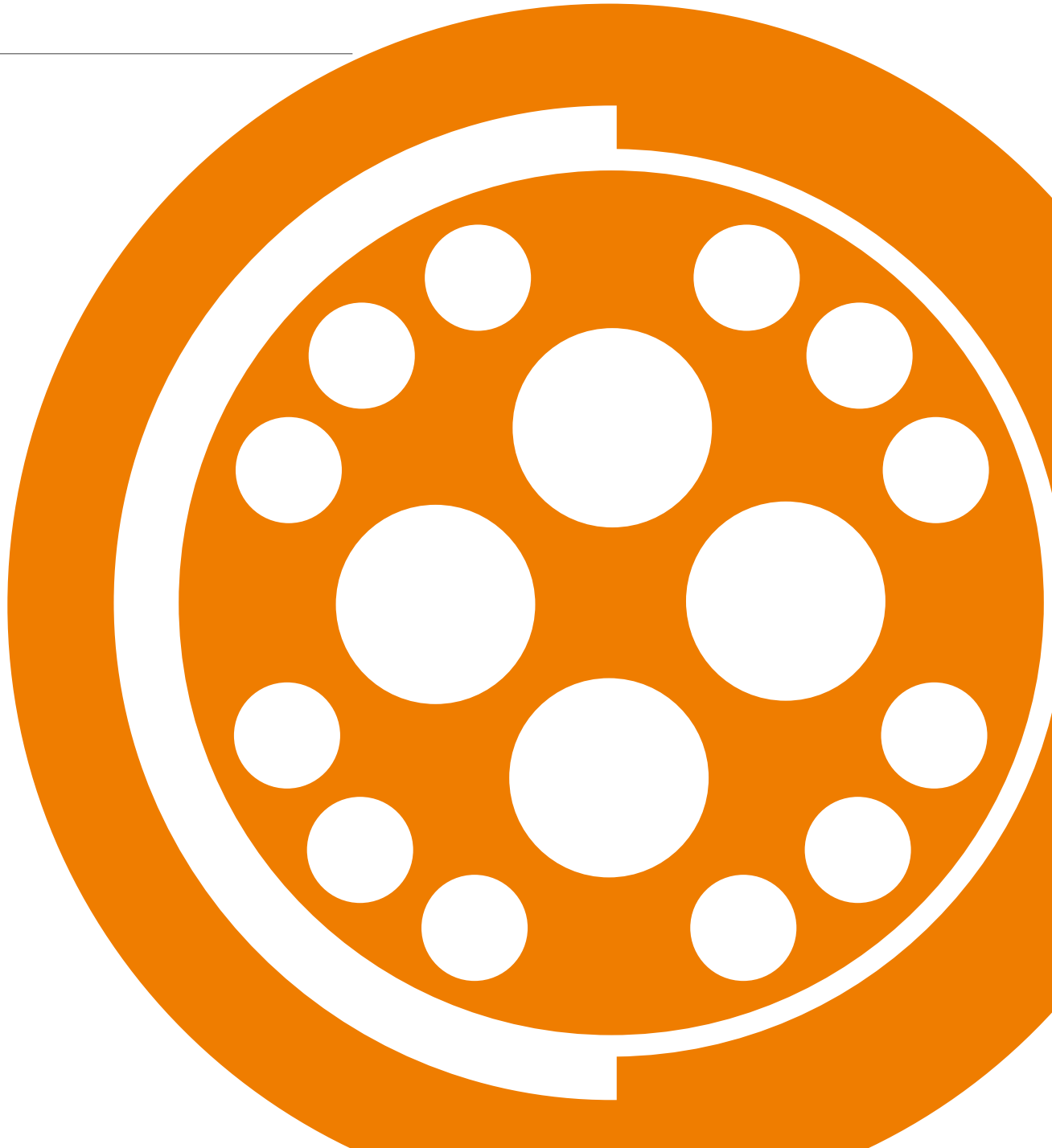
KEY FEATURES

- Various body styles and sizes available
- Individually insulated high voltage contacts
- Voltage up to 23 kV
- No guide mark is standard
- Locking ring for integral safety
- IP50

This catalog covers our standard connector solutions. For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S; SV)..... B 6-2
- Technical dimensions B 6-3

RECEPTACLES

PANEL MOUNTED



- Body style selection (D)..... B 6-4
- Technical dimensions B 6-5

FOR ALL MIXED HIGH VOLTAGE

- Electrical & Contact Specifications..... B 6-7
- Options..... B 3-24
- Insulating cable clamp sets B 2-10
- Cable assembly K 1
- Accessories B 8-1
- Tooling..... B 9-1
- Technical information..... B 11-1
- Cross-line technical information..... A 9



PLUGS

CABLE MOUNTED



Body style		S	SV	Links to detailed information
Protection	Unsealed (IP50)	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68			
Locking system	Friction			Locking systems, section A, page A 11
	Push-pull	●	●	
	Quick-release			
	Lanyard			
	Tamperproof		●	
Contacts	Crimp			Electrical & contact configurations, page B 6-7
	Solder	●	●	
Housing color	Natural chrome	●	●	Options, page B 1-35
	Black chrome	●		
Design	Shortened body			Body style selection, section B 2
	Right-angle			
Cabling	Cable clamp sets	●	●	Cable clamp sets, page B 2-10 Cable assembly, section K 1
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, section B 8-1
	Protective sleeves	●		
	Sealing caps	●	●	
Size	102 Series			Technical dimensions, page B 6-3 For more information visit: www.fischerconnectors.com/technical
	103 Series			
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series	●	●	
	107 Series			

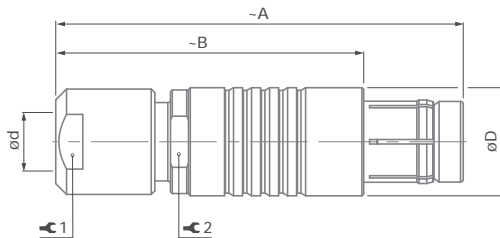


PLUGS

CABLE MOUNTED

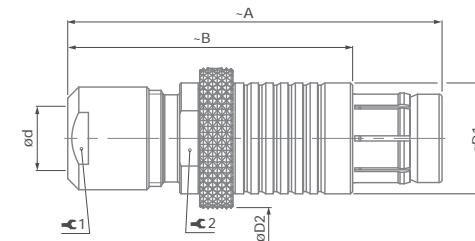
S

BODY STYLE



SV

BODY STYLE



Series	A	B	D	d max		1	Torque 1 [Nm]	2
				Unsealed	Sealed			
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	80	55	28	19.2	19.2	22	8.0	-

Series	A	B	D1	D2	d max		1	Torque 1 [Nm]	2
					Unsealed	Sealed			
104	50	38	15	20	8.7	8.7	12	2.0	13
105	62	47	18	22	10.7	10.7	15	3.5	16
106	80	55	28	35	19.2	19.2	22	8.0	-

For insertion of female high voltage contacts which have to be assembled after wiring, we recommend tool TP00.000, shown on the Tooling section, page B 9-6.

These connectors are supplied with insulating cable clamps sets. The available inner diameters are listed on page B2-10.

Some of these versions, however, can be delivered with special metal clamps, allowing the clamping of a cable screen. Please contact us for more information.

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket.

Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

All dimensions and images shown are in millimeters and are for reference only.



RECEPTACLES

PANEL MOUNTED



Body style		D	Links to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, section A, page A 12
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp		Electrical & contact configurations, page B 6-7
	Solder	●	
	PCB		
Housing color	Natural chrome	●	Options, page B 1-35
	Black chrome	●	
Design	Right-angle		Body style selection, section B 2
	Flush	●	
	Front-projecting		
	Bulkhead feedthrough		
Assembly	Front-mounting	●	
	Rear-mounting		
Accessories	Sealing caps	●	Accessories, section B 8-1
	Spacers		
	Color-coded washers	●	
	Grounding washers	●	
	Locking washers	●	
Size	102 Series		Technical dimensions, page B 6-5 For more information visit: www.fischerconnectors.com/technical
	103 Series		
	1031 Series		
	104 Series	●	
	105 Series	●	
	106 Series	●	
	107 Series		

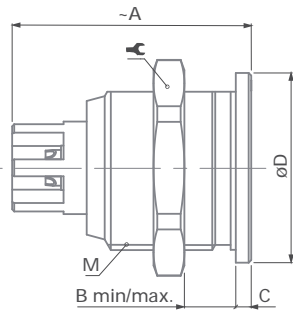


RECEPTACLES

PANEL MOUNTED

D

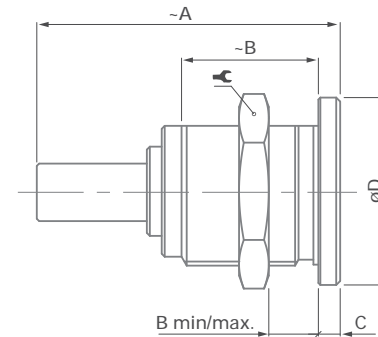
BODY STYLE



Types	A	B max.	C	D	M		Torque [Nm]
104 ^A / _Z 083	31	10.5	2.2	19	15x1	17	4.0
105 A 112	34	15.0	2.0	22	18x1	22	6.0

D

BODY STYLE



Types	A	B max.	C	D	M		Torque [Nm]
105 A 020 ¹⁾	54	15	2	22	18x1	22	6.0
105 A 036 ¹⁾	54	15	2	22	18x1	22	6.0
105 A 060 ¹⁾	58	15	2	22	18x1	22	6.0
106 A 014 ²⁾	49	18	3	37	32x1	TX00.106	15

¹⁾105 Series

The high voltage center contact is retained in a special insulator. To achieve proper high voltage performance, the window for soldering of the wire has to be covered by the supplied insulating tube, which must be placed over the cable before soldering.

²⁾ The D 106 A014 is supplied with a slotted nut.

The required hook spanner TX00.106 is shown on page B9-2.

For insertion of male high voltage contacts which have to be assembled after wiring, we recommend tool TP00.001, shown on page B9-6.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests must be conducted to evaluate the exact values.

All dimensions and images shown are in millimeters and are for reference only.



A/Z POLARITY

For Mixed High Voltage connectors, it is essential to pay attention to the differences between type "A" and "Z".

Type "A" Standard Polarity

The contacts of the receptacle are recessed to reduce the possibility of electric shock in the unmated position.

This version should be used when the voltage is sourced from the receptacle.

Type "Z" Inverted Polarity

The contacts of the plug are recessed to reduce the possibility of electric shock in the unmated position.

This version should be used when the voltage is sourced from the plug.

Protected contacts are usually female contacts recessed in the insulator. For Mixed High Voltage connectors, however, it is safer to recess the male contacts.

In these cases, the plug type "A" is equipped with female contacts and the receptacle with protected male contacts.

This applies to all connectors on page B6-7 except 104 ^A/_Z 083 and 105 A 112.



FOR 104, 105 & 106 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact type		Insulating material	Contact \varnothing ²⁾ [mm]	Wire barrel \varnothing [mm]	Test voltage ⁶⁾ [kV] in mated position				Current ¹⁾ [A]
				Solder	Crimp				AC r.m.s		DC		
									Contact to body	Contact to contact	Contact to body	Contact to contact	
104 A 083 ⁵⁾ Z		3	2 HT	●		PTFE	0.9	0.8	4.0	4.0	6.0	6.0	8.0
			1	●			1.6	1.8	2.2	4.5	3.5	6.5	18
105 A 020 ³⁾		3	1 HT	●		PTFE	2.0	2.0	6.0	6.0	14	14	20
			2	●			1.3	1.1	1.8	3.8	2.5	5.0	12
105 A 036 ³⁾		5	1 HT	●		PEEK	2.0	2.0	6.0	6.0	14	14	18
			4	●			1.3	1.1	1.8	2.0	2.5	3.0	12
105 A 060 ³⁾		8	1 HT	●		PTFE	2.0	2.0	6.0	6.0	14	14	16
			7	●			1.3	1.1	1.8	1.6	3.0	2.8	10
105 A 112 ⁴⁾		5	4 HT	●		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11
			1	●			2.0	2.0	2.0	4.5	3.0	7.0	11
106 A 014 ³⁾		8	2 HT	●		PTFE	2.0	2.4	7.0	15	14	23	16
			6	●			1.3	1.1	2.2	2.6	5.0	4.0	9.0

¹⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

²⁾ Contact dia 2.0 is positioned to make contact first and break last.

³⁾ See Tooling section, page B9-6, for insertion tool of contact dia. 2.0.

⁴⁾ HT contacts are female and LV contact is male on plug.

⁵⁾ All contacts are male on plug with type A standard polarity.



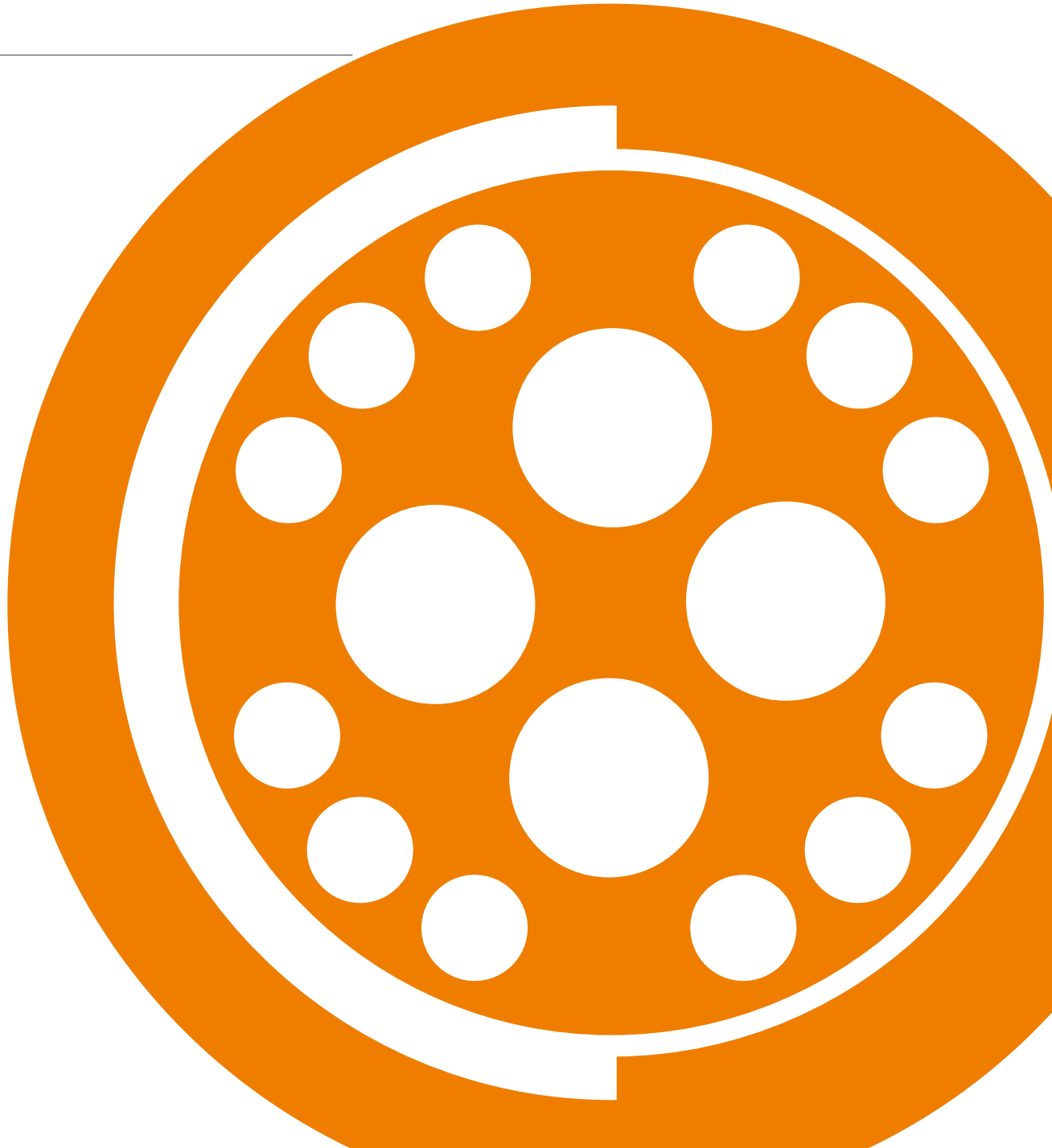
KEY FEATURES

- Wide range of body styles and sizes
- 50 Ohms impedance
- Sealed up to IP68
- Frequency up to 2 GHz

This catalog covers our standard connector solutions. For specific requests, including hybrid or custom connectors, please contact your local sales representative.



Technical Specifications





PLUGS

CABLE MOUNTED



- Body style selection (S/SC; SOV; SA; SV) B 7-2
- Technical dimensions B 7-3

PANEL MOUNTED



- Body style selection (SF)..... B 7-10
- Technical dimensions B 7-11

RECEPTACLES

CABLE MOUNTED



- Body style selection (K; KE)..... B 7-5
- Technical dimensions B 7-6

PANEL MOUNTED



- Body style selection (D; DB; DG) B 7-7
- Technical dimensions B 7-8

PANEL MOUNTED CABLE



- Body style selection (DKBE; DK; DKE) B 7-12
- Technical dimensions B 7-13

FOR ALL MIXED COAX

- Electrical & contact configurations B 7-15
- Cable groups B 3-22
- Options B 3-24
- Insulating cable clamp sets B 2-10

- Cable assembly K 1
- Accessories B 8-1
- Tooling B 9-1
- Technical information B 11-1
- Cross-line technical information A 9



PLUGS

CABLE MOUNTED



Body style		S	SC	SOV	SA	SV	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68	●	●	●	●	●	
Locking system	Friction			●			Locking systems, section A, page A 11
	Push-pull	●			●	●	
	Quick-release		●				
	Lanyard				●		
	Tamperproof					●	
Contacts	Crimp (coax)	●	●	●	●	●	Electrical & contact configurations, page B 7-15
	Solder (others)	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	Options, page B3-24
	Black chrome	●	●	●	●		
Design	Shortened body						Body style selection, section B 2
	Right angle						
Cabling	Cable clamp sets	●	●	●	●	●	Cable clamp sets, page B2-10 Cable assembly, section K 1
	Overmoldable						
	Heat shrinkable						
Accessories	Cable bend reliefs	●	●	●	●	●	Accessories, section B8-1
	Protective sleeves	●	●	●	●	●	
	Sealing caps	●	●	●	●	●	
Size	102 Series						Technical dimensions, page B7-3 For more information visit: www.fischerconnectors.com/technical
	103 Series						
	1031 Series						
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series						
107 Series							

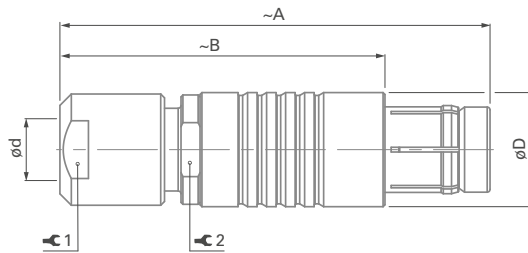


PLUGS

CABLE MOUNTED

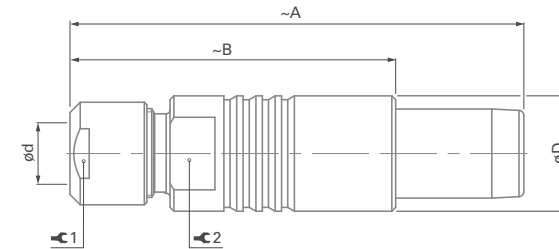
S/SC

BODY STYLES



SOV

BODY STYLE



Series	A	B	D	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
				Unsealed	Sealed			
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

Series	A	B	D	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
				Unsealed	Sealed			
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

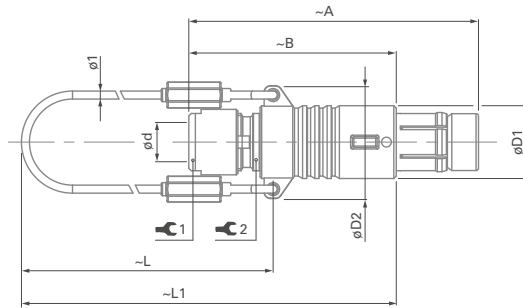
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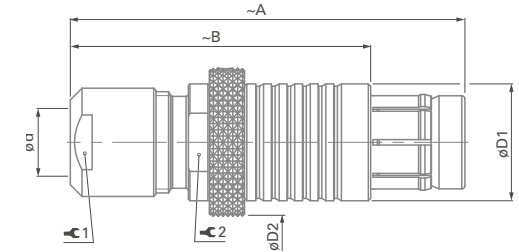
PLUGS

CABLE MOUNTED

SA
BODY STYLE



SV
BODY STYLE



Series	A	B	D1	D2	L	L1	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
							Unsealed	Sealed			
104	50	38	15	21	65	84	8.7	8.7	12	2.0	13
105	62	47	18	25	70	94	10.7	10.7	15	3.5	16

Series	A	B	D1	D2	L	L1	d max		⌘ 1	Torque 1 [Nm]	⌘ 2
							Unsealed	Sealed			
104	50	38	15	20	65	84	8.7	8.7	12	2.0	13
105	62	47	18	22	70	94	10.7	10.7	15	3.5	16



RECEPTACLES

CABLE MOUNTED



Body style		K	KE	Links to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, section A, page A 12
	Sealed up to IP68		●	
Contacts	Crimp (coax)	●	●	Electrical & contact configurations, page B 7-15
	Solder (others)	●	●	
Housing	Natural chrome	●	●	Options, B 3-24
	Black chrome	●	●	
	Shortened body			
Cabling	Cable clamp sets	●	●	Cable clamp sets, page B 2-10 Cable assembly, section K 1
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, section B 8-1
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	102 Series			Technical dimensions, page B 7-6 For more information visit: www.fischerconnectors.com/technical
	103 Series			
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series			

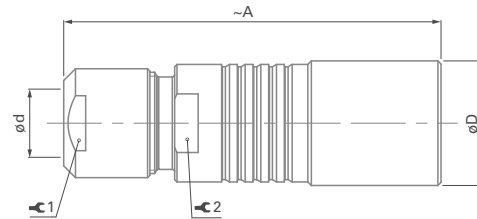


RECEPTACLES

CABLE MOUNTED

K/KE

BODY STYLES






Series	A	D	dmax		🔧 1	Torque 1 [Nm]	🔧 2
			Unsealed	Sealed			
104	50	16	8.7	8.7	12	2.5	13
105	60	19	10.7	10.7	15	3.5	16

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



RECEPTACLES

PANEL MOUNTED					
Body style		D	DB	DG	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	Sealing categories, section A, page A 12
	Sealed up to IP68				
	Hermetic				
Contacts	Crimp (coax)	●	●	●	Electrical & contact configurations, page B7-15
	Solder (others)	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B3-24
	Black chrome	●	●	●	
Design	Right-angle				Body style selection, section B2
	Flush	●		●	
	Front-projecting		●	●	
	Bulkhead feedthrough				
Assembly	Front-mounting	●	●	●	
	Rear-mounting			●	
Accessories	Sealing caps	●	●	●	Accessories, section B 8-1
	Spacers				
	Color-coded washers	●	●	●	
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Series				Technical dimensions, page B7-8 For more information visit: www.fischerconnectors.com/technical
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
	107 Series				

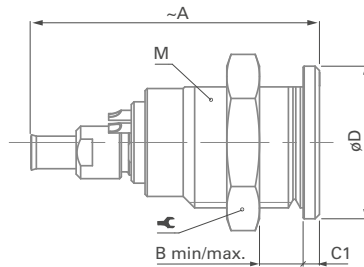


RECEPTACLES

PANEL MOUNTED

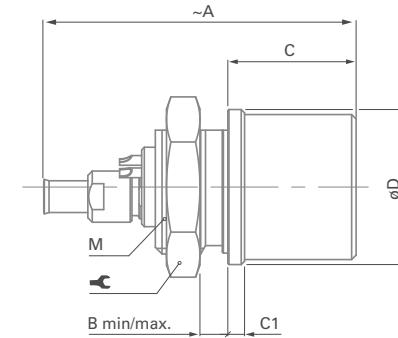
D

BODY STYLE



DB

BODY STYLE



Series	A	B max.	C1	D	M		Torque [Nm]
104	33	11	2.2	19	15x1	17	4.0
105	38	15	2.0	22	18x1	22	6.0

Series	A	B max.	C	C1	D	M		Torque [Nm]
104	33	3	14.5	2.5	19	16x1	19	4.5
105	38	7	19.0	2.0	22	18x1	22	6.0

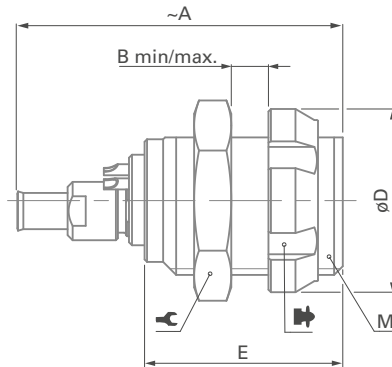
Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests must be conducted to evaluate the exact values.



RECEPTACLES

PANEL MOUNTED

DG BODY STYLE



Series	A	B _{max.}	D	E	M		 ¹⁾	Torque [Nm]
104	33	9	19	18	15x1	17	TK00.000	4.0
105	38	15	23	24	18x1	22	TP00.011	6.0

¹⁾ Assembly tool for decorative slotted nut, see Tooling section, page B 9-1 for details.



PLUGS

PANEL MOUNTED



Body style		SF	Links to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, section A, page A 12
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp (coax)	●	Electrical & contact configurations, page B 7-15
	Solder (others)	●	
	PCB		
Housing color	Natural chrome	●	Options, section B 3-24
	Black chrome	●	
Assembly	Front-mounting	●	Body style selection, section B 2
	Rear-mounting		
Accessories	Sealing caps	●	Accessories, section B 8-1
	Spacers		
	Color-coded washers	●	
	Insulating washers	●	
	Grounding washers	●	
Size	102 Series		Technical dimensions, page B 7-11 For more information visit: www.fischerconnectors.com/technical
	103 Series		
	1031 Series		
	104 Series	●	
	105 Series	●	
	106 Series		
	107 Series		

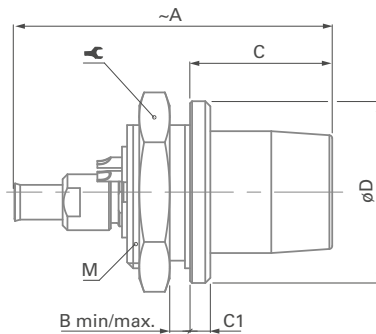



PLUGS

PANEL MOUNTED

SF

BODY STYLE



Series	A	B max.	C	C1	D	M		Torque [Nm]
104	28	3.0	14.0	2.0	18	15x1	17	4.0
105	35	5.5	16.8	1.2	22	16x1	19	4.5

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests must be conducted to evaluate the exact values.



RECEPTACLES

PANEL MOUNTED CABLE



Body style		DKBE	DK	DKE	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, section A, page A 12
	Sealed up to IP68	●		●	
Contacts	Crimp (coax)	●	●	●	Electrical & contact configurations, page B7-15
	Solder (others)	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B3-24
	Black chrome	●	●	●	
Design	Flush		●		Body style selection, section B2
	Front-projecting	●		●	
Assembly	Panel mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable mounted	●	●	●	
Accessories	Cable clamp sets	●	●	●	Cable clamp sets, page B2-10
	Cable bend reliefs	●	●	●	
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●	●	
	Insulating washers				
	Grounding washers	●	●	●	
Size	Locking washers	●	●	●	Accessories, section B 8-1
	102 Series				
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
107 Series					
					Technical dimensions, page B7-13
					For more information visit: www.fischerconnectors.com/technical

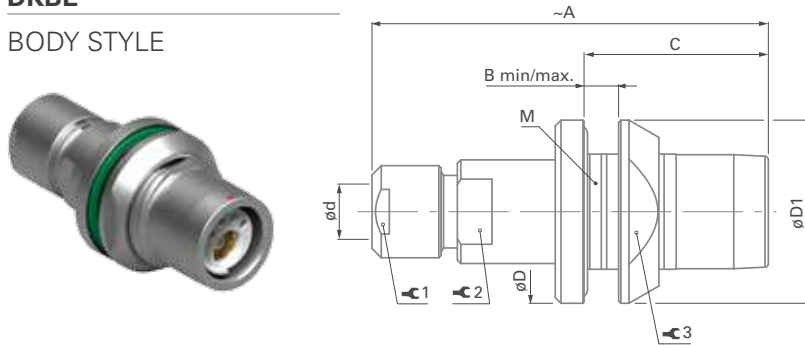


RECEPTACLES

PANEL
MOUNTED CABLE

DKBE

BODY STYLE

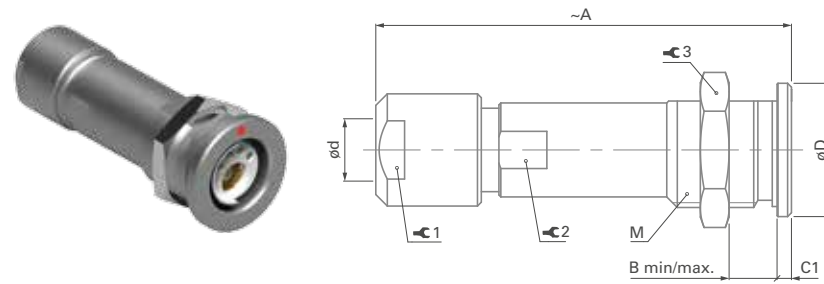


Series	A	B max.	C	D	dmax	D1	M
104	50	5.0	22.5	23	8.7	23	18x1
105	60	5.0	26.0	28	10.7	27	22x1

Series	Y ₁	Torque 1 [Nm]	Y ₂	Y ₃	Torque 3 [Nm]
104	12	2.0	13	20	6.0
105	15	3.5	16	24	8.0

DK

BODY STYLE



Series	A	B max.	C1	D	dmax	M
104	50	11	2.0	19	8.7	15x1
105	60	16	2.0	22	10.7	18x1

Series	Y ₁	Torque 1 [Nm]	Y ₂	Y ₃	Torque 3 [Nm]
104	12	2.0	12	17	4.0
105	15	3.5	14	22	6.0

All dimensions and images shown are in millimeters and are for reference only.

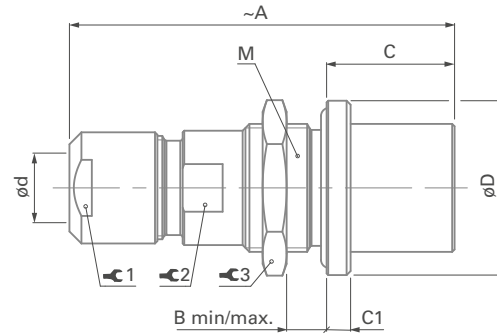


RECEPTACLES

PANEL MOUNTED CABLE

DKE

BODY STYLE



Series	A	B _{max.}	C	C1	D	d _{max}	M	⚙️ 1	Torque 1 [Nm]	⚙️ 2	⚙️ 3	Torque 3 [Nm]
104	50	8	16.0	3	22	8.7	16x1	12	2.0	13	19	4.5
105	61	9	19.0	4	27	10.7	20x1	15	3.5	16	25	6.5

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket and by the quality of the panel surface. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.



104 & 105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact type		Insulating material	Cable group ¹⁾	Contact ø [mm]	Wire barrel ø [mm]	Impedance [ohm]	Test voltage ⁵⁾ [kV] in mated position				Current ³⁾ [A]
				Solder	Crimp						AC r.m.s		DC		
											Contact to body ²⁾	Contact to contact	Contact to body ²⁾	Contact to contact	
104 A 078		2	Coax 1		●	PEEK ⁴⁾	1	0.7	0.6	50	1.8	-	3.0	-	4.0
				●				0.9	0.8	-	0.8	-	1.6	-	9.0
104 A 093		5	Coax 4		●	PTFE	1	0.7	0.6	50	1.8	-	3.0	-	4.0
				●				0.7	0.6	-	0.8	1.0	1.0	1.4	4.0
105 A 074		2	Coax 1		●	PTFE	4	1.3	1.0	50	4.5	-	6.0	-	12.0
				●				1.3	1.1	-	1.6	-	2.0	-	12.0
105 A 089		5	Coax 4		●	PTFE	4	1.3	1.0	50	4.5	-	6.0	-	12.0
				●				0.9	0.75	-	1.5	2.0	2.3	2.8	7.0
105 A 095		10	Coax 9		●	PTFE	1	0.7	0.55	50	1.8	-	3.5	-	4.0
				●				0.9	0.75	-	1.4	1.5	2.2	2.5	6.0

¹⁾ See list of recommended cables on page B3-22.

²⁾ Test voltages between contact and body, as well as between contact and coaxial outer contact.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ PEEK for main insulator and PTFE for Coax.

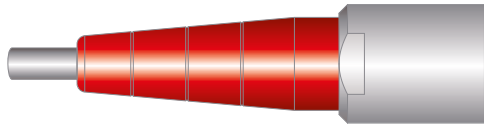
⁵⁾ Measured with S plug and D receptacle.



CABLE MOUNTED PLUGS & RECEPTACLES

CABLE BEND RELIEFS

FOR INCREASED PROTECTION OF YOUR CONNECTIONS



Suitable for :

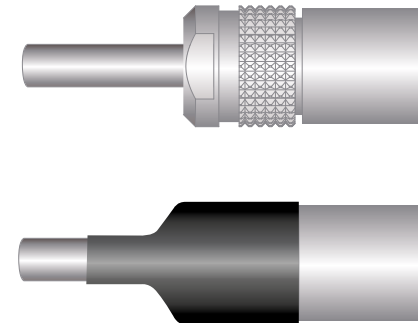
- Cable mounted plugs (S/SC, SOV, SA, SV, WSO)
- Cable mounted receptacles (K/KE)
- Panel mounted cable receptacles (DKBE, DK, DKE)

Prevent cable torsion and increase protection of connection.

Color coding for easy identification when combined with color washer on a panel mounted connector.

KNURLED CLAMP NUTS

FOR RESISTANT HEAT SHRINKING



Suitable for :

- Cable mounted plugs (S/SC, SOV, SA, SV, WSO)
- Cable mounted receptacles (K/KE)
- Panel mounted cable receptacles (DKBE, DK, DKE)

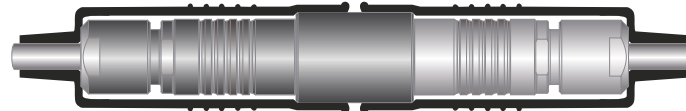
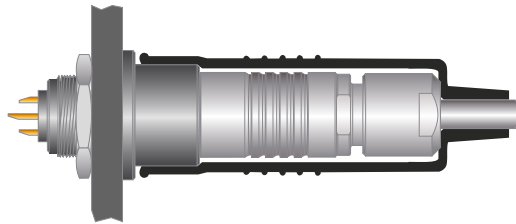
Give a good grip to a shrinkable tube acting as cable bend relief.



CABLE MOUNTED PLUGS & RECEPTACLES

PROTECTIVE SLEEVES

FOR IMPROVED PROTECTION



Suitable for :

- Cable mounted plugs (S/SC, SOV)
- Cable mounted receptacles (K/KE)

Protect against any foreign matter :

- Dust, dirt or mud
- Liquid splash

Minimize mechanical damage from impact on hard surfaces.

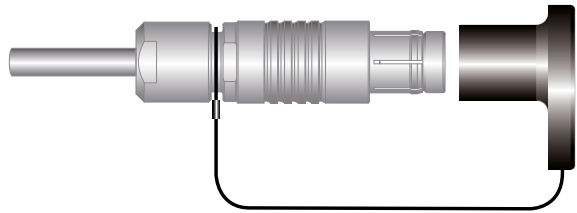
When mated, the front end of the protective sleeve encloses the projecting portion of the receptacle. When unmated, connectors can be protected with sealing caps.



PLUGS & RECEPTACLES

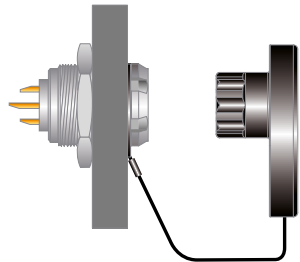
SEALING CAPS

FOR PROTECTION OF UNMATED CONNECTORS IN THE FIELD



Suitable for:

- Cable mounted plugs (S/SC, SOV, SA, SV, SS/SSC, WSO)
- Cable mounted receptacles (K/KE, KS/KSE)



Suitable for:

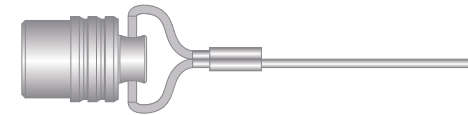
- Panel mounted receptacles (D, DEU/E, DB, DBEU/E, DBP, DBPU/E, DBPLU/E, DG/DGP, DBPC, WDE)
- Panel mounted plugs (SF, SFU/E, SFPU/E)
- Panel mounted cable receptacles (DKBE, DK, DKE)

SOFT CAPS



- Lightweight
- Noiseless operation
- Operating temperature – 55°C to + 85°C
- IP68
- Easily installed
- Available in single-piece or lanyard model
- Intermateable to provide additional dust protection

METAL CAPS



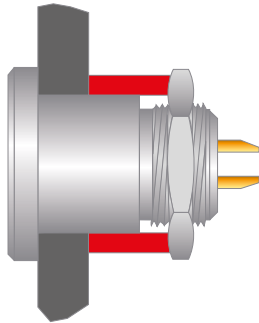
- Rugged
- Fitted with an o-ring seal
- Operating temperature – 30°C to + 200°C
- Protect & seal the mating face of the connector
- IP68
- Two colors available



PANEL MOUNTED PLUGS & RECEPTACLES

SPACERS

TO ALLOW MOUNTING ON ALL PANELS



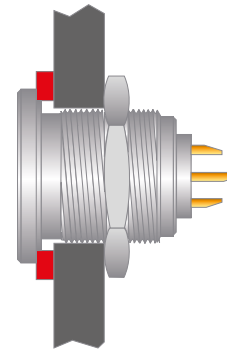
Suitable for :

- Feedthrough (WDE)
- Panel mounted receptacles (DEE, DEU, DKE)

Enables mounting on panels or bulkheads thinner than the unthreaded section.

COLOR CODING WASHERS

FOR EASY CONNECTOR IDENTIFICATION



Suitable for :

- Panel mounted receptacles (D, DB, DBP, DBPC, DG, DGP, DK)
- Panel mounted plug (SF)

Can be mounted between the connector flange and the panel.

Color coding for easy identification when combined with cable bend relief for cable mounted connectors.

Not suitable for sealed version.

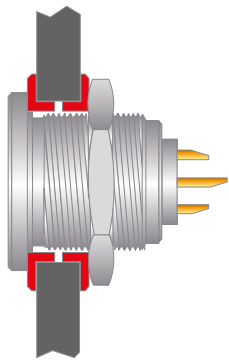




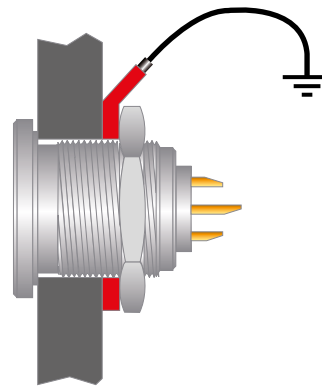
PANEL MOUNTED PLUGS & RECEPTACLES

INSULATING & COLOR WASHERS

FOR EASY CONNECTOR
IDENTIFICATION AND
EFFICIENT INSULATION

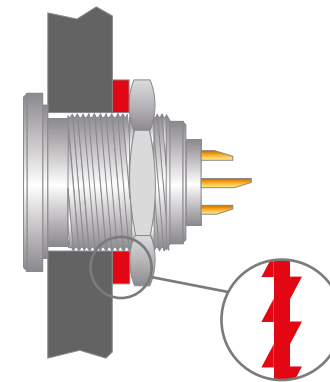


GROUNDING WASHERS



LOCKING WASHERS

TO ALLOW SECURE MOUNTING
ON ALL PANELS



Suitable for panel mounted receptacle (D):

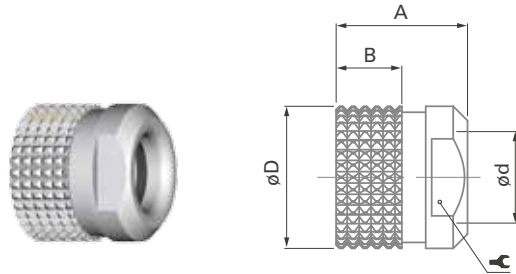
- Can be mounted on both sides of the panel cut-out
- Color coding for easy identification when combined with cable bend relief for cable mounted connectors
- Isolate the connector body electrically from the panel
- Not suitable for sealed versions



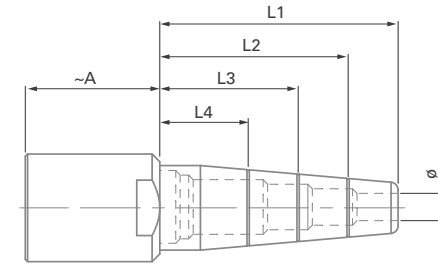


KNURLED CLAMP NUTS & CABLE BEND RELIEFS

KNURLED CLAMP NUTS



CABLE BEND RELIEFS



Series	A	B	D	d	⚙️	Part number
102	6	3.0	9	4.8	7	102.1869
103	11	5.5	12	6.5	10	103.2092
1031	12	5.5	13	7.2	12	1031.248
104	11	5.5	15	8.5	12	104.2103
105	14	7.5	18	11.0	15	105.2626

Material: nickel and chromium plated brass (ISO CuZn39Pb3)

Series ¹⁾	Cable ø range	Length	A
102	1.5 - 3.4	L1 = 21	10
	3.5 - 4.5	L1 = 21	
103	3.0 - 4.0	L1 = 26	17
	4.0 - 5.0	L2 = 21	
	5.0 - 6.2	L3 = 16	
1031	3.0 - 4.0	L1 = 26	18
	4.0 - 5.0	L2 = 21	
	5.0 - 6.5	L3 = 16	

Series ¹⁾	Cable ø range	Length	A
104	4.0 - 5.0	L1 = 31	18
	5.0 - 6.5	L2 = 25	
	6.0 - 7.5	L3 = 18	
105	4.0 - 5.0	L1 = 37	21
	5.5 - 6.5	L2 = 31	
	7.0 - 8.5	L3 = 24	
	8.5 - 10.5	L4 = 18	

¹⁾ For the 102 Series, cable bend reliefs are designed specifically for a given cable ø range.

For all other Series, cable bend reliefs have to be cut to length L1, L2, L3 or L4 to fit your cable ø range.

Material:

Clamp nut: nickel and chromium plated brass (ISO CuZn39Pb3)

Bend relief: TPE (Thermoplastic elastomer)

These cable bend reliefs cannot be assembled with the clamp nuts supplied with the standard connectors.

Therefore, the cable bend reliefs are supplied as sub-assemblies.



CABLE BEND RELIEFS

NATURAL CHROME CONNECTORS

PART NUMBERS

Series ¹⁾	Cable ø range	Bend relief color			
		White	Black	Green	Blue
102	1.5 - 3.4	-	E4 102.190.2	E4 102.190.3	E4 102.190.4
	3.5 - 4.5	-	E4 102.192.2	E4 102.192.3	E4 102.192.4
103	3.0 - 6.2	E4 103.190.1	E4 103.190.2	E4 103.190.3	E4 103.190.4
1031	3.0 - 6.5	E4 1031.190.1	E4 1031.190.2	E4 1031.190.3	E4 1031.190.4
104	4.0 - 7.5	E4 104.190.1	E4 104.190.2	E4 104.190.3	E4 104.190.4
105	4.0 - 10.5	E4 105.190.1	E4 105.190.2	E4 105.190.3	E4 105.190.4

BLACK CHROME CONNECTORS

PART NUMBERS

Series ¹⁾	Cable ø range	Bend relief color			
		White	Black	Green	Blue
102	1.5 - 3.4	-	E4 102.191.2	E4 102.191.3	E4 102.191.4
	3.5 - 4.5	-	E4 102.193.2	E4 102.193.3	E4 102.193.4
103	3.0 - 6.2	E4 103.191.1	E4 103.191.2	E4 103.191.3	E4 103.191.4
1031	3.0 - 6.5	E4 1031.191.1	E4 1031.191.2	E4 1031.191.3	E4 1031.191.4
104	4.0 - 7.5	E4 104.191.1	E4 104.191.2	E4 104.191.3	E4 104.191.4
105	4.0 - 10.5	E4 105.191.1	E4 105.191.2	E4 105.191.3	E4 105.191.4

¹⁾ For the 102 Series, cable bend reliefs are designed specifically for a given cable ø range.
For other Series, cable bend reliefs have to be cut to length L1, L2, L3 or L4 to fit your cable ø range.

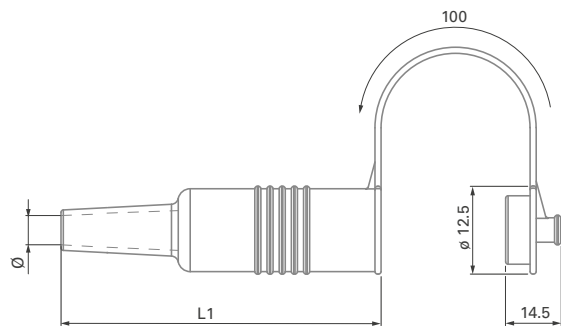
Series ¹⁾	Cable ø range	Bend relief color		
		Yellow	Red	Grey
102	1.5 - 3.4	E4 102.190.5	E4 102.190.6	E4 102.190.7
	3.5 - 4.5	E4 102.192.5	E4 102.192.6	E4 102.192.7
103	3.0 - 6.2	E4 103.190.5	E4 103.190.6	E4 103.190.7
1031	3.0 - 6.5	E4 1031.190.5	E4 1031.190.6	E4 1031.190.7
104	4.0 - 7.5	E4 104.190.5	E4 104.190.6	E4 104.190.7
105	4.0 - 10.5	E4 105.190.5	E4 105.190.6	E4 105.190.7

Series ¹⁾	Cable ø range	Bend relief color		
		Yellow	Red	Grey
102	1.5 - 3.4	E4 102.191.5	E4 102.191.6	E4 102.191.7
	3.5 - 4.5	E4 102.193.5	E4 102.193.6	E4 102.193.7
103	3.0 - 6.2	E4 103.191.5	E4 103.191.6	E4 103.191.7
1031	3.0 - 6.5	E4 1031.191.5	E4 1031.191.6	E4 1031.191.7
104	4.0 - 7.5	E4 104.191.5	E4 104.191.6	E4 104.191.7
105	4.0 - 10.5	E4 105.191.5	E4 105.191.6	E4 105.191.7



PROTECTIVE SLEEVES - 102 SERIES

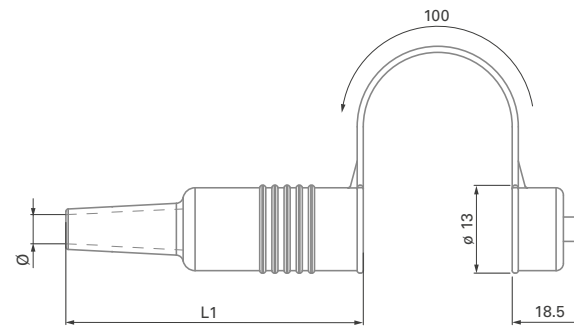
S, SC & SOV



Series	Cable Ø Range	L1	Part number
102	1.8 - 4.5	56	102.785

Material: TPE (Thermoplastic elastomer).

K & KE

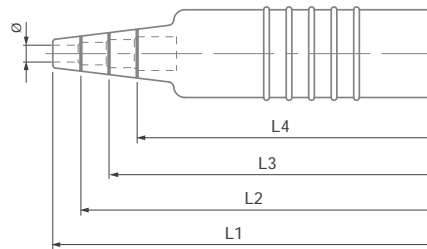


Series	Cable Ø Range	L1	Part Number
102	1.8 - 4.5	47	102.786

Material: TPE (Thermoplastic elastomer).



PROTECTIVE SLEEVES - 103, 1031, 104, 105, 106 & 107 SERIES



S, SC and SOV

Series	Cable Ø range	Length	Part number
103	3.0 - 4.1	L1 = 68	103.861
	4.2 - 5.1	L2 = 63	
	5.2 - 6.1	L3 = 58	
	6.2 - 6.5	L4 = 53	
1031	3.0 - 4.1	L1 = 69	1031.855
	4.2 - 5.1	L2 = 64	
	5.2 - 6.1	L3 = 59	
	6.2 - 6.5	L4 = 54	

Series	Cable Ø range	Length	Part number
104	4.0 - 5.1	L1 = 83	104.861
	5.2 - 6.1	L2 = 76	
	6.2 - 7.1	L3 = 70	
	7.2 - 8.5	L4 = 63	
105	3.5 - 5.6	L1 = 104	105.1545
	5.7 - 7.6	L2 = 96	
	7.7 - 8.6	L3 = 88	
	8.7 - 10.5	L4 = 80	

Series	Cable Ø range	Length	Part number
106	6.0 - 10.4	L1 = 123	106.226
	10.5 - 13.4	L2 = 112	
	13.5 - 16.4	L3 = 102	
	16.5 - 19.0	L4 = 92	
107	7.0 - 10.4	L1 = 170	107.808
	10.5 - 13.4	L2 = 160	
	13.5 - 16.4	L3 = 150	
	16.5 - 19.4	L4 = 140	
	19.5 - 22.5	L4 = 130	

Material: TPE (Thermoplastic elastomer).

K and KE

Series	Cable Ø range	Length	Part number
103	3.0 - 4.1	L1 = 60	103.886
	4.2 - 5.1	L2 = 55	
	5.2 - 6.1	L3 = 50	
	6.2 - 6.5	L4 = 45	
1031	3.0 - 4.1	L1 = 61	1031.860
	4.2 - 5.1	L2 = 56	
	5.2 - 6.1	L3 = 51	
	6.2 - 6.5	L4 = 46	

Series	Cable Ø range	Length	Part number
104	4.0 - 5.1	L1 = 68	104.862
	5.2 - 6.1	L2 = 61	
	6.2 - 7.1	L3 = 55	
	7.2 - 8.5	L4 = 48	
105	3.5 - 5.6	L1 = 88	105.1546
	5.7 - 7.6	L2 = 80	
	7.7 - 8.6	L3 = 72	
	8.7 - 10.5	L4 = 64	




Series	Cable Ø range	Length	Part number
106	6.0 - 10.4	L1 = 110	106.405
	10.5 - 13.4	L2 = 99	
	13.5 - 16.4	L3 = 89	
	16.5 - 19.0	L4 = 79	
107	7.0 - 10.4	L1 = 146	107.809
	10.5 - 13.4	L2 = 136	
	13.5 - 16.4	L3 = 126	
	16.5 - 19.4	L4 = 116	
	19.5 - 22.5	L5 = 106	

Material: TPE (Thermoplastic elastomer).

These protective sleeves for straight cable plugs and cable receptacles have grooved cable bend reliefs which can be shortened according to cable diameters. The lengths of the sleeves and the corresponding cable diameters are listed above.




All dimensions and images shown are in millimeters and are for reference only.

**SOFT CAPS - LANYARD WITH NYLON THIN CORD****FOR RECEPTACLES**

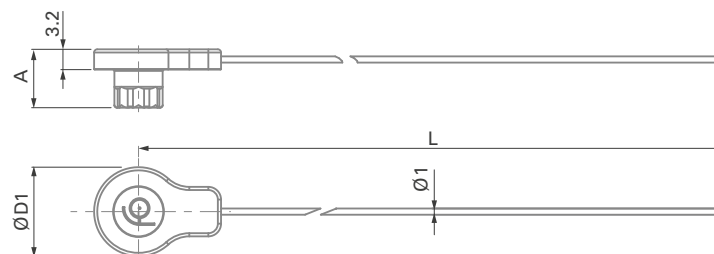
Accessories	Description	Part number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.

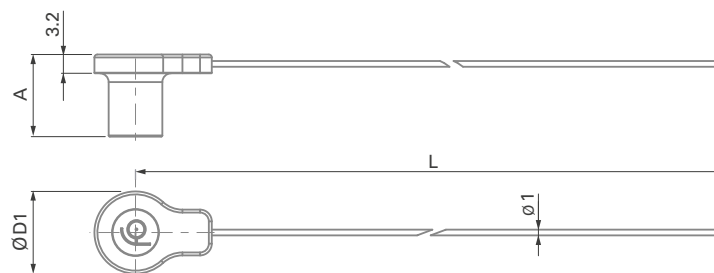
FOR PLUGS

Accessories	Description	Part number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.



Series	A	D1	L	Part number
102	9.2	14	200	102.2181
103	9.7	17	200	103.2406
1031	9.5	18	200	1031.1433
104	10.0	20	200	104.2808
105	10.0	23	200	105.3265



Series	A	D1	L	Part number
100	14.0	14	200	102.2180
103	14.7	17	200	103.2405
1031	14.0	18	200	1031.1432
104	16.0	20	200	104.2807
105	19.0	23	200	105.3264

Material: cap: Santoprene™ TPV 101-80 / Cord: Nylon.

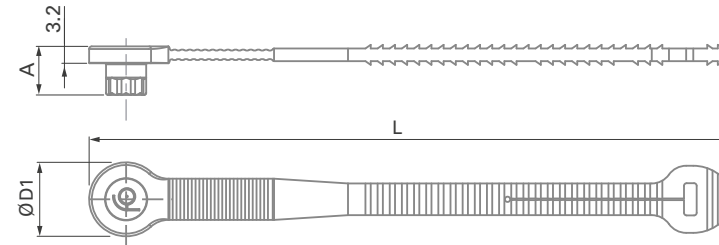


SOFT CAPS - SINGLE-PIECE

FOR RECEPTACLES



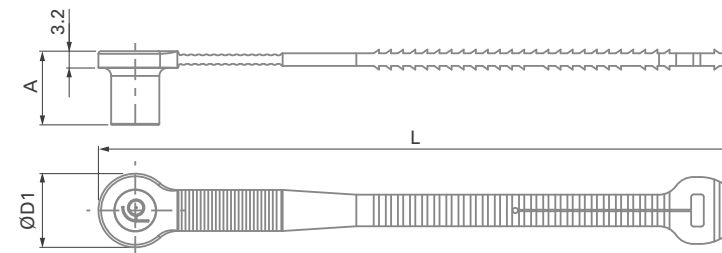
Series	A	D1	L	Part number
102	9.2	14	122	102.2166
103	9.7	17	147	103.2396
1031	9.5	18	148	1031.1422
104	10.0	20	164	104.2763
105	10.0	23	186	105.3250



FOR PLUGS

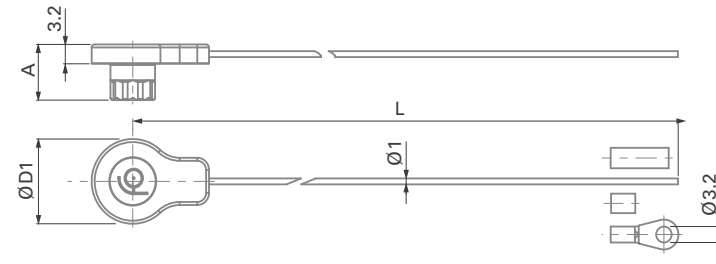


Series	A	D1	L	Part number
102	14.0	14	122	102.2169
103	14.7	17	147	103.2399
1031	14.0	18	148	1031.1425
104	16.0	20	164	104.2766
105	19.0	23	186	105.3253



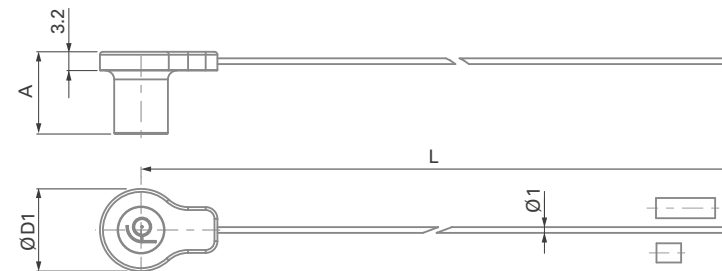
Material: cap: Santoprene™ TPV 101-80.

All dimensions and images shown are in millimeters and are for reference only.

**SOFT CAPS - LANYARD WITH STAINLESS STEEL CABLE****FOR RECEPTACLES**

Series	A	D1	L	Part number
102	9.2	14	200	102.2167
103	9.7	17	200	103.2397
1031	9.5	18	200	1031.1423
104	10.0	20	200	104.2764
105	10.0	23	200	105.3251

Crimp ferrule (300.922), crimp lug (300.299) and heat shrink tube (300.930) are included.

FOR PLUGS

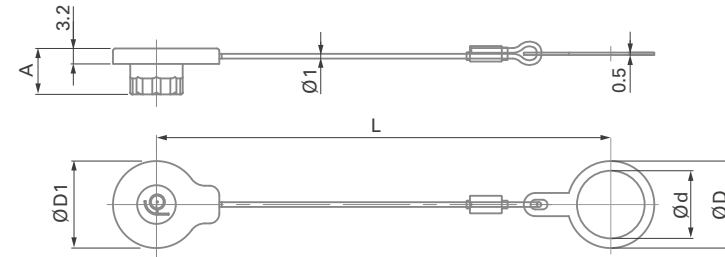
Series	A	D1	L	Part number
102	14.0	14	200	102.2185
103	14.7	17	200	103.2404
1031	14.0	18	200	1031.1431
104	16.0	20	200	104.2806
105	19.0	23	200	105.3263

Crimp ferrule (300.922) and heat shrink tube (300.930) are included.
Material: cap: Santoprene™ TPV 101-80 / Cable: Stainless steel with FEP-Teflon® covering.



SOFT CAPS - ASSEMBLED LANYARD WITH STAINLESS STEEL CABLE

FOR RECEPTACLES



Caps are intermateable to provide additional dust protection.

Series	A	D1	L	d	D	Part number
102	9.2	14	86	9	13	102.2182
	9.2	14	86	10	14	102.2165
103	9.7	17	93	14	18	103.2394
1031	9.5	18	94	14	18	1031.1434
	9.5	18	94	15	20	1031.1420
104	10.0	20	98	16	21	104.2761
105	10.0	23	100	20	25	105.3248

Crimp ferrule, heat shrink tube and fixing lug are included and mounted.

Material

Cap: Santoprene™ TPV 101-80
 Cable: Stainless steel with FEP-Teflon® covering
 Fixing lug: Black chrome plated brass (ISO CuZn37)

All dimensions and images shown are in millimeters and are for reference only.



METAL CAPS

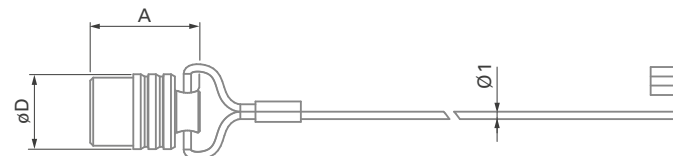
FOR RECEPTACLES



Series	Part number		O-ring material	Caps		Stainless steel cable	Crimp ferrule	Crimp lug	
	Natural chrome ¹⁾	Black chrome ²⁾		A	D				Length
102	102.1947	102.1951	NBR	15.0	11	100	FEP - Teflon®	300.922	300.299
103	103.2273	103.2276		15.0	13	100			
1031	1031.824	1031.826		17.0	15	100			
104	104.714	104.716		17.5	16	150			
105	105.3001	105.3005		21.0	19	150			
106	106.812	106.814		24.0	31	250			
107	107.2311	107.2313		26.0	36	300			

Material: cap: natural or black chrome plated brass (ISO CuZn39Pb3) – Crimp ferrule: aluminium – Crimp lug: tin plated copper.

FOR PLUGS³⁾



Series	Part number		O-ring material	Caps		Stainless steel cable	Crimp ferrule	
	Natural chrome ¹⁾	Black chrome ²⁾		A	D			Length
102	102.1948	102.1952	FPM - Viton®	14.5	10	100	FEP - Teflon®	300.922
103	103.2274	103.2277		21.0	14	100		
1031	1031.825	1031.827		20.0	15	100		
104	104.715	104.717		21.0	15	150		
105	105.3002	105.3006		29.0	20	150		
106	106.813	106.815		37.0	33	250		
107	107.2312	107.2314		42.0	38	300		

Material: cap: natural or black chrome plated brass (ISO CuZn39Pb3) – Crimp ferrule: aluminium.

These metal caps are fitted with an O-ring seal. They protect and seal the mating face of the plugs and receptacles.

To attach the ferrule or the crimp lug to the stainless steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws. See page J3 for recommended crimping tool for ferrule.

¹⁾ Assembled with natural plastic covered stainless steel cable.

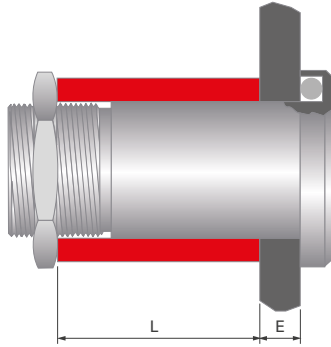
²⁾ Assembled with black plastic covered stainless steel cable.

³⁾ Not recommended for SFU/SFE/SFPE/SFPU. Use a soft cap instead.



SPACERS

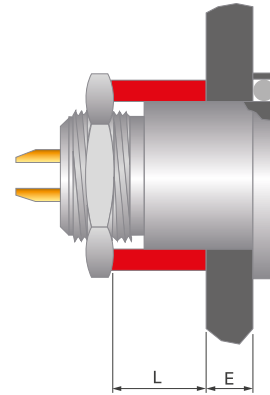
FOR WDE



Series	E	L	Part number
106	0.5 - 8.5	30.0	106.560
	8.0 - 16.0	22.5	106.561
	15.5 - 23.5	15.0	106.562
	23.0 - 31.0	7.5	106.563
107	2.0 - 5.5	18.5	107.556
	5.0 - 8.5	15.5	107.557
	8.0 - 11.5	12.5	107.558
	11.0 - 14.5	9.5	107.559
	14.0 - 17.5	6.5	107.560
	17.0 - 20.5	3.5	107.561

Material: aluminium.

FOR DEE, DEU & DKE¹⁾



Series	E	L	Part number
102	0.5 - 3.0	8.5	102.550
	2.5 - 5.5	6.0	102.551
	5.0 - 8.0	3.5	102.552

Series	E	L	Part number
104	0.5 - 3.0	8.5	104.550
	2.5 - 5.5	6.0	104.551
	5.0 - 8.0	3.5	104.552

Series	E	L	Part number
106	0.5 - 5.5	19.0	106.550
	5.0 - 10.0	14.5	106.551
	9.5 - 14.5	10.0	106.552
	14.0 - 19.0	5.5	106.553

Material: aluminium.

Series	E	L	Part number
103 1031	0.5 - 3.0	8.5	103.550
	2.5 - 5.5	6.0	103.551
	5.0 - 8.0	3.5	103.552

Series	E	L	Part number
105	0.5 - 5.0	12.0	105.1121
	3.5 - 8.5	8.5	105.1122
	7.0 - 12.0	5.0	105.1123

Series	E	L	Part number
107	1.0 - 4.0	18.5	107.556
	4.0 - 7.0	15.5	107.557
	7.0 - 10.0	12.5	107.558
	10.0 - 13.0	9.5	107.559
	13.0 - 16.0	6.5	107.560
	16.0 - 19.0	3.5	107.561

¹⁾ Spacers are useful and available for DKE only in 102 and 103 Series.

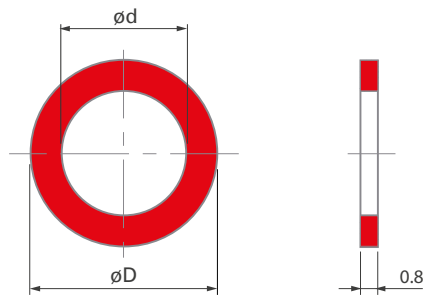
All dimensions and images shown are in millimeters and are for reference only.



WASHERS

COLOR CODING WASHERS

FOR D, DB, DBP, DBPC, DG, DGP, DK & SF



Series	D	d	Color						
			White	Black	Green	Blue	Yellow	Red	Grey
102	14.5	9	102.681	102.682	102.683	102.684	102.685	102.686	102.687
103	18.0	12	103.781	103.782	103.783	103.784	103.785	103.786	103.787
1031	20.0	14	1031.781	1031.782	1031.783	1031.784	1031.785	1031.786	1031.787
104 ¹⁾	23.0	15	104.981	104.982	104.983	104.984	104.985	104.986	104.987
105 ²⁾	26.0	18	105.2281	105.2282	105.2283	105.2284	105.2285	105.2286	105.2287

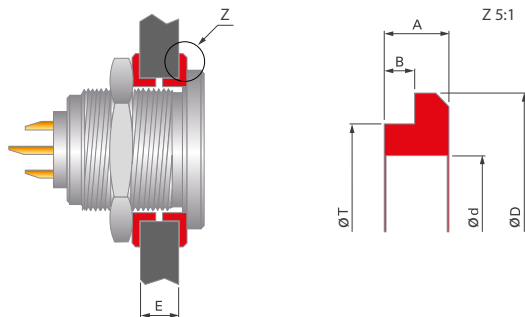
¹⁾ The connector style DB 104 requires an inner diameter d = 16 mm

²⁾ The connector style SF 105 requires an inner diameter d = 16 mm

Material: PP (Polypropylene).

INSULATING COLOR CODING WASHERS

FOR D RECEPTACLES



Series	D	d	T	A	B	E min/max	Color						
							White	Black	Green	Blue	Yellow	Red	Grey
102	12	9	10.6	1.5	0.6	1.3/6.5	102.791	102.792	102.793	102.794	102.795	102.796	102.797
103	15	12	13.9	2.0	1.0	2.1/5.0	103.382	103.383	-	-	-	-	-
104	19	15	17.0	2.0	1.0	2.1/8.5	-	104.377	-	-	-	-	-

Material:

102 Series: ABS (Acrylonitrile butadiene styrene).

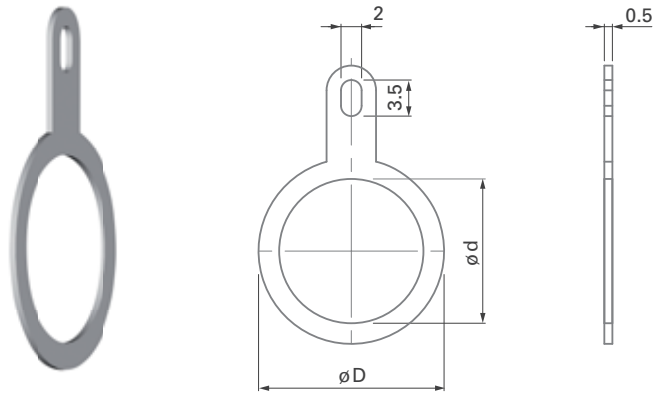
103, 104 Series: POM (Polyoxymethylene) Delrin®



WASHERS

GROUNDING WASHERS

FOR PANEL CONNECTORS

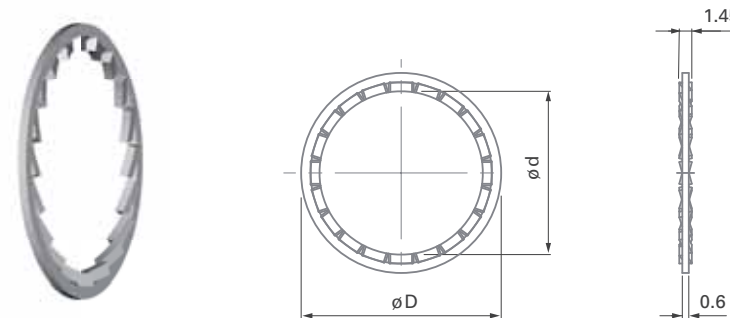


d	D	Part number
9	13	102.680
10	14	102.679
12	16	103.385
14	18	1031.315
15	20	104.680
16	21	104.679
18	23	105.680
20	25	105.679

Material: copper and tin plated brass (ISO CuZn37).

LOCKING WASHERS

FOR PANEL CONNECTORS



d	D	Part number	d	D	Part number
9	12.0	300.874	16	20	300.878
12	15.0	300.875	18	23	300.879
14	17.5	300.876	20	26	300.880
15	18.5	300.877	25	33	1052.338

Material: copper and tin plated brass (ISO CuZn37).

All dimensions and images shown are in millimeters and are for reference only.

**SPANNERS & NUT DRIVER****DOUBLE-END OPEN SPANNERS**
EXTRA THIN 

Part number	Opening across flats	Length	Fork thickness
TX00.007	7	90	2.0
TX00.008	8	96	2.3
TX00.009	9	102	2.5
TX00.010	10	104	2.5
TX00.011	11	114	2.5
TX00.012	12	122	3.0
TX00.013	13	122	3.0
TX00.014	14	130	3.0

Material: chrome alloy steel, chrome plated, fork angles – 15° and 75°.

OPEN-END SPANNERS
EXTRA THIN 

Part number	Opening across flats	Length	Fork thickness
TX00.015	15	145	5.2
TX00.016	16	160	3.2
TX00.017	17	160	5.5
TX00.019	19	175	6.0
TX00.020	20	175	6.0
TX00.022	22	196	6.5
TX00.024	24	195	6.5
TX00.025	25	216	7.0
TX00.030	30	240	7.5
TX00.032	32	270	8.0

Material: chrome vanadium steel, chrome plated, fork angle – 15°.



SPANNERS & NUT DRIVER

HOOK SPANNERS

FOR SIDE SLOTTED NUTS 

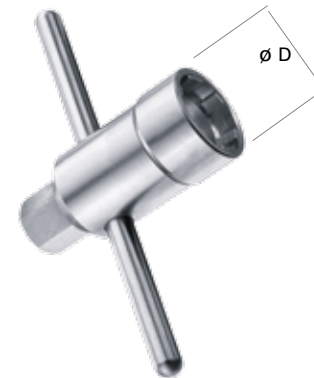


Part number	Thread size	Nut outer dia.
TX00.106	M30x1 / M32x1	34 – 38
TX00.107	M35x1 / M36x1	39 – 43

Material: hardened tool steel, gunmetal finish.

NUT DRIVER WITH T-HANDLE AND HEX DRIVE

FOR DECORATIVE SLOTTED NUTS 



Part number	Thread size	Nut outer dia.	D	Hex drive
TC00.000	M9 x 0.5	12	15	7
TC00.007	M10 x 0.5	13	16	7
TF00.001	M12 x 1	15	18	10
TG00.001	M14 x 1	18	21	10
TK00.000	M15 x 1	19	22	12
TK00.002	M16 x 1	20	23	12
TP00.011	M18 x 1	23	26	12
TP00.005	M20 x 1	25	28	12

Material: hardened tool steel, nickel plated.



CRIMPING TOOLS

CRIMP TOOL ULTRA PRECISION

FOR CLOSED C CRIMP TERMINATION



Part number	Contact dia.	C crimp tool
TX00.240	0.5	BALMAR 18 - 000 or DANIELS MH - 800
	0.7	
	0.9	
	1.3	
TX00.242	1.6	ASTROTOOL 615708

The best choice of precision crimp tools for highly reliable eight indenter crimping per US-MIL, IEC and DIN specifications. Positioners have to be ordered according to contact.

Standards

IEC 60203 / DIN 41 611, Part 3 / MIL-C-22520, Class I, Type 1

FISCHER POSITIONER

SUITABLE FOR CRIMP TOOL TX00.240



SUITABLE FOR CRIMP TOOL TX00.242



For the choice of Fischer Connectors' positioner, please refer to page B 1-26.



CRIMPING TOOLS

CRIMP TOOL

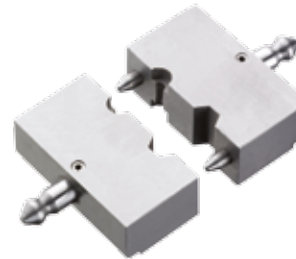
FOR COAXIAL CABLE

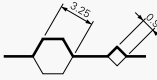
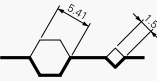
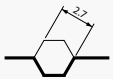


Part number	Description
TX00.241	The crimp tool for coaxial cable features a system of interchangeable dies (see below) that accommodate coaxial connectors and contacts used by Fischer Connectors.

CRIMPING DIES FOR PRECISION CRIMP TOOL

SUITABLE FOR CRIMP TOOL TX00.241



	Part number	Description
	TX00.250	Special crimping dies for coaxial cables of cable group 1 (RG-174 etc.). The hexagon corresponds to IEC 60803-B.
	TX00.251	Special crimping dies for coaxial cables of cable group 4 (RG-58 etc.). The hexagon corresponds to IEC 60803-D.
	TX00.265	Special crimping dies for crimp ferrule 300.922 of sealing caps

See page B 3-22 for the table of cable groups.



FOR CRIMP AND HIGH VOLTAGE CONTACTS

CONTACT
INSERTION TOOL



Part number	Contact dia.	Description
TX00.214	0.5	Tool for inserting male and female removable crimp contacts into the contact block. Especially recommended for small gauge and fragile wires.
TX00.210	0.7	
TX00.211	0.9	
TX00.273	1.3	

Material:
Handle: black POM (Delrin®).
Fork: tool steel, chrome plated.

CONTACT
EXTRACTION TOOL



Part number	Contact dia.	Description
TX00.213	0.5	Tool for extracting male and female removable crimp contacts from the contact block.
TX00.200	0.7	
TX00.205	0.9	The sleeve of this tool is pushed over the contact, to release the contact retaining mechanism.
TX00.212	1.3	The tool plunger is then pushed to eject the contact.
TX00.201	1.6	

Material:
Housing and plunger: black POM (Delrin®).
Sleeve: stainless steel.
Slide: tool steel.



FOR CRIMP AND HIGH VOLTAGE CONTACTS

ASSEMBLY TOOL

FOR MALE CONTACTS WITH OUTSIDE THREAD



Part number	Description
TP00.001	Tool for special contacts which are inserted only after termination to a wire ¹⁾ . To be used for : - Multipole HV Cable receptacle 107 A034 - Coax HV Plugs 105 A005 & 105 A108 - Mixed HV Cable receptacles 105 A020, 105 A036, 105 A060 Receptacles 106 A014

Material – Stainless steel: length 75 mm – Inside thread M3

¹⁾ Warning: these contacts are not removable after insertion into the contact block.

FOR FEMALE CONTACTS WITH INSIDE THREAD



Part number	Description
TP00.000	Tool for special contacts which are inserted only after termination to a wire ¹⁾ . To be used for : - Multipole HV Plug 107 A034 - Coax HV Plugs 105 Z005 (right-angle only) & 105 Z049 Receptacles 105 A049, 105 A108 - Mixed HV Plugs 105 A020, 105 A036, 105 A060 & 106 A014

Material – Stainless steel: length 75 mm – Outside thread M1.7

All dimensions and images shown are in millimeters and are for reference only.



References	Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
102 A 001			●					B3-21
102 A Z 002			●					B3-21
102 A 014					●			B5-17
102 A 017			●					B3-21
102 A Z 018				●				B4-7
102 A 021					●			B5-17
102 A Z 025				●				B4-7
102 A Z 051	●							B1-27
102 A Z 052	●							B1-27
102 A Z 053	●							B1-27
102 A Z 054	●							B1-27
102 A Z 056	●							B1-27
102 A Z 059	●							B1-27
103 A Z 001			●					B3-21
103 A Z 002			●					B3-21
103 A 015					●			B5-17
103 A Z 023				●				B4-7
103 A 026			●					B3-21
103 A Z 051	●							B1-28
103 A Z 052	●							B1-28
103 A Z 053	●							B1-28
103 A Z 054	●							B1-28
103 A Z 056	●							B1-28
103 A Z 057	●							B1-28
103 A Z 058	●							B1-28

References	Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
103 A Z 062	●							B1-28
1031 A Z 010	●							B1-28
1031 A Z 012	●							B1-28
1031 A Z 019	●							B1-28
104 A 002			●					B3-21
104 A Z 010				●				B4-7
104 A 012			●					B3-21
104 A Z 037	●							B1-29
104 A Z 040	●							B1-29
104 A Z 051	●							B1-29
104 A Z 053	●							B1-29
104 A Z 054	●							B1-29
104 A Z 055	●							B1-30
104 A Z 056	●							B1-30
104 A 060			●					B3-21
104 A Z 062		●						B2-9
104 A Z 065	●							B1-29
104 A Z 066	●							B1-30
104 A 078							●	B7-15
104 A Z 083						●		B6-7
104 A Z 086	●							B1-30
104 A Z 087	●							B1-29
104 A Z 092	●							B1-30
104 A 093							●	B7-15
104 A 124	●							B1-30

Contact configurations

FISCHER CORE SERIES **BRASS**



References	Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
105 A Z 002			•					B3-21
105 A Z 004				•				B4-7
105 A Z 005				•				B4-7
105 A 020						•		B6-7
105 A 036						•		B6-7
105 A Z 038	•							B1-32
105 A Z 039		•						B2-9
105 A Z 049				•				B4-7
105 A Z 051	•							B1-31
105 A Z 052	•							B1-31
105 A Z 053	•							B1-31
105 A Z 054	•							B1-31
105 A 057		•						B4-7
105 A Z 058	•							B1-32
105 A 060						•		B6-7
105 A Z 062	•							B1-32
105 A Z 069	•							B1-32
105 A 074							•	B7-15
105 A 087	•							B1-31
105 A 089							•	B7-15
105 A Z 090			•					B3-21
105 A Z 093	•							B1-32
105 A 095							•	B7-15
105 A Z 101	•							B1-31
105 A Z 102	•							B1-32

References	Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
105 A Z 104	•							B1-32
105 A 108				•				B4-7
105 A Z 110	•							B1-32
105 A 112						•		B6-7
105 A Z 124	•							B1-31
105 A 127	•							B1-32
106 A Z 003	•							B1-33
106 A Z 007	•							B1-33
106 A Z 013		•						B2-9
106 A 014						•		B6-7
106 A Z 015	•							B1-33
106 A Z 017	•							B1-33
106 A Z 018	•							B1-33
106 A Z 019	•							B1-33
107 A Z 003				•				B4-7
107 A 004				•				B4-7
107 A Z 013	•							B1-34
107 A Z 015	•							B1-34
107 A Z 017				•				B4-7
107 A Z 018	•							B1-34
107 A Z 023	•							B1-34
107 A 034		•						B2-9
107 A Z 051	•							B1-34
107 A Z 052	•							B1-34



MATERIAL & SURFACE TREATMENTS

Metal parts

The standard Fischer Connectors shells are nickel plated brass with natural (silver) chrome finish. Black chrome finish is available as an option; see Options pages B 1-35 and B 3-24. Internal piece parts are nickel plated brass. When warranted by an extreme environment, in most cases stainless steel can be substituted for all metal parts.

Metal parts	Material			Finish	
	Designation	ISO	Standard	Designation	Standard
Shell (Housing), clamp nut, decorative slotted nut	Brass	CuZn39Pb3	CW614N / UNS C 38500	Chrome over Nickel	SAE-AMS2460
Plug body, cable clamp, inner sleeve, spacers and rings, nuts and washers	Brass	CuZn39Pb3	CW614N / UNS C 38500	Nickel	SAE-AMS-QQ-N-290 / SAE-AMS2404
Contacts	Male (solder)	Brass	CuZn39Pb3	1 µm Gold over Nickel	MIL-DTL-45204D / Type 1 + ASTM B488
	Female, Male (crimp)	Bronze	CuSn4Zn4Pb4		

Other material and surface treatments are available on request.

Insulator and sealing

Contact blocks and other insulators for our standard connectors are manufactured from high performance engineering plastic materials. The standard materials of each connector series are listed under Electrical & Contact configurations in pages B 1-1 through B 7-1. Ceramics and other dielectrics are available on special order.

Insulator and sealing	International symbol	Flammability
Insulator	PEEK - PTFE - PBT	UL 94 V-O
Interface O-rings (receptacles)	FPM (Viton®) / EPDM	-
Sealant material - IP68 (receptacles) - Hermetic	Silicon compound Epoxy compound	UL 94 V-O UL 94 HB
Cable sealing (plugs) - IP68	TPE-S	UL 94 HB

Our products are RoHs compliant and conform with the EC Directives 2002/95/EC.

Elastomer seals

Sealed connectors are fitted with O-rings and cable sealing gaskets.

The standard materials are:

FPM (Viton®) for O-rings

TPE (Thermoplastic Elastomers) for cable seals, protective sleeves and strain reliefs.

Compound and trade name	Chemical name	Excellent resistance to
FPM (Viton®)	Fluoro Elastomer	Acids, weather, ozone, fuels, mineral and silicone oils, high vacuum, gamma rays
EPDM, EPM or EPR	Ethylene Propylene Diene Elastomer	Alcohol, weather, hot water, vapor, brake fluids, detergents, gamma rays
TPE-S, TPE-O (Thermoplastic Elastomer)	Styrene-Ethylene-Butadiene-Styrene	Very resistant, except to aromated and chlorinated hydrocarbons

Please note that as an elastomer reaches its lower temperature limit, it becomes rigid and loses the flexibility required for connector mating and unmating. If sealed connectors have to be manipulated at low temperatures, the O-rings in the mating area has to be of a material with a considerably lower temperature limit.

The elastomers listed below represent presently available materials, which Fischer Connectors can substitute when required by an application. Not all materials are available in all shapes and sizes so please check with us for details.



ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type	Value	Standard
Sealing performance	Unsealed connectors (mated)	IP50	IEC 60529
	Plugs (mated) with general purpose sealed clamps ¹⁾	IP68 IP69	
	Receptacles "U" body style	IP68	
	Receptacles "E" body style	Hermetic: Tested: 10^{-8} mbar l/sec.	IEC 60068-2-17 test Qk method 3, alternative b
IP69		IEC 60529	
Operating temperature range	See details on page A 15	See details on page A 15	IEC 60512-6-11 i+j / IEC 60068-2-14-Nb
Corrosion resistance ³⁾		Salt mist, 1,000 hours, 5% salt solution, 35°C	IEC 60068-2-11 test Ka MIL-STD-202 method 101 EIA-364-26
Endurance		10,000 mating cycles	IEC 60512-5-9a / EIA-364-09
Vibration		10 to 2000 Hz, 1.5 mm or 15g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity > 1us	MIL-STD-202 method 204 condition B
Radiation resistance ²⁾	Unsealed connectors	PEEK: 10 ⁷ Gy(=1000M Rads)	
	Sealed receptacles "E"	FPM (Viton®) O-rings 10 ⁵ Gy (=10M Rads)	

¹⁾ The sealing performance can be affected by the long term quality of the cable.

²⁾ For information only. Not tested by Fischer Connectors.

³⁾ Plug and receptacle in mated position or with cap when unmated. For Brass connectors only.

Aluminum version not recommended for Marine use. Preserved mechanical and electrical functionality. Visual aspect might be altered.

Most of our connectors are completely sterilizable in autoclave, Cidex®, ETO, gamma radiation, Steris® or Sterrad®. Please contact us for more details. For more information visit: www.fischerconnectors.com.

ELECTRICAL DATA

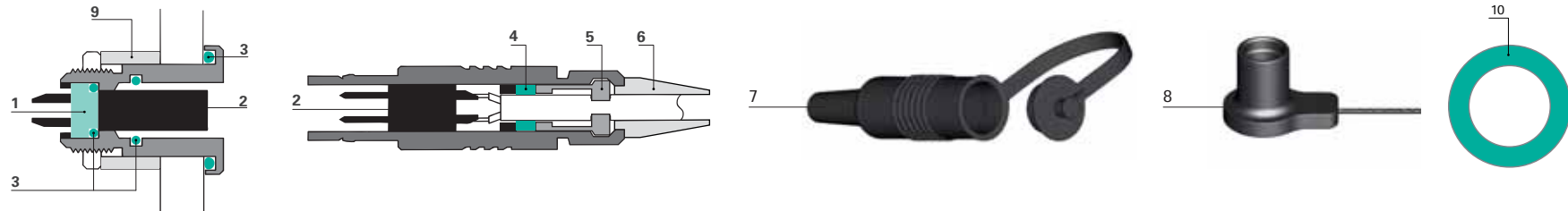
Characteristic	Contact size	Typical values	Standard
Contact resistance 10,000 mating cycles	ø 0.5 mm	5.0 mΩ	IEC 60512-2-2a/b
	ø 0.7 mm	5.0 mΩ	
	ø 0.9 mm	4.0 mΩ	
	ø 1.3 mm	2.5 mΩ	
	ø 1.6 mm	2.5 mΩ	
	ø 2.3 mm	2.5 mΩ	
	ø 3.0 mm	1.5 mΩ	
Insulation resistance		> 10 ¹⁰ Ω	IEC 60512-3-1-3a Method C



OPERATING TEMPERATURES

The temperature ranges quoted by the manufacturers of the plastic materials are usually the absolute maximum values. When exposed to the mechanical and electrical stresses present in a connector, these values are often unrealistic.

If a composite connector system including accessories is used, then the item with the lowest temperature performance will dictate the operating temperature limit of the system. The table below shows our recommended operating temperature ranges.



Ref.	Component	Material	Operating temperatures
1	Sealant	"U" Type	-55°C to +200°C
		"E" Type	-65°C to +150°C
2	Insulator	PEEK	-65°C to +200°C
		PTFE (Teflon®)	-65°C to +160°C
		PBT	-65°C to +135°C
3	Standard O-rings	FPM (Viton®)	-20°C to +200°C ¹⁾
	Interface O-rings (option)	EPDM	-50°C to +160°C ²⁾
4	Cable clamp seal	TPE	-70°C to +130°C
5	Cable clamp	Standard Brass	-40°C to +100°C
		High Voltage Connectors POM	-60°C to +100°C
6	Cable strain relief	TPE	-60°C to +100°C
		405 only	-60°C to +180°C
7	Protective Boots	TPE	-60°C to +100°C
8	Sealing Caps	Metallic Plug: Brass with FPM O-ring	-20°C to +200°C ¹⁾
		Receptacle Brass with NBR O-ring	-30°C to +110°C ¹⁾
		Plastic POM with FPM O-ring	-20°C to +100°C ¹⁾
		Soft Caps TPE	-55°C to +85°C
9	Panel Spacer	Aluminium	
10	Color Coding Washer	PP	-20°C to +60°C

¹⁾ Minimum mating temperature: 0°C.

²⁾ Minimum mating temperature: -20°C.



0°C



FISCHER
CORE SERIES
STAINLESS STEEL



KEY FEATURES



The Fischer Core Series Stainless Steel connectors have been specially designed for applications where long-term, reliable solutions in extreme environments are required – such as nuclear and energy, medical, and food processing applications. They are not only safe, but also easy to clean, easy to handle and highly versatile.

Made of 316L stainless steel shell, PEEK insulators, and EPDM interface o-rings, they offer the best radiation and corrosion resistance, while ensuring consistently high performance even in high temperatures. The connectors also allow microbiological sterilization and radioactive decontamination.

PERFORMANCE

- Premium grade 316L stainless steel
- IP68 sealed solutions
- 360° EMC shielding

RELIABILITY

- Premium materials (316L, PEEK, EPDM) for outstanding chemical, temperature and radiation resistance
- High corrosion resistance

SOLUTIONS

- Wide range of body styles & sizes
- Remote handling for robotic friendly operation and custom solutions
- PCB, Solder, Crimp contacts

STERILIZATION

- Fully sterilizable
- Decontamination fluids compatible (decon 90, RBS 25)



PLUGS

CABLE MOUNTED



- Body style selection (S/ST) C 3
- Technical dimensions C 12

RECEPTACLES

PANEL FRONT MOUNTED



- Body style selection (DBEE) C 3
- Technical dimensions C 13

PANEL REAR MOUNTED



- Body style selection (DBPE) C 3
- Technical dimensions C 13

FEEDTHROUGH

PANEL FRONT MOUNTED



- Body style selection (WDE 103/105/107) C 3
- Technical dimensions C 14

FOR ALL STAINLESS STEEL

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ Size selection C 4 ■ Electrical & contact configurations C 5 ■ Options C 11 ■ Part numbering C 16 | <ul style="list-style-type: none"> ■ Cable clamp sets C 18 ■ Accessories C 22 ■ Tooling C 23 ■ Technical information C 27 ■ Cross-line technical information A 9 |
|--|---|



PLUGS

CABLE MOUNTED



S



ST

BODY STYLES	S	ST
Locking system	Push-pull	Push-pull
Sealing	IP50/IP68	IP50/IP68
Design	Standard	Remote handling

RECEPTACLES

PANEL FRONT MOUNTED



DBEE



WDE

BODY STYLES	DBEE	WDE
Sealing	Hermetic	Hermetic
Design	Front-projecting	Bulkhead feedthrough

PANEL REAR MOUNTED



DBPE

BODY STYLES	DBPE
Sealing	Hermetic
Design	Rear-projecting



CONNECTOR SIZE VERSUS CABLE DIAMETER

¹⁾ For max cable ø, values in parenthesis are valid for sealed connectors (IP68).



Series	Multipole low voltage		
	Min cable ø	Max cable ø	Number of contacts
103	1.7	6.7 (6.2) ¹⁾	2-12
105	1.5	10.7	2-27
107	5.7	22.7	4-55



A/Z POLARITY

To protect users from contact with dangerous voltages, most Fischer connectors exist in two versions:

STANDARD "A" POLARITY

The contacts of the receptacle are protected against accidental touch.

Recommended when voltage is present on the receptacle.

INVERTED "Z" POLARITY

The contacts of the plug are protected against accidental touch.

Recommended when voltage is present on the plug.

	Receptacle DBEE	Plug S/ST
Type "A" Standard Polarity		
Type "Z" Inverted Polarity		

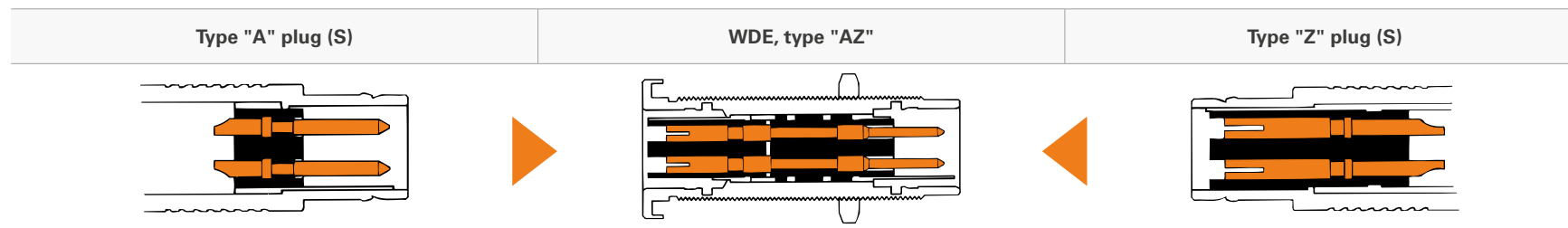
IMPORTANT: AN "A" TYPE CONNECTOR CAN NEVER BE MATED WITH A "Z" TYPE CONNECTOR.

A plug "S" has the same housing in type "A" as in type "Z", but type "A" comes with unprotected contacts while type "Z" is equipped with touch-

protected contacts. In most cases these are female contacts which are recessed in the insulator.

BULKHEAD FEEDTHROUGH WDE

Type "AZ" is the standard version of the WDE. The flange side accepts an "A" type plug, and the threaded side accepts a "Z" type plug.



The "ZA" version of the WDE accepts a type "Z" plug at the flange side and accepts a type "A" plug at the threaded end.



CONTACT TYPES

The Fischer Connectors' contact designs are highly reliable and are guaranteed up to 5,000 mating cycles.

All standard brass and bronze contacts for use in the Core Series are screw machined, and all are gold plated over a nickel underplate.

Most connectors are available with solder, crimp or PCB contacts and each type is optimized for a particular application.

SOLDER CONTACTS

Most versatile
Pre-installed contacts
Qualified assemblers required



- Can be produced with any type of contact block material and accept a wide range of wire sizes.
- Contacts are pre-installed in the insulator block, and the wires can be terminated with any appropriately sized soldering iron.
- May require operators who are qualified in specialized soldering techniques.

PCB CONTACTS

PCB or Flex circuit mount
Reduced pin diameter
Wave soldering



- Designed to be mounted directly onto a PCB or flex circuit, can be used in wave soldering operations for faster production assembly.
- Preferred for high rates of data transmission due to the low distance to the board that their integration allows. This helps reducing signal perturbations.
- PCB pins are generally used on rear mounted panel connectors.

CRIMP CONTACTS

Selectively annealed area
Special tools required
Limited range of wire sizes



- Each contact has a selectively annealed area which is deformed during assembly by specialized tooling to assure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering process is required.
- Not available for sealed or hermetic connectors.



103 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁵⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
103 A Z 051		2	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.5	2.2	2.2	3.0	≤ 250	13
103 A Z 052		3	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.5	1.8	2.0	≤ 250	12
103 A Z 053		4	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.6	2.0	2.4	≤ 250	7.0
103 A Z 054		5	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.1	1.4	1.9	2.2	≤ 250	6.8
103 A Z 056		6	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.3	2.0	2.0	≤ 250	5.2
103 A Z 057		7	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.3	2.0	2.0	≤ 250	5.0
103 A Z 058		8	●		●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.1	1.4	1.9	≤ 200	3.8
103 A Z 062		12	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	0.9	1.2	1.5	1.8	≤ 200	2.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle. Please contact us for rating for WSO right-angle plugs and WDE bulkhead feedthroughs.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Solder contact ¹⁾		AC r.m.s		DC			
									Solder contact ¹⁾	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 051		2		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.5	3.0	4.0	4.0	≤ 630	26
105 A Z 087		2		●			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	-	1.2	1.6	2.3	3.0	≤ 400	30
105 A Z 052		3		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.0	2.5	3.0	3.5	≤ 400	23
105 A Z 053		4		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	1.8	1.8	2.6	2.6	≤ 320	20
105 A Z 054 ⁵⁾		7	1	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
			6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		7.0
105 A Z 067		8		●			PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.7	2.0	2.5	2.8	≤ 320	10
105 A 124		8	2	●			PEEK	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.2	2.2	1.8	3.2	≤ 250	18.5
			6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.2	1.8	1.8		7.5
105 A Z 101 ⁵⁾		9	1	●	●		PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
			8					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		5.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contact dia. 2.0 is positioned to make contact first and break last.

⁶⁾ Measured with S plug and D receptacle.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁸⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC r.m.s		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 062		10		●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.7	2.0	2.5	2.7	≤ 320	9.0
105 A Z 069		12		●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.5	1.8	2.0	≤ 250	8.0
105 A Z 104 ⁵⁾		3	13	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.5	1.5	3.8	2.2	≤ 320	14
		10						0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.5	1.8	2.2		1.0
105 A 127 ⁷⁾		3	13		●		PEEK	1.3	-	max ø1.18mm min ø0.58mm AWG18-24	3.0	2.8	4.8	3.9	≤ 320	14
		10						0.7	-	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9		1.0
105 A Z 058		15		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 250	5.3
105 A Z 110 ⁶⁾		4	16	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.6	1.3	2.8	2.1	≤ 250	14
		12						0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.0	1.2	1.5	2.0		1.0
105 A Z 038		18		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 200	4.5
105 A Z 093		24		●		●	PBT	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.5	1.5	2.0	≤ 250	3.5
105 A Z 102		27		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.5	1.5	2.0	≤ 250	3.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contacts dia. 1.3 are positioned to make contact first and break last.

⁶⁾ Contacts dia. 1.6 are positioned to make contact first and break last.

⁷⁾ Inverted polarity: female contacts on plug/male contact on receptacle

⁸⁾ Measured with S plug and D receptacle.



107 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁵⁾ [kV] in mated position				Rated voltage ⁴⁾ r.m.s [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Male solder contacts ¹⁾	Female solder contacts ¹⁾	AC r.m.s		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
107 A Z 013		4		●			PTFE	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	6.5	7.0	10	11	≤ 1000	26
107 A Z 018		6		● ○			PTFE PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	4.5	4.5	6.0	6.0	≤ 800	25
107 A Z 015		19		● ○			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	2.0	2.5	2.5	3.2	≤ 500	13
107 A Z 051		27		● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	2.0	3.0	3.2	≤ 400	7.5
107 A Z 052		40		● ○			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	1.8	1.5	2.5	2.0	≤ 320	6.5
107 A Z 023		8		●			PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	1.8	2.8	2.5	≤ 400	7.0
		47		○			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.88mm AWG20 [1] AWG22 [19/34]	1.7	1.5	2.5	2.1		3.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle.



MECHANICAL CODING

For easy connect / Disconnect operations

Our contact blocks are engineered with arc-shape metal guides, which ensure precise alignment of connectors during the mating process.

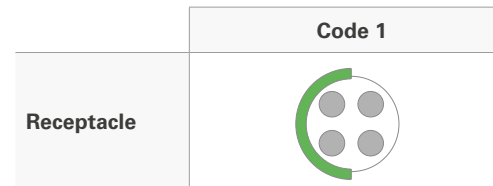


This guiding mechanism provides:

- Increased safety and user friendliness by preventing misconnection.
- Easy mating cycles, can be blind-mated.

Keying codes option


All Multipole body styles are mechanically coded. Code 1 is the standard, but other codes can be requested.



Other keying codes are available on request, please contact us. Images are for reference only.

MULTIPOLE LOW VOLTAGE OPTIONS

OPTIONS

1	Housing color Which housing color do you need?	Natural Stainless steel	
2	Contact block material Which contact block material do you need?	PEEK	
3	Contact type Which contact type do you need?	Solder	Crimp¹⁾
4	Keying code Which keying code do you need?	Code 1 	-130 -150

¹⁾Crimp contacts are not an option for sealed or hermetic connectors.

CONTACT TYPE FOR PANEL MOUNTED CONNECTORS

Applicable for	Last digit	Description
Front mounted: DBEE	0	Standard: solder contacts
	9	With PCB (Printed Circuit Board) contacts instead of solder contacts
Rear mounted: DBPE	0	Standard: PCB (Printed Circuit Board) contacts
	9	With solder contacts instead of PCB (Printed Circuit Board) contacts

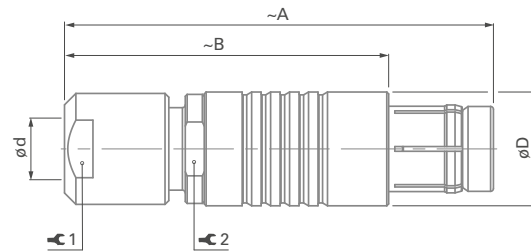
Options are available on request, please contact us.



PLUGS

CABLE MOUNTED

S
BODY STYLE

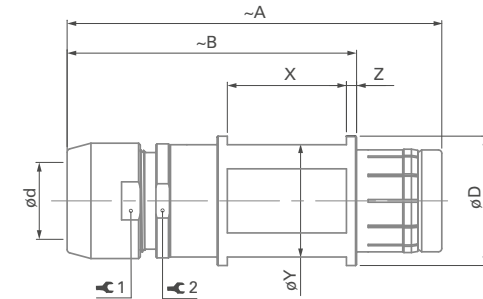


Series	A	B	ø D	d max		1	Torque 1 [Nm]	2
				Unsealed	Sealed			
103	46	35	12	6.7	6.2	10	1.0	10
105	62	47	18	10.7	10.7	15	3.5	16
107	110	85	34	22.7	22.7	32	10.0	32

Torque [Nm] are recommended values that may be influenced by the characteristics of the cable jacket. Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

CABLE MOUNTED

ST
BODY STYLE



Series	A	B	ø D	d max		1	Torque 1 [Nm]	2
				Unsealed	Sealed			
107	110	85	34	22.7	22.7	32	10.0	32

Series	X	ø Y	Z
107	35	33	3

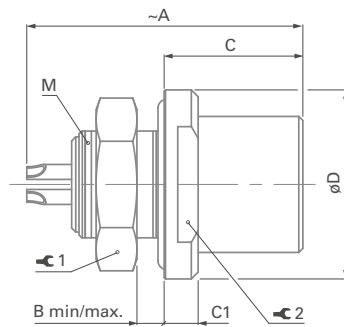


RECEPTACLES

PANEL FRONT MOUNTED

DBEE

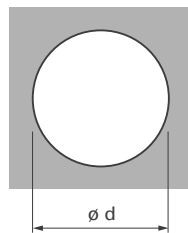
BODY STYLES



Series	A	B max.	C	C1	ø D	M	⚙️ 1	Torque 1 [Nm]	⚙️ 2
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14
105	32	5.0	19.0	4.0	27	18x1	22	6.0	22
107	47	5.0	24.0	5.0	45	36x2	TX00.107	16	38

PANEL CUT-OUT

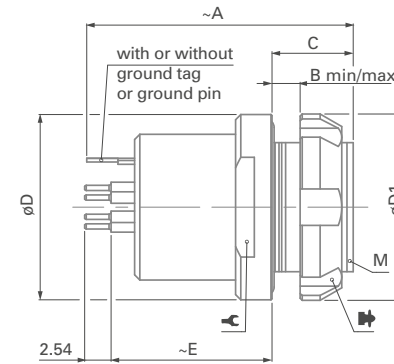
Series	DBEE
103	14.1
105	18.1
107	36.2



PANEL REAR MOUNTED

DBPE

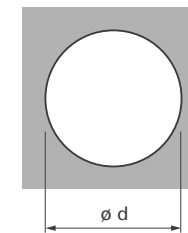
BODY STYLES



Series	A	B max.	C	D	D1	E	M	⚙️	➡️	Torque [Nm]
103	26	3.0	7.8	18	18	15.5	14x1	15	TG00.001	3.0

PANEL CUT-OUT

Series	DBPE
103	14.1



All dimensions and images shown are in millimeters and are for reference only.

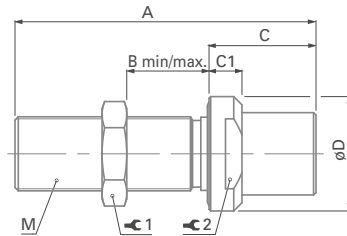


FEEDTHROUGH

PANEL FRONT MOUNTED

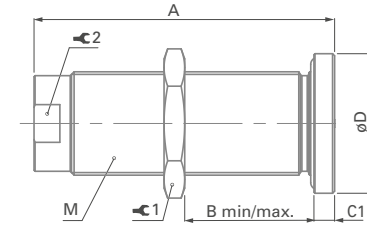
WDE 103

BODY STYLE



WDE 105

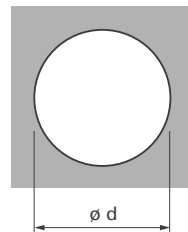
BODY STYLE



Series	A	B max	C	C1	ø D	M	⚙ 1 ¹⁾	Torque 1 [Nm]	⚙ 2
103	40	23	14	4	17	12x1	14	2.5	14
105	62	46	-	4	27	20x1	22	6.5	17

PANEL CUT-OUT

Series	WDE
103	12.1
105	20.1



The bulkhead feedthrough connector allows the passing of electrical signals and power through a panel via two cable plugs.

The "AZ" version of the feedthrough accepts a type "A" plug on the flange side and a type "Z" plug on the threaded end, which is typically oriented toward the interior of the chassis. In the version "ZA" the connections "A" and "Z" are inverted.

Dimension "B max" specifies the maximum panel thickness. For panels thinner than the unthreaded section "E min", we can provide spacers as shown accessories section, page B8-16.

¹⁾ Assembly tool for side hex nut, see Accessories section, page C 26.

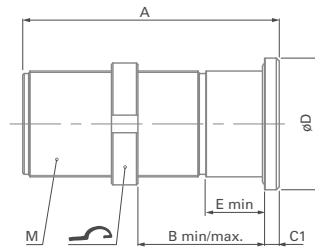


FEEDTHROUGH

PANEL FRONT MOUNTED

WDE 107

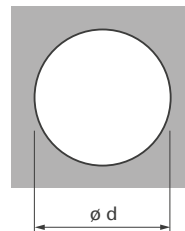
BODY STYLE



Series	A	B min/max	C1	ø D	E min	M	⌒ ¹⁾	Torque 1 [Nm]
107	92	20/76	5	45	20	36x2	TX00.107	17

PANEL CUT-OUT

Series	WDE
107	36.2



The bulkhead feedthrough connector allows the passing of electrical signals and power through a panel via two cable plugs.

The "AZ" version of the feedthrough accepts a type "A" plug on the flange side and a type "Z" plug on the threaded end, which is typically oriented toward the interior of the chassis. In the version "ZA" the connections "A" and "Z" are inverted.

Dimension "B max" specifies the maximum panel thickness. For panels thinner than the unthreaded section "E min", we can provide spacers as shown in accessories section, page B8-16.

¹⁾ Assembly tool for side slotted nut, see Accessories section, page C 27.

Torque [Nm] are recommended values that may be influenced by the quality of the panel surface. Tests must be conducted to evaluate the exact values.



ORDERING INFORMATION

How to build a part number

Refer to the table aside to find the information you need to build the part number to order your selected connector.

For customized solutions, please contact us.

CONNECTORS PARTS

Part system	Body style	Size	Polarity
-------------	------------	------	----------

PART NUMBER EXAMPLES

Plug	ST- S	103	A
------	-------	-----	---

ST- S cable mounted plug in Series 103 with 6 (multipole) low voltage male contacts and following options.


Receptacle	ST- DBEE	103	A
------------	----------	-----	---

ST- DBEE panel mounted receptacle in Series 103 with 6 (multipole) low voltage female contacts and following options.



▼	▼	▼
Cable mounted plugs	Series	As standard rule
S ST	103 105 107	A = male contacts on plug and female contacts on receptacle Z = female contacts on plug and male contacts on receptacle
Panel mounted receptacles	See page C 4 or Technical dimensions C 12	See page C 5
DBEE DBPE WDE		

Part numbering



Contact configuration	Options	Cable clamp sets for cable mounted plugs & receptacles
056	-130	+
	Natural stainless steel housing, PEEK contact blocks with solder contacts, keying code 1 and clamp nut without bend relief.	
056	-130 E	Not applicable as panel mounted
	Natural stainless steel housing, PEEK contact blocks with solder contacts and keying code 1.	
▼	▼	▼
Three-digit number specific for each pin layout	Specific suffix corresponding to selected options	Below cable clamp sets should be ordered separately
	Housing color	Multipole low voltage
See page C 7	Natural Stainless Steel	Example: ST- S 103 A056-130 +
	Contact block insulating material	Clamp set ordering line E31 103.1/6.7 + B
	PEEK	See page C 18
	Contact type	
	Solder Crimp PCB	
	Mechanical coding of the contact block	
	Clamp nut type & color	
	Other options	
	See page C 11	

RELATED ITEMS

Accessories	Tooling
	
Ex: ST-CR105C 2C3 A150	Ex: TX00.240
Stainless steel cap	Crimping tool
▼	▼
Protective sleeves Soft caps Metal caps Spacers Washers Mounting nuts	Spanners / Wrenches Crimping tools Tools for crimp contacts and high voltage contacts
See page C 22	See page C 23



INTRODUCTION



To guarantee excellent cable retention and strain relief, Fischer Connectors provides robust and high quality cable clamp sets :

- Collet style clamp system retaining cable over large jacket surface area.
- Protection of small diameters and delicate conductors.

Cable clamp sets are suitable for all cable mounted connectors.

RANGE OVERVIEW: S, U & E CABLE CLAMP SETS

Fischer Connectors offers three types of cable clamps sets. The table below will help you select the one corresponding to your needs.

Cable clamp set	Do you need the interface between the cable and the connector to be sealed?		Do you need the connector to be terminated to the cable shield?	
	Unsealed	Sealed	Unshielded	Shielded
S - Shielded	●			●
U - Unshielded	●		●	
E - Environmental		●	●	●

For 107 connector series, only S and E cable clamp sets are available.

PART NUMBERING

Cable clamp sets below should be ordered separately
Multipole low voltage
ST- S 103 A056-130 +
Examples connector ordering line
ST- S103 A056-130 +
Clamp set ordering line
E3 102.5/2.0

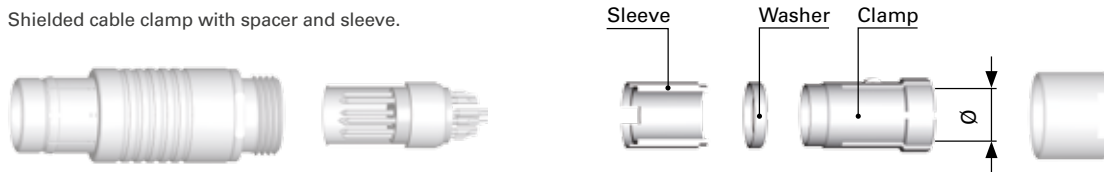
See following pages for cable clamp sets selection.



103 SERIES

S SHIELDED

Shielded cable clamp with spacer and sleeve.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.1/2.2 + B
2.2 - 2.7	2.7	E31 103.1/2.7 + B
2.7 - 3.2	3.2	E31 103.1/3.2 + B
3.2 - 3.7	3.7	E31 103.1/3.7 + B
3.7 - 4.2	4.2	E31 103.1/4.2 + B
4.2 - 4.7	4.7	E31 103.1/4.7 + B
4.7 - 5.2	5.2	E31 103.1/5.2 + B
5.2 - 5.7	5.7	E31 103.1/5.7 + B
5.7 - 6.2	6.2	E31 103.1/6.2 + B
6.2 - 6.7	6.7	E31 103.1/6.7 + B

U UNSHIELDED

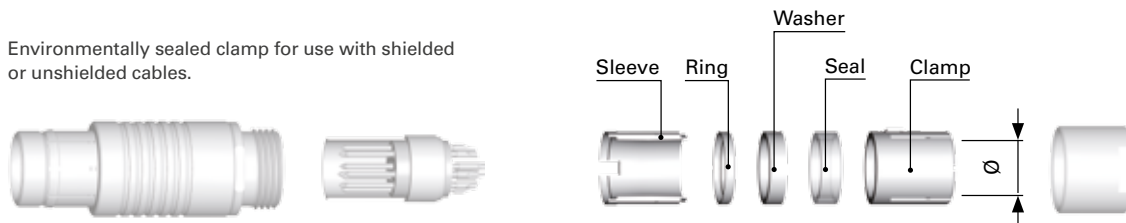
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
2.2 - 3.2	3.2	E3 103.6/3.2
3.2 - 4.2	4.2	E3 103.6/4.2
4.2 - 4.7	4.7	E3 103.6/4.7
4.7 - 5.2	5.2	E3 103.6/5.2
5.2 - 5.7	5.7	E3 103.6/5.7
5.7 - 6.2	6.2	E3 103.6/6.2
6.2 - 6.7	6.7	E3 103.6/6.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.2/2.2 + B
2.2 - 2.7	2.7	E31 103.2/2.7 + B
2.7 - 3.2	3.2	E31 103.2/3.2 + B
3.2 - 3.7	3.7	E31 103.2/3.7 + B
3.7 - 4.2	4.2	E31 103.2/4.2 + B
4.2 - 4.7	4.7	E31 103.2/4.7 + B
4.7 - 5.2	5.2	E31 103.2/5.2 + B
5.2 - 5.7	5.7	E31 103.2/5.7 + B
5.7 - 6.2	6.2	E31 103.2/6.2 + B

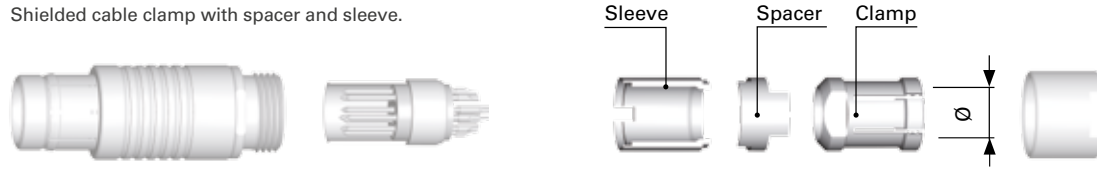
All dimensions and images shown are in millimeters and are for reference only.



105 SERIES

S
SHIELDED

Shielded cable clamp with spacer and sleeve.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
3.2 - 4.2	4.2	E3 105.1/4.2 + B
4.2 - 5.2	5.2	E3 105.1/5.2 + B
5.2 - 6.2	6.2	E3 105.1/6.2 + B
6.2 - 7.2	7.2	E3 105.1/7.2 + B
7.2 - 8.2	8.2	E3 105.1/8.2 + B
8.2 - 9.2	9.2	E3 105.1/9.2 + B
9.2 - 10.0	10.0	E3 105.1/10.0 + B
10.0 - 10.7	10.7	E3 105.1/10.7 + B

U
UNSHIELDED

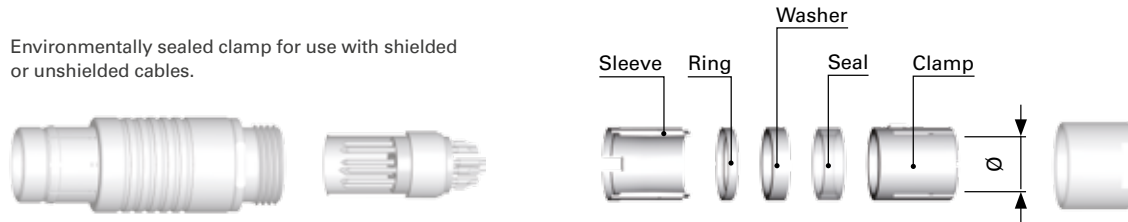
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
2.5 - 3.5	3.5	E3 105.6/3.5
3.5 - 4.5	4.5	E3 105.6/4.5
4.5 - 5.5	5.5	E3 105.6/5.5
5.5 - 6.5	6.5	E3 105.6/6.5
6.5 - 7.5	7.5	E3 105.6/7.5
7.5 - 8.5	8.5	E3 105.6/8.5
8.5 - 9.5	9.5	E3 105.6/9.5
9.5 - 10.5	10.5	E3 105.6/10.5

E
ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



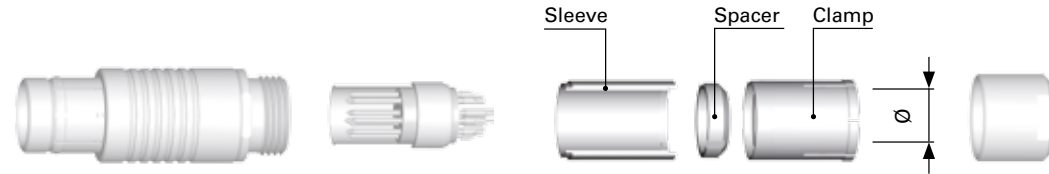
Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
3.2 - 4.2	4.2	E31 105.2/4.2 + B
4.2 - 5.2	5.2	E31 105.2/5.2 + B
5.2 - 6.2	6.2	E31 105.2/6.2 + B
6.2 - 7.2	7.2	E31 105.2/7.2 + B
7.2 - 8.2	8.2	E31 105.2/8.2 + B
8.2 - 9.2	9.2	E31 105.2/9.2 + B
9.2 - 10.0	10.0	E31 105.2/10.0 + B
10.0 - 10.7	10.7	E31 105.2/10.7 + B



107 SERIES

S SHIELDED

Shielded cable clamp with spacer and sleeve.



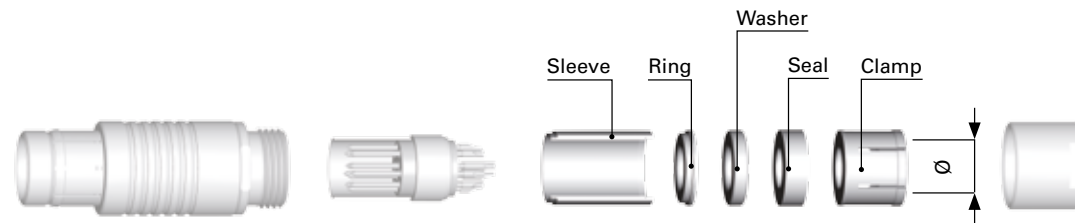
Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
5.7 - 7.2	7.2	E3 107.1/7.2
7.2 - 8.2	8.2	E3 107.1/8.2
8.2 - 9.2	9.2	E3 107.1/9.2
9.2 - 10.2	10.2	E3 107.1/10.2
10.2 - 11.2	11.2	E3 107.1/11.2

Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
11.2 - 12.2	12.2	E3 107.1/12.2
12.2 - 13.2	13.2	E3 107.1/13.2
13.2 - 14.2	14.2	E3 107.1/14.2
14.2 - 15.2	15.2	E3 107.1/15.2
15.2 - 16.2	16.2	E3 107.1/16.2

Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
16.2 - 17.2	17.2	E3 107.1/17.2
17.2 - 18.2	18.2	E3 107.1/18.2
18.2 - 19.2	19.2	E3 107.1/19.2
19.2 - 20.2	20.2	E3 107.1/20.2
20.2 - 21.2	21.2	E3 107.1/21.2
21.2 - 22.7	22.7	E3 107.1/22.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.

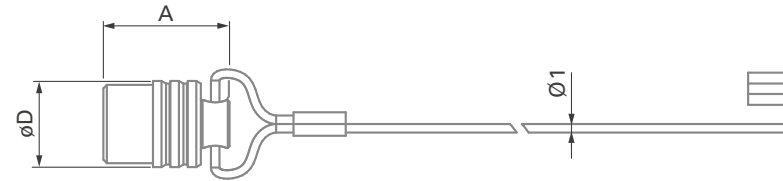


Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
5.7 - 7.2	7.2	E3 107.2/7.2
7.2 - 8.2	8.2	E3 107.2/8.2
8.2 - 9.2	9.2	E3 107.2/9.2
9.2 - 10.2	10.2	E3 107.2/10.2
10.2 - 11.2	11.2	E3 107.2/11.2

Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
11.2 - 12.2	12.2	E3 107.2/12.2
12.2 - 13.2	13.2	E3 107.2/13.2
13.2 - 14.2	14.2	E3 107.2/14.2
14.2 - 15.2	15.2	E3 107.2/15.2
15.2 - 16.2	16.2	E3 107.2/16.2

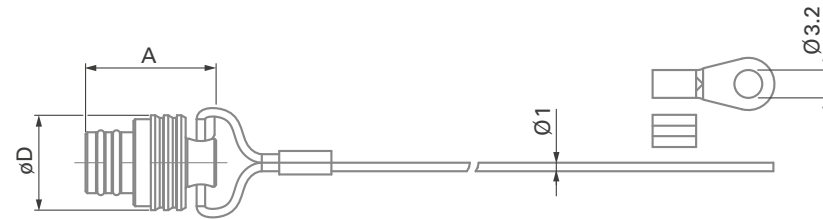
Cable dia. range	Collet Ø	Cable clamp set PTFE insulator
16.2 - 17.2	17.2	E3 107.2/17.2
17.2 - 18.2	18.2	E3 107.2/18.2
18.2 - 19.2	19.2	E3 107.2/19.2
19.2 - 20.2	20.2	E3 107.2/20.2
20.2 - 21.2	21.2	E3 107.2/21.2
21.2 - 22.7	22.7	E3 107.2/22.7

All dimensions and images shown are in millimeters and are for reference only.

**STAINLESS STEEL CAPS****FOR PLUGS**

Series	Part number	O-ring material	Caps		Stainless steel cable		Crimp ferrule
			A	D	Length	Covering material	Part number
103	ST-CP103C 2C3 A100	EPDM	21	13	100	FEP - Teflon®	300.922
105	ST-CP105C 2C3 A150		29	20	150		
107	ST-CP107C 2C3 A350		47	40	350		

Material - Cap: Stainless steel 316L – Crimp ferrule: aluminium

FOR RECEPTACLES

Series	Part number	O-ring material	Caps		Stainless steel cable		Crimp ferrule	Crimp lug
			A	D	Length	Covering material	Part number	Part number
103	ST-CR103C 2C3 A100	EPDM	13	15	100	FEP - Teflon®	300.922	300.299
105	ST-CR105C 2C3 A150		21	19	150			
107	ST-CR107C 2C3 A350		26	36	350			

Material - Cap: Stainless steel 316L – Crimp ferrule: aluminium

These metal caps are fitted with an EPDM O-ring seal. They protect and seal the mating face of the plugs and receptacles. To attach the ferrule or the crimp lug to the stainless steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws.



TOOLING FOR CRIMP CONTACTS

Series	Polarity	Contact diameter (mm)									
		0.5		0.7		0.9		1.3		1.6	
		Part number		Part number		Part number		Part number		Part number	
		Contact	Positioner	Contact	Positioner	Contact	Positioner	Contact	Positioner	Contact	Positioner
103	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
105	Male	-	-	200.2884	TX00.304	200.2891	TX00.308	200.2403	TX00.338	200.1653	TX00.313
	Female	-	-	200.2886	TX00.306	200.2893	TX00.310	200.2214	TX00.312	200.1654	TX00.314
Crimp tool part number		TX00.240		TX00.240		TX00.240		TX00.240		TX00.242	

See following pages for description of crimp tool and positioner.



CRIMPING TOOLS

CRIMP TOOL ULTRA PRECISION

FOR CLOSED C CRIMP TERMINATION



Part number	Contact dia.	C crimp tool
TX00.240	0.5	BALMAR 18 - 000 or DANIELS MH - 800
	0.7	
	0.9	
	1.3	
TX00.242	1.6	ASTRO TOOL 615708

The best choice of precision crimp tools for highly reliable eight indenter crimping per US-MIL, IEC and DIN Specifications. Positioners have to be ordered according to contact.

Standards

IEC 60203 / DIN 41 611, Part 3 / MIL-C-22520, Class I, Type 1

POSITIONER

SUITABLE FOR CRIMP TOOL TX00.240



SUITABLE FOR CRIMP TOOL TX00.242



For the choice of Fischer Connectors' positioner, please refer to section "Tooling", page B 9-3.



FOR CRIMP CONTACTS

CONTACT INSERTION TOOL



Part number	Contact dia.	Description
TX00.214	0.5	Tool for inserting male and female removable crimp contacts into the contact block. Especially recommended for small gauge and fragile wires.
TX00.210	0.7	
TX00.211	0.9	
TX00.273	1.3	

Material

Handle: black POM (Delrin®)
Fork: tool steel, chrome plated

CONTACT EXTRACTION TOOL



Part number	Contact dia.	Description
TX00.213	0.5	Tool for extracting male and female removable crimp contacts from the contact block.
TX00.200	0.7	
TX00.205	0.9	The sleeve of this tool is pushed over the contact, to release the contact retaining mechanism.
TX00.212	1.3	The tool plunger is then pushed to eject the contact.
TX00.201	1.6	

Material

Housing and plunger: black POM (Delrin®)
Sleeve: stainless steel
Slide: tool steel

**SPANNERS & NUTDRIVER****DOUBLE-END OPEN SPANNER**
EXTRA THIN 

Part number	Opening across flats	Length	Fork thickness
TX00.010	10	104	2.5
TX00.014	14	130	3.0

Material – Chrome alloy steel, chrome plated, fork angles – 15° and 75°**OPEN-END SPANNER**
EXTRA THIN 

Part number	Opening across flats	Length	Fork thickness
TX00.015	15	145	5.2
TX00.016	16	160	3.2
TX00.017	17	160	5.5
TX00.022	22	196	6.5
TX00.032	32	270	8.0

Material – Chrome vanadium steel, chrome plated, fork angle – 15°**HOOK SPANNER**

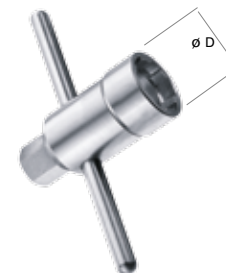
FOR SIDE SLOTTED NUTS



Part number	Thread size	Nut outer dia.
TX00.107	M35x1 / M36x1	39 – 43

Material – Hardened tool steel, gunmetal finish**NUTDRIVER WITH T-HANDLE**
AND HEX DRIVE

FOR DECORATIVE SLOTTED NUTS



Part number	Thread size	Nut outer dia.	D	Hex drive
TG00.001	M14 x 1	18	21	10

Material – Hardened tool steel, nickel plated



MATERIAL & SURFACE TREATMENTS

Metal parts

Metal parts	Material			Finish	
	Designation	ISO	Standard	Designation	Standard
Shell (Housing), clamp nut, decorative slotted nut	Stainless steel	X2CrNiMo17-12-2	316L/1.4404	-	-
Cable clamp, inner sleeve, spacers and rings, nuts and washers	Brass	CuZn39Pb3	CW614N / UNS C 38500	Nickel	SAE-AMS-QQ-N-290 / SAE-AMS2404
Contacts	Male (solder)	Brass	CuZn39Pb3	1 µm Gold over Nickel	MIL-DTL-45204D / Type 1 + ASTM B488
	Female, Male (crimp)	Bronze	CuSn4Zn4Pb4		

Other material and surface treatments are available on request.

Insulator and sealing

Contact blocks and other insulators for our standard connectors are manufactured from high performance engineering plastic materials. The standard materials of each connector series are listed under Electrical & contact configurations in pages C7 through C10. Ceramics and other dielectrics are available on special order.

Insulator and sealing	International symbol	Flammability
Insulator	PEEK	UL 94 V-O
Interface O-rings (receptacles)	FPM (Viton®) / EPDM	-
Sealant material - IP68 (receptacles) - Hermetic	Silicon compound Epoxy compound	UL 94 V-O UL 94 HB
Cable sealing (plugs) - IP68	TPE-S	UL 94 HB

Our products are RoHs compliant and conform with the EC Directives 2002/95/EC.

All dimensions and images shown are in millimeters and are for reference only.



ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type	Value	Standard
Sealing performance	Unsealed connectors (mated)	IP50	IEC 60529
	Plugs (mated) with general purpose sealed clamps ¹⁾	IP68 IP69	
	Receptacles "U" body style	IP68	
	Receptacles "E" body style	Hermetic: Tested: 10^{-8} mbar l/sec.	IEC 60068-2-17 test Qk method 3, alternative b
IP69		IEC 60529	
Operating temperature range	See details on page A 15	See details on page A 15	IEC 60512-6-11 i+j / IEC 60068-2-14-Nb
Corrosion resistance		Salt mist, 1,000 hours, 5% salt solution, 35°C	IEC 60068-2-11 test Ka MIL-STD-202 method 101 condition A
Endurance		5,000 mating cycles	IEC 60512-5-9a / EIA-364-09
Vibration		10 to 2000 Hz, 1.5 mm or 15g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity > 1us	MIL-STD-202 method 204 condition B
Radiation resistance ²⁾	Unsealed connectors	PEEK: 10 ⁷ Gy (=1000M Rads)	
	Sealed receptacles "E"	FPM (Viton®) O-rings 10 ⁵ Gy (=10M Rads)	

¹⁾ The sealing performance can be affected by the long term quality of the cable.

²⁾ For information only. Not tested by Fischer Connectors.

Most of our connectors are completely sterilizable in autoclave, Cidex®, EtO, gamma radiation, Steris® or Sterrad®. Please contact us for more details. For more information visit: www.fischerconnectors.com.

ELECTRICAL DATA

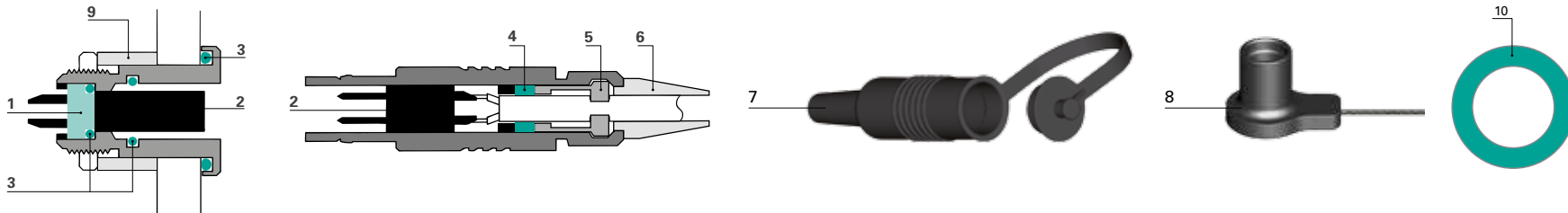
Characteristic	Contact size	Typical values	Standard
Contact resistance 5,000 mating cycles	ø 0.5 mm	5.0 mΩ	IEC 60512-2-2a/b
	ø 0.7 mm	5.0 mΩ	
	ø 0.9 mm	4.0 mΩ	
	ø 1.3 mm	2.5 mΩ	
	ø 1.6 mm	2.5 mΩ	
	ø 2.3 mm	2.5 mΩ	
	ø 3.0 mm	1.5 mΩ	
Insulation resistance		> 10 ¹⁰ Ω	IEC 60512-3-1-3a Method C



OPERATING TEMPERATURES

The temperature ranges quoted by the manufacturers of the plastic materials are usually the absolute maximum values. When exposed to the mechanical and electrical stresses present in a connector, these values are often unrealistic.

If a composite connector system including accessories is used, then the item with the lowest temperature performance will dictate the operating temperature limit of the system. The table below shows our recommended operating temperature ranges.



Ref.	Component	Material		Operating temperatures
1	Sealant	"U" Type		-55°C to +200°C
		"E" Type		-65°C to +150°C
2	Insulator	PEEK		-65°C to +200°C
3	Standard O-rings	FPM (Viton®)		-20°C to +200°C ¹⁾
	Interface O-rings (option)	EPDM		-50°C to +160°C ²⁾
4	Cable clamp seal	TPE		-70°C to +130°C
5	Cable clamp	Standard	Brass	-60°C to +100°C
6	Cable strain relief	TPE		-60°C to +180°C
		VMQ - Silicone rubber		-60°C to +100°C
7	Protective Boots	TPE		-20°C to +200°C ¹⁾
8	Sealing Caps	Metallic	Plug: Stainless steel with EPDM O-ring	-30°C to +110°C ¹⁾
			Receptacle: Stainless steel with EPDM O-ring	-20°C to +100°C ¹⁾
		Plastic	POM with FPM O-ring	-20°C to +85°C
	Soft Caps	TPE		-20°C to +60°C
9	Panel Spacer	Aluminium		
10	Color Coding Washer	PP		

¹⁾ Minimum mating temperature: 0°C.

²⁾ Minimum mating temperature: -20°C.



FISCHER
CORE SERIES
ALULITE™





KEY FEATURES



The aluminum engineered Fischer Core Series AluLite™ is ultralight and compact, offering an excellent strength-to-weight ratio. This push-pull circular connector smoothly fits in with your product design and offers an easy-to-use color coding system featuring products available in black, grey, red and blue.

Significantly lighter (around 50%) than typical metal connectors, the Fischer Core Series AluLite™ is ideal for mobile equipment, portable systems or hand-held devices.

ULTRALIGHT

- 50% lighter than typical metal connectors
- Enhanced efficiency on mobile equipment
- Compact & rugged construction

RUGGED DESIGN

- 360° EMC shielded to eliminate interference
- Sealed up to IP68 or hermetic
- Operating temperature: -50°C to +150°C

MODULAR

- Wide range of colors for visual coding
- Easy to integrate in product design
- High flexibility

EASY MATING

- Easy connect/disconnect options
- Over 10,000 mating cycles



PLUGS

CABLE MOUNTED



- Body style selection (S/SC; SS/SSC)D4
- Technical dimensionsD6
- Part numberingD7

RECEPTACLES

PANEL FRONT MOUNTED



- Body style selection (D; DEU/DEE) D5
- Technical dimensions D8
- Part numbering D9

PANEL REAR MOUNTED



- Body style selection (DBPU/DBPE; DBPLU/DBPLE) D5
- Technical dimensions D10
- Part numbering D11

FOR ALL ALULITE™

- Electrical & contact configurationsD12
- Cable clamp setsD18
- AccessoriesD24
- Tooling D29
- Technical information.....D30
- Technical information.....A9



PLUGS*

CABLE MOUNTED



BODY STYLES	S	SC	SS	SSC
Locking system	Push-pull	Quick-release	Push-pull	Quick-release
Sealing	IP50/IP68	IP50/IP68	IP50/IP68	IP50/IP68
Design	Standard	Standard	Short/Overmolding	Short/Overmolding

RECEPTACLES*

PANEL FRONT MOUNTED



BODY STYLES	D	DEU	DEE
Sealing	IP50	IP68	Hermetic
Design	Rear-projecting	Rear-projecting	

PANEL REAR MOUNTED



BODY STYLES	DBPU	DBPE	DBPLU	DBPLE
Sealing	IP68	Hermetic	IP68	Hermetic
Design	Rear-projecting		Front-projecting	

*See full color selection in part numbering sections (pages D7, D9, D11).



PLUGS







Body style		S	SC	SS	SSC
Protection	Sealed up to IP68	●	●	●	●
	360° EMC shielded	●	●	●	●
Locking system	Push-pull	●		●	
	Emergency release		●		●
Contact types	Crimp	●	●	●	●
	Solder	●	●	●	●
Design specifics	Colored housing	●	●	●	●
	Shortened body			●	●
Assembly specifics	Cable mounted	●	●	●	●
	Overmoldable			●	●
	Heat shrinkable			●	●

Other body styles available on request.



RECEPTACLES

								
Body Style		D	DEU	DEE	DBPU	DBPE	DBPLU	DBPLE
Protection	Sealed up to IP68		●	●	●	●	●	●
	Hermetic			●		●		●
	360° EMC shielded	●	●	●	●	●	●	●
Contact types	Crimp	●						
	Solder	●	●	●	●	●	●	●
	PCB	●	●	●	●	●	●	●
Design specifics	Colored housing	●	●	●	●	●	●	●
	Flush	●	●	●	●	●		
	Front-projecting						●	●
Assembly specifics	Panel-mounted	●	●	●	●	●	●	●
	Front-mounting	●	●	●				
	Rear-mounting				●	●	●	●

Other body styles available on request.

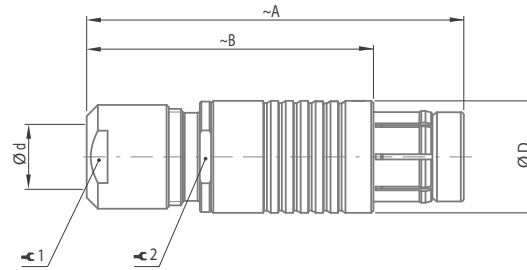


PLUGS

CABLE MOUNTED

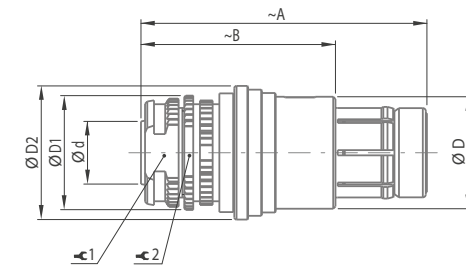
S/SC

BODY STYLES



SS/SSC

BODY STYLES



Series	Weight ¹⁾ (~g)	A	B	D	d max		⌀ 1	⌀ 2
					Unsealed	Sealed		
102	3	36	26	9	4.7	4.3	7	7
103	8	46	35	12	6.7	6.2	10	10
1031	8	48	38	13	7.2	6.7	12	11
104	11	50	38	15	9.1	8.7	12	13
105	19	62	47	18	10.7	10.7	15	16

Series	Weight ¹⁾ (~g)	A	B	D	D1	D2	d max ²⁾	⌀ 1	⌀ 2
103	7	33	22	12.0	12.5	15.0	6.0	10	11
1031	8	33	23	12.4	13.0	15.5	6.2	10	11
104	8	38	26	15.0	15.3	18.0	8.0	12	13
105	16	44	29	18.0	18.4	21.2	10.0	15	16

¹⁾ Weight shown is without cable clamp set, overmolding or heat shrinking.
²⁾ Max. cable diameter below shield.



PLUGS

The configurator below is designed for multipole contact blocks only.
For coax or triax blocks, please contact us.



Example:

A. Housing			B. Body style		C. Size	D. Contact blocks				E. Options
AL	12	31	S	C	103	A	053	SR	11	11

Housing material
 ■ AL = Aluminium

Housing color¹⁾

Housing treatment

1231 = Black (chromium)	■
1411 = Blue (anodized)	■
1611 = Red (anodized)	■
1731 = Grey (chromium)	■

Connector style

- S = Straight plug, standard body length
- SS = Straight plug, shortened body length

Locking system

If standard automatic push-pull locking system desired, leave field blank.
Other option possible:
 ■ C = Clic Loc, emergency release

Connector size

102, 103, 1031, 104 or 105 = Series
(See dimensions section page 6)

Clamp nut

For standard body length plugs (S):
 ■ 11 = Standard clamp nut, no bend relief.
(See pages D 19 - D 23)

For shortened body length plugs (SS):
 ■ 13 = For heat shrinking/boots
 ■ 14 = For injection/overmolding

Keying code

- 11 = Code 1
- 12 = Code 2
- 13 = Code 3

Contact type

- SR = Solder
- CP = Crimp

Contact configuration

Three-digit number
(see pages D 12 - D 17)

Polarity

- A = Male contacts on plug
- Z = Female contacts on plug

¹⁾ Fischer Connectors can not be held liable for small color variations that may appear from one batch to another.

Example 1

AL 1231-S-103-A062SR11-11

Example 2

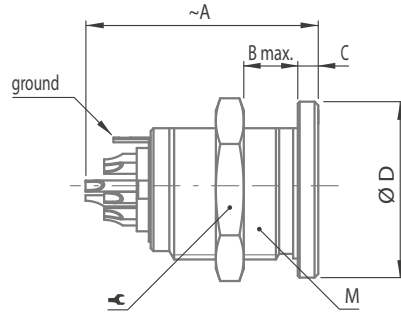
AL 1231-S-103-A053SR11-11
 AL 1731-SS-102-A056SR12-13



RECEPTACLES

PANEL FRONT MOUNTED

D
BODY STYLES



Series	Weight ¹⁾ (~g)	A	B max	C	D	M	⚙
102	3	19	9	1.5	11	9x0.5	11
103	5	23	8	1.5	14	12x1	14
1031	8	25	10	2.0	16	14x1	17
104	9	25	11	2.2	19	15x1	17
105	18	32	15	2.0	22	18x1	22

Series	G	H	Fig.
102	9.1	8.5	1
103	12.1	11.2	1
1031	14.1	12.1	2
104	15.1	14.2	1
105	18.1	17.3	1

PANEL CUT OUT

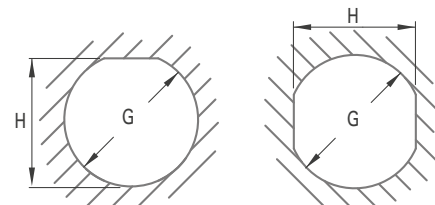
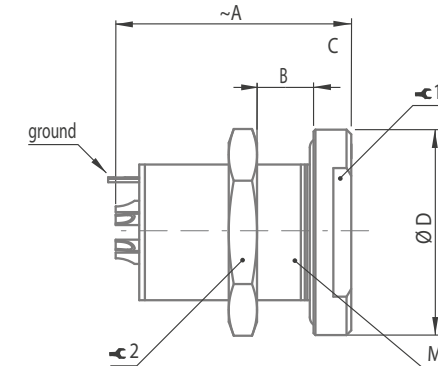


Fig. 1

Fig. 2

DEU / DEE
BODY STYLES



Series	Weight ¹⁾ (~g)	A	B min/max	C	D	M	⚙ ₁	⚙ ₂
102	4	20	8/10 ²⁾	2.5	14	9x0.5	11	11
103	9	23	12	3.0	18	14x1	14	17
1031	10	25	12	3.0	19	14x1	15	17
104	13	25	15	4.0	22	16x1	17	19
105	28	33	18	4.0	27	20x1	22	25

Series	G	H	Fig.
102	10.1	9.2	3
103	14.1	12.5	3
1031	14.1	13.0	2
104	16.1	14.5	3
105	20.1	18.5	3

PANEL CUT OUT

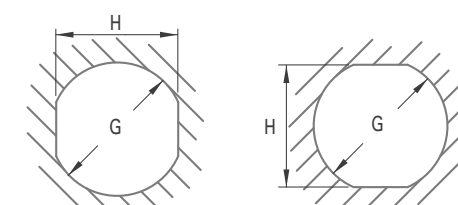


Fig. 2

Fig. 3

¹⁾Weight includes nut.

²⁾In the 102 Series only, the thread does not go all the way to the flange but stops 8 mm away. For panels thinner than 8 mm, spacers are available.



RECEPTACLES

PANEL FRONT MOUNTED

The configurator below is designed for multipole contact blocks only.
For coax or triax blocks, please contact us.



SPACERS

FOR DEU / DEE BODY STYLES OF THE 102 SERIES

Panel width	Spacer part number
0.5 - 3.0	102.550
2.5 - 5.5	102.551
5.0 - 8.0	102.552

Material: aluminium

Example: AL 12 31 D EE 103 A 062 SR 11 11 G 11

A. Housing
 AL = Aluminium
 12 = Housing color¹⁾
 31 = Housing treatment

B. Body style
 D = Connector style
 EE = Sealing level

C. Size
 103 = Connector size

D. Contact blocks
 A = Contact type
 062 = Contact configuration
 SR = Contact type
 11 = Contact type

E. Options
 11 = Nut type
 G = Grounding
 11 = O-ring at plug interface
 11 = Keying code
 11 = Contact type
 11 = Contact configuration
 11 = Polarity

Housing material
 ■ AL = Aluminium

Housing color¹⁾

Housing treatment
 1231 = Black (chromium) ■
 1411 = Blue (anodized) ■
 1611 = Red (anodized) ■
 1731 = Grey (chromium) ■

Connector style
 ■ D = Flush (vs. panel) Front-mounting receptacle

Sealing level
 If no sealing level desired, leave field blank.
 Other options possible:
 ■ EU = Sealed (IP68) even unmated
 ■ EE = Hermetic

Connector size
 102, 103, 1031, 104 or 105 = Series
 (See dimensions section)

Nut type
 ■ 11 = Hexagonal
 ■ 12 = None

Grounding
 ■ G = Yes ■ Z = No

O-ring at plug interface
 If 'No sealing level' chosen in section BC, leave field blank.
 Options possible if you selected 'Sealed (IP68) even unmated' or 'Hermetic':
 ■ 11 = Viton
 ■ 12 = EPDM (low temperature)

Keying code
 ■ 11 = Code 1
 ■ 12 = Code 2
 ■ 13 = Code 3

Contact type
 Options possible if, in field BC, you selected 'No sealing level':
 ■ SR = Solder
 ■ CP = Crimp "D" only
 ■ PB = PCB
 Options possible if, in field BC, you selected 'Sealed (IP68) even unmated' or 'Hermetic':
 ■ SR = Solder
 ■ PB = PCB

Contact configuration
 Three-digit number
 (see pages D12 - D17)

Polarity
 ■ A = Female contacts on receptacle
 ■ Z = Male contacts on receptacle

¹⁾Fischer Connectors can not be held liable for small color variations that may appear from one batch to another.

Example 1
 AL 1611-DEU-1031-A019SR11-11G11

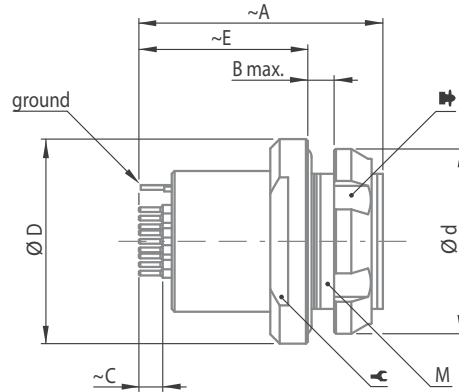
Example 2
 AL 1411-DEU-102-A053SR11-11G11



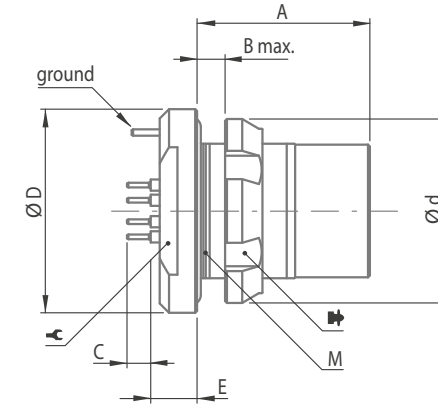
RECEPTACLES

PANEL REAR MOUNTED

DBPU / DBPE
BODY STYLES



DBPLU / DBPLE
BODY STYLES



SERIES	Weight ¹⁾ (~g)	A ²⁾	B _{max}	D	d	E ²⁾	C ²⁾	M ³⁾	⚙
102	3	20	3.5	14	12	13	2.54	9x0.5	11
103	8	26	3.0	18	18	18	2.54	14x1	15
1031	8	23	3.0	19	18	15	2.54	14x1	15
104	11	26	4.0	22	20	18	2.54	16x1	17
105	26	30	5.0	27	25	20	2.54	20x1	22

SERIES	Weight ¹⁾ (~g)	A	B _{max}	C	d	D	E	M ³⁾	⚙
102	3	14.2	4.5	2.54	13	14	3.6	10x0.5	11
103	8	16.5	5.0	2.54	18	18	4.2	14x1	15
1031	8	16.0	5.5	2.54	20	19	4.2	15x1	15
104	11	18.5	6.5	2.54	20	22	5.0	16x1	17
105	26	22.5	7.0	2.54	25	27	5.5	20x1	22

¹⁾ Weight includes nut.

²⁾ Pin length and diameter vary according to contact configuration. Contact us for more information.

³⁾ For information on nutdrivers (⚙), see Tooling page D29.

SERIES	G	H	Fig.
102	9.1	8.0	3
103	14.1	12.5	3
1031	14.1	12.1	2
104	16.1	14.5	3
105	20.1	18.5	3

PANEL CUT OUT

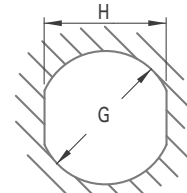


Fig. 2

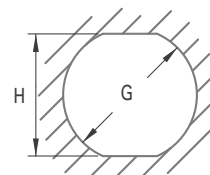


Fig. 3

SERIES	G	H	Fig.
102	10.1	9.2	3
103	14.1	12.5	3
1031	15.1	13.5	2
104	16.1	14.5	3
105	20.1	18.5	3

PANEL CUT OUT

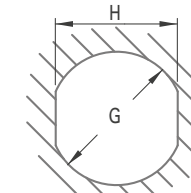


Fig. 2

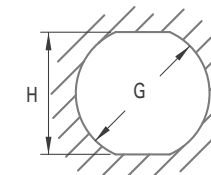


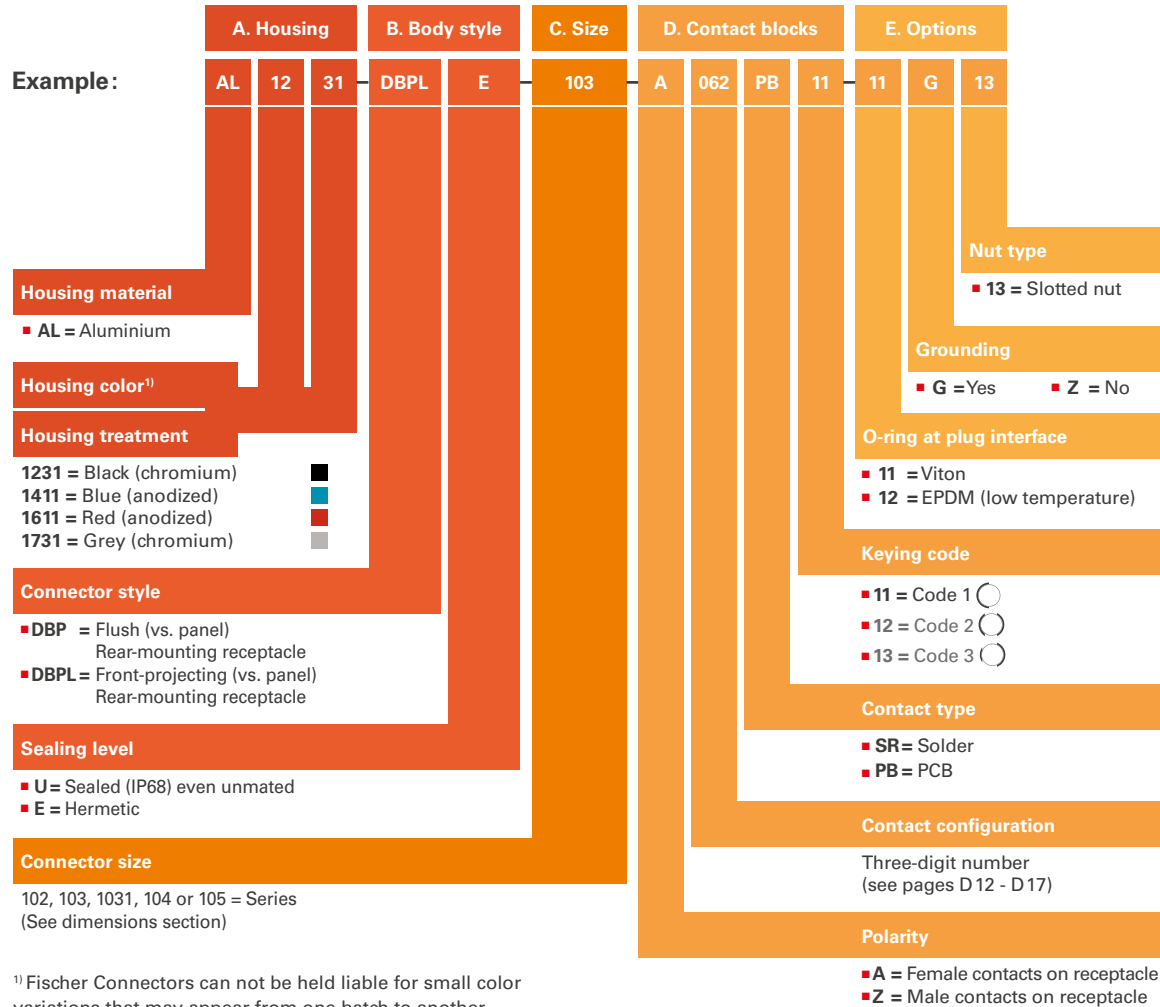
Fig. 3



RECEPTACLES

PANEL REAR MOUNTED

The configurator below is designed for multipole contact blocks only. For coax or triax blocks, please contact us.



Example 1:
AL 1231-DBPLU-102-A059PB12-12G13

Example 2:
AL 1231-DBPLE-102-Z054SR11-11G13

¹⁾ Fischer Connectors can not be held liable for small color variations that may appear from one batch to another.



102 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ³⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
			Solder	Crimp ⁶⁾	PCB			Solder contacts ¹⁾	Crimp contacts	AC rms		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
102 A Z 051		2	●	● ⁷⁾	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.3	1.7	1.8	2.4	≤ 250	9.2
102 A Z 052		3	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.3	1.8	1.6	≤ 250	8.2
102 A Z 053		4	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.2	1.7	1.8	≤ 200	5.5
102 A Z 054		5	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.0	1.3	1.8	≤ 160	5.2
102 A Z 056		7	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	0.8	1.0	1.3	1.8	≤ 160	2.0
102 A Z 059		9	●		●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.8	1.1	1.2	1.8	≤ 160	1.7

¹⁾ Wire gauge stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle.

⁶⁾ Plug with crimp contacts must be used with unshielded clamps only.

⁷⁾ Only available for A polarity plugs.



103 & 1031 SERIES

● = Standard ○ = Option

References	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁵⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC rms		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
103 ^A / _Z 051		2	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.5	2.2	2.2	3.0	≤ 250	13
103 ^A / _Z 052		3	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.5	1.8	2.0	≤ 250	12
103 ^A / _Z 053		4	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.6	2.0	2.4	≤ 250	7.0
103 ^A / _Z 054		5	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.1	1.4	1.9	2.2	≤ 250	6.8
103 ^A / _Z 056		6	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.3	2.0	2.0	≤ 250	5.2
103 ^A / _Z 057		7	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.3	2.0	2.0	≤ 250	5.0
103 ^A / _Z 058		8	●		●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.1	1.4	1.9	≤ 200	3.8
103 ^A / _Z 062		12	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	0.9	1.2	1.5	1.8	≤ 200	2.0
1031 ^A / _Z 010		10	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.4	1.5	2.0	2.2	≤ 250	4.5
1031 ^A / _Z 012		12	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.4	1.5	2.0	2.2	≤ 250	4.2
1031 ^A / _Z 019		19	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	1.2	0.9	2.0	1.5	≤ 250	2.5

¹⁾ Wire gauge stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing maybe required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Measured with S plug and D receptacle.



104 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
			Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC rms		DC			
										Contact to body	Contact to contact	Contact to body	Contact to contact		
104 A Z 051		2	● ○		● ○	PEEK PTFE	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.8	2.2	2.8	3.2	≤ 500	20
104 A Z 040		3	○ ●	●	●	PEEK PBT	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	max ø1.78mm min ø1.17mm AWG14-18	1.6	2.0	2.6	3.0	≤ 500	18
104 A Z 037		4	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.8	2.2	2.5	3.0	≤ 500	12
104 A Z 087		4	●		●	PBT	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.5	1.6	2.2	2.5	≤ 400	28
							0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-						
104 A Z 053		5	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.7	2.4	2.7	≤ 320	11
104 A Z 065		6	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.7	2.0	2.4	2.6	≤ 400	6.5
104 A Z 054		7	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.5	1.8 ⁵⁾	2.2	2.0 ⁵⁾	≤ 320	6.5
										2.1	2.8				

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Test voltages between the contacts with the shortest distance.

⁶⁾ Measured with S plug and D receptacle.



104 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Solder contacts ¹⁾	Crimp contacts	AC rms		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
104 A Z 066		8		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.5	1.5	2.5	2.5	≤ 320	6.2
104 A Z 055		1	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.4	2.2	3.8	3.6	≤ 250	12		
		8													0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]
104 A Z 056		11		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.5	2.1	2.2	≤ 250	5.8
104 A Z 086		16		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.5	1.6	2.2	≤ 200	4.0
104 A Z 092		19		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.8	1.2	1.2	1.8	≤ 200	3.5
104 A124 ⁵⁾		27		●	●	●	PEEK	0.5	-	max ø0.43mm min ø0.20mm AWG28-32	1.2	0.5	1.8	0.5	≤ 200	2.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Only "U" body style receptacles available.

⁶⁾ Measured with S plug and D receptacle.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁶⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			Solder contact ¹⁾	Crimp contacts	AC rms		DC			
											Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 051		2		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.5	3.0	4.0	4.0	≤ 630	26
105 A Z 087		2		●			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	-	1.2	1.6	2.3	3.0	≤ 400	30
105 A Z 052		3		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.0	2.5	3.0	3.5	≤ 400	23
105 A Z 053 ⁵⁾		4		●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	1.8	1.8	2.6	2.6	≤ 320	20
105 A Z 054 ⁵⁾		7	1	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
			6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		7.0
105 A Z 067		8		● ○			PEEK PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.7	2.0	2.5	2.8	≤ 320	10
105 A 124		8	2	●			PEEK	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.2	2.2	1.8	3.2	≤ 250	18.5
			6					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.2	1.8	1.8		7.5
105 A Z 101 ⁵⁾		9	1	●		●	PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0	≤ 320	25
			8					1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0		5.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contact dia. 2.0 is positioned to make contact first and break last.

⁶⁾ Measured with S plug and D receptacle.



105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact types			Insulating material	Contact ø [mm]	Wire size ²⁾		Test voltage ⁸⁾ [kV] in mated position				Rated voltage ⁴⁾ rms [V]	Current ³⁾ [A]
				Solder	Crimp	PCB			AC rms		DC					
									Solder contacts ¹⁾	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 A Z 062		10		●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.7	2.0	2.5	2.7	≤ 320	9.0
105 A Z 069		12		●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.5	1.8	2.0	≤ 250	8.0
105 A Z 104 ⁵⁾		13	3	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.5	1.5	3.8	2.2	≤ 320	14
			10					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.5	1.8	2.2		1.0
105 A 127 ⁷⁾		13	3		●		PEEK	1.3	-	max ø1.18mm min ø0.58mm AWG18-24	3.0	2.8	4.8	3.9	≤ 320	14
			10					0.7	-	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9		1.0
105 A Z 058		15		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 250	5.3
105 A Z 110 ⁶⁾		16	4	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.6	1.3	2.8	2.1	≤ 250	14
			12					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.0	1.2	1.5	2.0		1.0
105 A Z 038		18		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 200	4.5
105 A Z 093		24		●		●	PBT	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.5	1.5	2.0	≤ 250	3.5
105 A Z 102		27		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.5	1.5	2.0	≤ 250	3.0

¹⁾ Stranding values are in brackets.

²⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

³⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A 17 for details.

⁴⁾ Recommended operating voltage at sea level measured according to IEC 60664-1.

⁵⁾ Contacts dia. 1.3 are positioned to make contact first and break last.

⁶⁾ Contacts dia. 1.6 are positioned to make contact first and break last.

⁷⁾ Inverted polarity: female contacts on plug/male contact on receptacle

⁸⁾ Measured with S plug and D receptacle.



To guarantee excellent cable retention and strain relief, Fischer Connectors provides robust and high quality cable clamp sets:

- Collet style clamp system retains cable over large jacket surface area.
- Protection of small diameters and delicate conductors.
- Can be combined with cable bend reliefs for optimal performance.

Cable clamp sets are used with cable mounted connectors, except SS/SSC which require overmolding or heat shrinking techniques.

RANGE OVERVIEW : S, U AND E CABLE CLAMP SETS

Fischer Connectors offers three types of cable clamps sets. The table below will help you select the one corresponding to your needs.

Cable clamp set	Do you need the interface between the cable and the connector to be sealed?		Do you need the connector to be terminated to the cable shield?	
	Unsealed	Sealed	Unshielded	Shielded
S - Shielded	●			●
U - Unshielded	●		●	
E - Environmental		●	●	●

PART NUMBERING

Below cable clamp sets are ordered separately
Multipole low voltage
AL 1731-S-102-A056SR11-11
Examples connector ordering line
AL 1731-S-102-A056SR11-11
Clamp set ordering line
E3 102.5/2.0

See following pages for cable clamp set selection.



102 SERIES

S SHIELDED

Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	Cable clamp set
1.5 - 2.1	2.1	E32 102.1/2.1 + A
2.1 - 2.6	2.6	E32 102.1/2.6 + A
2.6 - 3.1	3.1	E32 102.1/3.1 + A
3.1 - 3.6	3.6	E32 102.1/3.6 + A
3.6 - 4.1	4.1	E32 102.1/4.1 + A
4.1 - 4.3	4.3	E32 102.1/4.3 + A
4.3 - 4.7	4.7	E3 102.248 + A

U UNSHIELDED

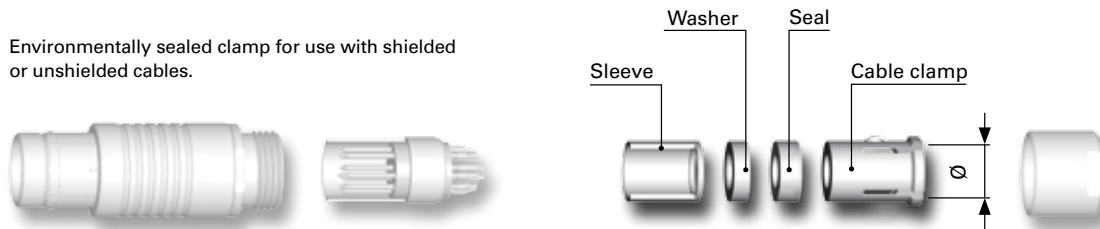
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set
1.4 - 2.0	2.0	E3 102.5/2.0
2.0 - 2.7	2.7	E3 102.5/2.7
2.7 - 3.5	3.5	E3 102.5/3.5
3.5 - 4.2	4.2	E3 102.5/4.2
4.2 - 4.7	4.7	E3 102.5/4.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



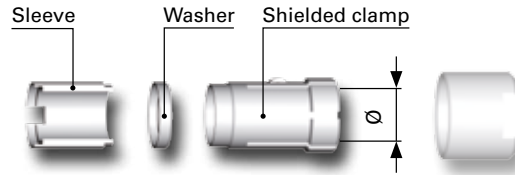
Cable dia. range	Collet Ø	Cable clamp set
1.5 - 2.1	2.1	E31 102.2/2.1 + B
2.1 - 2.6	2.6	E31 102.2/2.6 + B
2.6 - 3.1	3.1	E31 102.2/3.1 + B
3.1 - 3.6	3.6	E31 102.2/3.6 + B
3.6 - 4.1	4.1	E31 102.2/4.1 + B
4.1 - 4.3	4.3	E31 102.2/4.3 + B



103 SERIES

S
SHIELDED

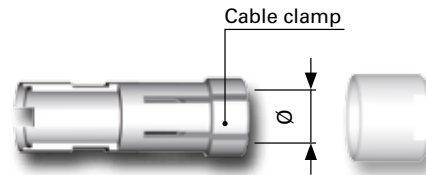
Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.1/2.2 + B
2.2 - 2.7	2.7	E31 103.1/2.7 + B
2.7 - 3.2	3.2	E31 103.1/3.2 + B
3.2 - 3.7	3.7	E31 103.1/3.7 + B
3.7 - 4.2	4.2	E31 103.1/4.2 + B
4.2 - 4.7	4.7	E31 103.1/4.7 + B
4.7 - 5.2	5.2	E31 103.1/5.2 + B
5.2 - 5.7	5.7	E31 103.1/5.7 + B
5.7 - 6.2	6.2	E31 103.1/6.2 + B
6.2 - 6.7	6.7	E31 103.1/6.7 + B

U
UNSHIELDED

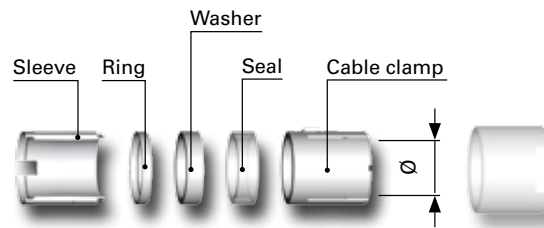
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
2.2 - 3.2	3.2	E3 103.6/3.2
3.2 - 4.2	4.2	E3 103.6/4.2
4.2 - 4.7	4.7	E3 103.6/4.7
4.7 - 5.2	5.2	E3 103.6/5.2
5.2 - 5.7	5.7	E3 103.6/5.7
5.7 - 6.2	6.2	E3 103.6/6.2
6.2 - 6.7	6.7	E3 103.6/6.7

E
ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



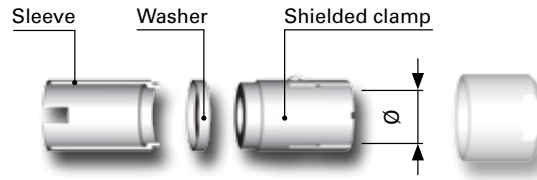
Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.2/2.2 + B
2.2 - 2.7	2.7	E31 103.2/2.7 + B
2.7 - 3.2	3.2	E31 103.2/3.2 + B
3.2 - 3.7	3.7	E31 103.2/3.7 + B
3.7 - 4.2	4.2	E31 103.2/4.2 + B
4.2 - 4.7	4.7	E31 103.2/4.7 + B
4.7 - 5.2	5.2	E31 103.2/5.2 + B
5.2 - 5.7	5.7	E31 103.2/5.7 + B
5.7 - 6.2	6.2	E31 103.2/6.2 + B



1031 SERIES

S SHIELDED

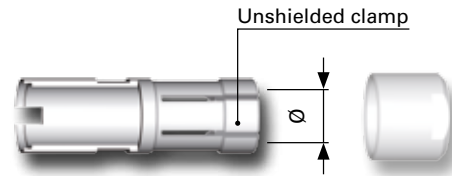
Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	Cable clamp set
2.2 - 2.7	2.7	E3 1031.1/2.7
2.7 - 3.2	3.2	E3 1031.1/3.2
3.2 - 3.7	3.7	E3 1031.1/3.7
3.7 - 4.2	4.2	E3 1031.1/4.2
4.2 - 4.7	4.7	E3 1031.1/4.7
4.7 - 5.2	5.2	E3 1031.1/5.2
5.2 - 5.7	5.7	E3 1031.1/5.7
5.7 - 6.2	6.2	E3 1031.1/6.2
6.2 - 6.7	6.7	E3 1031.1/6.7
6.7 - 7.2	7.2	E3 1031.1/7.2

U UNSHIELDED

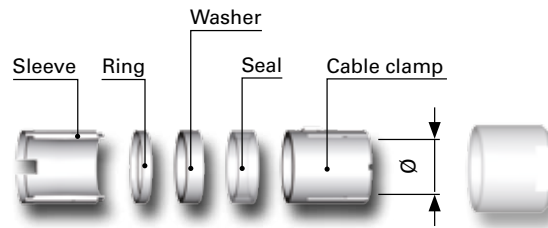
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set
2.2 - 2.7	2.7	E3 1031.6/2.7
2.7 - 3.2	3.2	E3 1031.6/3.2
3.2 - 3.7	3.7	E3 1031.6/3.7
3.7 - 4.2	4.2	E3 1031.6/4.2
4.2 - 4.7	4.7	E3 1031.6/4.7
4.7 - 5.2	5.2	E3 1031.6/5.2
5.2 - 5.7	5.7	E3 1031.6/5.7
5.7 - 6.2	6.2	E3 1031.6/6.2
6.2 - 6.7	6.7	E3 1031.6/6.7
6.7 - 7.2	7.2	E3 1031.6/7.2

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



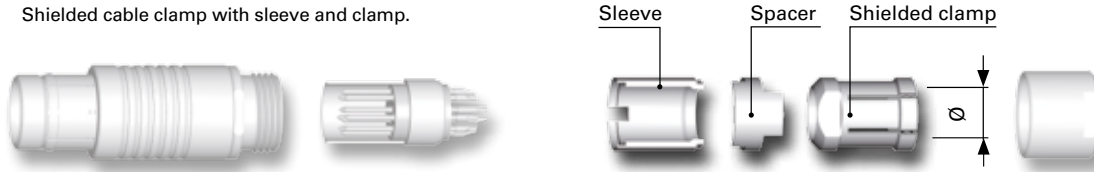
Cable dia. range	Collet Ø	Cable clamp set
2.2 - 2.7	2.7	E3 1031.2/2.7
2.7 - 3.2	3.2	E3 1031.2/3.2
3.2 - 3.7	3.7	E3 1031.2/3.7
3.7 - 4.2	4.2	E3 1031.2/4.2
4.2 - 4.7	4.7	E3 1031.2/4.7
4.7 - 5.2	5.2	E3 1031.2/5.2
5.2 - 5.7	5.7	E3 1031.2/5.7
5.7 - 6.2	6.2	E3 1031.2/6.2
6.2 - 6.7	6.7	E3 1031.2/6.7



104 SERIES

S SHIELDED

Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet \varnothing	Cable clamp set PEEK or PBT insulator
		Plug
2.9 - 4.0	4.0	E3 104.3/4.0 + B
4.0 - 4.7	4.7	E3 104.3/4.7 + B
4.7 - 5.7	5.7	E3 104.3/5.7 + B
5.7 - 6.7	6.7	E3 104.3/6.7 + B
6.7 - 7.7	7.7	E3 104.3/7.7 + B
7.7 - 8.7	8.7	E3 104.3/8.7 + B
8.7 - 9.1	9.1	E3 104.3/9.1 + B

U UNSHIELDED

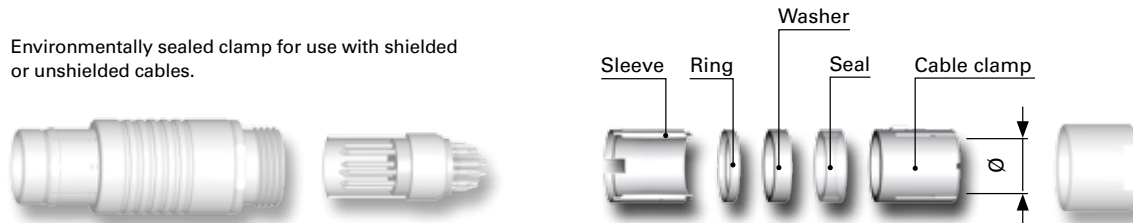
Unshielded, one-piece cable clamp.



Cable dia. range	Collet \varnothing	Cable clamp set PEEK or PBT insulator
		Plug
4.2 - 4.7	4.7	E3 104.6/4.7
4.7 - 5.7	5.7	E3 104.6/5.7
5.7 - 6.7	6.7	E3 104.6/6.7
6.7 - 7.7	7.7	E3 104.6/7.7
7.7 - 8.2	8.2	E3 104.6/8.2
8.2 - 8.7	8.7	E3 104.6/8.7

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



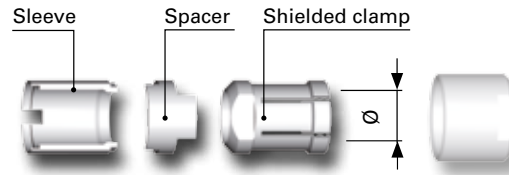
Cable dia. range	Collet \varnothing	Cable clamp set PEEK or PBT insulator
		Plug
2.9 - 4.0	4.0	E3 104.2/4.0 + B
4.0 - 4.7	4.7	E3 104.2/4.7 + B
4.7 - 5.7	5.7	E3 104.2/5.7 + B
5.7 - 6.7	6.7	E3 104.2/6.7 + B
6.7 - 7.7	7.7	E3 104.2/7.7 + B
7.7 - 8.7	8.7	E3 104.2/8.7 + B



105 SERIES

S SHIELDED

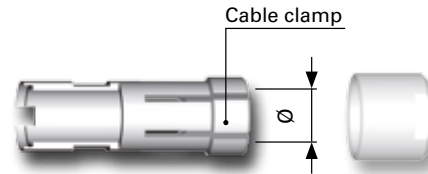
Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
3.2 - 4.2	4.2	E3 105.1/4.2 + B
4.2 - 5.2	5.2	E3 105.1/5.2 + B
5.2 - 6.2	6.2	E3 105.1/6.2 + B
6.2 - 7.2	7.2	E3 105.1/7.2 + B
7.2 - 8.2	8.2	E3 105.1/8.2 + B
8.2 - 9.2	9.2	E3 105.1/9.2 + B
9.2 - 10.0	10.0	E3 105.1/10.0 + B
10.0 - 10.7	10.7	E3 105.1/10.7 + B

U UNSHIELDED

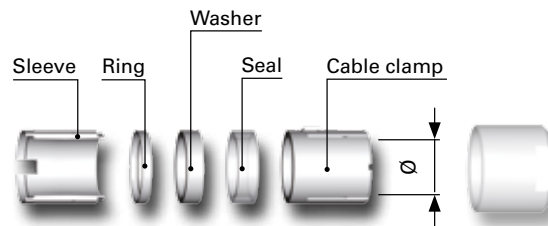
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
2.5 - 3.5	3.5	E3 105.6/3.5
3.5 - 4.5	4.5	E3 105.6/4.5
4.5 - 5.5	5.5	E3 105.6/5.5
5.5 - 6.5	6.5	E3 105.6/6.5
6.5 - 7.5	7.5	E3 105.6/7.5
7.5 - 8.5	8.5	E3 105.6/8.5
8.5 - 9.5	9.5	E3 105.6/9.5
9.5 - 10.5	10.5	E3 105.6/10.5

E ENVIRONMENTAL

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
3.2 - 4.2	4.2	E31 105.2/4.2 + B
4.2 - 5.2	5.2	E31 105.2/5.2 + B
5.2 - 6.2	6.2	E31 105.2/6.2 + B
6.2 - 7.2	7.2	E31 105.2/7.2 + B
7.2 - 8.2	8.2	E31 105.2/8.2 + B
8.2 - 9.2	9.2	E31 105.2/9.2 + B
9.2 - 10.0	10.0	E31 105.2/10.0 + B
10.0 - 10.7	10.7	E31 105.2/10.7 + B



CONTACT TYPES

CRIMP CONTACTS



- Selectively annealed area
- Special tools required
- Limited range of wire sizes
- Each contact has a selectively annealed area which is crushed during assembly by specialized tooling to assure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering process is required.
- Not available for sealed or hermetic connectors.

TOOLING FOR CRIMP CONTACTS

Series	Polarity	Contact diameter (mm) ¹⁾									
		0.5		0.7		0.9		1.3		1.6	
		Contact part number	Positioner part number	Contact part number	Positioner part number	Contact part number	Positioner part number	Contact part number	Positioner part number	Contact part number	Positioner part number
102	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	-	-	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	-	-	-	-
103	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
1031	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
104	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	200.1653	TX00.313
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	200.1654	TX00.314
105	Male	-	-	200.2884	TX00.304	200.2891	TX00.308	200.2403	TX00.338	200.1653	TX00.313
	Female	-	-	200.2886	TX00.306	200.2893	TX00.310	200.2214	TX00.312	200.1654	TX00.314
Crimp tool part number		TX00.240		TX00.240		TX00.240		TX00.240		TX00.242	




¹⁾Please refer to www.fischerconnectors.com/technical for detailed information and assembly instructions.

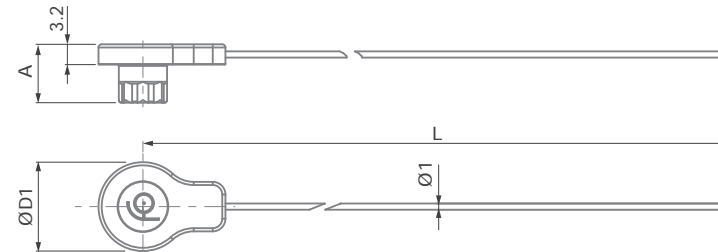


SOFT CAPS

LANYARD WITH NYLON THIN CORD FOR RECEPTACLES






Accessories	Description	Part Number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

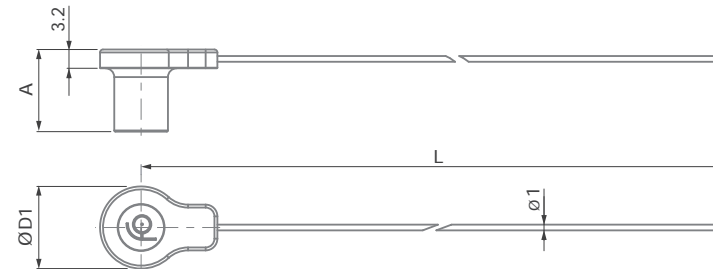


Series	A	D1	L	Part Number
102	9.2	14	200	102.2181
103	9.7	17	200	103.2406
1031	9.5	18	200	1031.1433
104	10.0	20	200	104.2808
105	10.0	23	200	105.3265

FOR PLUGS



Accessories	Description	Part Number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930



Series	A	D1	L	Part Number
102	14.0	14	200	102.2180
103	14.7	17	200	103.2405
1031	14.0	18	200	1031.1432
104	16.0	20	200	104.2807
105	19.0	23	200	105.3264

Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.
Material: Cap: Santoprene™TPV 101-80 / Cord: Nylon

All dimensions and images shown are in millimeters and are for reference only.

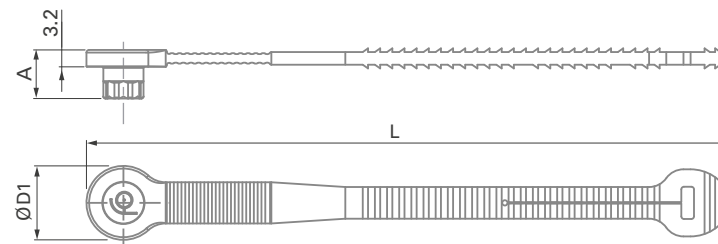


SOFT CAPS

SINGLE-PIECE FOR RECEPTACLES



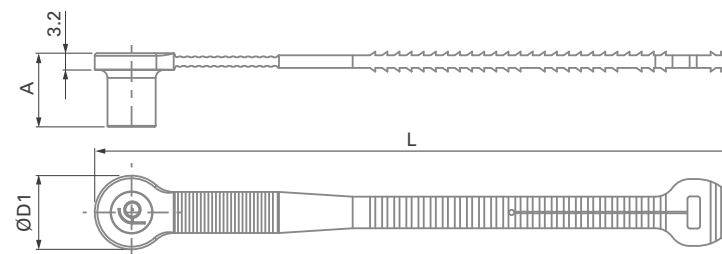
Series	A	D1	L	Part Number
102	9.2	14	122	102.2166
103	9.7	17	147	103.2396
1031	9.5	18	148	1031.1422
104	10.0	20	164	104.2763
105	10.0	23	186	105.3250



FOR PLUGS



Series	A	D1	L	Part Number
102	14.0	14	122	102.2169
103	14.7	17	147	103.2399
1031	14.0	18	148	1031.1425
104	16.0	20	164	104.2766
105	19.0	23	186	105.3253



Material: Santoprene™TPV 101-80

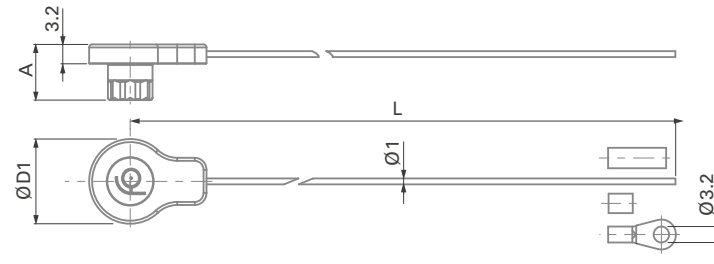


SOFT CAPS

LANYARD WITH STAINLESS STEEL CABLE FOR RECEPTACLES



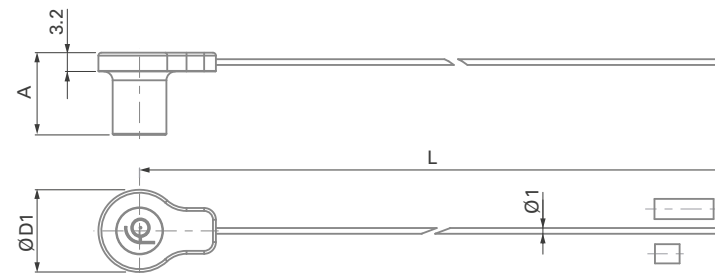
Series	A	D1	L	Part Number
102	9.2	14	200	102.2167
103	9.7	17	200	103.2397
1031	9.5	18	200	1031.1423
104	10.0	20	200	104.2764
105	10.0	23	200	105.3251



FOR PLUGS



Series	A	D1	L	Part Number
102	14.0	14	200	102.2185
103	14.7	17	200	103.2404
1031	14.0	18	200	1031.1431
104	16.0	20	200	104.2806
105	19.0	23	200	105.3263



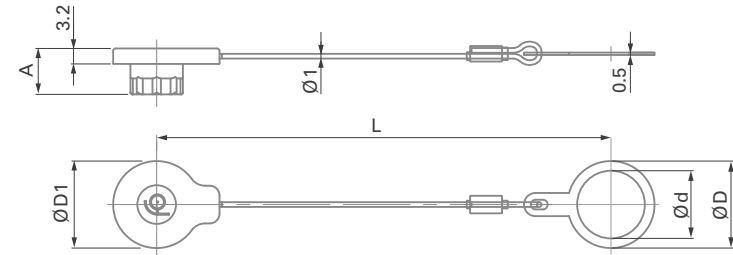
Crimp ferrule (300.922) and heat shrink tube (300.930) are included.
Material: Cap: Santoprene™ TPV 101-80 / Cable: Stainless steel with FEP-Teflon® covering

All dimensions and images shown are in millimeters and are for reference only.



SOFT CAPS

ASSEMBLED LANYARD WITH STAINLESS STEEL CABLE FOR RECEPTACLES



Series	A	D1	L	d	D	Part Number
102	9.2	14	86	9	13	102.2182
	9.2	14	86	10	14	102.2165
103	9.7	17	93	14	18	103.2394
1031	9.5	18	94	14	18	1031.1434
	9.5	18	94	15	20	1031.1420
104	10.0	20	98	16	21	104.2761
105	10.0	23	100	20	25	105.3248

Crimp ferrule, heat shrink tube and fixing lug are included and mounted.

Materials

Cap: Santoprene™ TPV 101-80

Cable: stainless steel with FEP-Teflon® covering

Fixing lug: black chrome plated brass (ISO CuZn37)



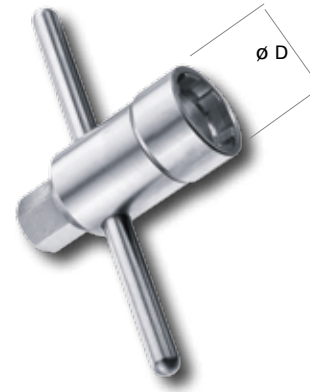
Caps are interchangeable to provide additional dust protection.



NUT DRIVER FOR SLOTTED NUTS

Thread size	D	🔑 Part number
M9x0.5	15	TC00.000
M10x0.5	16	TC00.007
M14x1	21	TG00.001
M15x1	22	TK00.000
M16x1	23	TK00.002
M20x1	28	TP00.005

Material: hardened tool steel, nickel plated.



**MECHANICAL & ENVIRONMENTAL DATA**

Parameter	Value	Standard
Mating cycles	10,000	IEC 60512-5-9a EIA-364-09
Temperature range - Viton O-ring at plug interface - EPDM O-ring (Low temp) at plug interface	-20°C to +200°C -50°C to +160°C	IEC 60068-2-14
Sealing	IP68 ; 2m submersion for 24 hours	IEC 60529
Hermeticity - DEE, DBPE, DBPLE	Hermetic: Tested: <10 ⁻⁸ mbar l/sec. IP69	IEC 60068-2-17 test Qk method 3, alternative b IEC 60529
Vibration	Contact interruption < 1µs (10-2000Hz/15G)	MIL-STD-202 Method 204, Condition B

ELECTRICAL DATA *

Parameter	Series				
	102	103	1031	104	105
Grounding resistance ¹⁾ (shell-to-shell)	Typical 50 mΩ				
EMC shielding	360-degree EMC shielding				

¹⁾ IEC 60512-2-6-2f

* Please refer to contact block sections for detailed information.



MATERIAL & SURFACE TREATMENTS

Metal Parts	Material				Finish	
	Designation	Standards			Designation	Standard
		ISO	UNS	EN		
Plug housing - Body - Latching sleeve	Aluminium Aluminium or Brass	AlMgSi1SnBi CuZn39Pb3	- -	AW-6023 AW-6026	Electroless nickel Sulfuric anodizing or chromium	SAE AMS 2404 MIL-A-8625 SAE AMS 2460
Receptacle housing - Receptacle housing (anodized)	Aluminium	AlMgSi1SnBi	-	AW-6023	Sulfuric anodizing	MIL-A-8625
Grounding - Tag (solder and crimp contacts) - Pin (PCB contacts)	Brass Brass	CuZn39Pb3 CuZn39Pb3	C 38500 C 38500	- -	Electroless nickel Nickel + Flash Gold	SAE AMS 2404
Contacts - Male contacts - Female contacts	Brass Bronze	CuZn39Pb3 CuSn4Zn4Pb4	C 38500 C 54000	- -	Electroless nickel 1 µm Gold	MIL-DTL-45204D Type 1 + ASTM B488

Insulator and sealing

Contact blocks and other insulators for our standard connectors are manufactured from high performance engineering plastic materials. The standard materials of each connector series are listed under Electrical & Contact configurations in pages D 12 through D 17. Ceramics and other dielectrics are available on special order.

Insulator and sealing	International symbol	Flammability
Insulator	PEEK - PTFE - PBT	UL 94 V-O
Interface O-rings (receptacles)	FPM (Viton®) / EPDM	-
Sealant material - IP68 (receptacles) - Hermetic	Silicon compound Epoxy compound	UL 94 V-O UL 94 HB

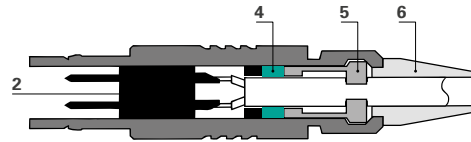
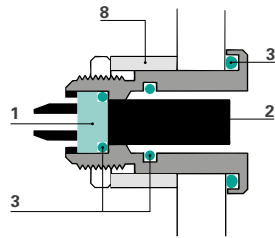
Our products are RoHs compliant and conform with the EC Directives 2002/95/EC.



OPERATING TEMPERATURES

The temperature ranges quoted by the manufacturers of the plastic materials are usually the absolute maximum values. When exposed to the mechanical and electrical stresses present in a connector, these values are often unrealistic.

If a composite connector system including accessories is used, then the item with the lowest temperature performance will dictate the operating temperature limit of the system. The table below shows our recommended operating temperature ranges.



Ref.	Component	Material	Operating temperatures
1	Sealant	"U" Type	-55°C to +200°C
		"E" Type	-65°C to +150°C
2	Insulator	PEEK	-65°C to +200°C
		PTFE (Teflon®)	-65°C to +160°C
		PBT	-65°C to +135°C
3	Standard O-rings	FPM (Viton®)	-20°C to +200°C ¹⁾
	Interface O-rings (option)	EPDM	-50°C to +160°C ²⁾
4	Cable clamp seal	TPE	-70°C to +130°C
5	Cable clamp	Standard Brass	-40°C to +100°C
		High Voltage Connectors POM	-60°C to +100°C
6	Cable strain relief	TPE	-60°C to +180°C
		VMQ - Silicone rubber	-55°C to +85°C
7	Sealing caps	Soft caps TPE	-55°C to +85°C
8	Panel spacer		

¹⁾ Minimum mating temperature: 0°C.

²⁾ Minimum mating temperature: -20°C.







FISCHER
CORE SERIES
PLASTIC



KEY FEATURES



Specially designed to ensure maximum user safety and electric shock protection, the Fischer Core Series Plastic features fully insulated plastic connector bodies.

The plug and receptacle can be color-coded to enable easy identification and prevent incorrect mating. Convenient to use, the SureGrip plug body can be securely and easily gripped with gloves. Resistant to up to 5,000 mating cycles and sterilizable, the Fischer Core Series Plastic is ideal for medical and industrial applications.

COMPLETELY STERILIZABLE*

- Autoclave, Cidex, EtO, gamma radiation, Steris® or Sterrad®
- Integrated into FDA-approved medical devices

HIGH DENSITY OF CONTACTS

- High signal density
- Highly reliable signal path

EASY TO USE

- Clear coding facilitates easy operation
- Immediate identification of multiple connectors

DURABILITY

- Sealed up to IP68
- Over 5,000 mating cycles
- Resistant to large temperature variations

*Only for 405 Series.



405 - PLUGS & RECEPTACLE

CABLE MOUNTED PLUGS

- Body style selection (S/SI 405).....E3

CABLE MOUNTED RECEPTACLE

- Body style selection (DBP 405).....E3
- Technical dimensions.....E4
- Part numberingE5
- Electrical & contact configurations.....E6
- PCB hole pattern pin layout.....E7

4032 - PLUG & RECEPTACLES

CABLE MOUNTED PLUG

- Body style selection (S/SI 4032).....E3

CABLE MOUNTED RECEPTACLES

- Body style selection (DBP/DBPO 4032)E3
- Technical dimensions.....E12
- Part numberingE13
- Electrical & contact configurations.....E14
- PCB hole pattern pin layout.....E15

FOR ALL PLASTIC 405

- AccessoriesE8
- Technical information.....E10
- Cross-line technical information.....A9

FOR ALL PLASTIC 4032

- AccessoriesE16
- Technical information.....E18
- Cross-line technical information.....A9



405 - PLUGS

CABLE MOUNTED



BODY STYLES	S 405	SI 405
Locking system	Push-pull	Push-pull
Sealing	IP50/IP67	IP50/IP67
Design	Standard	Standard
Integral shielding	Yes	No

4032 - PLUG

CABLE MOUNTED



BODY STYLE	SI 4032
Locking system	Push-pull
Sealing	IP50/IP68
Design	Standard
Integral shielding	No

405 - RECEPTACLE

PANEL MOUNTED



BODY STYLE	DBP 405
Sealing	IP50
Design	Standard

4032 - RECEPTACLES

PANEL MOUNTED



BODY STYLES	DBP 4032	DBPO 4032
Sealing	IP50	IP68
Design	Standard	Standard

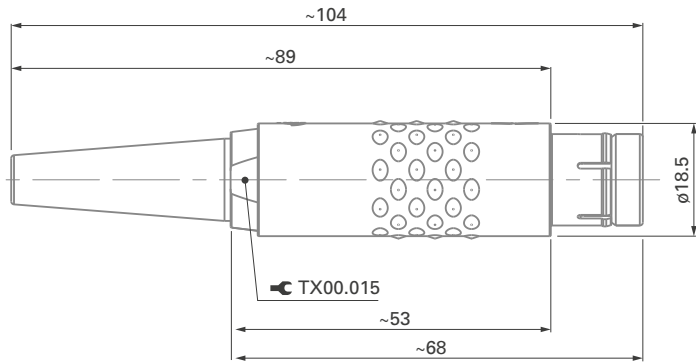


405 - PLUGS

CABLE MOUNTED

S/SI 405

BODY STYLES

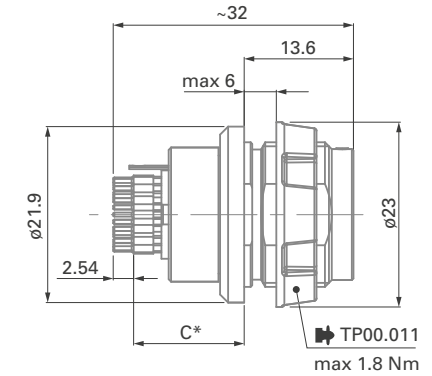


405 - RECEPTACLE

PANEL MOUNTED

DBP 405

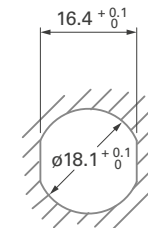
BODY STYLE



* See contact configurations page E 6.

PANEL CUT-OUT

Figure 1





405

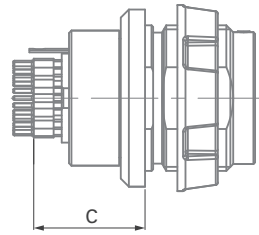
	Housing design					Standard options				
	S	405	A	087	-	B	3	L	2	R
Body style	<ul style="list-style-type: none"> ■ Plug, with integral shielding = S ■ Plug, without integral shielding = SI ■ Receptacle, rear panel mounted = DBP 									
Series	<ul style="list-style-type: none"> ■ 405 									
Contact polarity	<ul style="list-style-type: none"> ■ Plugs have pins. Receptacles have sockets = A ■ Plugs have sockets. Receptacles have pins = Z 									
Contact configuration	<ul style="list-style-type: none"> ■ See page E 6 									
Body color	<ul style="list-style-type: none"> ■ Beige = B ■ Anthracite = C 									
Insulator material	<ul style="list-style-type: none"> ■ PEEK = 3 									
Contact type	<ul style="list-style-type: none"> ■ Solder = J ■ Crimp = K ■ PCB = L 									
Color coding	<ul style="list-style-type: none"> ■ Anthracite = 2 ■ Green = 3 ■ Blue = 4 ■ Yellow = 5 ■ Beige = 8 									
Bend relief material	<ul style="list-style-type: none"> ■ None = R ■ Silicone (6.5 dia.) = S ■ TPE (6.5 dia.) = T ■ Silicone (3.5 dia.) = U ■ TPE (3.5 dia.) = W 									

PLASTIC



405

Figure 1



References	Pin layout	Number of contacts		Contact types			Insulating material	Contact \varnothing [mm]	Wire size		PCB Pin diameter [mm]	C [mm] see Figure 1	Test voltage [kV] in mated position				Current ¹⁾ [A]
				Solder	Crimp	PCB			Solder contacts	Crimp contacts			AC r.m.s		DC		
													Contact to body	Contact to contact	Contact to body	Contact to contact	
405 $\frac{A}{Z}$ 087		2	●	-	-	PEEK	3.0	max \varnothing 3.13mm AWG9 [1] AWG10 [105/30]	-	-	-	-	1.2	1.6	2.3	3.0	30
405 $\frac{A}{Z}$ 052		3	●	-	-	PEEK	2.0	max \varnothing 2.03mm AWG13 [1] AWG14 [7/22]	-	-	-	-	2.0	2.5	3.0	3.5	23
405 $\frac{A}{Z}$ 054		1	●	-	-	PEEK	2.0	max \varnothing 2.03mm AWG13 [1] AWG14 [7/22]	-	-	-	-	3.0	2.0	4.0	3.0	25
		6					1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	-	-	-	1.8	1.5	2.5	2.0	7.0	
405 $\frac{A}{Z}$ 101		1	●	-	●	PEEK	2.0	max \varnothing 2.03mm AWG13 [1] AWG14 [7/22]	-	A: 0.50 Z: -	A: 10.8 Z: -	-	3.0	2.0	4.0	3.0	25
		8					1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	-	A: 0.50 Z: -	A: 10.8 Z: -	1.8	1.5	2.5	2.0	5.0	
405 $\frac{A}{Z}$ 069		12	●	-	●	PEEK	1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	-	A: 0.50 Z: -	A: 13.8 Z: -	-	1.4	1.5	1.8	2.0	8.0
405 $\frac{A}{Z}$ 104		3	●	-	●	PEEK	1.3	max \varnothing 1.18mm AWG17 [1] AWG18 [16/30]	-	A: 0.50 Z: -	A: 13.8 Z: -	-	2.5	1.5	3.8	2.2	14
		10					0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	-	A: 0.50 Z: -	A: 13.8 Z: -	1.3	1.5	1.8	2.2	1.0	
405 $\frac{A}{Z}$ 110		4	●	-	●	PEEK	1.6	max \varnothing 1.86mm AWG13 [1] AWG14 [7/22]	-	A: 0.50 Z: -	A: 13.8 Z: -	-	1.6	1.3	2.8	2.1	14
		12					0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	-	A: 0.50 Z: -	A: 13.8 Z: -	1.0	1.2	1.5	2.0	1.0	
405 $\frac{A}{Z}$ 038		18	●	●	●	PEEK	0.9	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.83mm min \varnothing 0.38mm AWG22-26	A: 0.50 Z: -	A: 13.3 Z: -	-	1.4	1.6	1.8	2.2	4.5
405 $\frac{A}{Z}$ 102		27	●	●	●	PEEK	0.7	max \varnothing 0.79mm AWG21 [1] AWG22 [7/30]	max \varnothing 0.62mm min \varnothing 0.38mm AWG24-28	A: 0.50 Z: -	A: 13.8 Z: -	-	1.2	1.5	1.5	2.0	3.0

¹⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.



405 - PCB LAYOUT

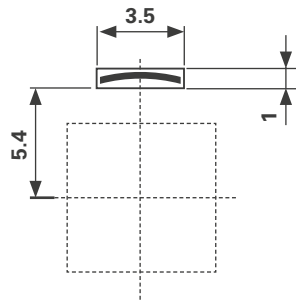
S/SI 405

DBP 405

BODY STYLES



Minimum clearance for ground contact



View from F - Number of contacts (reference)

Polarity	2 (087)	3 (052)	7 (054)	9 (101)	12 (069)
A					
Z					

Polarity	13 (104)	16 (110)	18 (038)	27 (102)
A				
Z			-	

All dimensions and images shown are in millimeters and are for reference only.

**405 - CABLE CLAMP SETS****UNSHIELDED METAL**

Cable O.D. (mm)	Use with PEEK Insulators
2.5 - 3.5	E3 105.6/3.5
3.5 - 4.5	E3 105.6/4.5
4.5 - 5.5	E3 105.6/5.5
5.5 - 6.5	E3 105.6/6.5
6.5 - 7.5	E3 105.6/7.5
7.5 - 8.5	E3 105.6/8.5
8.5 - 9.5	E3 105.6/9.5
9.5 - 10.5	E3 105.6/10.5

For use with unshielded cable or when shield is not carried through connector body.

SHIELDED METAL

Cable O.D. (mm)	Use with PEEK insulators
3.2 - 4.2	E3 105.1/4.2 + B
4.2 - 5.2	E3 105.1/5.2 + B
5.2 - 6.2	E3 105.1/6.2 + B
6.2 - 7.2	E3 105.1/7.2 + B
7.2 - 8.2	E3 105.1/8.2 + B
8.2 - 9.2	E3 105.1/9.2 + B
9.2 - 10.0	E3 105.1/10.0 + B
10.0 - 10.7	E3 105.1/10.7 + B

For use with shielded cable when shield is to be carried through connector body.

ENVIRONMENTAL

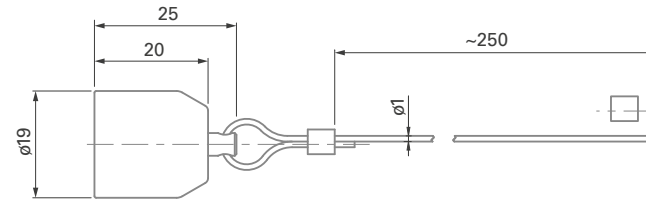
Cable O.D. (mm)	Use with PEEK insulators
3.2 - 4.2	E31 105.2/4.2 + B
4.2 - 5.2	E31 105.2/5.2 + B
5.2 - 6.2	E31 105.2/6.2 + B
6.2 - 7.2	E31 105.2/7.2 + B
7.2 - 8.2	E31 105.2/8.2 + B
8.2 - 9.2	E31 105.2/9.2 + B
9.2 - 10.0	E31 105.2/10.0 + B
10.0 - 10.7	E31 105.2/10.7 + B

For use when sealing shielded or unshielded cable to plug body.



405 - SEALING CAPS

FOR PLUGS



Cap material	Stainless steel cable covering material	Part number
PEI	FEP -Teflon®	105.2740 (beige)

Crimp ferrule (300.637) is included.

All dimensions and images shown are in millimeters and are for reference only.



405 - ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type	Value
Sealing performance	Plug (S or SI)	with sealed cable clamp and cap
	Receptacle (DBP)	
Endurance	5,000 mating cycles	

OPERATING TEMPERATURE RANGE

Component	Material	Operating temperatures
Body	PEI	-65°C to +200°C
Insulator	PEEK	-65°C to +200°C
Plastic Cable Clamp	POM (Delrin®)	-40°C to +100°C
Cable clamp seal	TPE	-70°C to +130°C
Cable strain relief	TPE	-60°C to +100°C
	VMQ - Silicone rubber	-60°C to +180°C
Sealing cap	PEI with FPM O-ring	-20°C to +200°C



405 - METAL PARTS

Parts		Material			Finish	
		Designation	ISO	Standard	Designation	Standard
Metal parts (except contacts), inner body shell of S plug		Brass	CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290 SAE-AMS2404
Contacts	Male (solder)	Brass	CuZn39Pb3	CW614N UNS C 38500	1 µm Gold over Nickel	MIL-DTL-45204D Type 1 + ASTM B488
	Female, male (crimp)	Bronze	CuSn4Zn4Pb4	CW456K ASTM B 139, UNS C 54400		

405 - PLASTIC PARTS

Parts	International symbol	Flammability
Body shell, sealing cap, back nut, mounting nut	PEI	UL 94 V-O
Insulator	PEEK - PTFE	UL 94 V-O
O-ring in sealing cap	FPM (Viton®)	-
Plastic cable clamps	POM (Delrin®)	UL 94 HB
Bend relief	TPE-S - VMQ - Silicone Rubber	UL 94 HB

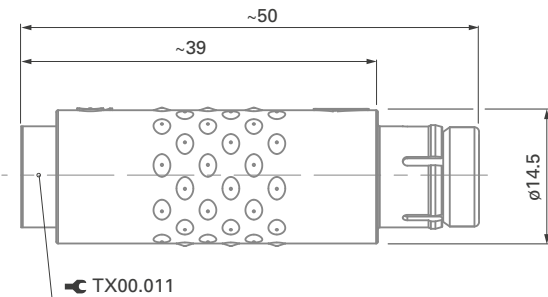


4032 - PLUG

CABLE MOUNTED

SI 4032

BODY STYLE

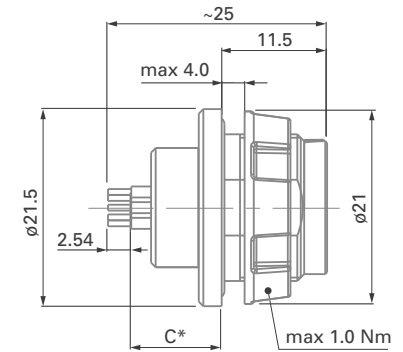


4032 - RECEPTACLES

PANEL MOUNTED

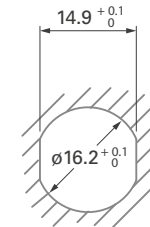
DBP / DBPO 4032

BODY STYLES



* See contact configurations page E 14.

PANEL CUT-OUT
Figure 1





4032

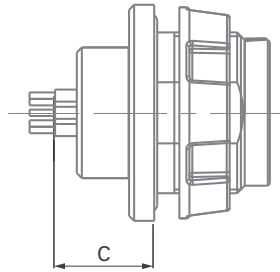
	Housing design					Standard options				
	SI	4032	A	051	-	D	3	L	1	R
Body style	<ul style="list-style-type: none"> ■ Plug = SI ■ Receptacle, rear panel mounted = DBP ■ Receptacle, rear panel mounted, sealed when mated (IP68) = DBPO 									
Series	<ul style="list-style-type: none"> ■ 4032 									
Contact polarity	<ul style="list-style-type: none"> ■ Plugs have pins. Receptacles have sockets = A ■ Plugs have sockets. Receptacles have pins = Z 									
Contact configuration	<ul style="list-style-type: none"> ■ See page E-14 									
Body material	<ul style="list-style-type: none"> ■ PBT = D 									
Insulator material	<ul style="list-style-type: none"> ■ PEEK = 3 									
Contact type	<ul style="list-style-type: none"> ■ Solder = J ■ Crimp = K ■ PCB = L 									
Color coding	<ul style="list-style-type: none"> ■ White = 1 ■ Black = 2 ■ Green = 3 ■ Blue = 4 ■ Yellow = 5 ■ Red = 6 ■ Grey = 7 									
Bend relief material	<ul style="list-style-type: none"> ■ None = R 									

PLASTIC



4032

Figure 1



References	Pin layout	Number of contacts	Contact types			Insulating material	Contact ϕ [mm]	Wire size		Pin diameter [mm]	C [mm] see Figure 1	Test voltage [kV] in mated position				Current ¹⁾ [A]
			Solder	Crimp	PCB			Solder contacts	Crimp contacts			AC r.m.s		DC		
												Contact to body	Contact to contact	Contact to body	Contact to contact	
4032 $\begin{matrix} A \\ Z \end{matrix}$ 051		2	●	●	-	PEEK	1.3	max ϕ 1.18mm AWG17 [1] AWG18 [16/30]	max ϕ 1.18mm min ϕ 0.58mm AWG18-24	--	-	1.5	2.2	2.2	3.0	13
4032 $\begin{matrix} A \\ Z \end{matrix}$ 052		3	●	-	-	PEEK	1.3	max ϕ 1.18mm AWG17 [1] AWG18 [16/30]	-	-	-	1.2	1.5	1.8	2.0	12
4032 $\begin{matrix} A \\ Z \end{matrix}$ 053		4	●	-	●	PEEK	0.9	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	-	A: 0.63 Z: 0.63	A: 9.9 Z: 10.0	1.2	1.6	2.0	2.4	7.0
4032 $\begin{matrix} A \\ Z \end{matrix}$ 054		5	●	●	●	PEEK	0.9	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	max ϕ 0.83mm min ϕ 0.48mm AWG22-26	A: 0.63 Z: -	A: 9.9 Z: -	1.1	1.4	1.9	2.2	6.8
4032 $\begin{matrix} A \\ Z \end{matrix}$ 056		6	●	●	-	PEEK	0.7	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	max ϕ 0.62mm min ϕ 0.38mm AWG24-28	-	-	1.0	1.3	2.0	2.0	5.2
4032 $\begin{matrix} A \\ Z \end{matrix}$ 057		7	●	●	-	PEEK	0.7	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	max ϕ 0.62mm min ϕ 0.38mm AWG24-28	--	-	1.0	1.3	2.0	2.0	5.0
4032 $\begin{matrix} A \\ Z \end{matrix}$ 010		10	●	●	●	PEEK	0.7	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	max ϕ 0.62mm min ϕ 0.38mm AWG24-28	A: 0.50 Z: -	A: 8.9 Z: -	1.4	1.5	2.0	2.2	4.5
4032 $\begin{matrix} A \\ Z \end{matrix}$ 012		12	●	●	●	PEEK	0.7	max ϕ 0.79mm AWG21 [1] AWG22 [7/30]	max ϕ 0.62mm min ϕ 0.38mm AWG24-28	A: 0.50 Z: -	A: 8.9 Z: -	1.4	1.5	2.0	2.2	4.2
4032 $\begin{matrix} A \\ Z \end{matrix}$ 019		19	●	●	●	PEEK	0.5	max ϕ 0.43mm AWG26 [1] AWG28 [19/40]	max ϕ 0.43mm min ϕ 0.20mm AWG28-32	A: 0.40 Z: -	A: 8.9 Z: -	1.2	0.9	2.0	1.5	2.5

¹⁾Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.



SI 4032

DBP/DBPO 4032

BODY STYLES



View from F - Number of contacts (reference)

Polarity	2 (051)	3 (052)	4 (053)	5 (054)	6 (056)
A					
Z					

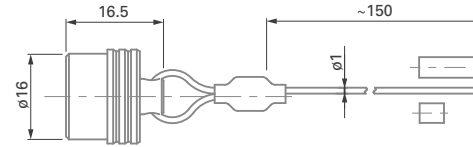
Polarity	7 (057)	10 (010)	12 (012)	19 (019)
A				
Z				

All dimensions and images shown are in millimeters and are for reference only.



4032 - SEALING CAPS

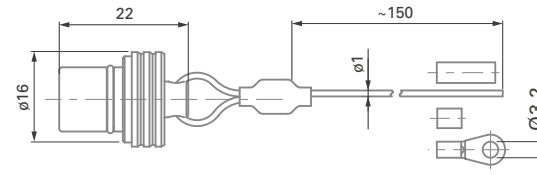
FOR PLUGS



Cap Material	Stainless steel cable covering material	Part number
POM (Delrin®)	FEP -Teflon®	4032.703

Crimp ferrule (300.922) and heat shrink tube (300.930) are included.

FOR RECEPTACLES



Cap Material	Stainless steel cable covering material	Part number
POM (Delrin®)	FEP -Teflon®	4032.701

Crimp ferrule (300.922), crimp lug (300.299) and heat shrink tube (300.930) are included.



4032 - CABLE CLAMP SETS

UNSHIELDED PLASTIC

Cable O.D. (mm)	Part number
2.2 - 3.7	4032.1003
3.7 - 5.2	4032.1002
5.2 - 6.7	4032.1001

For unshielded and unsealed applications.

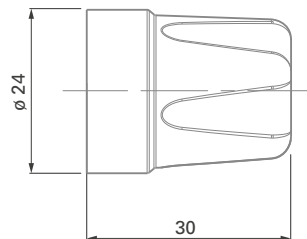
4032 - CABLE CLAMP SETS

ENVIRONMENTAL

Cable O.D. (mm)	Part number
2.2 - 2.7	E3 1031.2/2.7
2.7 - 3.2	E3 1031.2/3.2
3.2 - 3.7	E3 1031.2/3.7
3.7 - 4.2	E3 1031.2/4.2
4.2 - 4.7	E3 1031.2/4.7
4.7 - 5.2	E3 1031.2/5.2
5.2 - 5.7	E3 1031.2/5.7
5.7 - 6.2	E3 1031.2/6.2
6.2 - 6.7	E3 1031.2/6.7

For use when sealing shielded or unshielded cable to plug body.

TOOLING - 4032 - NUT DRIVER



Cap material	Part number
ABS	TH00.001

All dimensions and images shown are in millimeters and are for reference only.



4032 - ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type		Value
Sealing performance	Plug (SI)	- with sealed cable clamp - with cap or mated with sealed receptacle (DBPO)	IP68
			IP50
	Sealed receptacle (DBPO)	Mated with sealed plug or with cap	IP68
	Unsealed receptacle (DBP)		IP50
Endurance	5,000 mating cycles		

OPERATING TEMPERATURE RANGE

Component	Material	Operating temperatures
Body	PBT	-65°C to +135°C
Insulator	PEEK	-65°C to +200°C
O-rings - receptacle	NBR	-30°C to +110°C
Unshielded cable clamp	POM (Delrin®)	-40°C to +100°C
Cable clamp seal	TPE	-70°C to +130°C
Sealing cap for plug	POM (Delrin®) with O-ring	-60°C to +100°C
Sealing cap receptacle	POM (Delrin®) with NBR O-ring	-20°C to +100°C



4032 - METAL PARTS

Parts		Material			Finish	
		Designation	ISO	Standard	Designation	Standard
Metal parts (except contacts)		Brass	CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290 SAE-AMS2404
Contacts	Male (solder)	Brass	CuZn39Pb3	CW614N UNS C 38500	1 µm gold over nickel	MIL-DTL-45204D Type 1 + ASTM B488
	Female, male (crimp)	Bronze	CuSn4Zn4Pb4	CW456K ASTM B 139, UNS C 54400		

4032 - INSULATOR & SEALING

Parts	International symbol	Flammability
Body shell, sealing cap, back nut, mounting nut	PBT	UL 94 HB
Insulator	PEEK	UL 94 V-O
O-rings on receptacles and sealing caps for receptacles	NBR	-
O-ring on sealing cap for plug	FPM (Viton®)	-
Unshielded cable clamps, sealing cap bodies	POM (Delrin®)	UL 94 HB

The image shows two medical-grade connectors from the Fischer Core Series. One connector is silver and the other is white with a blue stripe. Both have gold-plated pins visible inside their ports. They are resting on a dark, reflective surface, creating clear reflections. The background is dark and out of focus, showing the curved path of the white cables.

FISCHER
CORE SERIES
DISPOSABLE



KEY FEATURES



The Fischer Core Series Disposable meets the needs of medical device manufacturers whose products are designed for disposal after a short number of uses. This circular connector is a cost effective solution that does not compromise on quality.

This product range truly contributes to the competitive pricing and performance necessary for disposable medical devices. Whether directly mounted into a disposable handpiece, overmold or mounted to a disposable cable, this plastic connector offers multiple configurations and optimally suits a wide array of applications, from catheters to surgical hand tools and more.

RELIABILITY

- Perfect solution for medical applications
- Fully insulated body
- Sterilizable (EtO, Gamma)

MODULAR

- Single or two-piece shell
- Easy integration of embedded electronics
- Stamped or machined contacts
- Mateable with all high performance panel receptacles of the Fischer Core Series Brass 104

EASY TO USE

- Color-coded for easy identification
- Quality tactile feel
- Click ensures secure friction plugging
- Choose from easy assembly connector or turnkey solution

PORTABLE

- Lightweight
- Ideal for portable applications from catheters to surgical hand tools
- Shock protection



PLUGS

CABLE MOUNTED



- Body style selection..... F 3

PRE-CABLED SOLUTION



- Body style selection..... F 3
- Technical dimensions F 6

CABLE MOUNTED TWO-PIECE SHELL

- Technical dimensions F 4

CABLE MOUNTED SINGLE SHELL

- Technical dimensions F 5

FOR ALL DISPOSABLE

ELECTRICAL & CONTACT CONFIGURATIONS

- Single or two-piece shell..... F 7
- Pre-cabled solution F 8

TECHNICAL INFORMATION

- Single or two-piece shell..... F 9
- Pre-cabled solution..... F 10
- Cross-line technical information A 9



PLUGS

CABLE MOUNTED



BODY STYLES	WHITE	BLUE	VIOLET	TURQUOISE
Locking system	Friction	Friction	Friction	Friction
Sealing	IP30/IP40	IP40	IP40	IP40
Design	Single/Two-piece shell	Two-piece shell	Two-piece shell	Two-piece shell

PRE-CABLED SOLUTION



BODY STYLES	
Locking system	Friction
Sealing	IP65
Design	Turnkey

COMPATIBILITY



Mateable with all high performance Fischer Connectors' panel receptacles of the Fischer Core Series Brass 104.

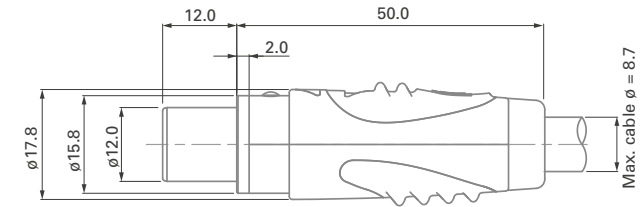
All dimensions and images shown are in millimeters and are for reference only.



PLUGS

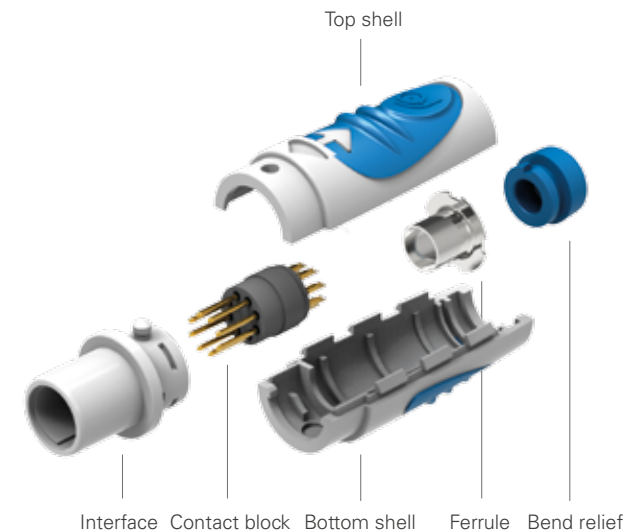
TWO-PIECE SHELL

WHITE* BLUE VIOLET TURQUOISE



Part	Part number	Description
Interface	U1 504-A	Interface white
Top shell	U31 504-B01	White top shell
	U31 504-A03	White top shell + blue soft touch
	U31 504-A04	White top shell + violet soft touch
	U31 504-A09	White top shell + turquoise soft touch
Bottom shell	U32 504-B01	White bottom shell
	U32 504-A03	White bottom shell + blue soft touch
	U32 504-A04	White bottom shell + violet soft touch
	U32 504-A09	White bottom shell + turquoise soft touch
Ferrule	U33 504/5.0	Ferrule Dia 5.0 for two-piece shell version
Bend relief	U34 504-A03	Blue
	U34 504-A04	Violet
	U34 504-A09	Turquoise

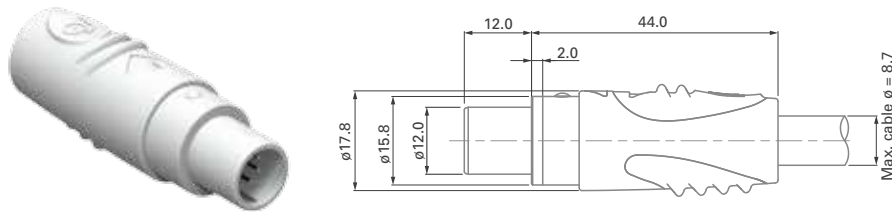
* Assembled with color bend relief.



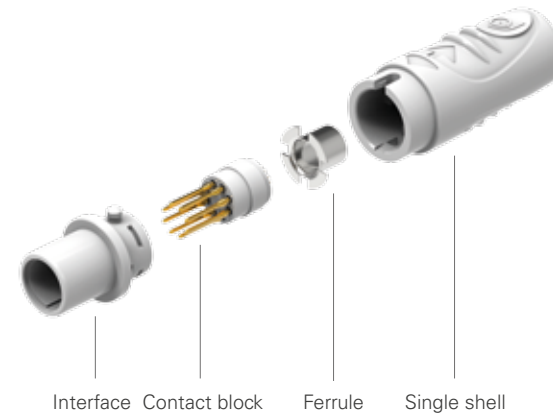


PLUGS

SINGLE SHELL WHITE



Part	Part number	Description
Interface	U1 504-A	Interface white
Single shell	U41 504-A	One-piece shell, white only
Ferrule	U42 504/5.0	Ferrule Dia 5.0 for single shell version

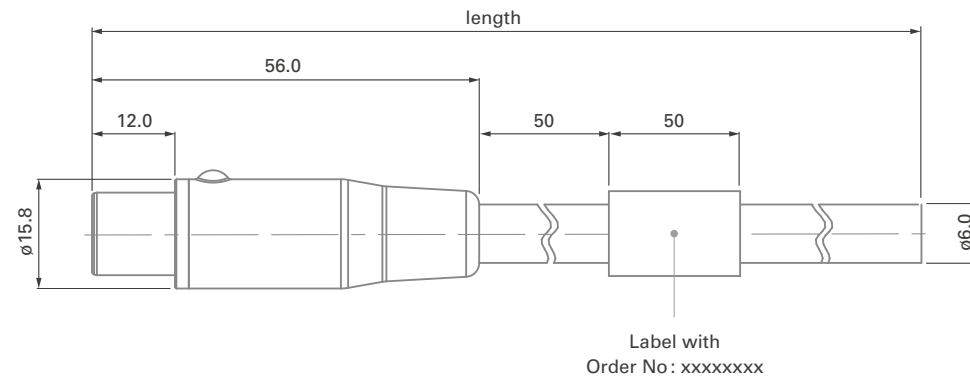


All dimensions and images shown are in millimeters and are for reference only.



PLUGS

PRE-CABLED SOLUTION











Part number	Length* [mm]
CA_S_8XLV_SI504 1.0m	1000
CA_S_8XLV_SI504 2.0m	2000
CA_S_8XLV_SI504 5.0m	5000

*Cable length tolerance according IPC-WHMA-A-620.



SINGLE OR TWO-PIECE SHELL

References	Pin layout	Number of contacts	Insulating material	Contact \varnothing [mm]	Wire size	Test Voltage [kV] in mated position				Max. admissible current ¹⁾ [A] at 10°C temperature rise	 Contact block insulator	Stamped contact	
						AC rms		DC			 Part number	 Part number	
						Contact to receptacle body	Contact to contact	Contact to receptacle body	Contact to contact			Reel size (pcs.)	
												1'000	10'000
A 065		6	PBT	0.9	AWG20 to AWG24	1.7	2.0	2.4	2.6	-	E21 504 A065-S	RMS1/0.9:1K	RMS10/0.9:10K
A 066		8	PBT	0.9	AWG20 to AWG24	1.5	1.6	2.2	2.7	3.0	E21 504 A066-S		
A 056		11	PBT	0.9	AWG20 to AWG24	1.4	1.5	2.1	2.2	-	E21 504 A056-S		
A 086		16	PBT	0.7	AWG26 to AWG30	0.8	1.5	1.3	2.1	1.7	E21 504 A086-S	RMS1/0.7:1K	RMS10/0.7:10K
A 092		19	PBT	0.7	AWG26 to AWG30	0.8	1.2	1.2	1.8	-	E21 504 A092-S		

¹⁾ Current per contact at 10°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.



PRE-CABLED SOLUTION

References	Pin layout	Number of contacts	Insulating material	Contact \varnothing [mm]	Wire size	Test Voltage [kV] in mated position				Max. admissible current ²⁾ [A] at 10°C temperature rise	Turnkey solution part number
						AC rms		DC			
						Contact to receptacle body	Contact to contact	Contact to receptacle body	Contact to contact		
A 066 ¹⁾		8	ABS	0.9	AWG24	1.5	1.5	2.5	2.5	1.9	CA_S_8XLV_SI504 1.0m CA_S_8XLV_SI504 2.0m CA_S_8XLV_SI504 5.0m

¹⁾The Fischer Core Series Disposable turnkey solution is available in a standard 8-contact pin layout. Pin layout with 16 contacts is available on request.

²⁾ Current per contact at 10°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.



SINGLE OR TWO-PIECE SHELL

MECHANICAL & ENVIRONMENTAL DATA

Sealing rating – Single shell – Two-piece shell	IP30 IP40
Operating temperature range	-20°C to +65°C
Endurance	10 mating cycles
Gamma irradiation for sterilization	Tested to withstand irradiation up to 60 kGy per ISO 11137-2
EtO for sterilization	Tested with a standard EtO sterilization cycle per ISO 11135
Mating / Unmating force	Typ. 10-20 N

MATERIAL & SURFACE TREATMENTS

Parts	Material	Surface treatment	Flammability
Plastic housing	ABS	–	UL 94 HB
Soft-touch areas	TPE	–	UL 94 HB
Contacts	Brass or Bronze	Gold over Nickel	–
Insulator	PBT	–	UL 94 V-0
Ferrule	Copper alloy	Nickel	–



PRE-CABLED SOLUTION

ENVIRONMENTAL DATA

Characteristic	Value
Sealing performance	IP65
Operating temperature range	-20°C to +65°C
Mechanical resistance cable / plug	100 N
Endurance	10 mating cycles

MATERIAL & SURFACE TREATMENTS

Part	Material	Surface treatment	Flammability
Body	PVC overmolding	–	UL 94 V-2
Contacts	Brass	Gold over Nickel	–
Interface and insulator (merged)	ABS	–	UL 94 HB
Cable (1, 2, or 5 meters)	PVC	–	UL 94 HB





FISCHER
CORE SERIES
BROADCAST



KEY FEATURES



Professional broadcasters and producers demand high performance, reliable equipment. Fischer Connectors delivers consistently, offering leading edge technology, consulting, installation, and training.

Our 1051 HD Triax Pro+™ connectors link HD video cameras and related equipment dependably.

RUGGED FOR OUTDOOR USE

- Drag it below roads, above trees and around the stadium
- Constant quality of transmission
- Professional data quality

OPTIMIZED FOR BROADCASTERS

- Fast and easy cable assembly and field maintenance
- Long transmission distance (30% longer than Triax 14)
- Over 5,000 mating cycles

DURABLE

- Corrosion resistant
- Sealed up to IP68 when mated
- Operating temperature : -55°C to +135°C

THE BEST OF TRIAX

- HD/SD signal compliant
- Lower cost of ownership vs SMPTE 304 solution





PLUGS

CABLE MOUNTED



- Body style selection (SE; SE-SE) G 4
- Technical dimensions G 6

PANEL MOUNTED



- Body style selection (DS; DSQ) G 4
- Technical dimensions G 8

PANEL MOUNTED WITH CABLE CLAMP



- Body style selection (DSR) G 4
- Technical dimensions G 10

PANEL FEEDTHROUGH



- Body style selection (DS-K) G 4
- Technical dimensions G 11

RECEPTACLES

CABLE MOUNTED



- Body style selection (KE; KE-KE) G 5
- Technical dimensions G 12

PANEL FRONT MOUNTED



- Body style selection (DB; DBQ) G 5
- Technical dimensions G 14

PANEL MOUNTED WITH CABLE CLAMP



- Body style selection (DKE; DKBE) G 5
- Technical dimensions G 16

PANEL FEEDTHROUGH



- Body style selection (KE-KE) G 5
- Technical dimensions G 17

FOR ALL BROADCAST

- Cable clamp sets G 18
- Accessories G 21
- Tooling G 24

- Recommended cables G 26
- Technical information G 28
- Cross-line technical information A 9



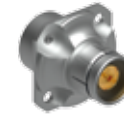
PLUGS

CABLE MOUNTED



BODY STYLES	SE	SE-SE
Locking system	Push-pull	Push-pull
Sealing	IP68	IP50
Design	Standard	In-line adapter

PANEL MOUNTED



BODY STYLES	DS	DSQ	DSR	DS-K
Locking system	Push-pull	Push-pull	Push-pull	Push-pull
Sealing	IP50	IP50	IP50	IP50
Design	Standard	Square flange	Cable mounted	Bulkhead feedthrough



RECEPTACLES

CABLE MOUNTED



BODY STYLES	KE	KE-KE
Sealing	IP68	IP50
Design	Standard	In-line adapter

PANEL FRONT MOUNTED



BODY STYLES	DB	DKE	DBQ
Sealing	IP50	IP68	IP50
Design	Standard	Cable mounted	Square flange

PANEL REAR MOUNTED



BODY STYLES	DKBE	KE-KE
Sealing	IP68	IP50
Design	Cable mounted	Bulkhead feedthrough

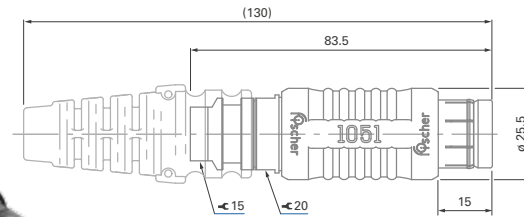


PLUGS

CABLE MOUNTED

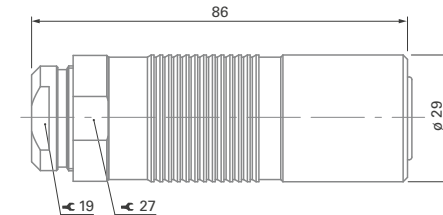
SE

FOR Ø 8.4 TO Ø 11.9 MM CABLES



SE

FOR Ø 12.2 TO Ø 15.2 MM CABLES



Cable plug part number	Cable group ¹⁾	Cable clamp part number ²⁾
SE 1051 A004-9+	1	E3 SE1051.3/A004-9/1.0/4.5/8.7
	2	E3 SE1051.3/A004-9/1.0/4.5/9.4
	2	E3 SE1051.3/A004-9/1.4/4.5/9.4
	3	E3 SE1051.3/A004-9/1.4/6.6/11.3
SE 1051 A004-HD Pro+	3 HD Pro+	E3 SE1051.3/A004 HD Pro/1.75/7.5/11.9

¹⁾ See list of recommended cables on page G 26.

²⁾ See cable clamp details on page G 18.

Cable plug part number	Cable group ¹⁾	Cable clamp part number
SE 1051 A004-4 1.4/6.6/12.6	4	Included
SE 1051 A004-4 T1895/13.6	5	
SE 1051 A004-4 2.1Ls/10s/15.2	6	

¹⁾ See list of recommended cables on page page G 26.

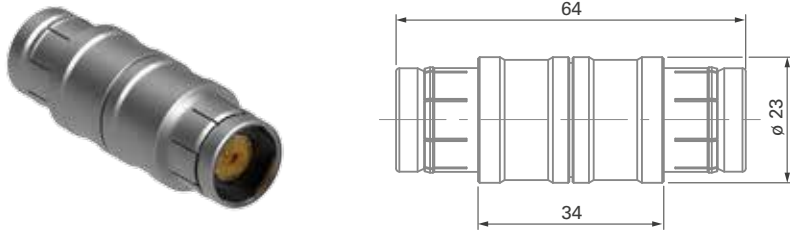


PLUGS

IN-LINE ADAPTER

SE-SE

FOR CONNECTION OF PANEL
OR CABLE RECEPTACLES



Adapter part number	Suitable for
SE-SE 1051 A004	KE, DB and DKE connections

All dimensions and images shown are in millimeters and are for reference only.

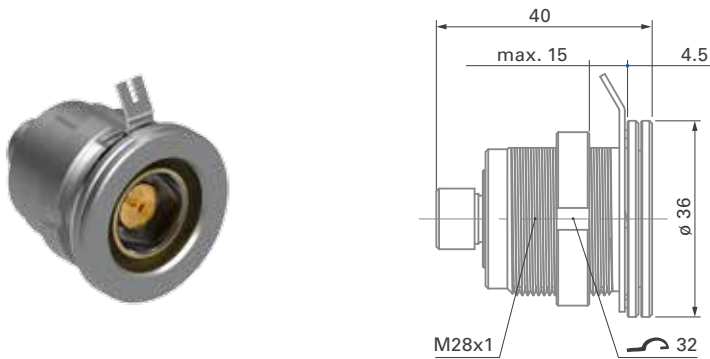


PLUGS

PANEL MOUNTED

DS

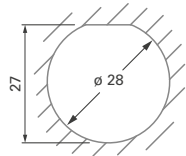
FOR Ø8.5 MM CABLES



Panel plug part number

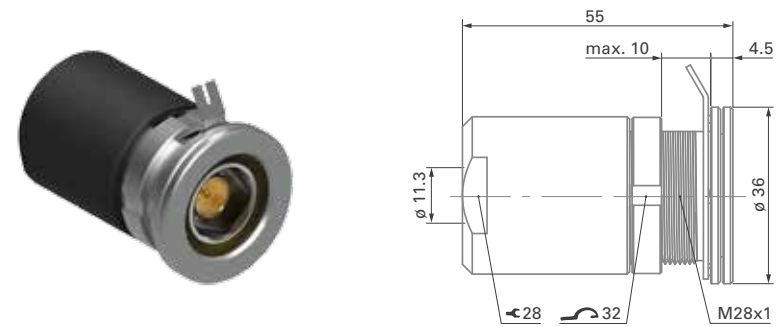
DS 1051 A004-3 1.0/5.0

PANEL CUT-OUT



DS

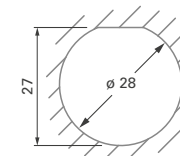
FOR Ø11.3 MM CABLES, WITH CABLE GUIDE



Panel plug part number

DS 1051 A004-3 1.4/6.6

PANEL CUT-OUT



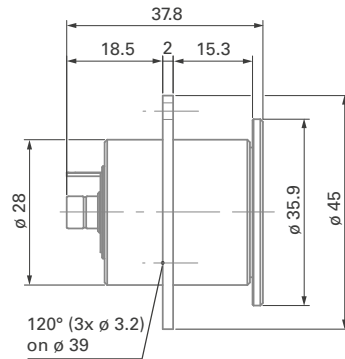


PLUGS

PANEL MOUNTED WITH SMB ADAPTOR

DS

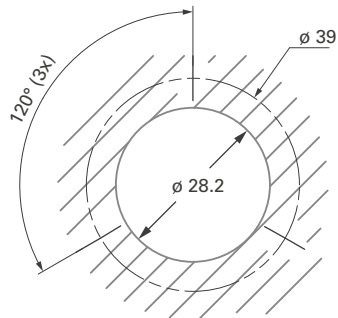
PANEL PLUG WITH 75 Ω SMB MALE PLUG



Panel plug part number

DS 1051 A004-SMB75/M

PANEL CUT-OUT



All dimensions and images shown are in millimeters and are for reference only.

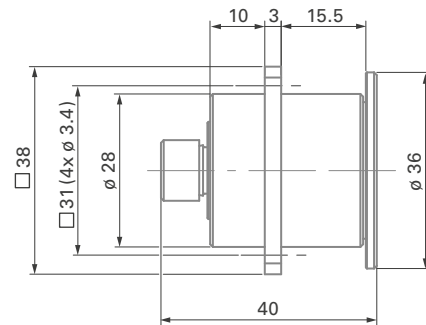


PLUGS

PANEL MOUNTED

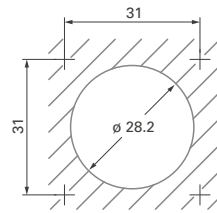
DSQ

FOR Ø8.5 MM CABLES, WITH SQUARE FLANGE



Panel plug part number
DSQ 1051 A004-3 1.0/5.0

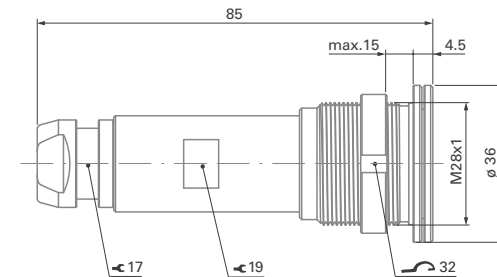
PANEL CUT-OUT



PANEL MOUNTED WITH CABLE CLAMP

DSR

FOR Ø8.5 TO Ø11.9 MM CABLES

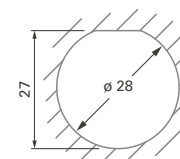


Panel plug part number	Cable group ¹⁾	Cable clamp part number ²⁾
DSR 1051 A004-9+	1	E3 1051.5/A004-9/1.0/4.5/8.7
	2	E3 1051.5/A004-9/1.0/4.5/9.4
	2	E3 1051.5/A004-9/1.4/4.5/9.4
DSR 1051 A004-HD Pro+	3	E3 1051.5/A004-9/1.4/6.6/11.3
	3	E3 1051.5/A004 HD Pro/1.75/7.5/11.9

¹⁾ See list of recommended cables on page G 26.

²⁾ See cable clamp details on page G 20.

PANEL CUT-OUT



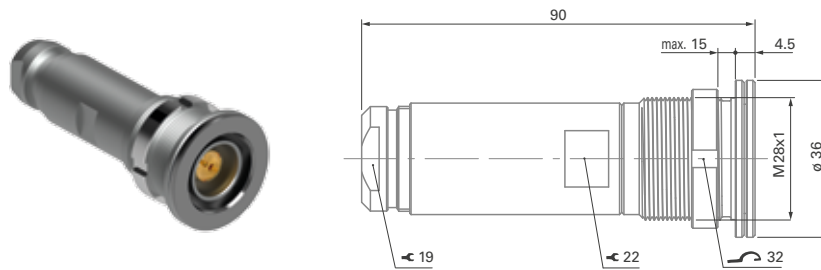


PLUGS

PANEL MOUNTED WITH CABLE CLAMP

DSR

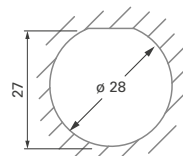
FOR Ø 12.2 TO Ø 15.2 MM CABLES



Panel plug part number	Cable group ¹⁾	Cable clamp part number
DSR 1051 A004-4 1.4/6.6/12.6	4	Included
DSR 1051 A004-4 T1895/13.6	5	
DSR 1051 A004-4 2.1Ls/10s/15.2	6	

¹⁾ See list of recommended cables on page G 26.

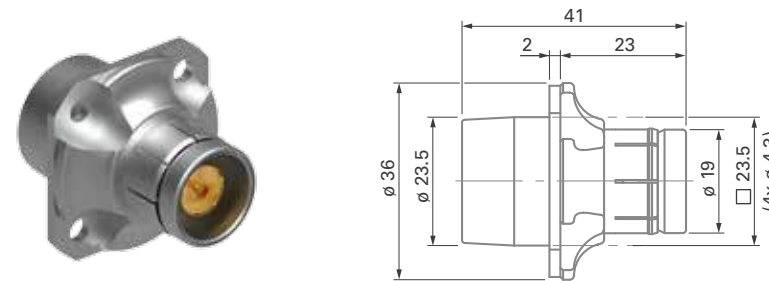
PANEL CUT-OUT



PANEL FEEDTHROUGH

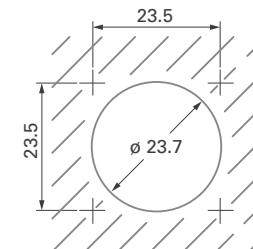
DS-K

FOR CONNECTION OF CABLE PLUGS AND CABLE RECEPTACLES



Feedthrough part number	Suitable for
DS-K 1051 A004	SE with KE connections

PANEL CUT-OUT



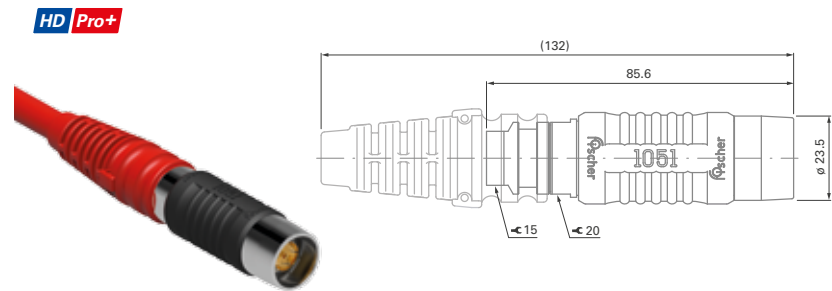


RECEPTACLES

CABLE MOUNTED

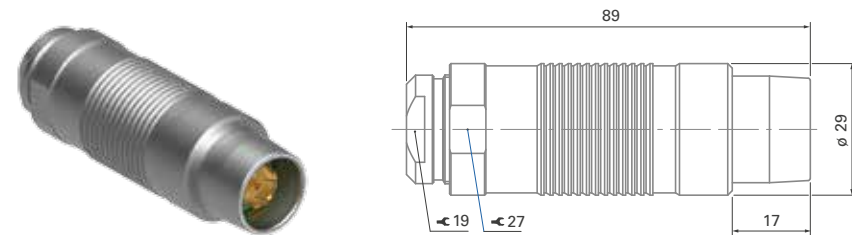
KE

FOR Ø8.4 TO Ø11.9 MM CABLES



KE

FOR Ø12.2 TO Ø15.2 MM CABLES



Cable receptacle part number	Cable group ¹⁾	Cable clamp part number ²⁾
KE 1051 A004-9+	1	E3 KE1051.4/A004-9/1.0/4.5/8.7
	2	E3 KE1051.4/A004-9/1.0/4.5/9.4
	2	E3 KE1051.4/A004-9/1.4/4.5/9.4
	3	E3 KE1051.4/A004-9/1.4/6.6/11.3
KE 1051 A004-HD Pro+	3	E3 KE1051.4/A004-HD Pro/1.75/7.5/11.9

¹⁾ See list of recommended cables on page G 26.

²⁾ See cable clamp details on page G 19.

Cable receptacle part number	Cable group ¹⁾	Cable clamp part number
KE 1051 A004-4 1.4/6.6/12.6	4	Included
KE 1051 A004-4 T1895/13.6	5	
KE 1051 A004-4 2.1Ls/10s/15.2	6	

¹⁾ See list of recommended cables on page G 26.

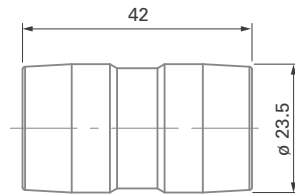


RECEPTACLES

IN-LINE ADAPTER

KE-KE

FOR CONNECTION OF CABLE OR PANEL PLUGS



Adapter part number	Suitable for
KE-KE 1051 A004	SE, DS and DSR connections

All dimensions and images shown are in millimeters and are for reference only.

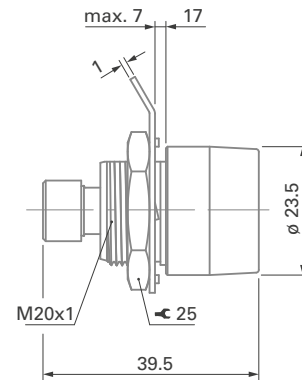


RECEPTACLES

PANEL FRONT MOUNTED

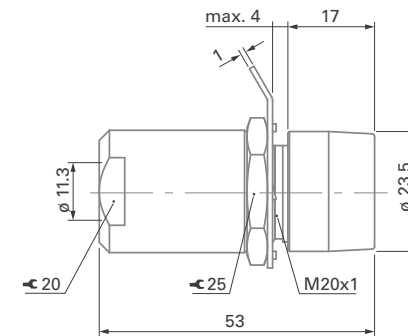
DB

FOR Ø8.5 MM CABLES



DB

FOR Ø11.3 MM CABLES, WITH CABLE GUIDE



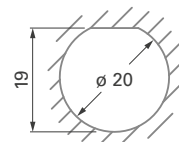
Receptacle part number

DB 1051 A004-3 1.0/5.0

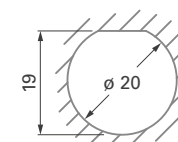
Receptacle part number

DB 1051 A004-3 1.4/6.6

PANEL CUT-OUT



PANEL CUT-OUT



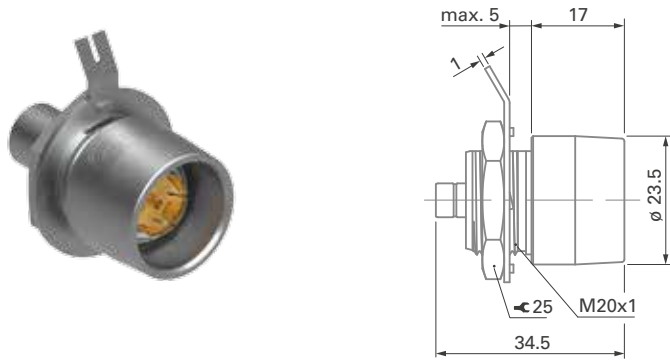


RECEPTACLES

PANEL MOUNTED WITH SMB ADAPTER

DB

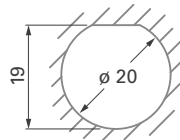
PANEL RECEPTACLE WITH 75 Ω SMB MALE PLUG



Panel receptacle part number

DB 1051 A004-SMB75/M

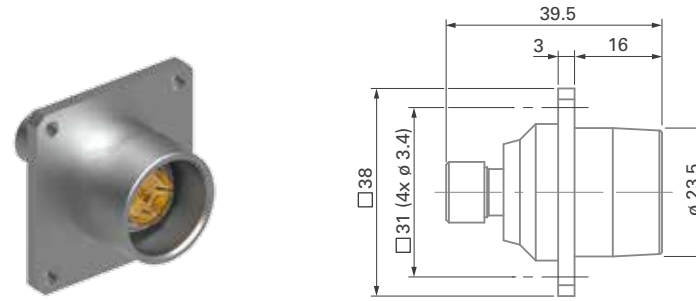
PANEL CUT-OUT



PANEL FRONT MOUNTED

DBQ

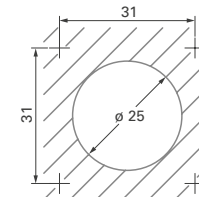
FOR Ø8.5 MM CABLES, WITH SQUARE FLANGE



Receptacle part number

DBQ 1051 A004-3 1.0/5.0

PANEL CUT-OUT



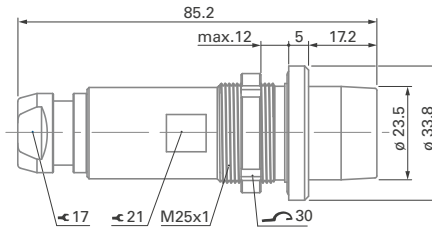


RECEPTACLES

PANEL MOUNTED WITH CABLE CLAMP

DKE

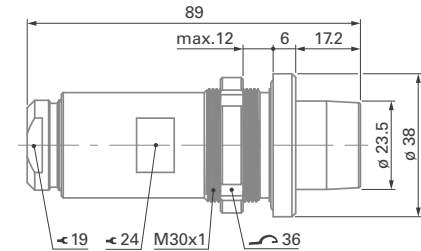
FOR Ø 8.4 TO Ø 11.9 MM CABLES



PANEL MOUNTED WITH CABLE CLAMP

DKE

FOR Ø 12.2 TO Ø 15.2 MM CABLES



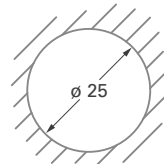
Receptacle part number	Cable group ¹⁾	Cable clamp part number ²⁾
DKE 1051 A004-9+	1	E3 1051.5/A004-9/1.0/4.5/8.7
	2	E3 1051.5/A004-9/1.0/4.5/9.4
	2	E3 1051.5/A004-9/1.4/4.5/9.4
	3	E3 1051.5/A004-9/1.4/6.6/11.3
DKE 1051 A004-HD Pro+	3 HD Pro+	E3 1051.5/A004 HD Pro/1.75/7.5/11.9

Receptacle part number	Cable group ¹⁾	Cable clamp part number ²⁾
DKE 1051 A004-4 1.4/6.6/12.6	4	Included
DKE 1051 A004-4 T1895/13.6	5	
DKE 1051 A004-4 2.1Ls/10s/15.2	6	

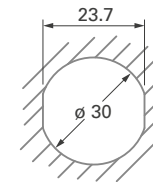
¹⁾ See list of recommended cables on page G 26.

²⁾ See cable clamp details on page G 20.

PANEL CUT-OUT



PANEL CUT-OUT



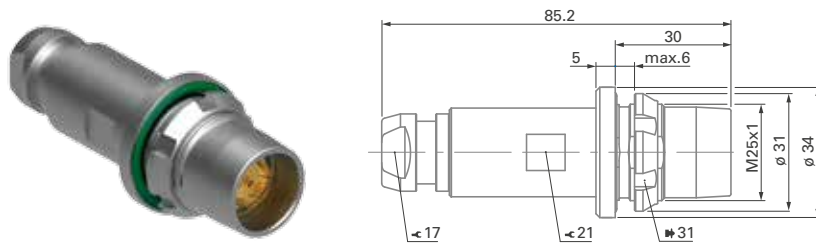


RECEPTACLES

PANEL MOUNTED WITH CABLE CLAMP

DKBE

FOR Ø8.4 TO Ø11.9 MM CABLES

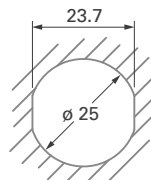


Receptacle part number	Cable group ¹⁾	Cable clamp part number ²⁾
DKBE 1051 A004-9+	1	E3 1051.5/A004-9/1.0/4.5/8.7
	2	E3 1051.5/A004-9/1.0/4.5/9.4
	2	E3 1051.5/A004-9/1.4/4.5/9.4
	3	E3 1051.5/A004-9/1.4/6.6/11.3
DKBE 1051 A004-HD Pro+	3 HD Pro+	E3 1051.5/A004 HD Pro/1.75/7.5/11.9

¹⁾ See list of recommended cables on page G 26.

²⁾ See cable clamp details on page G 20.

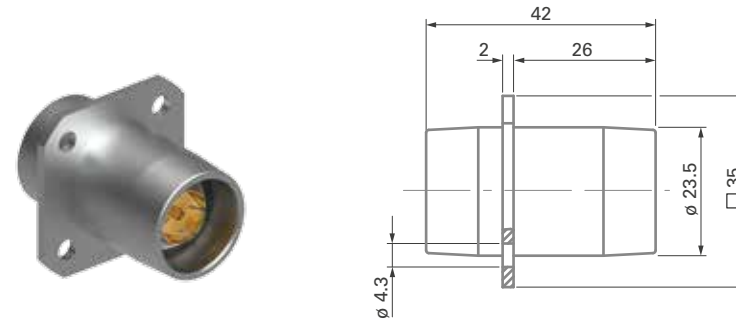
PANEL CUT-OUT



PANEL FEEDTHROUGH

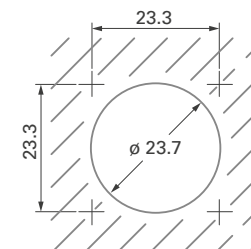
KE-KE

FOR CONNECTION OF CABLE PLUGS



Feedthrough part number	Suitable for
KE-KE 1051 A004-8	SE connections

PANEL CUT-OUT

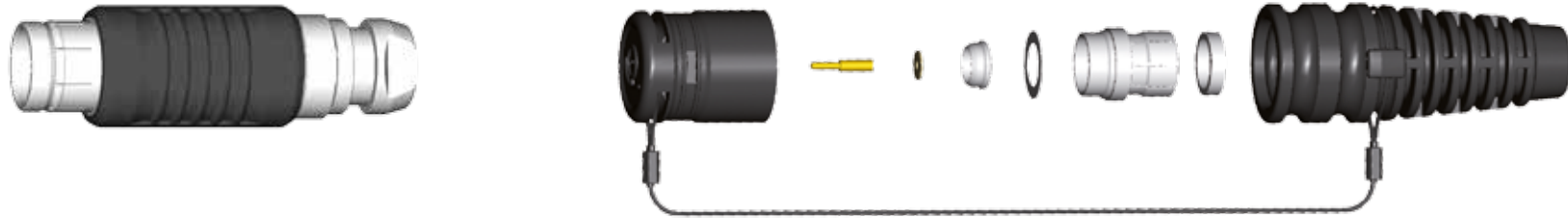


All dimensions and images shown are in millimeters and are for reference only.



FOR SE MODELS

Cable clamp set



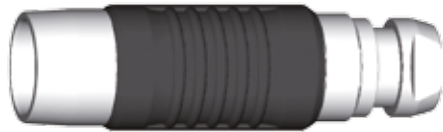
Plug cap is included with the cable clamp set

	Cable diameters (mm)	Cable clamp part number ¹⁾
SE 1051 A004-9+	1.0 / 4.5 / 8.7	E3 SE1051.3/A004-9/1.0/4.5/8.7
	1.0 / 4.5 / 9.4	E3 SE1051.3/A004-9/1.0/4.5/9.4
	1.4 / 4.5 / 9.4	E3 SE1051.3/A004-9/1.4/4.5/9.4
	1.4 / 6.6 / 11.3	E3 SE1051.3/A004-9/1.4/6.6/11.3
SE 1051 A004-HD Pro+	1.75 / 7.5 / 11.9 HD Pro+	E3 SE1051.3/A004-HD Pro/1.75/7.5/11.9

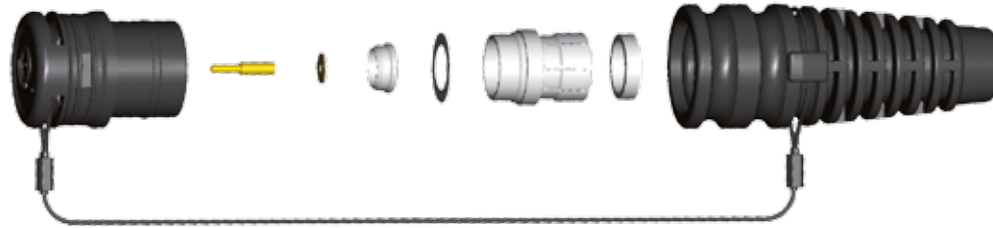
¹⁾ See list of recommended cables on page G 26.



FOR KE MODELS

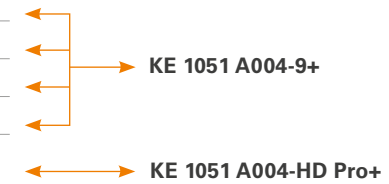


Cable clamp set



Cable receptacle cap is included with the cable clamp set

Cable diameters (mm)	Cable clamp part number ¹⁾
1.0 / 4.5 / 8.7	E3 KE1051.4/A004-9/1.0/4.5/8.7
1.0 / 4.5 / 9.4	E3 KE1051.4/A004-9/1.0/4.5/9.4
1.4 / 4.5 / 9.4	E3 KE1051.4/A004-9/1.4/4.5/9.4
1.4 / 6.6 / 11.3	E3 KE1051.4/A004-9/1.4/6.6/11.3
1.75 / 7.5 / 11.9 HD Pro+	E3 KE1051.4/A004 HD Pro/1.75/7.5/11.9



¹⁾ See list of recommended cables on page G 26.




FOR DSR, DKBE AND DKE MODELS



Cable clamp set



Cable diameters (mm)	Cable clamp part number ¹⁾
1.0 / 4.5 / 8.7	E3 1051.5/A004-9/1.0/4.5/8.7
1.0 / 4.5 / 9.4	E3 1051.5/A004-9/1.0/4.5/9.4
1.4 / 4.5 / 9.4	E3 1051.5/A004-9/1.4/4.5/9.4
1.4 / 6.6 / 11.3	E3 1051.5/A004-9/1.4/6.6/11.3
1.75 / 7.5 / 11.9 	E3 1051.5/A004-HD Pro/1.75/7.5/11.9




← ← ← ← → DSR 1051 A004-9+
 ← ← ← ← → DKBE 1051 A004-9+
 ← ← ← ← → DKE 1051 A004-9+

← ← ← ← → DSR 1051 A004-HD Pro+
 ← ← ← ← → DKBE 1051 A004-HD Pro+
 ← ← ← ← → DKE 1051 A004-HD Pro+



¹⁾ See list of recommended cables on page G 26.



FOR A004-9 & HD PRO+MODELS

	Description	Part number	Suitable for
	Protective sleeve	1051.1569	All SE, KE
	Plug cap	1051.1576	All SE, DS, DSR
	Receptacle cap	1051.1577	All KE, DKE, DKBE, DB

COMBINED SLEEVE & CAP FOR A004-4 MODELS

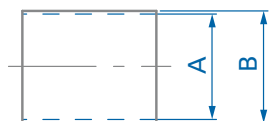
	Description	Part number	Suitable for
	Protective sleeve	1051.875	SE 1051 A004-4 1.4/6.6/12.6 SE 1051 A004-4 T1895/13.6
	Protective sleeve	1051.874	SE 1051 A004-4 2.1Ls/10s/15.2
	Protective sleeve	1051.876	KE 1051 A004-4 1.4/6.6/12.6 KE 1051 A004-4 T1895/13.6
	Protective sleeve	1051.877	KE 1051 A004-4 2.1Ls/10s/15.2

All dimensions and images shown are in millimeters and are for reference only.



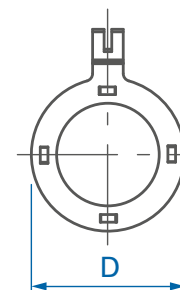
SPARE PARTS

CRIMP FERRULES



Part number	A	B	Suitable for
1051.910	11.8	12.5	SE 1051 A004-4 T1895/13.6
			KE 1051 A004-4 T1895/13.6
			DKE 1051 A004-4 T1895/13.6
			DSR 1051 A004-4 T1895/13.6
			DSR 1051 A004-4 2.1Ls/10s/15.2
1051.922	14.3	15.5	SE 1051 A004-4 2.1Ls/10s/15.2
			KE 1051 A004-4 2.1Ls/10s/15.2
			DKE 1051 A004-4 2.1Ls/10s/15.2

SOLDER LUG WITH FORKS



Part number	D	Suitable for
1051.311	30	DB
1051.615	34	DS



SPARE PARTS

CRIMP AND/OR SOLDER CONTACTS



Part number	D	Suitable for
1051.900	1.0	A004-x 1.0/xx/xx
1051.905	1.5	A004-x 1.4/xx/xx
1051.919	1.8	A004-x HD Pro+
1051.906	2.5	A004-4T1895 A004-4 2.1Ls

All dimensions and images shown are in millimeters and are for reference only.





SPANNER FOR INNER THREADED RING



Part number	Suitable for
TQ00.002	All body styles -4

HOOK SPANNER FOR SLOTTED NUTS



Part number	Suitable for
TX00.105	 30-32 DS + DSR + DKE -9 + DKE HD-Pro+
TX00.106	 34-36 DKE -4

NUT DRIVER



Part number	Suitable for
TQ00.005	 31 DKBE

CONTACT CRIMP TOOL



Part number	Description
TX00.242	Buchanan 615708



CONTACT CRIMP TOOL



Part number	Description
TX00.242	Buchanan 615708

CONTACT CRIMP TOOL POSITIONER



Part number	Suitable for
TX00.315	All connectors corresponding to cable groups 1 to 4 ¹⁾
TX00.317	All connectors corresponding to cable groups 5 to 6 ¹⁾

¹⁾ See list of recommended cables on page G 26.

CRIMP TOOL



Part number	Description
TX00.245	Daniels HX4 (M 22520/5-01)

CRIMP TOOL DIES




Part number	Hexagon width	Description
TX00.270	10.9	Daniels Y178 (M 22520/5-61)
TX00.271	13.51	Daniels Y151 (M 22520/5-27)

All dimensions and images shown are in millimeters and are for reference only.



RECOMMENDED TRIAXIAL CAMERA CABLES 75 Ω

	Cable			Cable diameters ¹⁾ [mm]			Recommended connectors ²⁾	Recommended clamp set
	Brand	Type	Reference	Core	Dielectric	Ext.		
1	Bedeia	Standard 8 (PUR)	–	1.0	4.5	8.5	All body styles 1051 A004-9+ DS+DB+DSQ+DBQ 1051 A004-3 1.0/5.0	E3 1051.1/A004-9/1.0/4.5/8.7 N/A
	Bedeia	Superflex 8 (TPE flex)	–	1.0	4.5	8.6		
	Belden	Triax 8	7783A	1.0	4.5	8.4		
	Draka	Triax 8 (PVC)	CT2765700	1.0	4.5	8.4		
	Draka	Triflex 8 (PUR)	CT2767900	1.0	4.5	8.4		
	Intercond	8.5mm (PVC or PUR)	RX 75/55	1.0	4.7	8.5		
	Fujikura	4.8/1.0 EFTXF	–	1.0	4.8	8.6		
	Hirakawa	TRIAx 4.8/1.0-TUFRET	3118-250	1.0	4.8	8.8		
2	Belden	–	9267, 1857A	0.8	3.7	9.2	All body styles 1051 A004-9+ DS+DB+DSQ+DBQ 1051 A004-3 1.0/5.0	E3 1051.1/A004-9/1.0/4.5/9.4 E3 1051.1/A004-9/1.4/4.5/9.4 N/A
	Draka	Triax 8 (FRNC) Reinforced	CT2853203	1.0	4.5	9.0		
3	Belden	Triax 11	7784AS	1.4	6.5	11.2	All body styles 1051 A004-9+ DS+DB 1051 A004-3 1.4/6.6	E3 1051.1/A004-9/1.4/6.6/11.3 N/A
	Intercond	11.0mm (PVC or PUR)	RX 75/56	1.4	6.5	11.0		
	Bedeia	Standard 11 (PUR)	–	1.4	6.5	11.0		
	Bedeia	Superflex 11 (TPE flex)	–	1.4	6.0	11.3		
	Draka	Triax 11 (PVC)	CT2766400	1.4	6.5	11.0		
	Draka	Triflex 11 (PUR)	CT2768100	1.4	6.5	11.0		
	Draka		CT 2768700	1.75	7.5	11.9		



RECOMMENDED TRIAXIAL CAMERA CABLES 75 Ω

	Cable			Cable diameters ¹⁾ [mm]			Recommended connectors ²⁾	Recommended clamp set
	Brand	Type	Reference	Core	Dielectric	Ext.		
4	Draka	Triax 11/1 (PU) Reinforced	CT2767101	1.4	6.5	12.2	SE+KE+DSR+DKE 1051 A004-4 1.4/6.6/12.6 DS+DB 1051 A004-3 1.4/6.6	Included N/A
5	Belden	–	9192, 9232	1.6	8.0	13.2	SE+KE+DSR+DKE 1051 A004-4T1895/13.6	Included
6	Belden	Triax 14	7785A	2.2	9.7	14.5	SE+KE+DSR+DKE 1051 A004-4 2.1Ls/10s/15.2	Included
	Intercond	14.0mm (PVC or PUR)	RX 75/57	2.2	9.7	14.0		
	Draka	Triax 14 (PVC)	CT2766700	2.2	9.7	14.4		
	Draka	Triax 14 (PUR)	CT2767000	2.2	9.7	14.5		
	Bedeia	Standard 14 (PUR)	–	2.2	9.7	14.4		
	Bedeia	Superflex 14 (TPE flex)	–	2.2	9.7	14.5		
	Fujikura	9.6/2.22 EFTXF	–	2.2	9.6	14.5		
Hirakawa	TRIAx-1/2.22-TUFRET	3118-290	2.2	9.6	14.5			

¹⁾ The cable dimensions listed are reference only, sizes may vary according to production batch.

²⁾ Connector types for other cables not listed are by request.

Please note that there are many additional cables in the marketplace that can be matched with Fischer Connectors.

Please contact your local sales representative for assistance with cables not listed above.

**MECHANICAL & ENVIRONMENTAL DATA**

Parameter	Values	Norm
Mating cycles	5000	
Temperature range - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	-55°C to + 135°C -55°C to + 135°C -40°C to + 85°C	
Vibration	10 to 2000 Hz, 1.5 mm or 20 g, no discontinuity > 1 µs	EIA-364-28, Test cond. IV (MIL-STD-1344, Method 2005 superseded)
Protection level SE, KE, DKE	IP68 when mated or with fitted sealing caps 2 m/24 h	IEC 60529
Corrosion, salt spray	96 h with 5% salt solution at 35°C	IEC 60068-2-11, Test Ka MIL-STD-202, Method 101, cond. A

MATERIAL & SURFACE TREATMENTS

Part	Materials	Finish
Housings - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	Brass Brass Brass, Steel, PA	Chrome over Nickel Chrome over Nickel Nickel
Housing accessories	Brass	Nickel
Inner contact	Bronze	Gold over Nickel
Crimp contact	Brass	Gold over Nickel
Outer contact	Brass	Gold over Nickel
Ground contact	Brass	Nickel
Insulators - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	PTFE, PCTFE, PP-H PTFE, PCTFE, PP-H POM, PP-H, PEI	- - -
Washers	PEEK, PET	-
O-ring seals	NBR, NBR Low Temp	-
Cable seal and protections	TPE	-



ELECTRICAL DATA

Parameter	Values	Norm
Nominal impedance	75 Ω	
Test voltage at sea level (mated) - Center to outer contact - Outer to ground contact	1.7 kVAC 1.0 kVAC	IEC 60512-4-1, Test 4a, Method c
Current rating per contact	14 A	IEC 60512-5-2, Test 5b
Contact resistance - Center contact - Outer contact - Ground contact	<3 m Ω <0.5 m Ω <5 m Ω	IEC 60512-2-1, Test 2a IEC 60512-2-2, Test 2b
Insulation resistance	> 10 ¹⁰ Ω	IEC 60512-3-1, Test 3a
VSWR (Voltage Standing Wave Ratio) - 0 to 250 MHz - 250 to 1300 MHz	< 1.05 < 1.2	



POWER CONNECTORS



- IP68 sealing (mated)
- Mistake-proofing connection
- Safe and secured scoop-proof system

TECHNICAL FEATURES

Current rating up to 275 A¹⁾

Test voltage up to 7000 V dc
up to 5000V ac

Body materials and platings Aluminium AlMgSiSn1Bi (EN-AW-6023), Nickel Chrome
Brass CuZn39Pb3 (CW614N), Nickel Chrome Plating
Custom color Painting on outersleeve

Receptacle contact Brass CuZn39Pb3 (CW614N), Silver Plating
Multi-Contact Insert B10N

Plug contact Brass CuZn39Pb3 (CW614N), Gold Plating

Insulator PTFE

O-rings Viton



¹⁾ Recommended max. operating current at 40° temperature rise measured according to IEC 60512-5-2-5b.



HYBRID CONNECTORS



- Signal, fluid and gas contacts
- Signal and/or power from 14 to 24 AWG
- Up to 5 bar fluid/gaz pressure

TECHNICAL FEATURES

Body Shell Brass CuZn39Pb3 (CW614N), chrome over nickel plating

Cable Clamp, Nuts and other inner parts Brass CuZn39Pb3 (CW614N), nickel plating

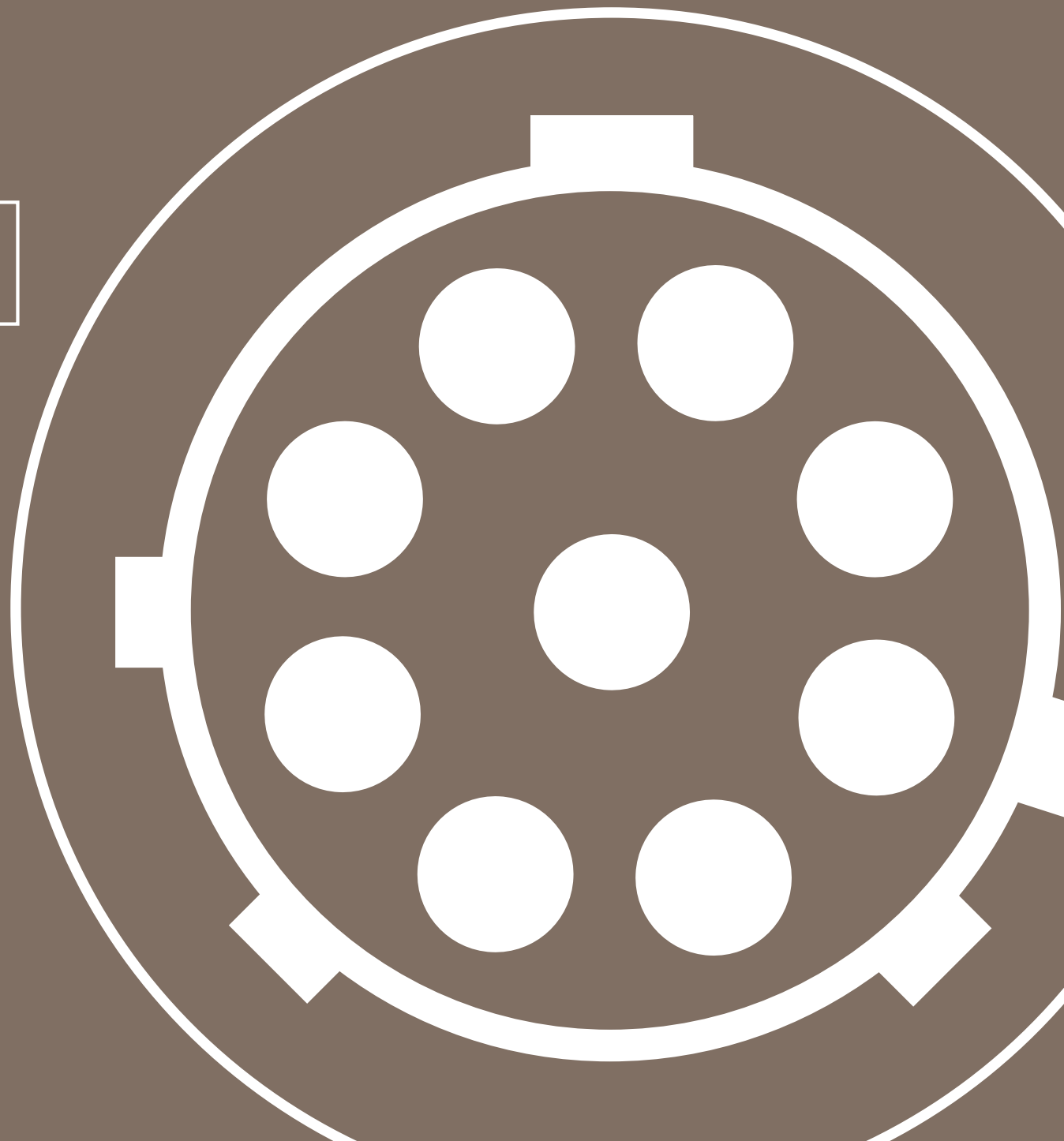
Contact Male (solder) Brass CuZn39Pb3 (CW614N), gold over nickel plating
Female, Male (crimp) Bronze CuSn4Zn4Pb4 (CW456K), gold over nickel plating

Insulator PEEK / PTFE / PBT

O-rings Viton



H1 > H23 | PAGES





KEY FEATURES



The Fischer UltiMate™ Series offers rugged, compact, lightweight, sealed connectors and cable assembly solutions ideally suited to withstand a variety of severe environmental, industrial and chemical conditions.

This circular push-pull connector features excellent 360° EMC shielding, extremely robust keying, and IP68/69 sealing even unmated.

DURABILITY

- Sealing IP68/IP69 even unmated
- Hermetic
- Extremely robust mechanical keying
- 10,000 mating cycles

PERFORMANCE

- 360° EMC shielding
- Grounding contact ring
- Easy cable assembly solutions

PERSONALIZED

- Wide range of configurations
- Miniature & ultralight design
- Color overmolding available
- Crimp and solder contacts

RUGGED

- High shock and vibration resistance
- Operating temperature: -55°C to +135°C
- High corrosion resistance
- Blind mating

FISCHER
ULTIMATE™
SERIES





RUGGED | COMPACT | LIGHTWEIGHT

Ideally suited for harsh environments:
Industrial | Transportation | Energy | Defense and security

FISCHER **ULTIMATE™** SERIES

Body style selection	H 4
Size overview	H 5
Contact configurations	H 6
Mechanical coding	H 9
Technical dimensions	H 10
PCB hole layout	H 13
Part numbering	H 16
Accessories	H 17
Tooling	H 20
Technical information	H 22



PLUGS

CABLE MOUNTED



BODY STYLES	UP01-L	UP01-Q
Locking system	Push-pull	Quick-release
Sealing	IP68/69	IP68/69
Design	Short/Overmolding	Short/Overmolding

PANEL FRONT MOUNTED



BODY STYLE	UP50
Locking system	Non-locking
Sealing	IP68/69
Design	Front-projecting

RECEPTACLES

CABLE MOUNTED



BODY STYLE	UR50
Sealing	IP68/69
Design	Short/Overmolding

PANEL FRONT MOUNTED



BODY STYLE	UR03
Sealing	IP68/69 Hermetic
Design	Front-projecting

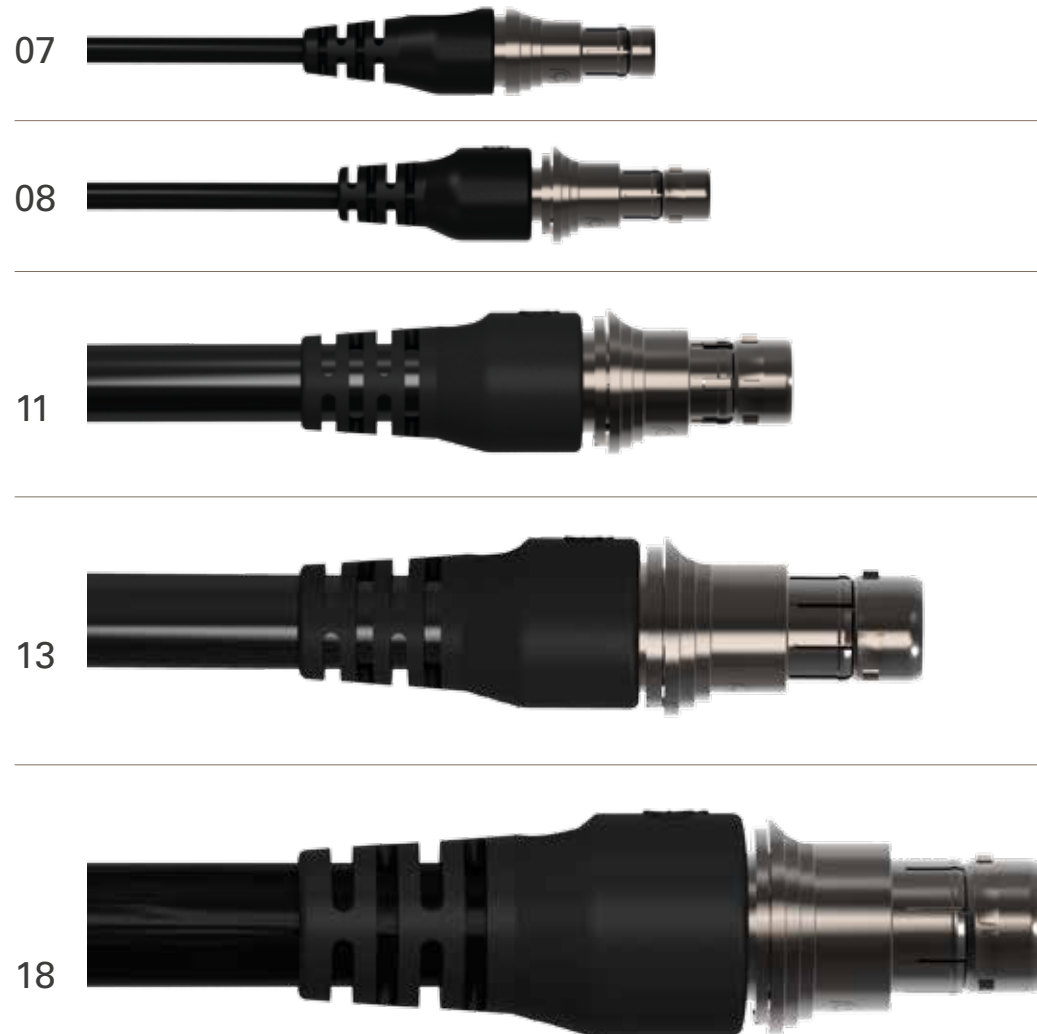
PANEL REAR MOUNTED



BODY STYLES	UR01	UR02
Sealing	IP68/69 Hermetic	IP68/69 Hermetic
Design	Front-projecting	Rear-projecting



AVAILABLES SIZES



Images of available sizes are on 1:1 scale when printed full size on A4 paper.



Size	Pin layout	Number of contacts	Contact diameter [mm]	Wire size ³⁾		PCB contacts	Current rating [A]	Rated voltage r.m.s [V]	Test voltage [kV] in mated position			
				Solder contacts ¹⁾	Crimp contacts ²⁾				IEC 60512-4-1 Test 4a		DC	
						Pin diameter [mm]	IEC 60512-5-2-5b ⁴⁾	IEC 60664-1 ⁵⁾	AC r.m.s.		DC	
Contact to body	Contact to contact	Contact to body	Contact to contact									
07		2	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm ⁶⁾ min ø0.48mm AWG22-26	0.63	9.2	≤ 250	1.3	1.7	1.8	2.4
		3	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	0.63	8.2	≤ 250	1.3	1.3	1.8	1.6
		4	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.50	5.5	≤ 200	1.2	1.2	1.7	1.8
		5	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.50	5.2	≤ 160	0.8	1.0	1.3	1.8
		7	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm AWG28-32	0.40	4.0	≤ 160	0.8	1.0	1.3	1.8
		9	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40	3.1	≤ 160	0.8	1.1	1.2	1.8
		10	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40	3.1	≤ 160	0.8	0.9	1.2	1.3

¹⁾ Stranding values are in brackets.

²⁾ See dedicated crimping instructions document for further information.

³⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

⁴⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁵⁾ Recommended operating voltage at sea level. This rated voltage is a general purpose guideline where no other electrical safety standard applies.

In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first. This must be evaluated in the framework of equipment engineering.

⁶⁾ Standard polarity only.



Size	Pin layout	Number of contacts	Contact diameter [mm]	Wire size ³⁾		PCB contacts	Current rating [A]	Rated voltage r.m.s [V]	Test voltage [kV] in mated position			
				Solder contacts ¹⁾	Crimp contacts ²⁾				IEC 60512-4-1 Test 4a		DC	
						Pin diameter [mm]	IEC 60512-5-2-5b ⁴⁾	IEC 60664-1 ⁵⁾	AC r.m.s.		DC	
Contact to body	Contact to contact	Contact to body	Contact to contact									
08		2	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	0.70	9.2	≤ 250	1.3	1.7	1.8	2.4
		3	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	0.70	8.2	≤ 250	1.3	1.3	1.8	1.6
		4	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.50	5.5	≤ 200	1.2	1.2	1.7	1.8
		5	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.50	5.2	≤ 160	0.8	1.0	1.3	1.8
		7	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40	4.0	≤ 160	0.8	1.0	1.3	1.8
		9	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40	3.1	≤ 160	0.8	1.1	1.2	1.8

¹⁾ Stranding values are in brackets.

²⁾ See dedicated crimping instructions document for further information.

³⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

⁴⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A 17 for details.

⁵⁾ Recommended operating voltage at sea level. This rated voltage is a general purpose guideline where no other electrical safety standard applies.

In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first. This must be evaluated in the framework of equipment engineering.



Size	Pin layout	Number of contacts	Contact diameter [mm]	Wire size ³⁾		PCB contacts	Current rating [A]	Rated voltage r.m.s [V]	Test voltage [kV] in mated position			
				Solder contacts ¹⁾	Crimp contacts ²⁾				IEC 60512-4-1 Test 4a		DC	
								IEC 60512-5-2-5b ⁴⁾	IEC 60664-1 ⁵⁾	AC r.m.s.		Contact to body
11		8	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	0.50	4.2	≤ 250	1.7	1.8	3.1	2.6
		12	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	^{7) 8)} max ø0.62mm min ø0.38mm AWG24-28	0.50	4.2	≤ 250	1.6	1.6	2.6	2.3
		16	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40 ⁷⁾	2.7	≤ 250	1.2	0.9	2.0	1.5
		19	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.40 ⁷⁾	2.5	≤ 250	1.2	0.9	2.0	1.5
13		27	0.5	⁸⁾ max ø0.43mm AWG26 [1] AWG28 [19/40]	⁹⁾ max ø0.43mm min ø0.20mm AWG28-32	0.40 ⁸⁾	2.0	≤ 200	1.2	0.5	1.8	0.5
18		42 ⁶⁾	0.7	-	max ø0.62mm min ø0.38mm AWG24-28	0.50	3.0	≤ 250	1.5	1.5	2.4	2.5

¹⁾ Stranding values are in brackets.

²⁾ See dedicated wire gauge crimping instructions document for further information.

³⁾ For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel. Testing may be required.

⁴⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

⁵⁾ Recommended operating voltage at sea level. This rated voltage is a general purpose guideline where no other electrical safety standard applies.

In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first. This must be evaluated in the framework of equipment engineering.

⁶⁾ Standard polarity only.

⁷⁾ Not valid for UP50.

⁸⁾ UR0x: standard polarity only.

⁹⁾ Only valid for UP01, UR50.

Mechanical coding

FISCHER ULTIMATE™ SERIES



PLUGS	Size	Code 1	Code 2	Code 3	Code 4
	07				
	08				
	11				
	13				
	18				
Visual coding		●	▼	■	✕

RECEPTACLES	Size	Code 1	Code 2	Code 3	Code 4
	07				
	08				
	11				
	13				
	18				
Visual coding		●	▼	■	✕

ULTIMATE

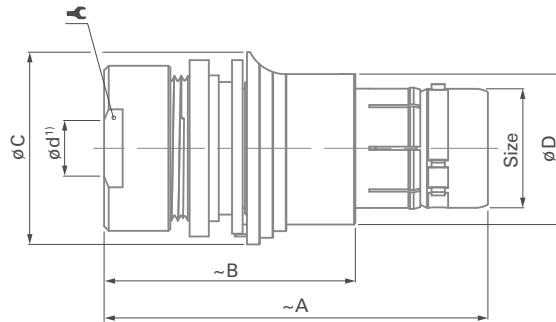


PLUGS

CABLE MOUNTED

UP01

BODY STYLE



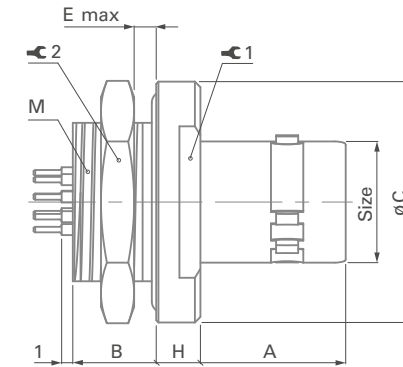
Size	A	B	øC	øD	ød max	☛	Torque
07	28.0	18.0	12.0	9.0	4.5	8	1.5 Nm
08	39.0	25.0	15.0	10.5	4.5	10	2.5 Nm
11	39.5	26.0	18.5	13.7	7.1	14	3.0 Nm
13	50.0	34.0	21.7	16.0	8.7	17	3.5 Nm
18	58.0	38.0	29.0	22.7	13.7	22	6.0 Nm

¹¹Max. cable diameter below shield.

PANEL FRONT MOUNTED

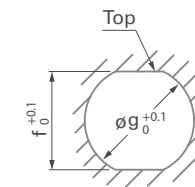
UP50

BODY STYLE



Size	A	B	øC	E	H	M	☛1	☛2	Torque
07	10.0	5.2	13.0	2.5	3.0	9x0.5	9	11	1.3 Nm
11	13.2	7.6	21.8	4.5	4.0	16x1	17	19	4.5 Nm

Size	f	øg
07	8.0	9.1
11	14.5	16.1



PANEL CUT-OUT

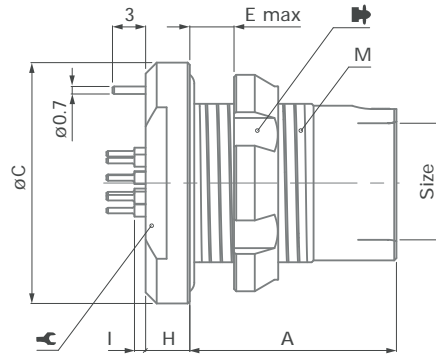


RECEPTACLES

PANEL REAR MOUNTED*

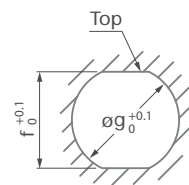
UR01

BODY STYLE



Size	A	øC	E	H	I	M			Torque
07	14.2	14.0	4.5	3.0	0.7	10x0.5	11	TC00.007	1.5 Nm
08	18.7	16.9	5.0	4.0	1.0	12x1	15	TF00.001	2.5 Nm
11	18.7	21.8	7.0	4.0	1.0	16x1	17	TK00.002	4.5 Nm
13	22.5	23.8	5.5	4.0	1.0	18x1	20	TP00.011	6.0 Nm
18	29.3	31.8	7.5	4.0	1.0	25x1	27	TQ00.005	10.0 Nm

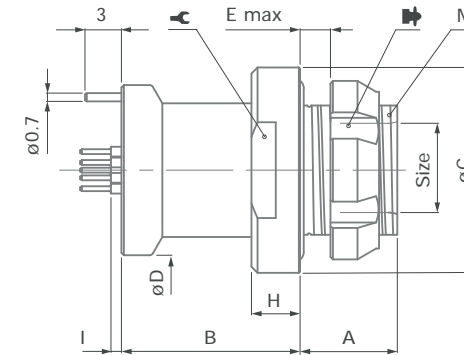
Size	f	øg
07	9.2	10.1
08	10.9	12.1
11	14.5	16.1
13	16.5	18.1
18	23.2	25.1



PANEL CUT-OUT

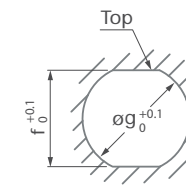
UR02

BODY STYLE



Size	A	B	øC	øD	E	H	I	M			Torque
07	6.5	10.7	14.0	13.0	3.5	3.5	0.7	9x0.5	11	TC00.000	1.3 Nm
08	8.0	14.7	16.9	14.0	4.0	4.0	1.0	12x1	15	TF00.001	2.5 Nm
11	8.0	14.7	21.8	18.8	4.0	4.0	1.0	16x1	17	TK00.002	4.5 Nm
13	10.5	16.0	23.8	20.0	5.0	4.0	1.0	18x1	20	TP00.011	6.0 Nm
18	11.0	22.3	31.8	26.0	5.0	4.0	1.0	25x1	27	TQ00.005	10.0 Nm

Size	f	øg
07	8.0	9.1
08	10.9	12.1
11	14.5	16.1
13	16.5	18.1
18	23.2	25.1



PANEL CUT-OUT

* Standard version with PCB contacts and grounding pin. For solder contact version, a special solder ground contact pin is included for max. wire size of AWG22[7/30].

All dimensions and images shown are in millimeters and are for reference only.

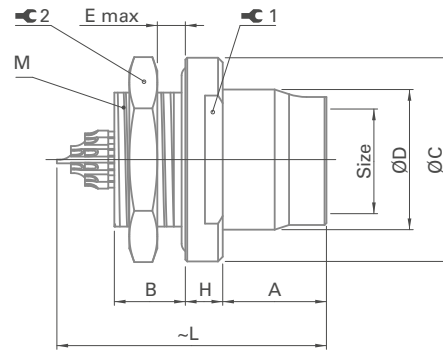


RECEPTACLES

PANEL FRONT MOUNTED*

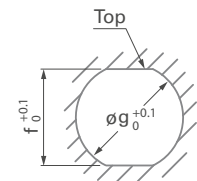
UR03

BODY STYLE



Size	A	B	øC	øD	E	H	L	M	1	2	Torque
07	7.7	6.4	14.0	10.0	3.5	2.5	20	9x0.5	11	11	1.3 Nm
08	11.7	7.0	16.9	11.5	4.0	4.0	27	12x1	15	14	2.5 Nm
11	11.1	7.6	21.8	15.0	4.6	4.0	29	16x1	17	19	4.5 Nm

Size	f	øg
07	8.0	9.1
08	10.9	12.1
11	14.5	16.1



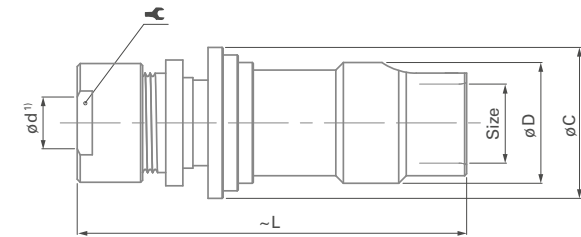
PANEL CUT-OUT

* Standard version with solder contacts.

CABLE MOUNTED

UR50

BODY STYLE



Size	øC	øD	ø dmax	L	1	Torque
07	12.0	10.0	4.5	27	8	1.5 Nm
08	15.0	12.0	4.5	39	10	2.5 Nm
11	18.5	15.5	7.1	39	14	3.0 Nm
13	21.7	17.9	8.7	50	17	3.5 Nm

¹) Max. cable diameter below shield.

PCB hole layout



BODY STYLES

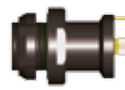
UP01

UP50



UR01

UR02



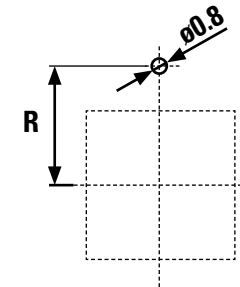
UR03

UR50



Position of optional ground pin

Size	R	
	UR01	UR02
07	5.5	
08	6.0	
11	8.4	
13	9.0	
18	12.0	



View from F¹⁾

Size	Polarity ²⁾	Number of contacts						
		2	3	4	5	7	9	10
07	Standard							
	Inverted							

¹⁾ Recommended PCB hole dimensions may be adjusted to application.

²⁾ Standard polarity: male contacts on plug / female contacts on receptacle. Inverted polarity: female contacts on plug / male contacts on receptacle.

All dimensions and images shown are in millimeters and are for reference only.



View from F¹⁾

Size	Polarity ²⁾	Number of contacts					
		2	3	4	5	7	9
08	Standard						
	Inverted						

Size	Polarity ²⁾	Number of contacts			
		8	12	16	19
11	Standard				
	Inverted				

¹⁾ Recommended PCB hole dimensions may be adjusted to application.

²⁾ Standard polarity: male contacts on plug / female contacts on receptacle. Inverted polarity: female contacts on plug / male contacts on receptacle.



View from F¹⁾

Size	Polarity ²⁾	Number of contacts	Size	Polarity ²⁾	Number of contacts
		27			42
13	Standard		18	Standard	
	Inverted			Inverted	

¹⁾ Recommended PCB hole dimensions may be adjusted to application.

²⁾ Standard polarity: male contacts on plug / female contacts on receptacle. Inverted polarity: female contacts on plug / male contacts on receptacle.

All dimensions and images shown are in millimeters and are for reference only.



Example:

Connector Design				Contact Block			Housing		Standard options			
UP01		L	07	M	010	S	BK	1	Z	2	Z	B
UR01	W		11	F	012	S	BK	2	E	1	A	A

Body style

UltiMate Plug = UP

- UP01 = Cable mounted plug
- UP50 = Panel mounted plug

UltiMate Receptacle = UR

- UR01 = Panel rear mounted low profile
- UR02 = Panel rear mounted
- UR03 = Panel front mounted low profile
- UR50 = Cable mounted

Sealing level

Panel mounted:

- V = Vacuum sealing
- W = Water sealing
- N = Non sealing

Cable mounted:

- Not applicable = Nothing

Locking system

Cable mounted plug:

- L = Push-pull locking
- Q = Quick release

Cable mounted receptacle:

- Z = Not applicable

Panel mounted:

- No locking = Nothing

Connector size

- 07 = Size 07
- 08 = Size 08
- 11 = Size 11
- 13 = Size 13
- 18 = Size 18

Housing Material

- A = ALUMINUM
- B = BRASS (Standard)

Grounding

Panel mounted:

- A = Grounding pin (for UR01/UR02)
- N = None (for UR03/UP50)

Cable mounted:

- Z = Not applicable

Insulator Material

- 1 = PBT, Size 08/11/13/18
- 2 = PEEK. Size 07 only

O-ring material

- Receptacle:**
O-ring at plug interface
- E = Standard (FVMQ)

Plug:

- Z = Not applicable

Keying code

- Code 1 = ●
- Code 2 = ▼
- Standard keying = Code 1

- Code 3 = ■
- Code 4 = ✕

Standard guide mark = White

Housing color

- BK = Standard (Anthracite)

Contact Type

- S = Solder
- P = PCB
- C = Crimp

Number of contacts

002 to 042

Available contacts per size:

- Size 07: 002, 003, 004, 005, 007, 009, 010
- Size 08: 002, 003, 004, 005, 007, 009

- Size 11: 008, 012, 016, 019
- Size 13: 027
- Size 18: 042

Polarity contacts

- M = Male contacts
- F = Female contacts

Standard polarity:

male contacts in plug, female contacts in receptacle



BEND RELIEF

Top performance, no hassle

- No tool required: 5 steps to assemble
- Clean cut: perfectly adjust the bend relief to your cable diameter with a simple blade

Long lasting

- Resists 10,000 flexes at a 90° angle
- Operating temperature -55°C to +135°C
- UV resistant



Standard color is black (BK)

Also available in grey (GY), blue (BL), yellow (YL), green (GN), violet (VT) upon request.

Please contact your Fischer Connectors sales representative.

CUTTING DIAMETERS

Size	Uncut	Level 1	Level 2	Level 3	Level 4	Part Number
07	ø1.9	ø2.9	ø3.9	ø4.9	-	UB07 A1BK
08	ø2.5	ø3.7	ø5.7	ø7.5	-	UB08 A1BK
11	ø3.9	ø5.4	ø6.9	ø8.9	-	UB11 A1BK
13	ø6.9	ø8.9	ø10.9	ø12.9	-	UB13 A1BK
18	ø6.9	ø8.4	ø10.4	ø11.9	ø13.9	UB18 A1BK



All dimensions and images shown are in millimeters and are for reference only.



SOFT CAPS - LANYARD WITH CORD

FIGURE 1

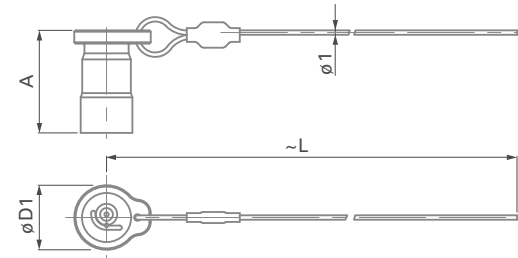
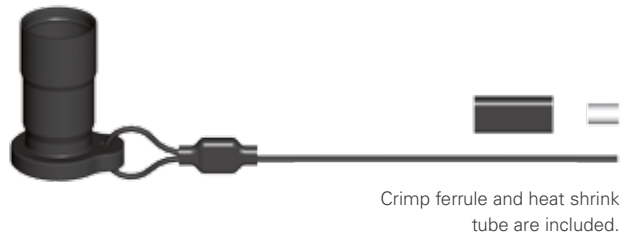


FIGURE 2

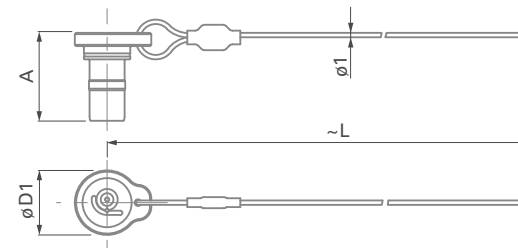
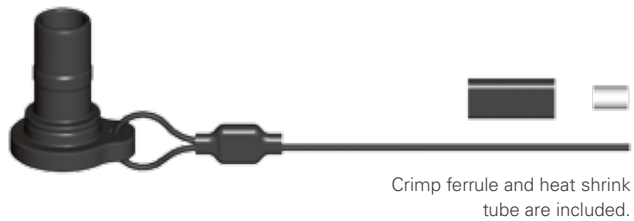
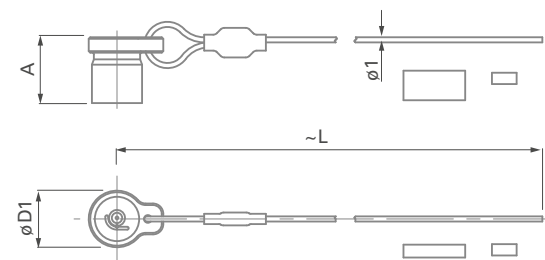
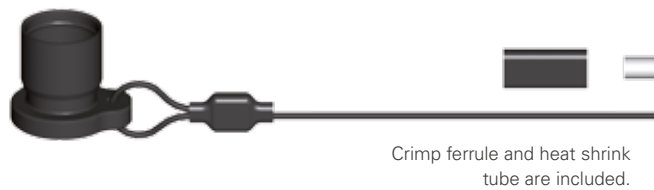


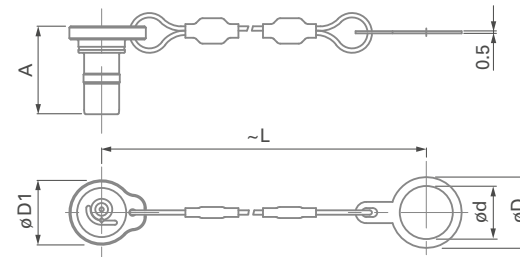
FIGURE 3





SOFT CAPS - LANYARD WITH CORD

FIGURE 4



Size	Plug		Receptacle				A	D1	L	d	D	Part number	Fig.
	UP01	UP50	UR01	UR02	UR03	UR50							
07	●						18.5	11.0	200	-	-	UCP07C 1A1 A200	1
			○	○	●	●	16.0	11.0	200	-	-	UCR07C 1A1 A200	2
		●					12.8	11.0	200	-	-	UCP07P 1A1 A200	3
			●	●			16.0	11.0	95	10	14	UCR07P 1A1 A095	4
08	●						23.2	14.6	200	-	-	UCP08C 1A1 A200	1
			○	○	●	●	19.9	14.6	200	-	-	UCR08C 1A1 A200	2
			●	●			19.9	14.6	95	12	16	UCR08P 1A1 A095	4
11	●						22.0	17.6	200	-	-	UCP11C 1A1 A200	1
			○	○	●	●	19.2	17.6	200	-	-	UCR11C 1A1 A200	2
			●	●			19.2	17.6	95	16	21	UCR11P 1A1 A095	4
13	●						25.0	20.7	200	-	-	UCP13C 1A1 A200	1
			○	○	●	●	22.5	20.7	200	-	-	UCR13C 1A1 A200	2
			●	●			22.5	20.7	95	18	23	UCR13P 1A1 A095	4
18	●						29.5	28.7	200	-	-	UCP18C 1A1 A200	1
			●	●			25.0	28.7	95	25	29	UCR18P 1A1 A095	4

● Recommended for optimal sealing.

○ Compatible but not recommended for optimal sealing.

All dimensions and images shown are in millimeters and are for reference only.



SPANNER & NUT DRIVER

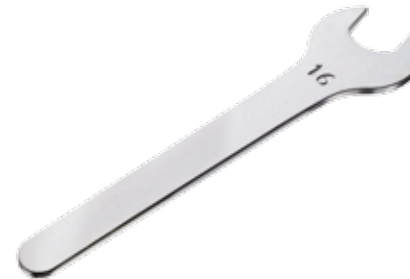
DOUBLE-END OPEN SPANNER EXTRA THIN



Part number	Opening across flats	Length	Fork thickness
TX00.008	8	96	2.3
TX00.009	9	102	2.5
TX00.010	10	104	2.5
TX00.011	11	114	2.5
TX00.014	14	130	3.0

Material – Chrome Alloy Steel, Chrome plated, Fork Angles – 15° and 75°.

OPEN-END SPANNER EXTRA THIN



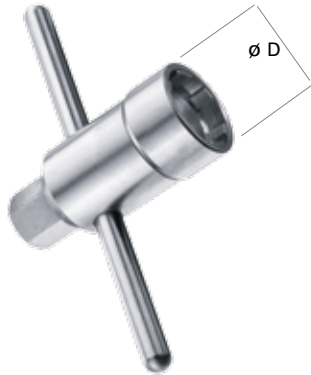
Part number	Opening across flats	Length	Fork thickness
TX00.015	15	145	5.2
TX00.017	17	160	5.5
TX00.019	19	175	6.0
TX00.020	20	175	6.0
TX00.022	22	196	6.5
TX00.027	27	240	7.4

Material – Chrome Vanadium Steel, Chrome plated, Fork Angle – 15°.



SPANNER & NUT DRIVER

NUT DRIVER WITH T-HANDLE AND HEX DRIVE ➡



Part number	Thread size	Nut outer dia.	D	Hex drive
TC00.000	M9 x 0.5	12	15	7
TC00.007	M10 x 0.5	13	16	7
TF00.001	M12 x 1	15	18	10
TK00.002	M16 x 1	20	23	12
TP00.011	M18 x 1	23	26	12
TP00.005	M20 x 1	25	28	12

Material – Hardened Tool Steel, Nickel plated.



ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Performance and standard
Sealing performance mated and unmated	IP68/IP69 2m submersion for 24h ¹⁾ ; IEC 60529
	"V" sealing level: Hermetic: Tested: 10^{-8} mbar l/sec.; IEC 60068-2-17 Test Qk, Method 3
Sealing performance soft caps	IP68, 2m submersion for 24 hours; IP69; IEC 60529
Operating temperature range	-55°C to +135°C ²⁾ ; IEC 60512-6-11 i+j; IEC 60068-2-14-Nb
Corrosion resistance ³⁾	Salt mist, 1,000 hours, 5% salt solution, 35°C; IEC 60068-2-11 Test Ka; MIL-STD-202 Method 101; EIA-364-26
Endurance	10,000 mating cycles IEC 60512-5-9a; EIA-364-09
Vibration, random (Size 08, 11, 13, 18)	37.80 Grms, MIL-STD-202 Method 214A Condition I; EIA-364-28 Condition V
Vibration (Size 07)	10 to 2000 Hz, 1.5 mm or 15g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity > 1us; MIL-STD-202 Method 204 Condition B
Shock	300g amplitude, half sine pulse of 3ms, no discontinuity > 1μs MIL-STD-202 Method 213; EIA-364-27

¹⁾ 120m/24h or other depth/duration requirements available on request, please contact your local sales office.

²⁾ Temperature range of -40°C to +125°C for cable connectors overmolded with TPU material. Max. temperature of +85°C for soft caps.

³⁾ Plug and receptacle in mated position or with cap when unmated. For Brass connectors only.
Aluminum version not recommended for Marine use. Preserved mechanical and electrical functionality. Visual aspect might be altered.

ELECTRICAL DATA

Characteristic	Contact size	Performance and standard
Contact resistance over 10,000 mating cycles	Ø 0.5 mm	5 mΩ IEC 60512-2-1-2a
	Ø 0.7 mm	5 mΩ IEC 60512-2-2-2b
	Ø 0.9 mm	4 mΩ
Shell resistance ⁴⁾		< 5 mΩ IEC 60512-2-6-2f
Insulation resistance		> 10 ¹⁰ Ω IEC 60512-3-1-3a
Shielding effectiveness ⁵⁾		> 55 dB up to 1 GHz, IEC 60512-23-3

⁴⁾ Measurement points on Figure 1.

⁵⁾ Size 08 connector pair.

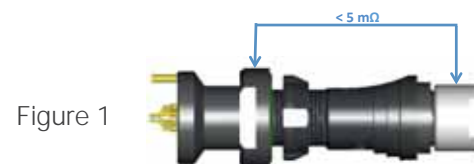


Figure 1

DATA TRANSMISSION

Protocol	Number of contacts required	UltiMate
USB 2.0	4	yes
USB 3.0 SS	9	application dependent
Ethernet Cat 5e (1Gb/s)	8	yes
HDMI ™	19	yes

The data transmission performance of the Fischer UltiMate™ Series has been tested for most popular protocols that are used in a variety of applications today.



MATERIAL & SURFACE TREATMENTS

Metal parts	Material		Finish	
	Designation ISO	Standard	Designation	Standard
Spring sleeve (plug), shell (plug), Mounting nut (receptacle) ¹⁾ , bodies (all)	Aluminium AlMgSiSn1Bi	EN-AW-6023	Anthracite Nickel	SAE-AMS-QQ-N-290 SAE-AMS 2404
	Brass CuZn39Pb3	CW614N UNS C 38500		
Back nut (plug & cable mounted receptacle), Mounting nut (receptacle) ²⁾	Aluminium AlMgSiSn1Bi	EN-AW-6023	Nickel	SAE-AMS-QQ-N-290 SAE-AMS 2404
	Brass CuZn39Pb3	CW614N UNS C 38500		
Ground contact	Brass CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290 SAE-AMS 2404
Contacts	- Male, ground pin - Female	Brass ; CuZn39Pb3 Bronze ; CuSn4Zn4Pb4	CW614N ; UNS C 38500 CW456K ; ASTM B 139 UNS C 54400	1µm Gold over Nickel MIL-DTL-45204D Type I ; ASTM B488

Insulator and sealing		International symbol	Flammability
Insulator	- Molded	PBT, PEEK ³⁾	UL 94 V-0
Inner sleeve	- Cable connectors	POM	UL 94 HB
Sealant materials	- «V» Vacuum sealed connectors	Bi-component epoxy	UL 94 HB
	- «W» Water sealed connectors	Silicon compound	UL 94 V-0
Bend relief	- Cable connectors	Santoprene™ TPV 101-64	UL 94 HB

Soft caps		Material	Flammability
Cap		TPV (Santoprene™)	UL 94 HB
Cord		Nylon	-
Fixing lug		Black Chrome plated brass (ISO CuZn37)	-
Crimp ferrule		Nickel plated copper	-

O-rings	International symbol	Chemical name
General	FPM (Viton)	Fluoro elastomer
Interface	FVMQ	Fluorosilicone rubber

¹⁾ For UR01 & UR02.

²⁾ For UR03 & UP50.

³⁾ PBT for Size 08, 11, 13 and 18 only. PEEK for Size 07 only.

All dimensions and images shown are in millimeters and are for reference only.

11 > 129 | PAGES





KEY FEATURES

The Fischer FiberOptic Series offers the best quality and stability needed for an optical link, combined with easy mating and easy field cleaning. It performs perfectly in harsh and extreme environments and has a high ingress protection of IP68 when mated, and IP67 unmated. This rugged push pull fiber optic connector, for both indoor and outdoor applications, can also be available pre-cabled for maximum performance and time saving, either directly from our factory or from one of our in-country Value Added Reseller partners.

The Fischer FiberOptic Series is available in two versions:

FiberOptic FO1, FO2 & FO4

A rugged connector with one (FO1), two (FO2) or four (FO4) fibers.

FiberOptic Hybrid FOH

A rugged hybrid connector with two fiber channels and two electrical contacts.

DURABILITY

- IP68 mated
- IP67 unmated
- 1,000 mating cycles
- Performs in extreme environments
- High optical stability

PERFORMANCE

- Low back reflection
- Singlemode & Multimode optical fibers
- UPC & APC polishing
- High-end butt joint technology

EASY CLEANING

- Removable monoblock mate adapter for easy access to ferrules
- Easy maintenance
- Easy field cleaning

EASY MATING

- Push-pull locking system makes it easy to mate/unmate with one hand
- Easy operation



A close-up photograph of a Fischer fiber optic connector. The connector is cylindrical and metallic, with a central lens and four small circular ports arranged in a square pattern. A red dot is visible on the top edge of the connector. The background is a dark blue gradient.

FISCHER
FIBEROPTIC
SERIES



ROBUST | OPTICAL PERFORMANCE | EASY CLEANING

A rugged solution ideal for:
 Faultless optical performance | Indoor and extreme outdoor applications | Easy field cleaning

FISCHER **FIBEROPTIC** SERIES

Body style selection	4
Configuration matrix	5
Technical dimensions	6
Optical termini and electrical contact	20
Part numbering	21
Protective caps	22
Deployment accessories	23
Quote request form	25
Accessories	27
Technical information	28



PLUG

CABLE MOUNTED



BODY STYLE	P01
------------	------------

REAR ACCESSORIES

Wire	–
Cable clamp	○
Potting	●

RECEPTACLES

CABLE MOUNTED



BODY STYLE	R50
------------	------------

REAR ACCESSORIES

Wire	–
Cable clamp	○
Potting	●

PANEL REAR MOUNTED

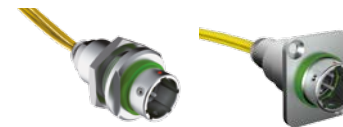


BODY STYLES	R01
-------------	------------

REAR ACCESSORIES

Wire	●
Cable clamp	○
Potting	●

PANEL FRONT MOUNTED



BODY STYLES	R03	R13
-------------	------------	------------

REAR ACCESSORIES

Wire	●	●
Cable clamp	○	○
Potting	●	○

- Not available for this body style
- Partially available for this body style
- Available for all body styles



PLUGS & RECEPTACLES

Wire	P01	R01	R03	R13	R50
FO1	-	•	•	•	-
FO2	-	•	•	•	-
FO4	-	•	•	•	-
FOH	-	•	•	•	-

Cable Clamp	P01	R01	R03	R13	R50
FO1	•	•	•	-	•
FO2	•	•	•	•	•
FO4	•	•	•	•	•
FOH	-	-	-	-	-

Potting	P01	R01	R03	R13	R50
FO1	•	•	•	-	•
FO2	•	•	•	•	•
FO4	•	•	•	•	•
FOH	•	•	•	•	•

All dimensions and images shown are in millimeters and are for reference only.



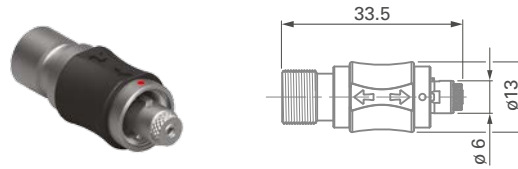
PLUGS - FO1

CABLE MOUNTED

P01

BODY STYLE

Part number :
FO1 P01LGR1 00A00 A 000

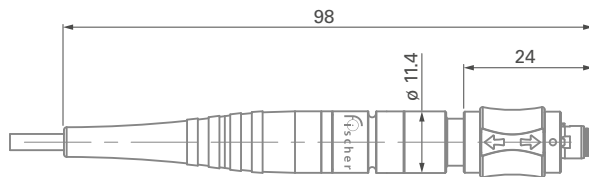


REAR ACCESSORIES

CABLE CLAMP SET



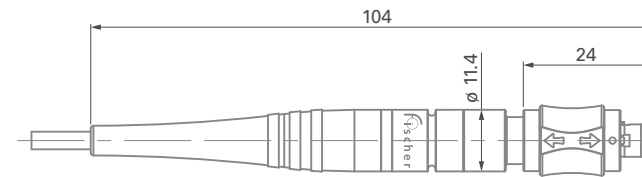
FO1 P01 CABLE CLAMP SET L36 D3.5



POTTING SET



FO1 P01 POTTING SET L41 D3.5



Indicated connector P/N = delivered without contacts, termini and rear accessory



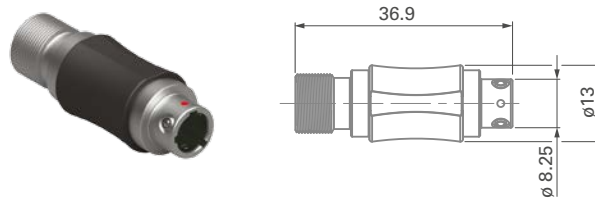
RECEPTACLES - FO1

CABLE MOUNTED

R50

BODY STYLE

Part number :
FO1 R50LGR1 00A00 A 000

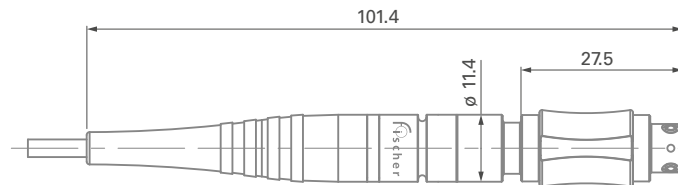


REAR ACCESSORIES

CABLE CLAMP SET



FO1 R50 CABLE CLAMP SET L36 D3.5

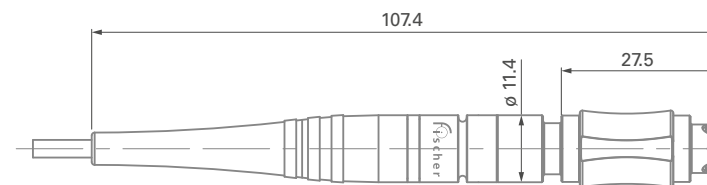


Indicated connector P/N = delivered without contacts, termini and rear accessory

POTTING SET



FO1 R50 POTTING SET L41 D3.5



All dimensions and images shown are in millimeters and are for reference only.



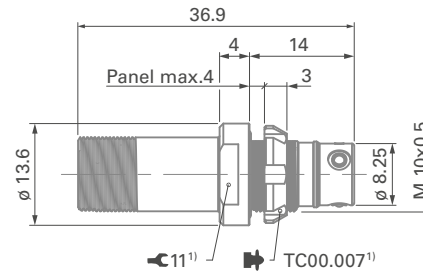
RECEPTACLES - FO1

PANEL REAR MOUNTED

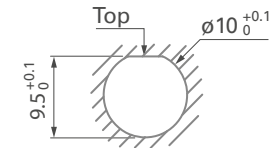
R01

BODY STYLE

Part number :
FO1 R01LGR1 00A00 A 000



PANEL CUT-OUT

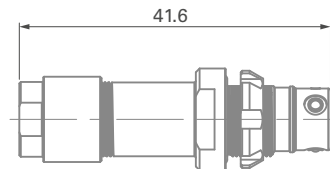


REAR ACCESSORIES

WIRE SET



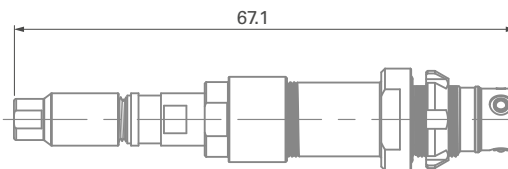
FO1 R01 WIRE SET L18 D3.5



CABLE CLAMP SET



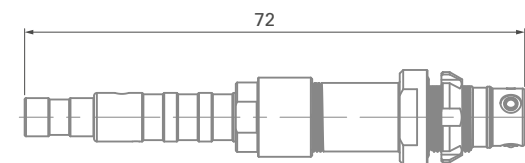
FO1 R01 CABLE CLAMP SET L36 D3.5



POTTING SET



FO1 R01 POTTING SET L41 D3.5



¹⁾ Torque 5.0 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values. Indicated connector P/N = delivered without contacts, termini and rear accessory



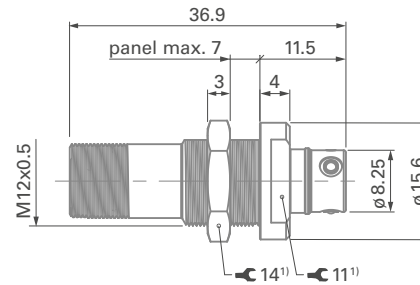
RECEPTACLES - FO1

PANEL FRONT MOUNTED

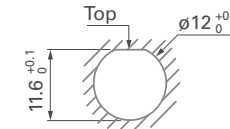
R03

BODY STYLE

Part number:
FO1 R03LGR1 00A00 A 000



PANEL CUT-OUT

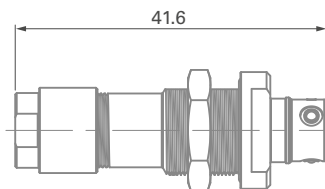


REAR ACCESSORIES

WIRE SET



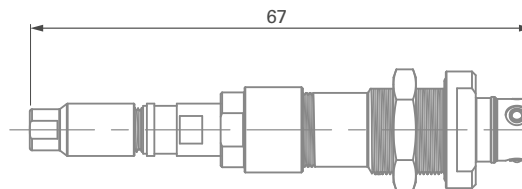
FO1 R03 WIRE SET L18 D3.5



CABLE CLAMP SET



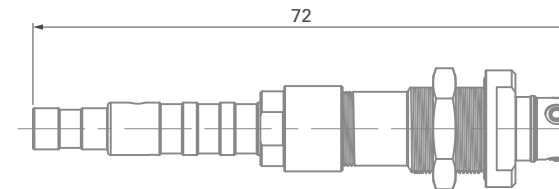
FO1 R03 CABLE CLAMP SET L36 D3.5



POTTING SET



FO1 R03 POTTING SET L41 D3.5



¹⁾ Torque 5.0 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.

All dimensions and images shown are in millimeters and are for reference only.



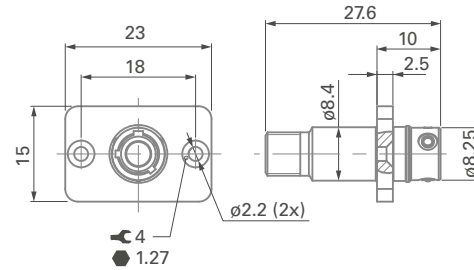
RECEPTACLES - FO1

PANEL FRONT MOUNTED

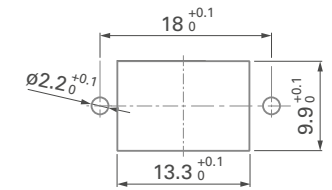
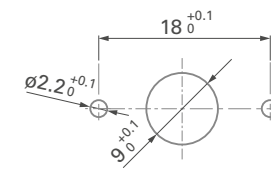
R13 - SQUARE FLANGE²⁾

BODY STYLE

Part number :
FO1 R13LGR1 00A00 A 000



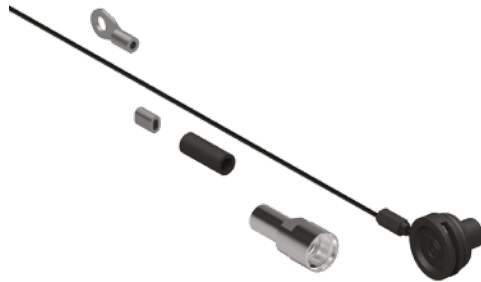
PANEL CUT-OUT



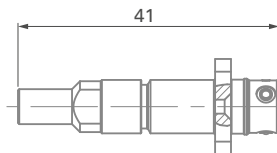
Compatible with following SC & LC duplex panel cut-out

REAR ACCESSORY

WIRE SET



FO1 R13 WIRE SET L20 D3.5



¹⁾ Torque 5.0 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.

²⁾ Due to panel mounting with screws, sealing can't be guaranteed at panel level.

Note : indicated connector P/N = delivered without contacts, termini and rear accessry



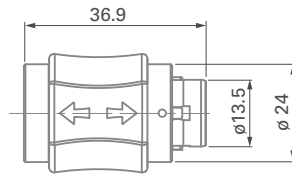
PLUGS - FO2/FO4

CABLE MOUNTED

P01

BODY STYLE

Part number :
FO2 P01LGR1 00A00 A 000
FO4 P01LGR1 00A00 A 000

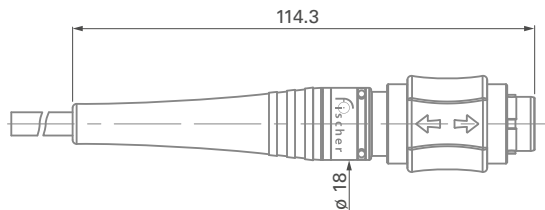


REAR ACCESSORIES

CABLE CLAMP SET



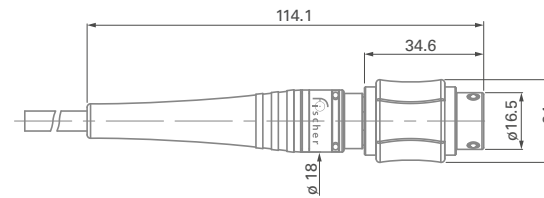
FO2-4 P01 CABLE CLAMP SET L49 D6



POTTING SET



FO2-4 P01 POTTING SET L49 D6.5)



Note : indicated connector P/N = delivered without contacts, termini and rear accessory

All dimensions and images shown are in millimeters and are for reference only.



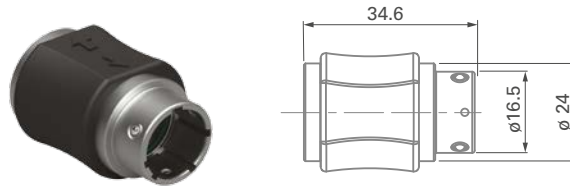
RECEPTACLES - FO2/FO4

CABLE MOUNTED

R50

BODY STYLE

Part number :
FO2 R50LGR1 00A00 A 000
FO4 R50LGR1 00A00 A 000

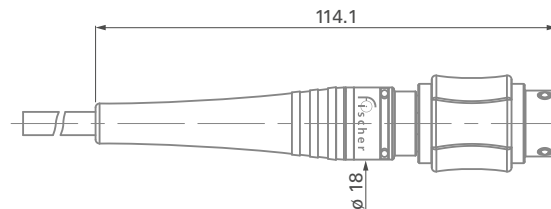


REAR ACCESSORIES

CABLE CLAMP SET



FO2-4 R50 CABLE CLAMP SET L49 D6

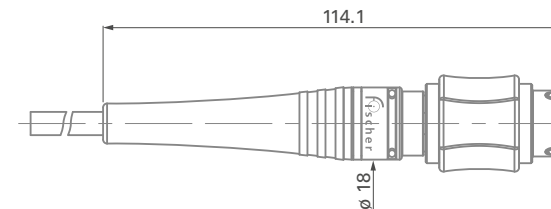


Indicated connector P/N = delivered without contacts, termini and rear accessory

POTTING SET



FO2-4 R50 POTTING SET L49 D6.5





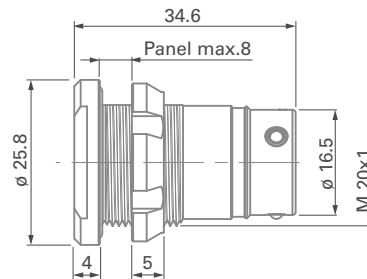
RECEPTACLES - FO2/FO4

PANEL REAR MOUNTED

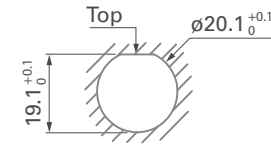
R01

BODY STYLE

Part number :
FO2 R01LGR1 00A00 A 000
FO4 R01LGR1 00A00 A 000



PANEL CUT-OUT

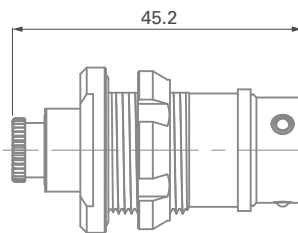


REAR ACCESSORIES

WIRE SET



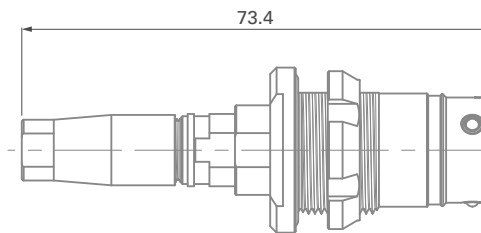
FO2 R01 WIRE SET L20 D6.5
FO4 R01 WIRE SET L20 D6.5



CABLE CLAMP SET



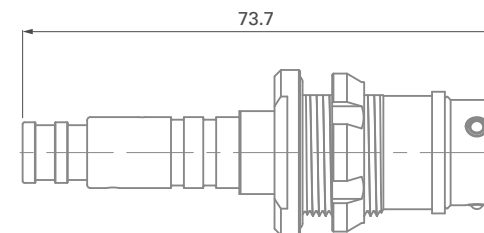
FO2-4 R01 CABLE CLAMP SET L49 D6



POTTING SET



FO2-4 R01 POTTING SET L49 D6.5



¹⁾Torque 6.5 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.
Indicated connector P/N = delivered without contacts, termini and rear accessory

All dimensions and images shown are in millimeters and are for reference only.



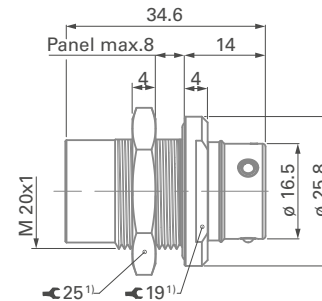
RECEPTACLES - FO2/FO4

PANEL FRONT MOUNTED

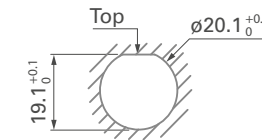
R03

BODY STYLE

Part number :
FO2 R03LGR1 00A00 A 000
FO4 R03LGR1 00A00 A 000



PANEL CUT-OUT

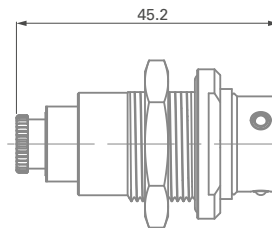


REAR ACCESSORIES

WIRE SET



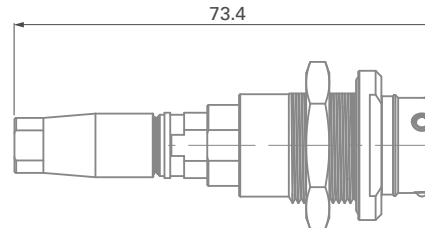
FO2 R03-R13 WIRE SET L20 D6.5
FO4 R03-R13 WIRE SET L20 D6.5



CABLE CLAMP SET



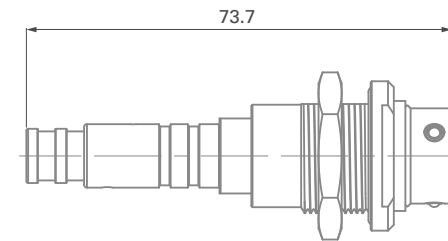
FO2-4 R03-R13 CABLE CLAMP SET L49 D6



POTTING SET



FO2-4 R03-R13 POTTING SET L49 D6.5



¹⁾Torque 6.5 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.
Indicated connector P/N = delivered without contacts, termini and rear accessory



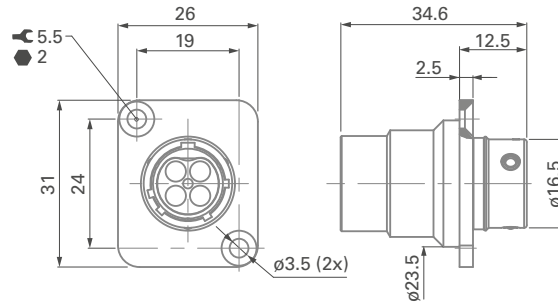
RECEPTACLES - FO2/FO4

PANEL FRONT MOUNTED

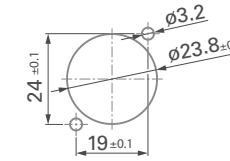
R13 - SQUARE FLANGE

BODY STYLE

Part number :
FO2 R13LGR1 00A00 A 000
FO4 R13LGR1 00A00 A 000



PANEL CUT-OUT

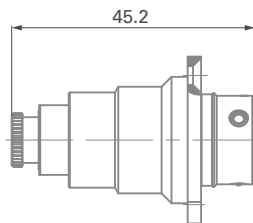


REAR ACCESSORIES

WIRE SET



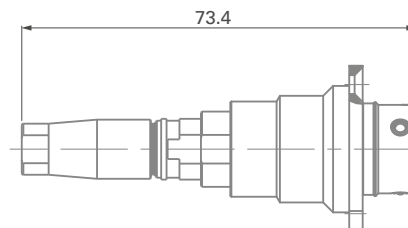
FO2 R03-R13 WIRE SET L20 D6.5
FO4 R03-R13 WIRE SET L20 D6.5



CABLE CLAMP SET



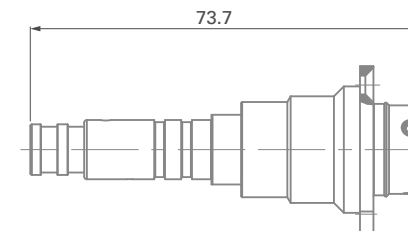
FO2-4 R03-R13 CABLE CLAMP SET L49 D6



POTTING SET



FO2-4 R03-R13 POTTING SET L49 D6.5



¹⁾ Due to panel mounting with screws, sealing can't be guaranteed at panel level.
Indicated connector P/N = delivered without contacts, termini and rear accessory

All dimensions and images shown are in millimeters and are for reference only.



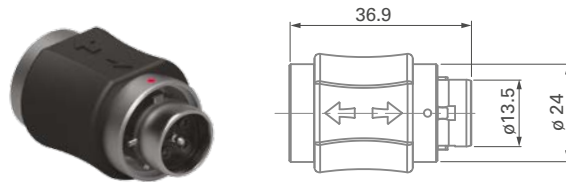
PLUGS - FOH

CABLE MOUNTED

P01

BODY STYLE

Part number :
FOH P01LGR1 00A00 A 000



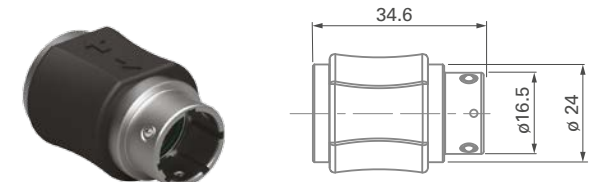
RECEPTACLES - FOH

CABLE MOUNTED

R50

BODY STYLE

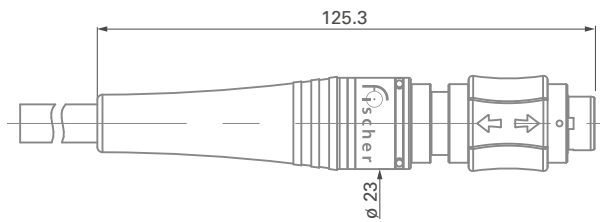
Part number :
FOH R50LGR1 00A00 A 000



REAR ACCESSORIES

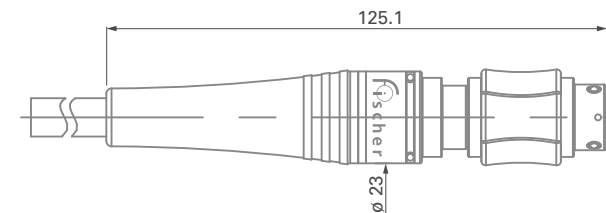
POTTING SET

FOH P01 POTTING SET L54 D10.8



POTTING SET

FOH R50 POTTING SET L54 D10.8



Indicated connector P/N = delivered without contacts, termini and rear accessory



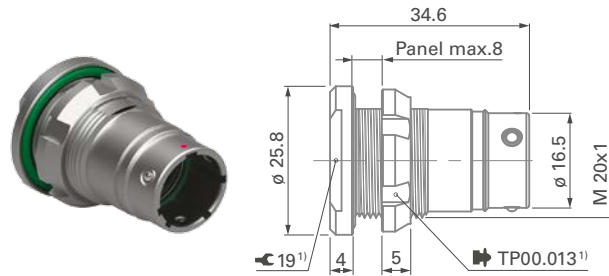
RECEPTACLES - FOH

PANEL REAR MOUNTED

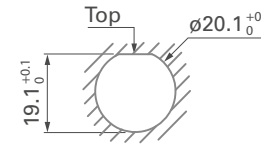
R01

BODY STYLE

Part number :
FOH R01LGR1 00A00 A 000



PANEL CUT-OUT



REAR ACCESSORIES

WIRE SET

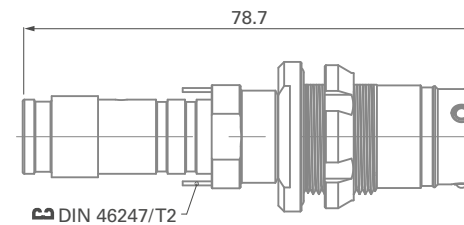
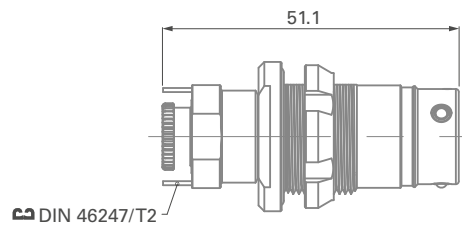


FOH R01 WIRE SET L26 D8

POTTING SET



FOH R01 POTTING SET L54 D10.8



Indicated connector P/N = delivered without contacts, termini and rear accessory

All dimensions and images shown are in millimeters and are for reference only.



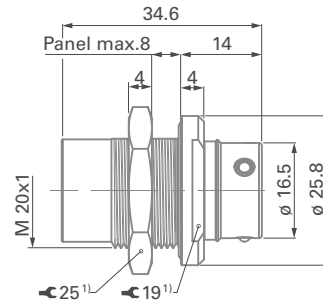
RECEPTACLES - FOH

PANEL FRONT MOUNTED

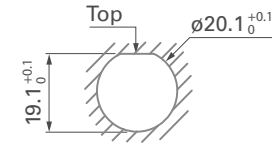
R03

BODY STYLE

Part number :
FOH R03LGR1 00A00 A 000



PANEL CUT-OUT

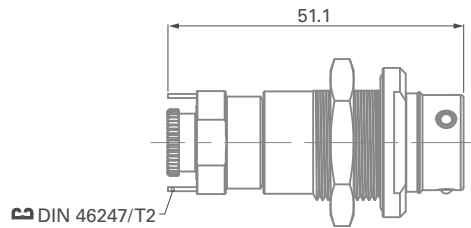


REAR ACCESSORIES

WIRE SET



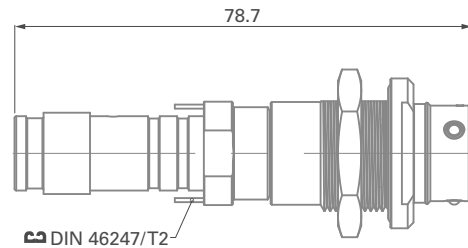
FOH R03-R13 WIRE SET L26 D8



POTTING SET



FOH R03-R13 POTTING SET L54 D10.8



¹⁾ Torque 6.5 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.

²⁾ For gas tightness performances, please contact us.

Note : indicated connector P/N = delivered without contacts, termini and rear accessory



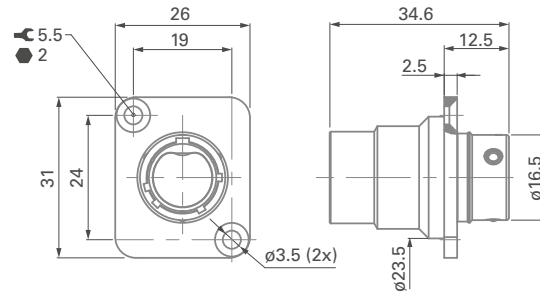
RECEPTACLES - FOH

PANEL FRONT MOUNTED

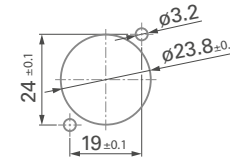
R13 - SQUARE FLANGE

BODY STYLE

Part number :
FOH R13LGR1 00A00 A 000



PANEL CUT-OUT

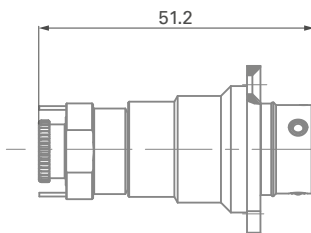


REAR ACCESSORIES

WIRE SET



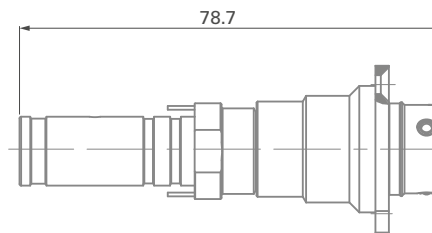
FOH R03-R13 WIRE SET L26 D8



POTTING SET



FOH R03-R13 POTTING SET L54 D10.8



¹⁾ Torque 6.5 Nm. Torque (Nm) are recommended values that may be influenced by the quality of the panel surface. Tests have to be made to evaluate the exact values.

²⁾ For gas tightness performances, please contact us.

Note : indicated connector P/N = delivered without contacts, termini and rear accessory

All dimensions and images shown are in millimeters and are for reference only.



Designation	Housing	Part Number
Singlemode terminus	Black (default)	FOTERMINI SMA PC
	Beige	FOTERMINI SMA PC BG

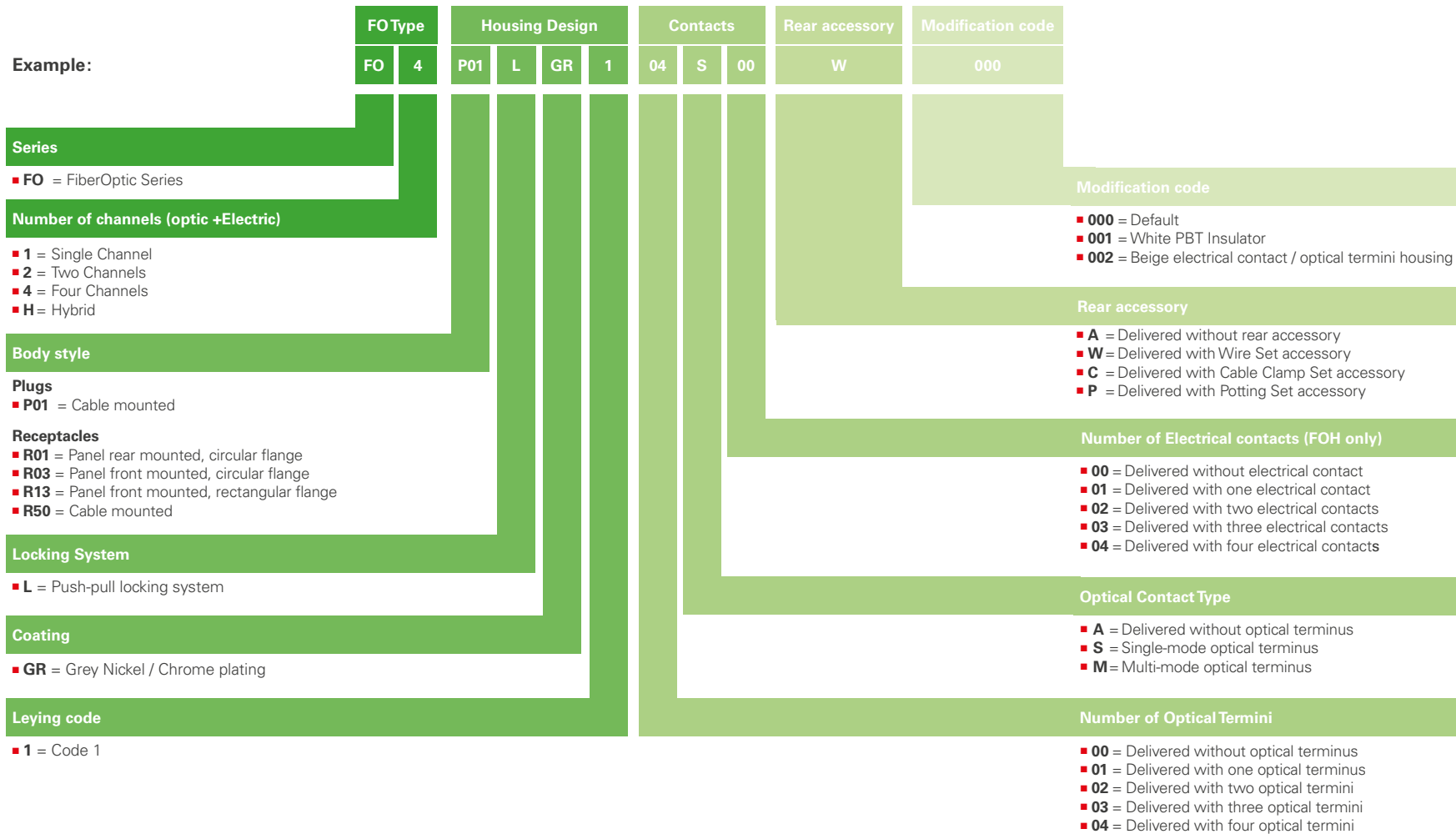


Multimode terminus	Black (default)	FOTERMINI MMA PC
	Beige	FOTERMINI MMA PC BG



Electrical contact (FOH Only)	Black (default)	FOTermini EL M Ø1.25 SR A
	Beige	FOTermini EL M Ø1.25 SR A BG

Part numbering

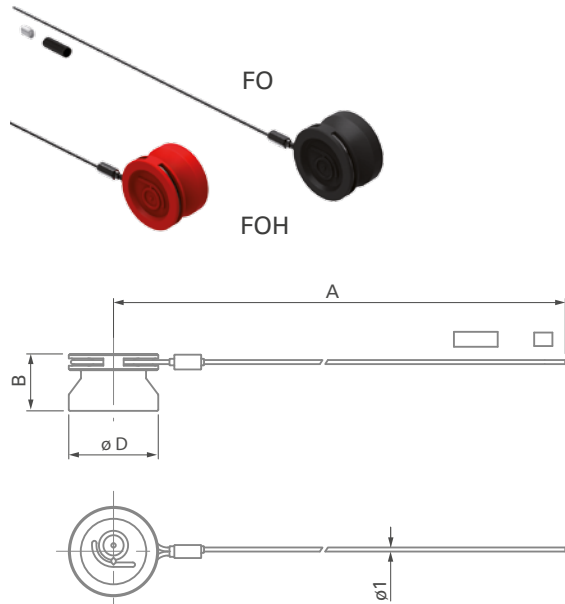


All dimensions and images shown are in millimeters and are for reference only.



PROTECTIVE CAPS

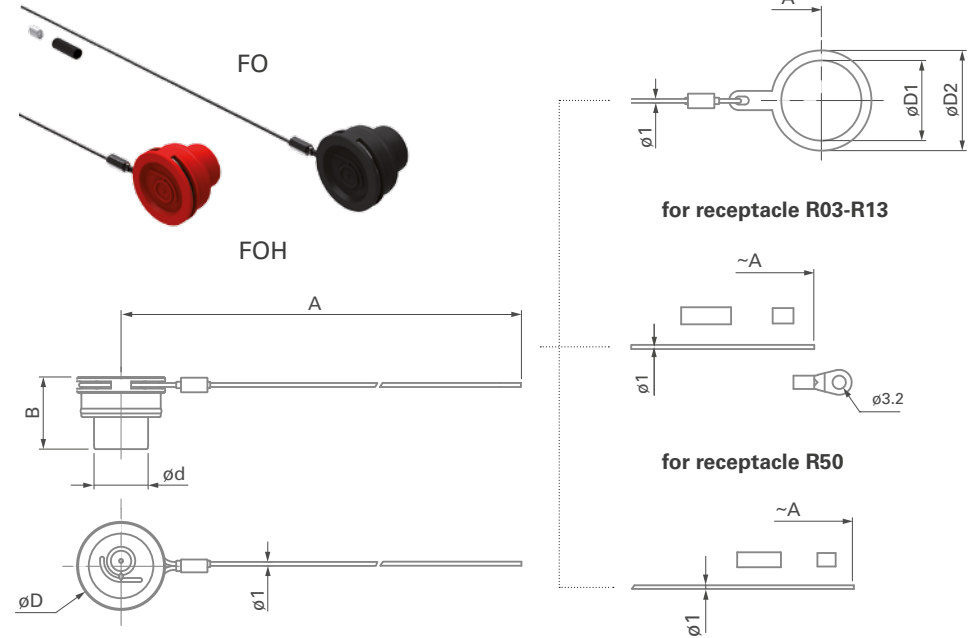
FOR REPLACEMENT ON PLUGS



	Reference Number P01	A	B	ø D
FO1	FOCP06C 1B2 A120	120	10.5	13
FO2/4	FOCP14C 1B2 A150	150	14	22
FOH2-2	FOHCP14C 1B2 A150	150	14	22

Crimp ferrule and heat shrink tube are included.

FOR REPLACEMENT ON RECEPTACLES



		Reference Number	A	B	ø d	ø D	øD1	øD2
FO1	R01	FOCR06P 1B2 A70	70	11.5	6	13	10	14
	R03-R13	FOCR06P 1B2 E150	150				-	-
	R50	FOCR06C 1B2 A120	120				-	-
FO2/4	R01	FOCR14P 1B2 A110	110	14	13.5	22	20	25
	R03-R13	FOCR14P 1B2 E150	150	14	13.5	22	-	-
	R50	FOCR14C 1B2 A150					-	-
FOH 2-2	R01	FOHCR14P 1B2 A110	110	14	13.5	22	20	25
	R03-R13	FOHCR14P 1B2 E150	150	14	13.5	22	-	-
	R50	FOHCR14C 1B2 A150					-	-



DAISY CHAINING



Fiber type	Fiber count	Ref / ordering info
SM 9 (G657.A1)	2	FO2 DC 0 S9 AAA
	4	FO4 DC 0 S9 AAA
	Hybrid	FOH2-2 DC 0 S9 AAA
MM 50 (OM3)	2	FO2 DC 0 M5 AAA
	4	FO4 DC 0 M5 AAA
	Hybrid	FOH2-2 DC 0 M5 AAA
MM 62.5 (OM1+)	2	FO2 DC 0 M6 AAA
	4	FO4 DC 0 M6 AAA
	Hybrid	FOH2-2 DC 0 M6 AAA
Pin layout	Applies to all configurations	

LOOPBACK



Fiber type	Fiber count	Ref / ordering info
SM 9 (G657.A1)	4	FO4 LB 0 S9 AAA
MM 50 (OM3)	4	FO4 LB 0 M5 AAA
MM 62.5 (OM1+)	4	FO4 LB 0 M6 AAA
Pin layout	Applies to all configurations	

The use of caps is recommended for maximum robustness during handling.

All dimensions and images shown are in millimeters and are for reference only.



PRE-CONFIGURED REELS



		50 meter reels		100 meter reels	
Fiber type	Fiber count	Ref / ordering info		Ref / ordering info	
SM 9 (G657.A1)	1	FO1 P01P0 S9-050.0-00.0 P01P0 RAA		FO1 P01P0 S9-100.0-00.0 P01P0 RAA	
	2	FO2 P01P0 S9-050.0-00.0 P01P0 RAC		FO2 P01P0 S9-100.0-00.0 P01P0 RAC	
	4	FO4 P01P0 S9-050.0-00.0 P01P0 RAC		FO4 P01P0 S9-100.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 S9-050.0-00.0 P01P0 RAC		FOH2-2 P01P0 S9-100.0-00.0 P01P0 RAC	
MM 50 (OM3)	1	FO1 P01P0 M5-050.0-00.0 P01P0 RAA		FO1 P01P0 M5-100.0-00.0 P01P0 RAA	
	2	FO2 P01P0 M5-050.0-00.0 P01P0 RAC		FO2 P01P0 M5-100.0-00.0 P01P0 RAC	
	4	FO4 P01P0 M5-050.0-00.0 P01P0 RAC		FO4 P01P0 M5-100.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 M5-050.0-00.0 P01P0 RAC		FOH2-2 P01P0 M5-100.0-00.0 P01P0 RAC	
		150 meter reels		200 meter reels	
Fiber type	Fiber count	Ref / ordering info		Ref / ordering info	
SM 9 (G657.A1)	1	FO1 P01P0 S9-150.0-00.0 P01P0 RAA		FO1 P01P0 S9-200.0-00.0 P01P0 RAA	
	2	FO2 P01P0 S9-150.0-00.0 P01P0 RAC		FO2 P01P0 S9-200.0-00.0 P01P0 RAC	
	4	FO4 P01P0 S9-150.0-00.0 P01P0 RAC		FO4 P01P0 S9-200.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 S9-150.0-00.0 P01P0 RAC		FOH2-2 P01P0 S9-200.0-00.0 P01P0 RAC	
MM 50 (OM3)	1	FO1 P01P0 M5-150.0-00.0 P01P0 RAA		FO1 P01P0 M5-200.0-00.0 P01P0 RAA	
	2	FO2 P01P0 M5-150.0-00.0 P01P0 RAC		FO2 P01P0 M5-200.0-00.0 P01P0 RAC	
	4	FO4 P01P0 M5-150.0-00.0 P01P0 RAC		FO4 P01P0 M5-200.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 M5-150.0-00.0 P01P0 RAC		FOH2-2 P01P0 M5-200.0-00.0 P01P0 RAC	
		300 meter reels		450 meter reels	
Fiber type	Fiber count	Ref / ordering info		Ref / ordering info	
SM 9 (G657.A1)	1	FO1 P01P0 S9-300.0-00.0 P01P0 RAA		FO1 P01P0 S9-450.0-00.0 P01P0 RAA	
	2	FO2 P01P0 S9-300.0-00.0 P01P0 RAC		FO2 P01P0 S9-450.0-00.0 P01P0 RAC	
	4	FO4 P01P0 S9-300.0-00.0 P01P0 RAC		FO4 P01P0 S9-450.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 S9-300.0-00.0 P01P0 RAC		-	
MM 50 (OM3)	1	FO1 P01P0 M5-300.0-00.0 P01P0 RAA		FO1 P01P0 M5-450.0-00.0 P01P0 RAA	
	2	FO2 P01P0 M5-300.0-00.0 P01P0 RAC		FO2 P01P0 M5-450.0-00.0 P01P0 RAC	
	4	FO4 P01P0 M5-300.0-00.0 P01P0 RAC		FO4 P01P0 M5-450.0-00.0 P01P0 RAC	
	Hybrid	FOH2-2 P01P0 M5-300.0-00.0 P01P0 RAC		-	

Assembled on Schill drum with OCC cable (FO1) and LEONI cable (FO2, FO4, FOH 2-2).



CONFIGURE YOUR SOLUTION

Quantity - Please use one request form per cable assembly type

Cable assembly types		
	End A	End B
Patch cord		
Receptacle		
Gas tight receptacle		
Breakout		
Single Fiber		

Drawings are for reference only. All types exist for FO1, FO2, FO4 and FOH 2-2.

End A	Assembly	End B
FiberOptic connectors <input type="checkbox"/> P01 - Plug <input type="checkbox"/> R50 - Receptacle cable mounted <input type="checkbox"/> R01 - Receptacle panel rear mounted <input type="checkbox"/> R03 - Receptacle panel front mounted <input type="checkbox"/> R13 - Receptacle* panel square flange	Total length* L_{tot} <i>end-to-end total (min. 0.5 except receptacles)</i> <input type="checkbox"/> 1 meter <input type="checkbox"/> 2 meters Breakout length* L_b <i>for breakout & gas tight (if applicable / min. 0.3, max 2.0)</i> <input type="checkbox"/> 0.5 meter <input type="checkbox"/> 1 meter Short length receptacles <i>For receptacles <0.5 meters 900 μm buffered fibers wires</i> <i>For receptacles \geq0.5 meters 2.0 mm tight buffered wires</i>	FiberOptic connector <input type="checkbox"/> CNA - Free end No Connector <input type="checkbox"/> P01 - Plug <input type="checkbox"/> R50 - Receptacle cable mounted <input type="checkbox"/> R01 - Receptacle panel rear mounted <input type="checkbox"/> R03 - Receptacle panel front mounted <input type="checkbox"/> R13 - Receptacle panel square flange Telecom connector <input type="checkbox"/> LC <input type="checkbox"/> SC <input type="checkbox"/> FC <input type="checkbox"/> ST Contact End-face <i>Available for SM only</i> <input type="checkbox"/> 0° PC <input type="checkbox"/> 8° APC

*Cable length in 0.1 meter units only.
 Cable length tolerance according IPC-WHMA-A-620.



CHOOSE YOUR CABLE

		INDOOR/OUTDOOR			
Supplier Brand	Fiber Count	SM 9/125 G.657.A1	MM 50/125 OM3	MM 62.5/125 OM1+	
OCC	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LEONI	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LEONI	Hybrid 2+2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

		RODENT PROOF			
Supplier Brand	Fiber Count	SM 9/125 G.657.1.A1	MM50/125 OM3	MM 62.5/125 OM1+	
LEONI Glass Fiber	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		METAL ARMORED			
KAIPHONE	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BRUGG	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

See our Cable Specifications for detailed information.

Available Available under special lead time - please contact your local sales department for details.

Outdoor cable features	OCC		LEONI	LEONI	KAIPHONE	BRUGG
Available for	FO1	FO2, FO4	FO2, FO4	FO2, FO4	FO1	FO2, FO4
Best for	Premium application		High load application	Rodent proof	Metal armored	Metal armored
	<ul style="list-style-type: none"> - Overall ruggedness - Easy deployment - High end tactical cable 		<ul style="list-style-type: none"> - High load resistance - Easy deployment - High end tactical cable 	<ul style="list-style-type: none"> - Semi-static applications - Easy deployment - Dielectric rodent protection - High flexibility 	<ul style="list-style-type: none"> - High rodent protection - Static & deployable applications - Ultra-light armored technology - Sensing applications 	<ul style="list-style-type: none"> - High rodent protection - Static & deployable applications - Self supporting applications - Ultra-light armored technology - Direct burial
Technology	<ul style="list-style-type: none"> - Tight buffered fibers - Aramid yarn - PUR jacket 		<ul style="list-style-type: none"> - Tight buffered fibers - Aramid yarn - PUR jacket 	<ul style="list-style-type: none"> - Tight buffered fibers - Aramid yarn / - PUR double skin jacket 	<ul style="list-style-type: none"> - Stainless steel loose tube - Aramid yarn - LDPE jacket 	<ul style="list-style-type: none"> - Stainless steel loose tube - Stainless steel yarn - PA Jacket
Outer diameter	2.9 mm	5.5 mm	5.5 mm	9.4 mm	3.0 mm	3.8 mm
Weight	8 kg/km	27 kg/km	28 kg/km	105 kg/km	18 kg/km	25 kg/km
Operating tensile load	300 N	600 N	1500 N	2000 N	300 N	900 N
Crush resistance	500 N/cm	1800 N/cm	800 N/cm	800 N/cm	300 N/cm	800 N/cm
Min. bending radius	1.5 cm	3.3 cm	5.5 cm	9.4 cm	3.0 cm	5.7 cm
Operating temperature	-40°C to +85°C		-55°C to +85°C	-55°C to +85°C	-40°C to + 85°C	-40°C to + 70°C

Accessories

FISCHER **FIBEROPTIC** SERIES



COLOR SILICON RINGS



FO1 – FOCR06

- Beige Red
- Blue Green

FO2/4/H – FOCR14

- Beige Red
- Blue Green

OPEN END SPANNER



FO1

- TX00.004 TX00.014
- TX00.011

FO2/4/H

- TX00.019
- TX00.025

HEXAGON SPANNER



FO1 - R13

- TX00.384

NUT DRIVER



FO1

- TC00.007

FO2/4/H

- TP00.013

SLEEVES HOLDER MATE ADAPTER



FO1

- FOP06 Sleeve Holder



FO2/FO4

- FOP14 Sleeve Holder

PANEL SEALS



FO1

- FO R13 Panel Seal FO1



FO2/4/H

- FO R13 Panel Seal FO2/4/H

TELECOM MATE ADAPTERS



- LC Adapter SM/APC
- LC Adapter SM/UPC
- LC Adapter MM/UPC



- FC Adapter SM/APC
- FC Adapter SM-MM



- SC Adapter SM/APC
- SC Adapter SM/UPC
- SC Adapter MM/UPC



- ST Adapter SM-MM

PRE-CABLED REELS*



- GT235.RM
- GT310.RM
- GT380.RMFK
- GT450.RMFK
- HT582.RM

DEPLOYMENT ACCESSORY



- Wedge Clamp Black Jaws

FIBER OPTIC CLEANING KIT



FO Cleaning Kit (complete kit)

- Cleaning kit components
- Laser pen
 - Laser pen adapter
 - IBC brand cleaner H125
 - Precision tweezers
 - 50 alcohol wipes





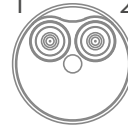
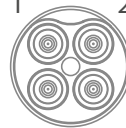
* Pre-configured reels can be found on page I 18.

Reel selection can vary following cable choice and length.

Contact your local sales for details or visit: www.fischerconnectors.com/fiberoptic



FIBER TYPE AND PIN LAYOUT

Contact type		Fiber standards	Plug pin layout			Receptacle pin layout		
Single-mode 9/125	UPC	G.657.A1						
Single-mode 9/125	APC		Multi-mode 50/125	-	OM3	Multi-mode 62.5/125	-	OM1+

OPTICAL DATA

Characteristic	Performance	Standard
Insertion loss	SM and MM	≤0.20 dB mean
		≤0.45 dB max for >97% of samples
		≤0.2 dB change during and after testing
Return loss	SM UPC	≥50 dB
	SM APC	≥70 dB (mated) and ≥50 dB (unmated)
		IEC 61300-3-34 Random mated
		IEC 61300-3-3
		IEC 61300-3-6 Random mated

ENVIRONMENTAL & TECHNICAL SPECIFICATION

Characteristic	Performance	Standard
Sealing mated	IP68; 2m submersion for 24 hours ¹⁾	IEC 60529
Sealing unmated	IP67 ¹⁾	IEC 60529
Operating temperature range	-40°C to +85°C (cable dependent)	IEC 61300-2-22
Vibration	Sinusoidal, 10 - 55Hz, 3 axes, 0.75 mm amplitude (max 10g) ¹⁾	IEC 61300-2-1
Shock	100 g ¹⁾	IEC 61300-2-9
Salt mist	1,000 hours, 5% salt solution, 35°C ^{1) 2)}	IEC 61300-2-26
Mating durability	1,000 mating cycles ^{1) 3)}	IEC 61300-2-2

¹⁾Exceeds IEC 61753-1 Cat.E Extreme Environment.

²⁾Connector must be mated or with cap.

³⁾Recommended cleaning every 50 cycles.



ELECTRICAL DATA - FOH 2-2

Characteristic	Performance	Standard
Contact count	2 contacts, ground by shell	-
Current	10 [A] ¹⁾	IEC 60512-5-2-5b
Rated voltage	400 [V] r.m.s. ²⁾³⁾	EIA-364-20-B
Contact resistance (power contact)	< 10 mΩ	IEC 60512-2-1-2a
Contact resistance (ground contact)	< 50 mΩ	IEC 60512-2-1-2a
Insulation resistance	> 10 ¹⁰ Ω	IEC 60512-3-1-3a
Contact termination	Solder	-
Wire size	AWG17 / 1 mm ²	-
Test voltage AC	1.5 [kV] r.m.s	IEC 60512-4-1 Test 4a
Test voltage DC	2.8 [kV]	IEC 60512-4-1 Test 4a

¹⁾Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

²⁾Recommended operating voltage at sea level measured according to IEC 60664-1. This rated voltage is a general purpose guideline where no other electrical standard applies. In case where other standard rule a specific use of the connectors, the application-specific safety criteria shall be considered first. This must be evaluated within the framework of equipment engineering. In case where other calculation methods are preferred, please use the Test voltage to determine the specific operating voltage.

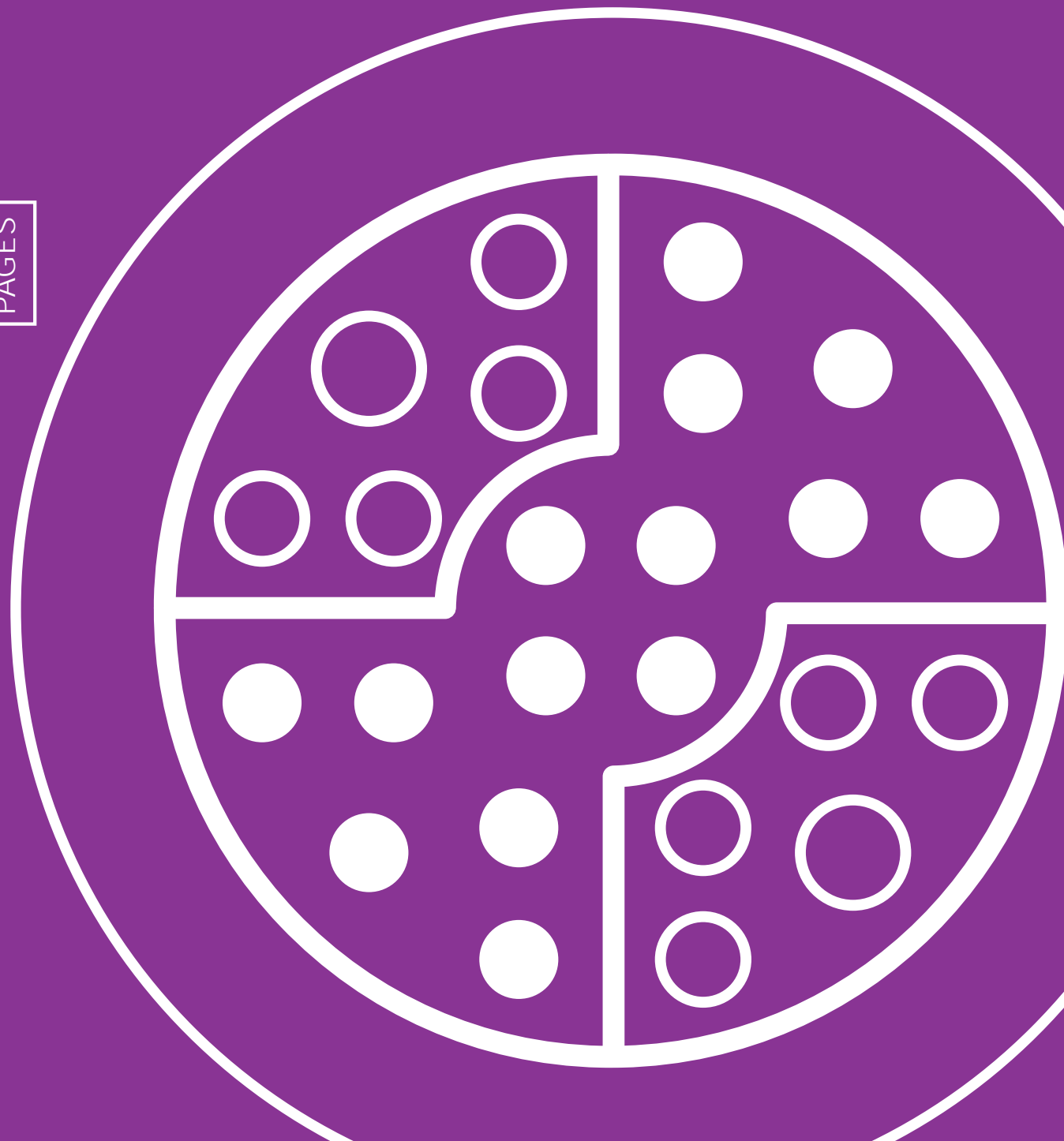
³⁾Based on IEC 61984 safety requirements, Fischer Connectors recommends that, for operating voltage > 50V, power should not be used without integration of an active security system. Please contact us for further information.

MATERIAL & SURFACE TREATMENT

Metal parts	Material		Finish	
	Designation ISO	Standard	Designation	Standard
Housing, nut	Brass CuZn39Pb3	CW614N	Chrome over Nickel	SAE-AMS 2460
		UNS C 38500		
Back nut (plug) FO1	Brass CuZn39Pb3	CW614N	Black Chrome over Nickel	SAE-AMS 2460
		UNS C 38500		
Back nut (plug) FO2, FO4, FOH 2-2	Brass CuZn39Pb3	CW614N	Nickel	SAE-AMS-QQ-N-290
		UNS C 38500		SAE-AMS 2404
Electrical contact	Brass CuZn39Pb3	CW614N UNS C 38500	1µm Gold over Nickel	MIL-DTL-45204D Type 1 + ASTM B488 / SAE-AMS- QQ-N-290 / SAE-AMS 2404
Shell contact	Stainless steel	X5CrNiMo18-10 (1.4401)	-	-
Spring	Stainless steel	X10CrNi18-8 (1.4310)	-	-
Mantel clip	Stainless steel	X5CrNiMo18-10 (1.4401)	-	-
Sleeve holder (plug) FO1	Brass CuZn39Pb3	CW614N	Nickel	SAE-AMS-QQ-N-290
		UNS C 38500		SAE-AMS 2404
Sleeve holder shaft FO2, FO4, FOH 2-2	Stainless steel	X8CrNiS18-9 (1.4305)	-	-
Locking balls	Stainless steel	X46Cr13 (1.4034)	-	-

Non metallic parts	Material	Flammability
Ferrules & sleeves	Zirconia	-
Contact housing	LCP	UL 94 V-0
Contact bloc & sleeves holder	PBT	UL 94 V-0
	PEEK	-
Mantel ring	PTFE	UL 94 V-0
O-rings	FPM (Viton®)	UL 94 V-0
	NBR (Nitrile)	-
Sealant material	Bi-component epoxy	-
Cable strain relief	TPE	UL 94 HB
Caps	TPE	UL 94 HB
Locking protection sleeve	TPE	UL 94 HB

J1 > J18 | PAGES





KEY FEATURES



The Fischer MiniMax™ Series increases the performance of your miniature rugged devices, handling more mixed signal and power connections in a unique combination of up to 24 contacts. This high performance rugged connector will save space and weight and lower the total cost of ownership by putting more functionality into smaller devices.

It can also come as a pre-cabled solution and is ideally suited for handheld or body-worn applications when space is limited.

SPACE SAVING

- Save up to 45% space
- Replace multiple connectors with only one
- Ultra compact interconnect solutions

RELIABLE

- IP68 sealed mated and unmated
- 5,000 mating cycles
- Transfer data up to 10Gb/s

LIGHTWEIGHT

- Reduce weight up to 75%
- Improve performance for handheld, body-worn or airborne applications
- Solve device miniaturization challenges

PERSONALIZED

- Unique combination of power and signal
- Lower total cost of ownership
- Various locking systems, cabling & overmolding solutions and protective soft cap

FISCHER
MINIMAX™
SERIES





HIGH DENSITY | SIGNAL & POWER | MINIATURIZATION

Perfectly suited for:

Limited space and lightweight applications | Combined needs of multiple signals and power | Instrumentation, testing equipment and military applications

FISCHER **MINIMAX™** SERIES

Body style selection	J 4
Electrical & contact configurations	J 5
Mechanical coding	J 5
Technical dimensions	J 6
PCB hole layout	J 11
Part numbering	J 12
Accessories	J 13
Tooling	J 15
Technical information	J 16



PLUGS

CABLE MOUNTED



BODY STYLES	MP11-L	MP11-S	MP11-Q
Locking system	Push-pull	Screw-locking	Quick-release
Sealing	IP68	IP68	IP68
Design	Short/Overmolding	Short/Overmolding	Short/Overmolding

RECEPTACLES

CABLE MOUNTED



BODY STYLES	MR50-L	MR50-S	MR50-Q
Locking system	Push-pull	Screw-locking	Quick-release
Sealing	IP68	IP68	IP68
Design	Short/Overmolding	Short/Overmolding	Short/Overmolding

PANEL REAR MOUNTED



BODY STYLES	MR11-L	MR11-S	MR11-Q
Locking system	Push-pull	Screw-locking	Quick-release
Sealing	IP68	IP68	IP68
Design	Front-projecting	Front-projecting	Front-projecting



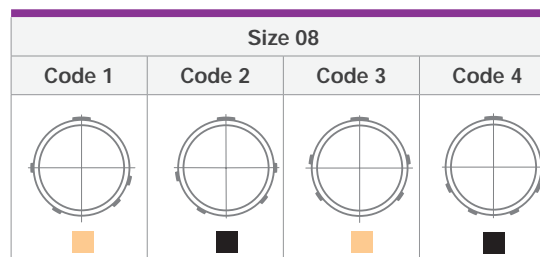
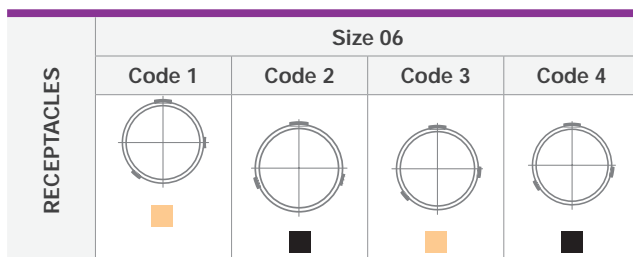
Size	Pin layout	Number of contacts	Contact diameter [mm]	Wire size ¹⁾		PCB contacts	Current [A]	Rated voltage r.m.s [V]	Test voltage [kV] in mated position			
				Solder contacts					IEC 60512-4-1 test 4a			
						Pin diameter [mm]	IEC 60512-5-2-5b ²⁾	IEC 60664-1 ³⁾	AC r.m.s.		DC	
		IEC 60512-5-2-5b ²⁾	IEC 60664-1 ³⁾	Contact to body	Contact to contact	Contact to body	Contact to contact					
06		2	0.5	maxø .70mm – AWG28 [7/36]	0.4	1.0	≤250	1.4	1.2	2.3	1.9	
		2	1.3	maxø 1.33mm – AWG18 [19/30]	0.7	10						
		12	10	0.5	maxø .43mm – AWG30 [7/38]	0.4	1.0	≤250	0.9	0.9	1.5	1.2
		2	0.5	maxø .70mm – AWG24 [19/36]	0.4	5.0						
08		19	15	0.5	maxø .70mm – AWG28 [7/36]	0.4	1.0	≤250	0.9	0.9	1.5	1.2
		4	0.5	maxø .70mm – AWG24 [19/36]	0.4	5.0						
		19	13+2 ⁴⁾	0.5	maxø .70mm – AWG28 [7/36]	0.4	1.0	≤250	0.9	0.9	1.5	1.2
		4	0.5	maxø .70mm – AWG24 [19/36]	0.4	5.0						
		24	20	0.5	maxø .43mm – AWG30 [7/38]	0.4	1.0	≤250	0.9	0.9	1.5	1.2
		4	0.5	maxø .70mm – AWG24 [19/36]	0.4	5.0						
		24	18+2 ⁴⁾	0.5	maxø .43mm – AWG30 [7/38]	0.4	1.0	≤250	0.9	0.9	1.5	1.2
		4	0.5	maxø .70mm – AWG24 [19/36]	0.4	5.0						

¹⁾ Stranding values in brackets. Wire size information is based on Fischer Connectors standard cabling recommendation for configuration with 2 or 4 power contacts.

²⁾ Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A17 for details.

³⁾ Recommended operating voltage at sea level. This rated voltage is a general purpose guideline where no other electrical safety standard applies. In case where other standards rule a specific use of the connector, then the application-specific safety criteria shall be considered first. This must be evaluated in the frame of equipment engineering.

⁴⁾ Two advanced signal contacts for USB power are available for Solder (S) or PCB (P) receptacles.



Visual color coding

Code 1, 3 have a beige contact block
Code 2, 4 have a black contact block

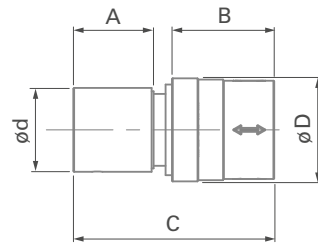


PLUGS

CABLE MOUNTED

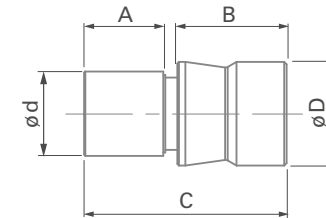
MP11-L / PUSH-PULL

BODY STYLE



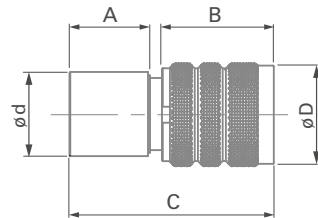
MP11-Q / QUICK-RELEASE

BODY STYLE



MP11-S / SCREW-LOCKING

BODY STYLE



Size	Locking	ød	øD	A	B	C
06	Push-pull	Ø 8.5	Ø 9.9	10.1	12.8	~ 25.0
	Quick-release	Ø 8.5	Ø 9.9	10.1	13.6	~ 25.0
	Screw	Ø 8.5	Ø 9.9	10.1	14.0	~ 25.0
08	Push-pull	Ø 10.5	Ø 12.9	10.1	12.8	~ 25.0
	Quick-release	Ø 10.5	Ø 12.9	10.1	13.6	~ 25.0
	Screw	Ø 10.5	Ø 12.9	10.1	14.0	~ 25.0

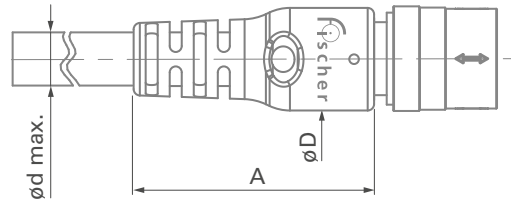


DIMENSIONS OF OVERMOLDING (AVAILABLE ON REQUEST)

CABLE MOUNTED

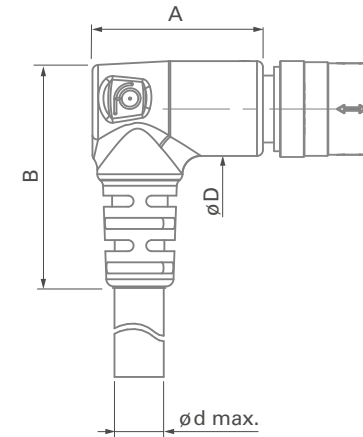
MP11-L/S/Q

STRAIGHT OVERMOLDING



MP11-L/S/Q

RIGHT-ANGLE OVERMOLDING



Size	Angle	$\varnothing d$	$\varnothing D$	A	B
06	Straight	$\varnothing 4.7$	$\varnothing 10.8$	30	-
	90°	$\varnothing 4.7$	$\varnothing 10.8$	23	30
08	Straight	$\varnothing 6.7$	$\varnothing 12.8$	30	-
	90°	$\varnothing 6.7$	$\varnothing 12.8$	23	30

All dimensions and images shown are in millimeters and are for reference only.

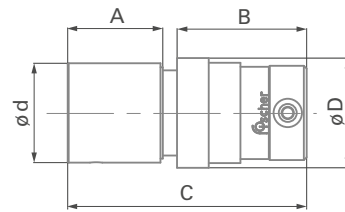


RECEPTACLES

CABLE MOUNTED

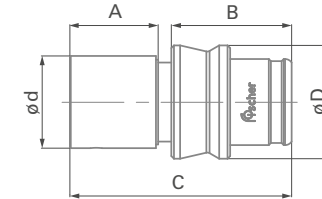
MR50-L / PUSH-PULL

BODY STYLE



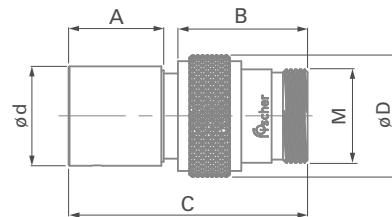
MR50-Q / QUICK-RELEASE

BODY STYLE



MR50-S / SCREW-LOCKING

BODY STYLE



Size	Locking	ød	øD	A	B	C	M
06	Push-pull	Ø 8.5	Ø 9.9	10.1	13.7	~ 25.0	-
	Quick-release	Ø 8.5	Ø 9.9	10.1	13.7	~ 25.0	-
	Screw	Ø 8.5	Ø 9.9	10.1	13.7	~ 25.0	M8x2
08	Push-pull	Ø 10.5	Ø 11.6	10.1	13.7	~ 25.0	-
	Quick-release	Ø 10.5	Ø 12.9	10.1	13.7	~ 25.0	-
	Screw	Ø 10.5	Ø 12.9	10.1	13.7	~ 25.0	M10x2

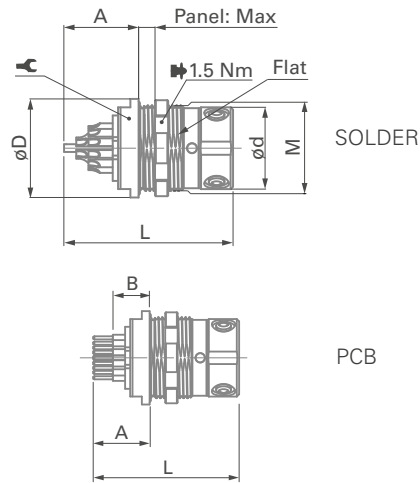


RECEPTACLES

PANEL REAR MOUNTED

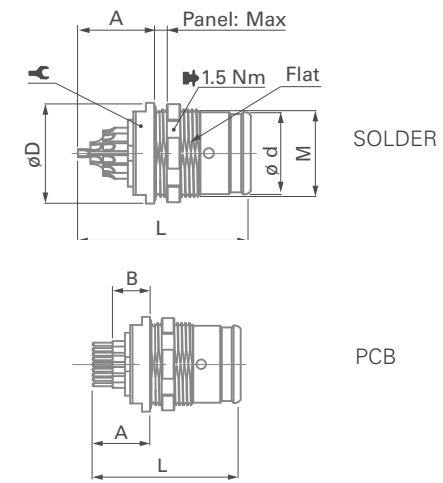
MR11-L / PUSH-PULL

BODY STYLE

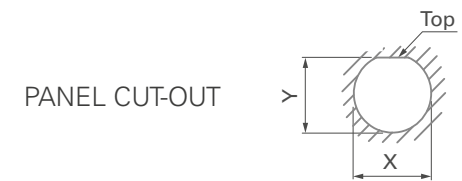


MR11-Q / QUICK-RELEASE

BODY STYLE



Size	Locking	Termination	ød	øD	A	B	L	Panel max.	M Panel thread	⌘
06	Push-pull	Solder	Ø 8.0	Ø 10.0	7.6	-	19.1	3.0	M8.5x0.35	8
		PCB	Ø 8.0	Ø 10.0	7.3	4.7	18.8	3.0	M8.5x0.35	8
	Quick-release	Solder	Ø 7.8	Ø 10.0	7.6	-	19.1	3.0	M8.5x0.35	8
		PCB	Ø 7.8	Ø 10.0	7.3	4.7	18.8	3.0	M8.5x0.35	8
08	Push-pull	Solder	Ø 10.0	Ø 12.0	9.1	-	20.6	3.0	M10.5x0.5	10
		PCB	Ø 10.0	Ø 12.0	7.3	4.7	18.8	3.0	M10.5x0.5	10
	Quick-release	Solder	Ø 9.8	Ø 12.0	9.1	-	20.6	3.0	M10.5x0.5	10
		PCB	Ø 9.8	Ø 12.0	7.3	4.7	18.8	3.0	M10.5x0.5	10



Size	X	Y
06	Ø 8.58 ^{+0.1/0}	8.25 ^{+0.1/0}
08	Ø 10.45 ^{+0.1/0}	10.2 ^{+0.1/0}

All dimensions and images shown are in millimeters and are for reference only.

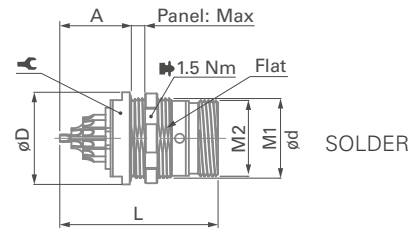


RECEPTACLES

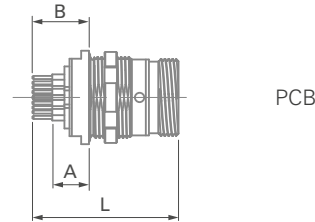
PANEL REAR MOUNTED

MR11-S / SCREW-LOCKING

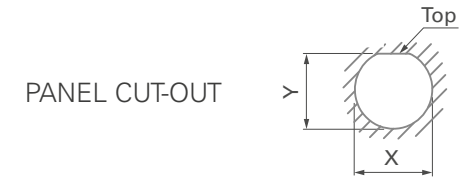
BODY STYLE



SOLDER



PCB



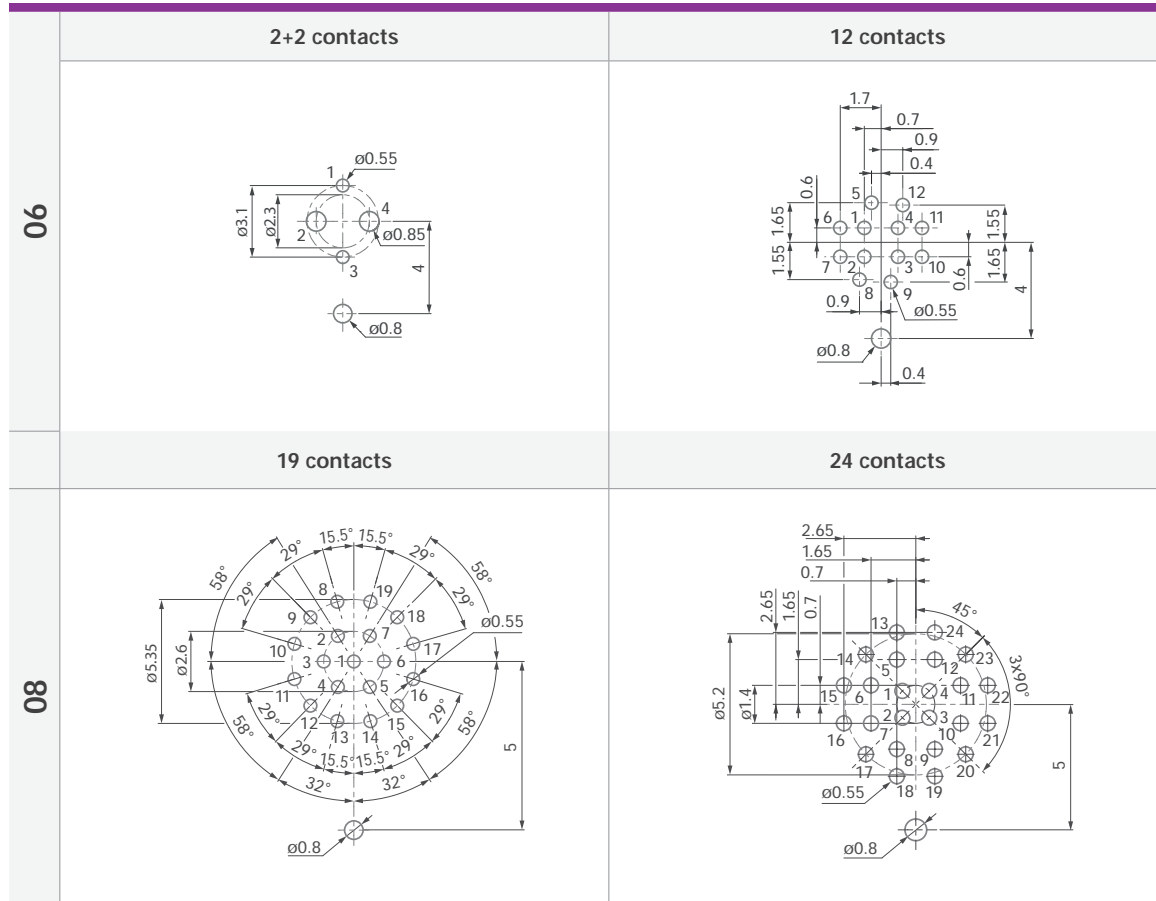
PANEL CUT-OUT

Size	Locking	Termination	ød	øD	A	B	L	Panel Max	M1 Panel thread	M2 Locking thread	↺
06	Screw	Solder	Ø 8.0	Ø 10.0	7.6	N/A	19.1	2.3	M8.5x0.35	M8x2	8
		PCB	Ø 8.0	Ø 10.0	7.3	4.7	18.8	2.3	M8.5x0.35	M8x2	8
08	Screw	Solder	Ø10.4	Ø 12.0	9.1		20.6	2.3	M10.5x0.5	M10x2	10
		PCB	Ø10.4	Ø 12.0	7.3	4.7	18.8	2.3	M10.5x0.5	M10x2	10

Size	X	Y
06	Ø 8.58+0.1/0	8.25+0.1/0
08	Ø 10.45+0.1/0	10.2+0.1/0



View from the back of the plug/front of receptacle (Guide mark at 12 o'clock)



	2+2	12	19	24
Power	2 ; 4	5 ; 9	9; 12; 15; 18 1)	14; 17; 20; 23
Ethernet	-	1/6; 3/10; 7/8; 11/12 1)	8/19; 10/11; 13/14; 16/17 1)	15/16; 18/19; 21/22; 13/24 1)
Advanced pin	2 ; 4	-	13;19 2)	18;24 2)

1) Recommended

2) Optional on MR11

All dimensions and images shown are in millimeters and are for reference only.



Example:	Connector design				Contact block	Housing		Standard options			
	MP11	Z	L	08	0420	BK	1	Z	1	A	S
MR11	W	S	08	2017	BK	2	E	1	A	P	
MR50	Z	Q	08	0019	BK	4	E	1	A	S	

Body style

MiniMax plug = MP
 ■ MP11 = Cable mounted

MiniMax receptacle = MR
 ■ MR11 = Panel mounted
 ■ MR50 = Cable mounted

Sealing level

MP11, MR50
 ■ Z = not applicable

MR11
 ■ W = water sealing

Locking system

MiniMax plug & receptacle
 ■ L = Push-pull locking
 ■ Q = Quick-release
 ■ S = Screw-locking

Connector size

■ 06 = Size 6
 ■ 08 = Size 8

Number of contacts

■ **Digit 1** = Advanced contacts (if applicable)
 ■ **Digit 2** = Power contacts (if physically larger compared to the other contacts)
 ■ **Digit 3+4** = Remaining contacts

Available standard options:
 0420
 2418 (MR11)
 0019
 2017 (MR11)
 0210
 0202

Contact termination

MP11, MR50
 ■ S = Solder contact

MR11
 ■ P = PCB contact
 ■ S = Solder contact

Contact bloc

■ A = Hermaphroditic (both MR and MP need to be "A")
 ■ F* = Female contacts
 ■ M* = Male contacts
 * only for size 06 configuration 0202
 (if MR = "F" then MP = "M"; if MR = "M" then MP = "F")

Insulating material

■ 1 = PEEK

O-ring material

MP11
 ■ Z = Not applicable

MR11, MR50
 ■ E = EPDM

Keying code

■ 1 = Code 1 (insulator= Beige)
 ■ 2 = Code 2 (insulator= Black)
 ■ 3 = Code 3 (insulator= Beige)
 ■ 4 = Code 4 (insulator= Black)

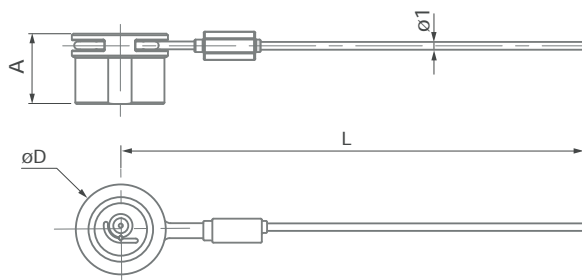
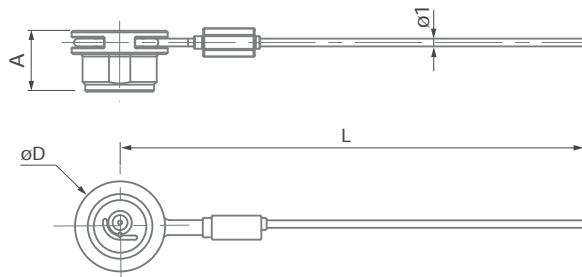
Housing color

■ BK = Black (standard)
 ■ AN = Anthracite (on request)



SOFT CAPS

CABLE MOUNTED



Size	Designation	Images	Push-pull	Quick-release	Screw-lock	A	øD	L	Part number
06	MP11 ¹⁾		•			9.6	10.0	200	MCP06C 1B2 A200 AA
				•	•	7.8	10.0	200	MCP06C 1B2 A200 BA
08	MP11 ¹⁾		•			9.6	12.3	200	MCP08C 1B2 A200 AA
				•	•	7.8	12.3	200	MCP08C 1B2 A200 BA

¹⁾Crimp ferrule and heat shrink tube are included.

06	MR50 ¹⁾		•	•	•	9.0	10.0	200	MCR06C 1B2 A200 AA
08	MR50 ¹⁾		•	•	•	9.0	12.3	200	MCR08C 1B2 A200 AA

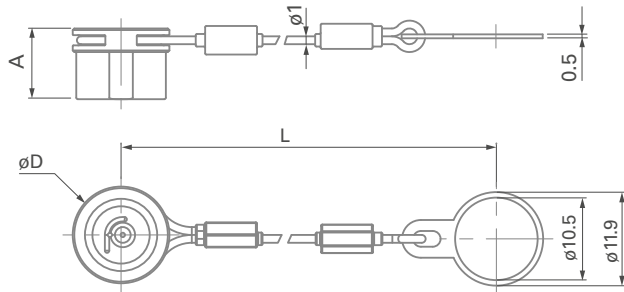
¹⁾Crimp ferrule and heat shrink tube are included.

All dimensions and images shown are in millimeters and are for reference only.



SOFT CAPS

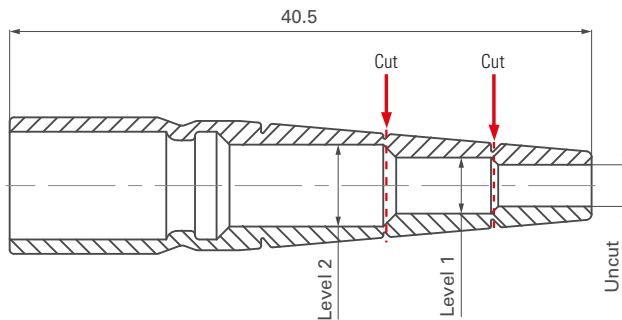
PANEL MOUNTED



06	MR11 ¹⁾		•	•	•	9	10	95	MCR06P 1B2 A095 AA
08	MR11 ¹⁾		•	•	•	9.0	12.3	95	MCR08P 1B2 A095 AA

¹⁾Crimp ferrule, heat shrink tube and mounting ring are included.

BEND RELIEF



CUTTING DIAMETERS

Size	Uncut	Level 1	Level 2	Part Number
06	$\phi 2.9$	$\phi 3.9$	$\phi 5.7$	MB06 A1BK
08	$\phi 6.7$	$\phi 5.4$	$\phi 3.9$	MB08 A1BK



SPANNER & NUT DRIVER

DOUBLE-END OPEN SPANNER EXTRA THIN



Size	Part number	Opening across	Length	Fork thickness
06	TX00.008	8	96	2.3
08	TX00.010	10	104	2.5

Material – Chrome Alloy Steel, Chrome plated, Fork Angles – 15° and 75°.

NUT DRIVER WITH T-HANDLE AND HEX DRIVE



Part number	Thread size	Nut outer dia.	ø D	Hex drive
TX00.383	M8.5x0.35	10	14	7
TC00.007	M10.5 x 0.5	13	16	7

Material – Hardened Tool Steel, Nickel plated.

CABLE ASSEMBLY TOOLING



Part number	Description
130257	Hand press Vogt 4255 or equivalent
130254	MiniMax support tool



Part number	Description
130252	MiniMax tool kit Size 06
130253	MiniMax tool kit Size 08

All dimensions and images shown are in millimeters and are for reference only.



ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Performance	Standard
Sealing performance mated and unmated	IP68; 2m submersion for 24 hours	IEC 60529
Sealing performance Soft Cap	IP67; 15cm submersion for 30 min	IEC 60529
Operating temperature range (with PUR cable)	-40°C to +85°C	IEC 60512-6-1 IEC 60068-2-14-Nb
Corrosion resistance mated	Salt mist 1,000 hours ; 5% salt solution, 35°C Plug and receptacle in mated position or with cap when unmated. Cosmetic changes may appear over time without impacting mechanical or electrical functions.	IEC 61300-2-1
Endurance	5,000 mating cycles Preserved mechanical and electrical functionality. Normal wear will appear.	IEC 60512-5-1 IEC 60512-5-2
Vibration (Screw-lock version only)	10 to 2000 Hz, 1.5 mm or 15g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity >1μs	MIL-STD-202 G Method 204D Condition B
Unlocking Force (Quick-release version only)	Size 06 = Typical 25N±40% Size 08 = Typical 35N±40%	
Shock	300 g	MIL-STD-202 G Method 213

ELECTRICAL DATA

Characteristic	Performance	Standard
Contact resistance	5 mΩ (typical value)	IEC 60512-2-1-2a; IEC 60512-2-2-2b
Shell resistance ¹⁾	<50 mΩ (Cabled)	IEC 60512-2-6-2f
Insulation resistance	>10 ¹⁰ Ω	IEC 60512-3-1-3a
Shielding effectiveness	360° shielded	-

¹⁾ Measured for a mated pair of panel receptacle and cable plug between the grounding pin and the cable shielding.



MATERIAL & SURFACE TREATMENTS

Metal Parts	Material		Finish	
	Designation ISO	Standard	Designation	Standard
Housing, Nut	Brass CuZn39Pb3	CW614N UNS C 38500	Chrome over Nickel	SAE-AMS2460
Back nut (MP11, MR50)	Brass CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290B SAE-AMS2404G
Ground contact	Brass CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290B SAE-AMS2404G
Push-pull locking spring Quick-release locking spring	Stainless steel	X10CrNi18-8 (1.4310)	-	-
Contacts	- Male, Ground Pin	Brass CuZn39Pb3	1µm Gold over Nickel	MIL-DTL-45204D Type I; ASTM B488 MIL-DTL-45204D Type I; ASTM B488
	- Female	Bronze CuSn4Zn4Pb4		
Ball-locking	Ceramic Si3N4	-	-	-

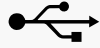



Insulator and sealing		International symbol	Flammability
Insulators		PEEK ¹⁾	UL 94 V-0
O-rings	- General - Interface	FPM (Viton®) EPDM	-
Sealant materials	- Cable connectors - Panel receptacles	Bi-component epoxy Silicone	-
Cap	- Cable connectors - Panel receptacles	TPV (Santoprene)	UL 94 HB

¹⁾ Or any material in the PAEK family that provides equal or better overall performances.



DATA TRANSMISSION

The data transmission performance of the Fischer MiniMax™ Series has been tested for most popular protocols that are used in a variety of applications today.

Protocol	Number of contacts required	MINIMAX
USB 2.0 	4	yes
USB 3.0 SS 	9	application dependent
Ethernet Cat 5e (1Gb/s) 	8	yes
Ethernet Cat 6a (10Gb/s) 	8	yes
HDMI	19	yes

It is important to note that the connector is only a small part of the equation when talking about data transmission performances.

The cable quality, the cabling process and the cable length are other, more critical factors that will directly influence the performances of the cable assembly.

K1 > K7 | PAGES





KEY FEATURES



Fischer Connectors provides system designers with everything they need to put together the right interconnect solution for a wide range of applications.

Thanks to the most modern ISO certified cable assembly facilities in Europe, North America and Asia Pacific, our engineering and manufacturing experts ensure short lead times to meet your project deadline.

VERTICAL INTEGRATION

- Connectors
- Components
- Cables

EXPERTISE

- Design
- Manufacturing
- Testing

RELIABILITY

- Sealing
- Sterilization
- Data transmission



**CABLE
ASSEMBLY**



COMPLETE SOLUTIONS | ENGINEERING SUPPORT | RAPID DELIVERY

CABLE ASSEMBLY

Vertical integration	K 4
Worldwide capabilities	K 5
Custom solutions	K 6



K 3



INTEGRATED CONNECTIVITY SOLUTIONS FOR EVERY PROJECT

Our engineers work closely with your team to find the right solution for the most demanding applications by integrating precision connectors, components, parts, and engineered cables.

Fischer Connectors' skilled technical and support teams help you build the perfect cable assembly for your unique application, providing advice through design, prototype, assembly, testing, manufacturing, installation, and beyond.

LARGE RANGE OF APPLICATIONS:

- High-performance rugged and submersible cable assemblies for the defense and marine markets
- Silicone overmolded solution for high heat protection and maximum flexibility in the medical industry
- High speed transmission of electrical, power, and optical signals
- Custom and application-specific cable harnesses

MEDICAL



Integration in medical devices

SILICONE



High heat applications

DEFENSE



Communications

- Overmolded cable assemblies, including thermoplastic & silicone
- Wiring harness assemblies
- Rugged & submersible cable solutions
- Third-party connector integration
- Right-angle overmolds
- Custom overmolds with multi-cable exits
- Potting or heat shrink
- Automated strip and crimp
- Colored overmolding
- Low cost and disposable options



AT YOUR SERVICE, WHEREVER YOU ARE

GLOBAL FOOTPRINT

With our worldwide connectors and cable assembly network, located in Europe, North America and Asia Pacific, we provide our customers with quick turnarounds around the globe.

STREAMLINING YOUR SUPPLY CHAIN

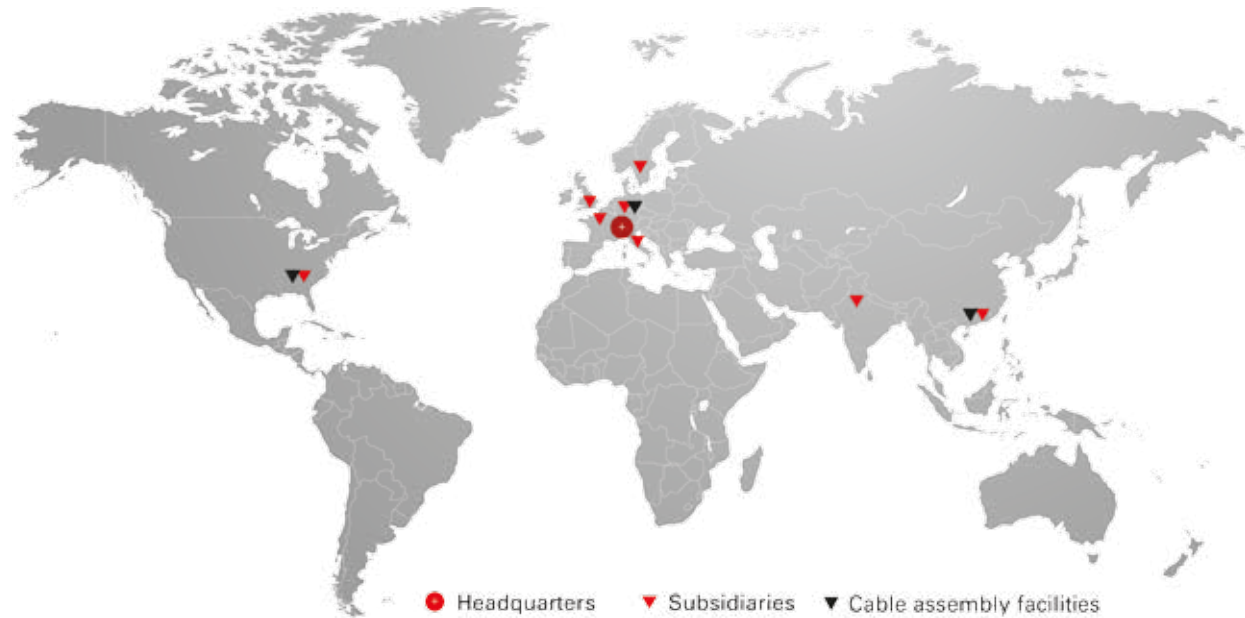
By purchasing cable assemblies, connectors and labor from one place, you deal with one vendor, pay one bill, and reduce the time and the risk it takes to coordinate your project.

ALL THE RIGHT ANGLES

Overmolding, including right-angle and custom connections, silicone and low friction cables, are all part of the business. We have overmolding machines for both polyurethane and silicone.

COMPETITIVE PRICING

Companies that use Fischer Connectors for both their connectors and assembly solutions can see significant savings over the cost of handling each vendor separately.



TOP QUALITY

We build assemblies with the same rigorous quality standards used when building our connectors. From simple to complex assemblies, Fischer Connectors delivers just what you need.



CUSTOM CABLE ASSEMBLIES

Fischer Connectors has helped hundreds of customers find their unique cable assembly solution that fulfills technical, quality and cost requirements.

From prototyping, design validation, testing and delivery, we support your project from the beginning to the end.

Our team of experts is at your service to recommend the best solution for your connectivity challenges and turn them into a success story.





A WIDE RANGE OF SOLUTIONS



Thermoplastic overmolds for the Fischer Core Series, Fischer MiniMax™ Series and Fischer FiberOptic Series



Right-angle thermoplastic overmolds for the Fischer Core Series and Fischer UltiMate™ Series



Silicone overmolds with low friction coatings for medical and high temperature applications



Thermoplastic overmolds for the Fischer UltiMate™ Series



Thermoplastic overmolds with custom cable breakouts



Custom thermoplastic overmolds for multi-cable exits

OVER 30,000 UNIQUE PART NUMBERS COVERING A MULTITUDE OF APPLICATIONS:
FROM STANDARD, VOLUME PROGRAMS TO HIGHLY TECHNICAL OR COMPLEX ONES



Expertise | Reliability | Innovation

ISO 9001

ISO 13485

ISO 14001

OHSAS 18001

NUCLEAR
KTA 1401 - IAEA 50-C-Q

REACH

ROHS
compliant

SONY
green partner

FISCHER CONNECTORS, over six decades of **Expertise, Reliability** and **Innovation**



A pioneer in connector technology, Fischer Connectors has kept the spirit of innovation alive for more than sixty years. We are known for our breakthrough technologies, high-quality products and highly responsive customer service.

We fully support companies build reliable applications by designing, manufacturing and distributing high performance, rugged circular connectors and cable assembly solutions. Our innovative circular push-pull connectors are known for their reliability, precision and resistance to demanding and harsh environments.

With our primary manufacturing facility in Saint-Prex, Switzerland, and cable assembly facilities in Europe, North America and Asia Pacific, backed by our global engineering and customer support teams, we are able to expertly serve customers throughout the world.

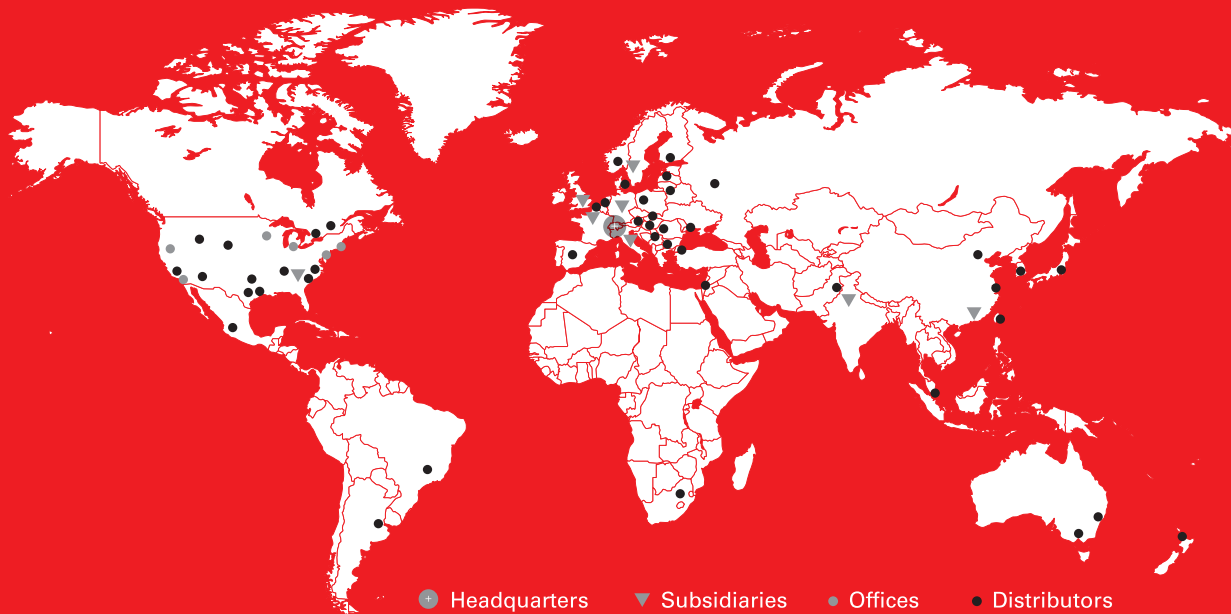
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