TECHNICAL SPECIFICATIONS
VOLUME 1

- BRASS
- STAINLESS STEEL
- ALULITE
- PLASTIC
- DISPOSABLE

fischer® CONNECTORS

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GENERAL **INFORMATION**

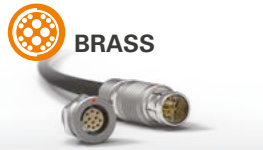
FISCHER CORE SERIES **BRASS**

FISCHER CORE SERIES **STAINLESS STEEL**

FISCHER CORE SERIES **ALULITE™**

FISCHER CORE SERIES **PLASTIC**

FISCHER CORE SERIES **DISPOSABLE**

	BRASS	STAINLESS STEEL	ALULITE
			
	ANY SIZE ANY CONFIGURATION ANY APPLICATION	HIGH CORROSION RESISTANCE EASY DECONTAMINATION EASY HANDLING	ULTRALIGHT RUGGED HIGHLY CONFIGURABLE
Locking	Push-pull / Quick-release / Friction	Push-pull	Push-pull / Quick-release
Shell material	Brass	Stainless Steel 316L	Aluminum
Plating	Chrome over Nickel	-	Chrome over Nickel
Plug Ø [mm]	9-34	12-34	9-18
Number of contacts	1 to 55	1 to 55	2 to 27
AWG	AWG9-32	AWG9-32	AWG9-32
Contact type	Low voltage / High voltage / Coax / Triax / Hybrid	Low voltage / High voltage / Coax / Triax	Low voltage / High voltage / Coax / Triax
Test voltage DC *[kV]*	Up to 50	Up to 50	Up to 14
Current rating *[A]*	Up to 60	Up to 60	Up to 30
Contact termination	Crimp / Solder / PCB	Crimp / Solder / PCB	Crimp / Solder / PCB
Sealing level	IP50 / IP68 / IP69 / Hermetic	IP50 / IP68 / IP69 / Hermetic	IP50 / IP68 / IP69 / Hermetic
Mating cycles	10,000	5,000	10,000

Technical specifications for our Fischer UltiMate™ Series, Fischer FiberOptic Series, Fischer MiniMax™ Series and Fischer Freedom™ Series can be found in **VOLUME 2**.

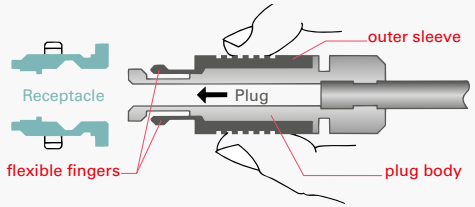
Connector overview

	PLASTIC	DISPOSABLE	BROADCAST [1]
			
	EASY TO USE DURABLE LIGHTWEIGHT	COST-EFFECTIVE EASY TO USE MODULAR	THE BEST OF TRIAX RUGGED FOR OUTDOOR USE
Locking	Push-pull	Friction	Push-pull
Shell material	PEI (405) PBT (4032)	ABS	Brass
Plating	-	-	Chrome over Nickel
Plug Ø [mm]	14.5-18.5	17.8	25.5
Number of contacts	2 to 27	6 to 19	1
AWG	AWG9-32	AWG20-30	-
Contact type	Low voltage / Hybrid	Low voltage	Low voltage
Test voltage DC *[kV]*	Up to 4	Up to 2.7	Up to 1.7
Current rating *[A]*	Up to 30	Up to 3.0	Up to 14
Contact termination	Crimp / Solder / PCB	Crimp	Crimp / Solder
Sealing level	IP67	IP30 / IP40 / IP65	IP68
Mating cycles	5,000	10	5,000

[1] Technical specifications only available in PDF format on www.fischerconnectors.com

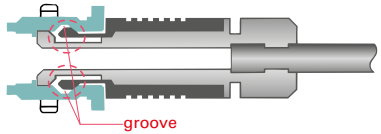
ORIGINAL PUSH-PULL LOCKING SYSTEM

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



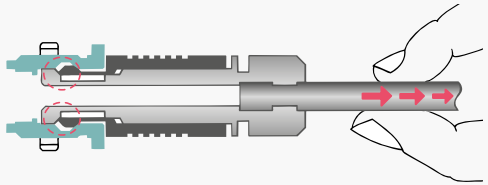
MATING

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



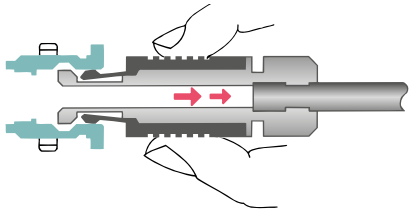
WHEN CONNECTED

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.



UNMATING

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		WATER	
0	Non-protected	0	Non-protected
1	Protected against solid objects greater than 50 mm	1	Protected against dripping water
2	Protected against solid objects greater than 12 mm	2	Protected against dripping water when filled, up to 15°
3	Protected against solid objects greater than 2.5 mm	3	Protected against spraying water
4	Protected against solid objects greater than 1.0 mm	4	Protected against splashing water
5	Dust protected	5	Protected against water jets
6	Dust tight	6	Protected against heavy seas
		7	Protected against immersion effects
		8	Protected against submersion
		9	Protected against intense water jets

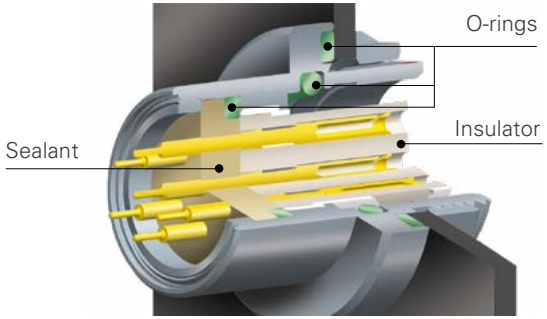
Example: IP68

INGRESS PROTECTION

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

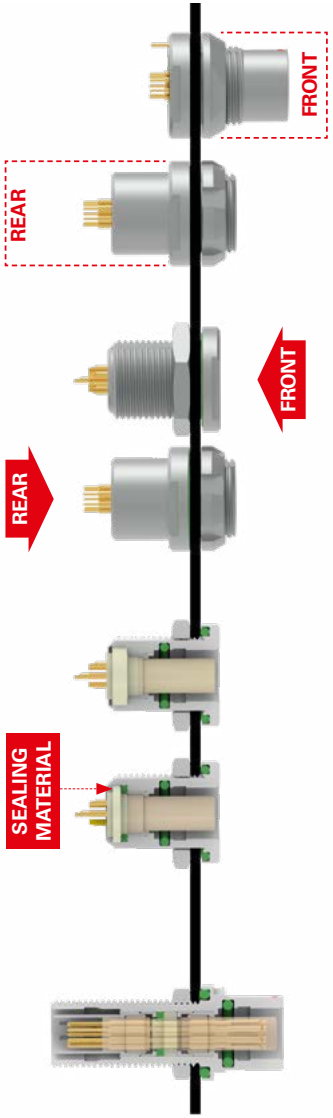
Typically for applications requiring outdoor use where they might be exposed to water submersion, rain, sand, mud or any other environmental stress.

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

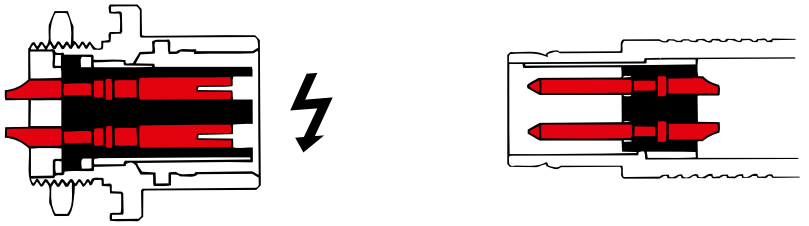
MATERIALS

MATERIAL NAME	IDEAL 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 +250°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

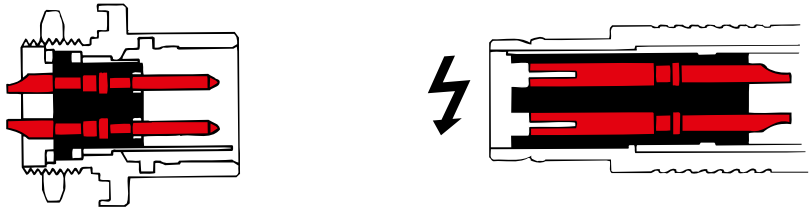
A/Z POLARITY

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

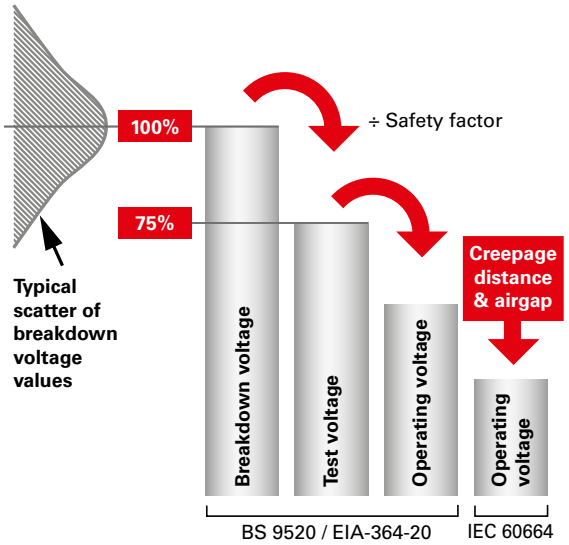
STANDARD A POLARITY
The contacts of the receptacle are protected against accidental touch.
Recommended when voltage is present on the receptacle.



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

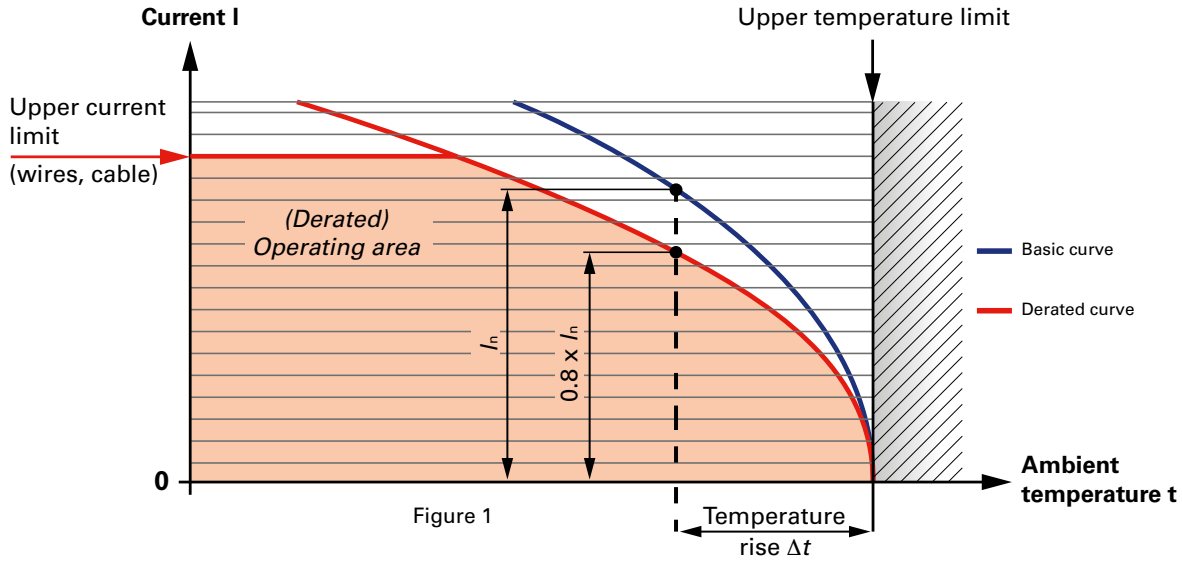


Figure 1

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.

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.

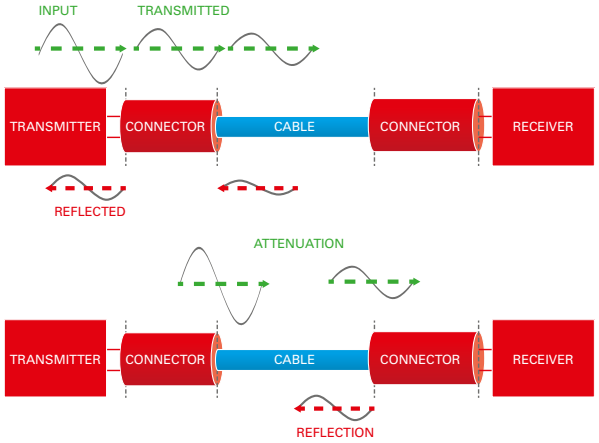
The current-carrying capacity may be further limited by external factors, for example the size of the wire and the cable characteristics. This upper current limit is plotted as a horizontal line on the graphs shown in Figure 1.

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.

HIGH FREQUENCY SIGNAL & DATA TRANSMISSION

DATA TRANSMISSION PRINCIPLES



Challenges in data transmission

When a signal is emitted at the transmitter, it must undergo minimal distortion across the system (transmitter, connectors, cable, receiver) to be properly recovered at the receiver.

Types of signal distortion across the transmission link:

- **Return loss:** When the impedances of two interfaced media do not match (i.e., transmitter/connector, connector/cable, ...), some parts of the signal will reflect back towards the source and be lost. The amount of this loss comes from impedance mismatch and is characterized by the return loss.
- **Insertion loss:** Insertion loss describes the attenuation of the signal along the transmission path. This mainly arises from losses both in the dielectric and the conductors.
- **Crosstalk:** Signals running in close-lying channels are likely to couple to one another. This is described as crosstalk terms.
- **Noise:** Unwanted interferences which could either be external or internal to the system itself might add up to the original signal and cause distortion. For instance, internal interferences can be linked to the noise generated from the transmitter or receiver.

CONNECTOR DESIGN RULES TO OPTIMIZE DATA TRANSMISSION

At a system level, the return loss, insertion loss, crosstalk and noise are critical parameters to ensure high quality data transmission. However, impedance and crosstalk play a more prominent role at the connector level.

Connector with optimized impedance

To optimize impedance matching, the following factors must be considered: Contact diameter, interaxial contact distance, contact form factor, and the dielectric constant of all the components (i.e., type of material).

Figures 1 and 2 illustrate the notion of impedance matching in which the green area depicts the tolerated range: Fig. 1 shows a connector with poor impedance-matching, while Fig. 2, shows a connector with optimized impedance matching.

Fig.1

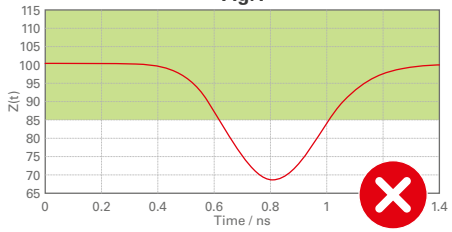
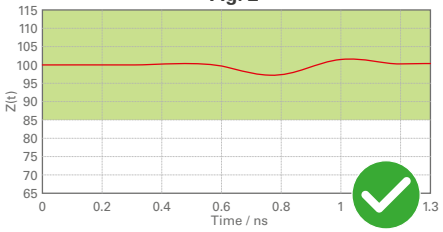


Fig. 2



Preventing Crosstalk

To minimize crosstalk, the geometrical distribution of the contacts as well as the contact layout (i.e., signal attribution to specific contacts) are critical.

Figures 3 and 4 illustrate the latter by displaying the crosstalk for two different contact layouts: Fig. 3 shows a connector where the contact layout was not optimized, while Fig. 4 shows a reduced crosstalk noise level which was achieved as a result of an optimized contact layout.

Fig. 3

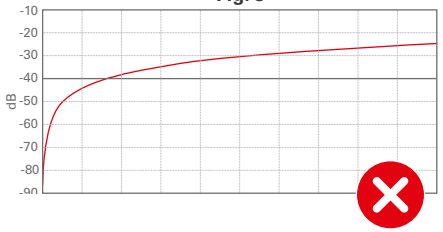
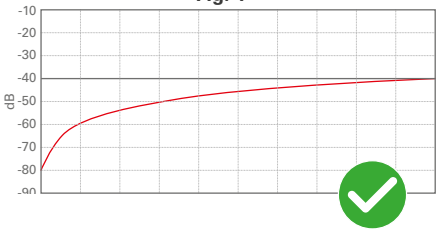


Fig. 4



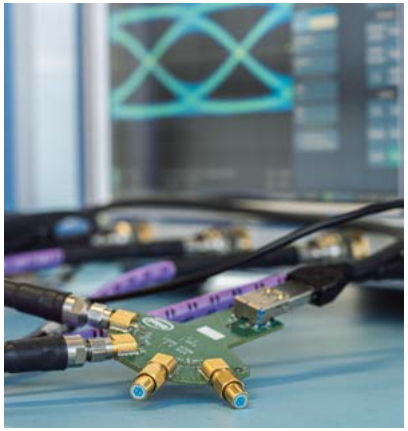
HIGH FREQUENCY SIGNAL & DATA TRANSMISSION

DATA PROTOCOLS

Data protocols provide us the normative values of data transmission parameters (ex. Insertion Loss, Return Loss, Crosstalk, Noise). This provides a means of ensuring that the various components of a system (transmitter, connectors, cable, receiver) work together and allow for an optimized transmission of the data streams.

Two complementary methods can be used to assess the system's capability of transmitting a certain high-speed data transmission protocol in terms of signal quality and transmission speeds: Numerical simulations (connector only) and Vector Network Analyzer (VNA) measurements (i.e., cable and connector).

Typical high-speed data transmision protocols are USB, Ethernet and standard protocol for the simultaneous transmission of audio and video.



Fischer Connectors' skilled technical and support teams can help you build the perfect system by analyzing your specific application and needs. Please contact your local sales representative for more details.

SYMBOL	SS			UHD	
PROTOCOL	**USB**	**SPE (SINGLE PAIR ETHERNET)**	**ETHERNET**	**STANDARD AUDIO/VIDEO PROTOCOL**	
DESCRIPTION	4 wires for USB 2.0 up to 480 Mbit/s 9 wires for USB 3.2 Gen 1 up to 5 Gbit/s 9 wires for USB 3.2 Gen 2 up to 10 Gbit/s	2 wires for SPE up to 1 Gbit/s (1000BASE-T1)	4 wires for Ethernet up to 100 Mbit/s (100BASE-TX) 8 wires for Ethernet up to 10 Gbit/s (10GBASE-T)	19 wires for standard audio/video protocol up to 10.2 Gbit/s	
FISCHER SERIES PERFORMANCE UP TO:					
CORE SERIES	USB 3.2 Gen 2	1000BASE-T1	5GBASE-T	18 Gbit/s	4K UHD Up to 60 fps
ULTIMATE SERIES	USB 3.2 Gen 2	1000BASE-T1	1000BASE-T	10.2 Gbit/s	4K UHD Up to 30 fps
MINIMAX SERIES	USB 3.2 Gen 2	1000BASE-T1	10GBASE-T	18 Gbit/s	4K UHD Up to 60 fps
FREEDOM SERIES	USB 2.0		100BASE-TX		

USB 3.2 Gen 1 and Gen 2 Connectors and Cable assemblies are validated following parameters (such as impedance, attenuation, Cross talks, conversion modes) listed in the Universal Serial Bus 3.1 Legacy Connectors and Cable Assemblies Compliance Document (Revision 1.1). Speed rate mentioned is the maximum theoretical speed rate achievable with the according protocol. For further request on the parameters tested and the test reports, please contact Technical Support.

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.

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

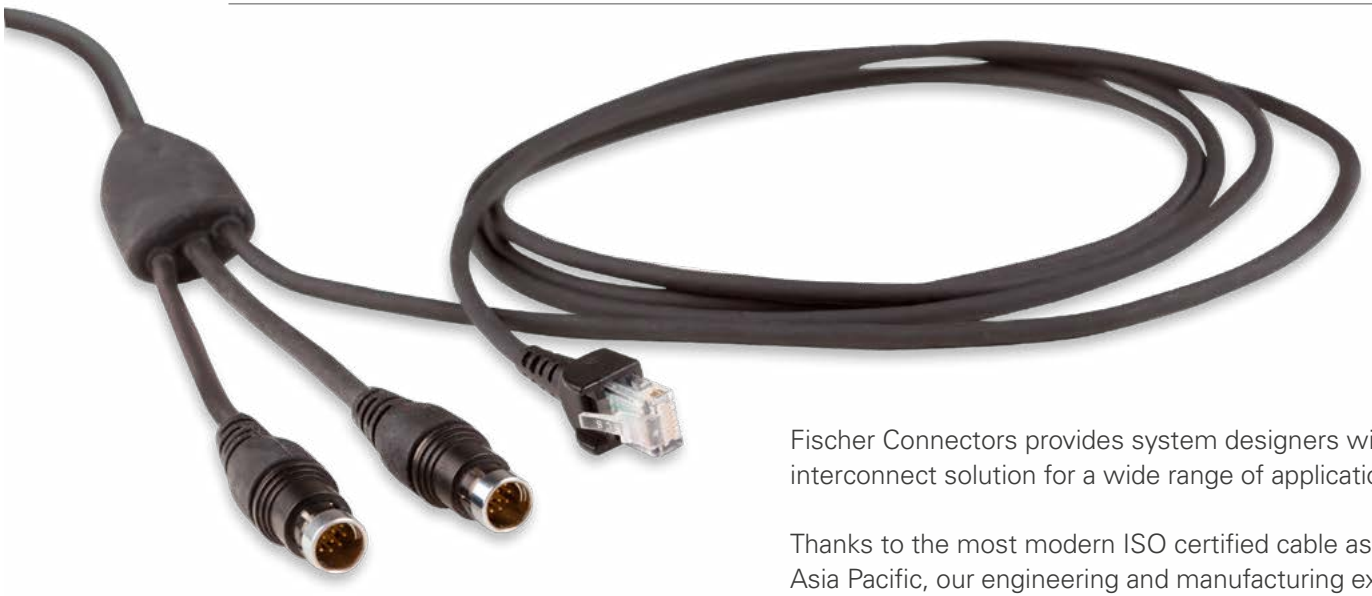
HEAT SHRINKING TUBE

Allows submersion with adhesive versions:

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

CABLE ASSEMBLIES

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

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 temperature 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

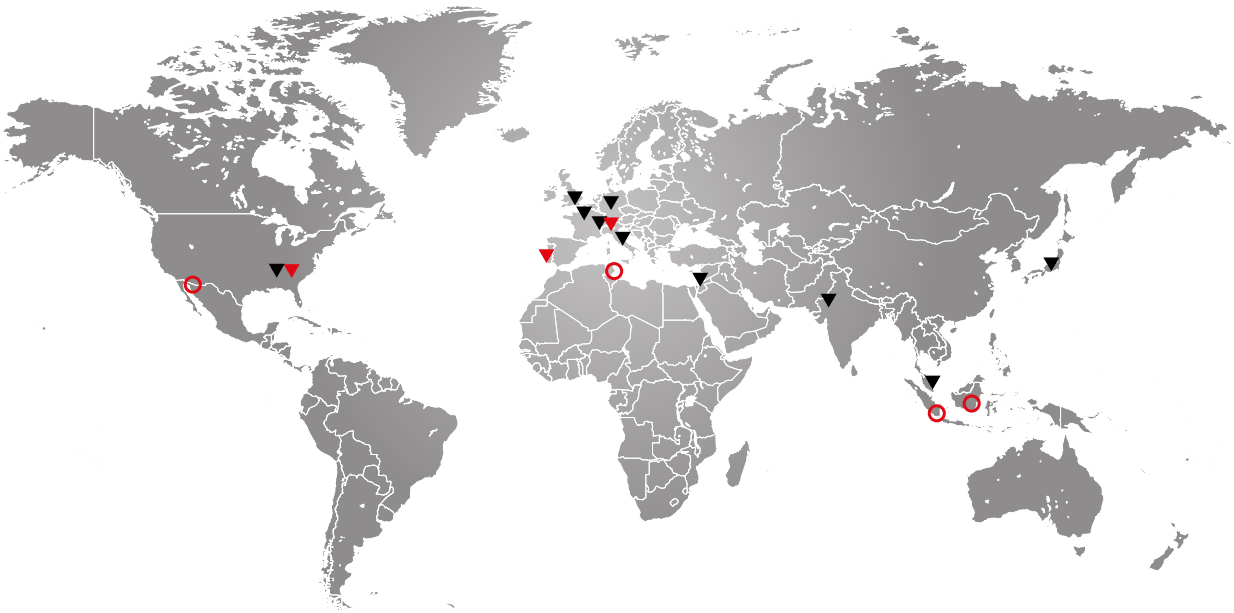
With our worldwide connectors and cable assembly network, located in Europe, North America and Asia Pacific, we provide our customers with quick turnarounds around the globe.

STREAMLINING YOUR SUPPLY CHAIN

By purchasing cable assemblies, connectors and manufacturing 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.



▼3 Global manufacturing plants ○4 Manufacturing partners ▼10 Regional units 40 Distribution partners
Headquarters: Saint-Prex, Switzerland

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 cable assemblies to the same rigorous quality standards as we build our connectors. Whether you're looking for a simple or complex assembly, Fischer Connectors is able to deliver exactly what you need, when you need it.

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 CUSTOM OVERMOLDING

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

B1
CHAPTER

FISCHER CORE SERIES **BRASS**
INTRODUCTION

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	

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

RECEPTACLES & FEEDTHROUGH

DIFFERENT DESIGN

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

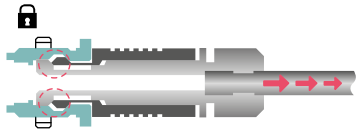
All dimensions and images shown are in millimeters and are for reference only.

PUSH-PULL AUTOMATIC LOCKING PLUGS

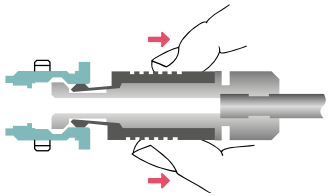
S - SS - WSO

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



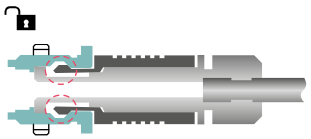
Pull the outer sleeve to unlock

QUICK-RELEASE PLUGS

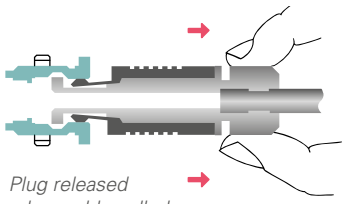
SC - SSC

Fischer Connectors' 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.



Clicking mechanism



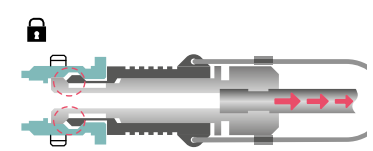
Plug released when cable pulled

LANYARD PLUG

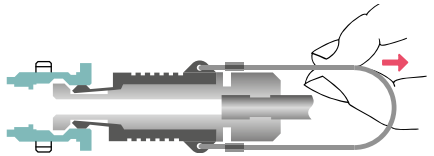
SA

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

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



Secure locking when cable pulled



Pull the lanyard to unlock

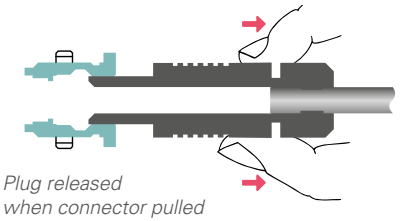
FRICTION PLUGS

SOV - SF - SFE/SFU - SFPE/SFPU

Our non-locking plugs are designed without clicking mechanism.

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

No clicking



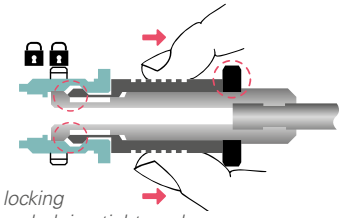
Plug released when connector pulled

TAMPERPROOF PLUG

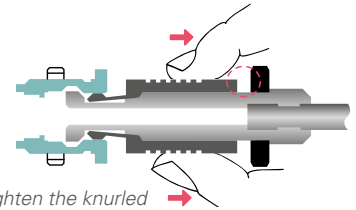
SV

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

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



Secure locking when knurled ring tightened



Untighten the knurled ring and pull the outer sleeve to unlock

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

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 ø, values in parenthesis are valid for sealed connectors (IP68).

Size	Multipole low voltage		
	Min Cable ø	Max Cable ø	Nbr of Contacts
102	1.4	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	2.5	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 2-39

Size selection

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 *Multipole high voltage* section, page B 2-58			For more information see *Coax low voltage* section, page B 3-23		For more information see *Coax high voltage* section, page B 3-34		For more information see *Triax* section, page B 4-18		For more information see *Mixed high voltage* section, page B 5-24			For more information see *Mixed coax section*, page B 5-16		

All dimensions and images shown are in millimeters and 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 Size 102 with
7 (multipole) low voltage male contacts and following options.

Receptacle	**D**	**102**	**A**

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

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

Part numbering

Contact configuration	Options*	Cable clamp sets for cable mounted plugs & receptacles
	See page B2-42 for multipole low voltage / See page B3-24 for others	
056	**130**	**+**
	Natural chrome housing, PEEK contact blocks with solder contacts, keying code 1 and clamp nut without bend relief.	
056	**130**	**Not applicable as panel mounted**
	Natural chrome 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

Housing color

Natural chrome
Anthracite

Contact block insulating material

PEEK PTFE PBT

Contact type

Solder Crimp PCB

Mechanical coding of the contact block

Clamp nut type & color

Other options

Below cable clamp sets should be ordered separately

Multipole low voltage
Triax

Example: S 102 A056 - 130 +

Clamp set ordering line E3 102.5/2.0

See page B2-42

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 ø.

Examples:
for Shielded S clamp sets K 103 A002-600 ø6.2
or environmental E clamp sets
KE 103 A002-600 ø6.2

Multipole high voltage
Mixed high voltage
Mixed coax

Insulating clamp set ø (104, 105 and 106 Sizes) 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

Example 102.785

Protective sleeve

- Cable bend reliefs
- Protective sleeves
- Soft caps
- Metal caps
- Spacers
- Washers
- Mounting nuts

See *Accessories* section, page B 6-2.

Tooling

Example TX00.240

Crimping tool

- Spanners / Wrenches
- Crimping tools
- Tools for crimp contacts and high voltage contacts

See *Tooling* section, page B 6-19.

Contact configurations

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**			●					B 3-22
102	A Z	**002**			●					B 3-22
102	A	**014**					●			B 4-18
102	A	**017**			●					B 3-22
102	A Z	**018**				●				B 3-34
102	A	**021**					●			B 4-18
102	A Z	**025**				●				B 3-34
102	A Z	**051**	●							B 2-27
102	A Z	**052**	●							B 2-27
102	A Z	**053**	● ETHERNET [1]							B 2-27
102	A Z	**054**	●							B 2-27
102	A Z	**056**	●							B 2-27
102	A Z	**059**	●							B 2-27
102	A	**066**	● SPE [4]							B 2-27
103	A Z	**001**			●					B 3-22
103	A Z	**002**			●					B 3-22
103	A	**015**					●			B 4-18
103	A Z	**023**				●				B 3-34
103	A	**026**			●					B 3-22

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	**051**	●							B 2-28
103	A Z	**052**	●							B 2-28
103	A Z	**053**	●							B 2-28
103	A Z	**054**	●							B 2-28
103	A Z	**056**	●							B 2-28
103	A Z	**057**	●							B 2-28
103	A Z	**058**	●							B 2-28
103	A Z	**062**	●							B 2-28
1031	A	**009**	● [5] USB 3.2							B 2-29
1031	A Z	**010**	●							B 2-29
1031	A Z	**012**	●							B 2-29
1031	A Z	**015**	● [3] ETHERNET							B 2-30
1031	A Z	**019**	●							B 2-30
1031	A Z	**029**	● [3] ETHERNET							B 2-29
1031	A Z	**105**	●							B 2-29
104	A	**002**			●					B 3-23
104	A Z	**010**				●				B 3-34
104	A Z	**037**	● ETHERNET [1] USB 2.0 [2]							B 2-31

[1] Ethernet 100 Mbit/s
[2] USB 2.0 480 Mbit/s
[3] Ethernet 5 Gbit/s
[4] SPE 1 Gbit/s
[5] USB 3.2 Gen 2 10 Gbit/s

Contact configurations

References			Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
104	A Z	**040**	●							B 2-31
104	A Z	**051**	●							B 2-31
104	A Z	**053**	●							B 2-31
104	A Z	**054**	●							B 2-31
104	A Z	**055**	●							B 2-32
104	A Z	**056**	●							B 2-32
104	A	**060**			●					B 3-23
104	A Z	**062**		●						B 2-60
104	A Z	**065**	●							B 2-31
104	A Z	**066**	● [6] ETHERNET							B 2-32
104	A	**078**							●	B 5-15
104	A Z	**083**						●		B 5-22
104	A Z	**086**	●							B 2-33
104	A Z	**087**	●							B 2-31
104	A Z	**092**	●							B 2-33
104	A	**093**							●	B 5-15
104	A Z	**104**	● [7] USB 2.0							B 2-32
104	A	**124**	●							B 2-33

References			Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
104	A	**130**	●							B 2-33
104	A	**131**	●							B 2-32
104	A	**135**	● [8] UHD-VIDEO							B 2-33
105	A Z	**002**			●					B 3-23
105	A Z	**004**				●				B 3-34
105	A Z	**005**				●				B 3-34
105	A	**020**						●		B 5-22
105	A	**036**						●		B 5-22
105	A Z	**038**	●							B 2-35
105	A Z	**039**		●						B 2-60
105	A Z	**049**				●				B 3-34
105	A Z	**051**	●							B 2-34
105	A Z	**052**	●							B 2-34
105	A Z	**053**	●							B 2-34
105	A Z	**054**	●							B 2-34
105	A	**057**		●						B2-60
105	A Z	**058**	●							B 2-35
105	A	**060**						●		B 5-22

[6] Ethernet 1 Gbit/s
[7] USB 2.0 480 Mbit/s
[8] Standard protocol for simultaneous transmission of audio and UHD-Video 18 Gbit/s

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

FISCHER CORE SERIES **BRASS**

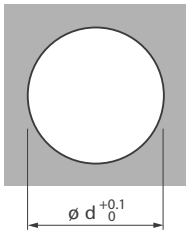
References			Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
105	A Z	**062**	●							B 2-35
105	A Z	**067**	● [6] ETHERNET							B 2-34
105	A Z	**069**	●							B 2-35
105	A	**074**							●	B 5-15
105	A	**087**	●							B 2-34
105	A	**089**							●	B 5-15
105	A Z	**090**			●					B 3-23
105	A Z	**093**	● [7] AUDIO/ VIDEO							B 2-35
105	A	**095**							●	B 5-15
105	A Z	**101**	●							B2-34
105	A Z	**102**	●							B2-35
105	A Z	**104**	●							B 2-35
105	A	**108**				●				B 3-34
105	A Z	**110**	●							B 2-35
105	A	**112**						●		B 5-22
105	A Z	**124**	●							B2-34
105	A	**127**	●							B 2-35

References			Multipole low voltage	Multipole high voltage	Coax low voltage	Coax high voltage	Triax	Mixed high voltage	Mixed coax	relevant information (page)
106	A Z	**003**	●							B 2-36
106	A Z	**007**	●							B 2-36
106	A Z	**013**		●						B 2-60
106	A	**014**						●		B 5-22
106	A Z	**015**	●							B 2-36
106	A Z	**017**	●							B 2-36
106	A Z	**018**	●							B 2-36
106	A Z	**019**	●							B 2-36
107	A Z	**003**				●				B 3-37
107	A	**004**				●				B 3-37
107	A Z	**013**	●							B 2-37
107	A Z	**015**	●							B 2-37
107	A Z	**017**				●				B 3-34
107	A Z	**018**	●							B 2-37
107	A Z	**023**	●							B 2-37
107	A	**034**		●						B 2-60
107	A Z	**051**	●							B 2-37
107	A Z	**052**	●							B 2-37

[6] Ethernet 1 Gbit/s

[7] Standard protocol for simultaneous transmission of audio and video, up to 10.2 Gbit/s

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

Size	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

Size	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 B3-33).

PANEL MOUNTED CABLE RECEPTACLES

Size	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

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

MATERIAL & SURFACE TREATMENTS

Metal parts

The standard Fischer Connectors shells are nickel plated brass with natural (silver) chrome finish. Anthracite finish is available as an option; see Options pages B 2-35 and B 3-26.
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
					Anthracite Nickel	SAE-AMS-QQ-N-290 / SAE-AMS2404
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	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		

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 2-2 through B 5-2. 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 (receptacles) - IP68	Silicon compound	UL 94 V-O
- Hermetic	Epoxy compound	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/s	IEC 60068-2-17 test Qk method 3, alternative b
		IP69	IEC 60529
Operating temperature range	See details on page A-9 and B1-16		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 60512-9-1 / 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.**

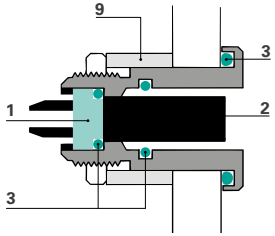
ELECTRICAL DATA

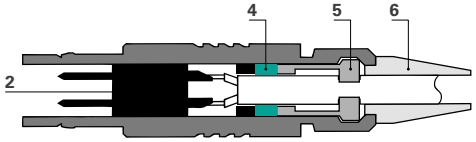
Characteristic	Contact size	Typical values	Standard
Contact resistance 10,000 mating cycles	ø 0.5 mm ø 0.7 mm ø 0.9 mm ø 1.3 mm ø 1.6 mm ø 2.3 mm ø 3.0 mm	5.0 mΩ 5.0 mΩ 4.0 mΩ 2.5 mΩ 2.5 mΩ 2.5 mΩ 1.5 mΩ	IEC 60512-2-1, Test 2a IEC 60512-2-2, Test 2b
Insulation resistance		> 10^{10}Ω	IEC 60512-3-1-3a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

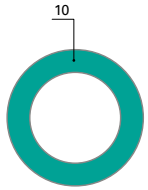
All dimensions and images shown are in millimeters and are for reference only.

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 +250°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	
		High Voltage Connectors	POM	-40°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

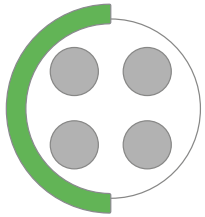
[1] Minimum mating temperature: 0°C.
[2] Minimum mating temperature: -20°C.

TEMPERATURE °C
0°C

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 here for information only and do not reflect always the reality.

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

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

Notes

B2

CHAPTER

FISCHER CORE SERIES **BRASS**

MULTIPOLE

B2-2 / B2-49

MULTIPOLE
LOW VOLTAGE

Table of contents

PLUGS

RECEPTACLES

FOR ALL MULTIPOLE LOW VOLTAGE

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		S	SC	SOV	SA	SV	SS	SSC	WSO	References to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	●	●	Sealing categories, page A-6
	Sealed up to IP68	●	●	●	●	●	●	●	●	
Locking system	Friction			●						Locking systems, page A-5
	Push-pull	●			●	●	●		●	
	Quick-release		●					●		
	Lanyard				●					
	Tamperproof					●				
Contacts	Crimp	●	●	●	●	●	●	●	●	Electrical & configurations, page B2-23
	Solder	●	●	●	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	●	●	●	Options, page B2-35
	Anthracite	●	●	●	●		●	●	●	
Design	Shortened body						●	●		Body styles, chapter B1-2
	Straight	●	●	●	●	●	●	●		
	Right-angle						●	●	●	
Cabling	Cable clamp sets	●	●	●	●	●			●	Cable clamp sets, page B2-39
	Overmoldable						●	●		
	Heat shrinkable						●	●		
Accessories	Cable bend reliefs	●	●	●	●	●			●	Accessories, section B6-2
	Protective sleeves	●	●	●						
	Sealing caps	●	●	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	●	●	Technical dimensions, page B2-4 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	●	
	1031 Size	●	●	●	●	●	●	●	●	
	104 Size	●	●	●	●	●	●	●	●	
	105 Size	●	●	●	●	●	●	●	●	
	106 Size	●				●				
	107 Size	●				●				

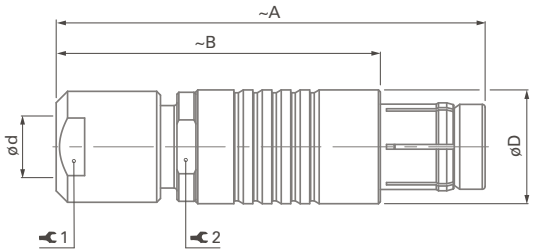
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S/SC

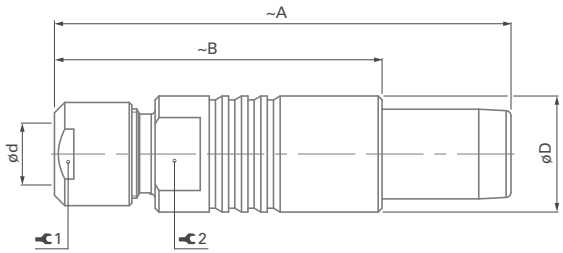
BODY STYLES



Size	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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	9.1	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

SOV

BODY STYLE

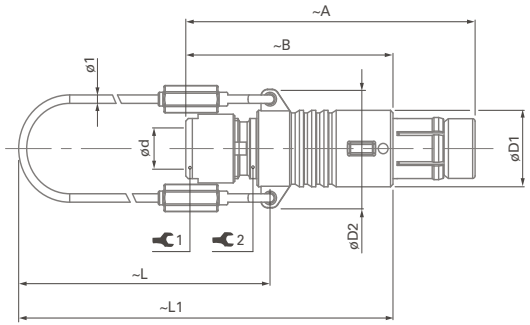


Size	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
1031	48	38	13	7.2	6.7	12	1.5	11
104	50	38	15	9.1	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	Please contact us for additional information							
107								

PLUGS

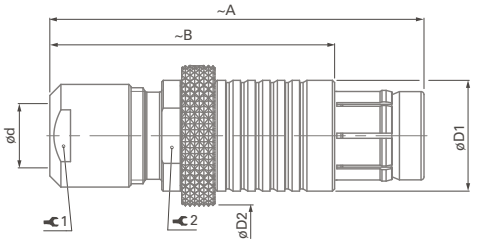
CABLE
MOUNTED

SA
BODY STYLE



Size	A	B	D1	D2	L	L1	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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											

SV
BODY STYLE



Size	A	B	D1	D2	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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.

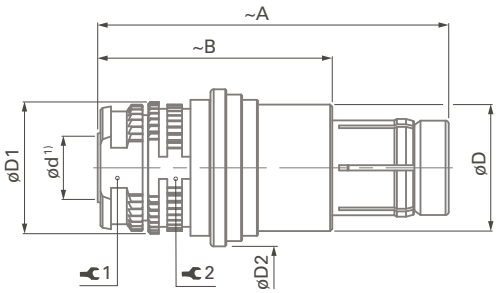
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

SS/SSC

BODY STYLES

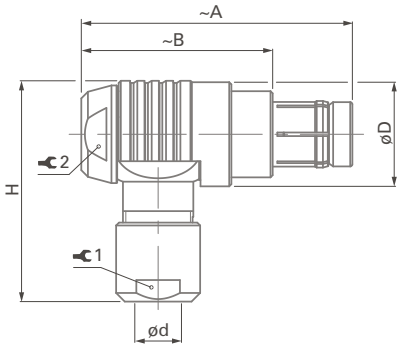


Size	A	B	D	D1	D2	d *max* [1]	1	Torque 1 *[Nm]*	2
102	30	20	9.0	9.5	12.0	3.8	7	0.4 – 0.6	8
103	33	22	12.0	12.5	15.0	6.0	10	0.8 – 1.0	11
1031	33	23	12.4	13.0	15.5	6.2	10	0.8 – 1.0	11
104	38	26	15.0	15.3	18.0	8.0	12	1.5 – 2.0	13
105	44	29	18.0	18.4	21.2	10.0	15	1.5 – 2.0	16
106	Please contact us for additional information								
107									

[1] Max. cable diameter below shield.

WSO

BODY STYLE

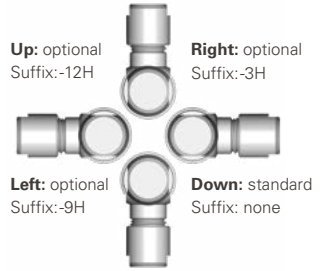


Size	A	B	D	H	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2	Torque 2 *[Nm]*
102	33	23	12	25	4.7	4.3	7	0.6	8	1.0
103	38	27	15	31	6.7	6.2	10	1.0	11	1.3
1031	39	29	17	33	7.2	6.7	12	1.5	12	2.0
104	45	32	19	37	8.7	8.7	12	2.0	14	2.5
105	53	38	23	45	10.7	10.7	15	3.5	17	3.5
106	Please contact us for additional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

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

Cable orientations: view from the back



RECEPTACLES

CABLE
MOUNTED

Body style		K	KE	KS	KSE	References to detailed information
Protection	Unsealed (IP50)	●		●		Sealing categories, page A-6
	Sealed up to IP68		●		●	
Contacts	Crimp	●	●	●	●	Electrical & contact configurations, page B 2-23
	Solder	●	●	●	●	
Housing	Natural chrome	●	●	●	●	Options, page B 2-35
	Anthracite	●	●	●	●	
	Shortened body			●	●	
Design	Straight			●	●	Body styles, chapter B 1-3
	Right-angle			●	●	
Cabling	Cable clamp sets	●	●			Cable clamp set, page B 2-39
	Overmoldable			●	●	
	Heat shrinkable			●	●	
Accessories	Cable bend reliefs	●	●			Accessories, section B 6-2
	Protective sleeves	●	●			
	Sealing caps	●	●	●	●	
Size	102 Size	●	●	●	●	Technical dimensions, page B 2-8 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	
	1031 Size	●	●	●	●	
	104 Size	●	●	●	●	
	105 Size	●	●	●	●	
	106 Size	●	●			
	107 Size	●	●			

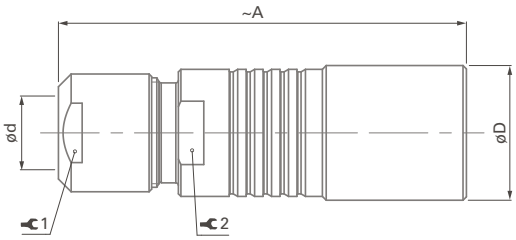
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

CABLE
MOUNTED

K/KE

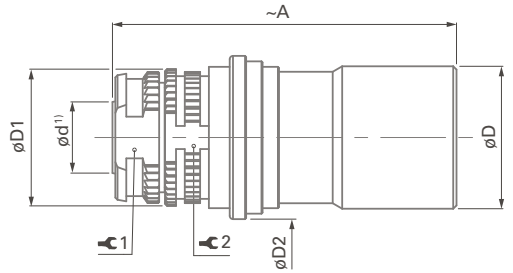
BODY STYLES



Size	A	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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	9.1	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

KS/KSE

BODY STYLES



Size	A	D	D1	D2	d *max*	1	Torque 1 *[Nm]*	2
102	28	10.0	10.0	12.0	3.8	7	0.4 – 0.6	8
103	32	13.0	13.0	15.0	6.0	10	0.8 – 1.0	11
1031	31	13.5	13.5	15.5	6.2	10	0.8 – 1.0	11
104	35	16.0	16.0	18.0	8.0	12	1.5 – 2.0	13
105	43	19.0	18.0	21.2	10.0	15	1.5 – 2.0	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.

RECEPTACLES

PANEL MOUNTED





Body style		D	DEU	DEE	DB	DBEU	DBEE	DBP	References to detailed information
Protection	Unsealed (IP50)	●			●			●	Sealing categories, page A-6
	Sealed up to IP68		●	●		●	●		
	Hermetic			●			●		
Contacts	Crimp	●			●			●	Electrical & contact configurations, page B2-23
	Solder	●	●	●	●	●	●	●	
	PCB	●	●	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	●	●	Options, page B2-38
	Anthracite	●	●	●	●	●	●	●	
Design	Right-angle								Body styles, chapter B1-3
	Flush	●	●	●				●	
	Front-projecting				●	●	●		
	Bulkhead feedthrough								
Assembly	Front-mounting	●	●	●	●	●	●		
	Rear-mounting							●	
Accessories	Sealing caps	●	●	●	●	●	●	●	Accessories, section B6-2
	Spacers		●	●					
	Color-coded washers	●			●			●	
	Grounding washers	●	●	●	●	●	●	●	
	Locking washers	●	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	●	Technical dimensions, page B2-11 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	
	1031 Size	●	●	●	●	●	●	●	
	104 Size	●	●	●	●	●	●	●	
	105 Size	●	●	●	●	●	●	●	
	106 Size	●		●			●		
	107 Size	●		●			●		

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

RECEPTACLES

PANEL MOUNTED





Body style		DBPU	DBPE	DBPLU	DBPLE	DG	DGP	DBPC	WDE	References to detailed information
Protection	Unsealed (IP50)					●	●	●		Sealing categories, page A-6
	Sealed up to IP68	●	●	●	●				●	
	Hermetic		●		●				●	
Contacts	Crimp					●				Electrical & contact configurations, page B 2-23
	Solder	●	●	●	●	●				
	PCB	●	●	●	●		●	●		
Housing color	Natural chrome	●	●	●	●	●	●	●	●	Options, page B 2-38
	Anthracite	●	●	●	●	●	●	●		
Design	Right-angle							●		Body styles, chapter B 1-3
	Flush	●	●			●	●	●	●	
	Front-projecting			●	●	●	●		●	
	Bulkhead feedthrough								●	
Assembly	Front-mounting					●	●		●	
	Rear-mounting	●	●	●	●	●	●	●		
Acces-sories	Sealing caps	●	●	●	●	●	●	●	●	Accessories, section B 6-2
	Spacers								●	
	Color-coded washers					●	●	●		
	Grounding washers	●	●	●	●	●	●	●		
	Locking washers	●	●	●	●	●	●	●		
Size	102 Size	●	●	●	●	●	●	●	●	Technical dimensions, page B 2-13 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	●	
	1031 Size	●	●	●	●	●	●	●		
	104 Size	●	●	●	●	●	●		●	
	105 Size	●	●	●	●	●	●		●	
	106 Size					●	●		●	
	107 Size		●						●	

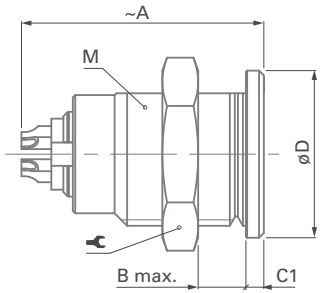
For WDE 106 the interface is not sealed (no interface O.-ring).

RECEPTACLES

PANEL
MOUNTED

D

BODY STYLE

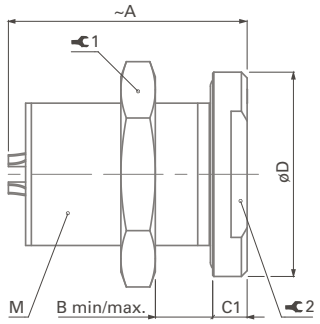


Size	A	B max.	C1	D	M		Torque [Nm]
102	19	9	1.5	11	9x0.5	11	1.3
103	23	8	1.5	14	12x1	14	2.5
1031	25	10	2.0	16	14x1	17	3.0
104	25	11	2.2	19	15x1	17	4.0
105	32	15	2.0	22	18x1	22	6.0
106	50	18	3.0	37	32x1	TX00.106	15
107	46	18	4.0	40	35x1	TX00.107	16

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.

DEU/DEE

BODY STYLES



Size	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	19.3/24	5.0	41	32x1	TX00.106	15	-
107	47	19.5/22	5.0	45	35x1	TX00.107	16	-

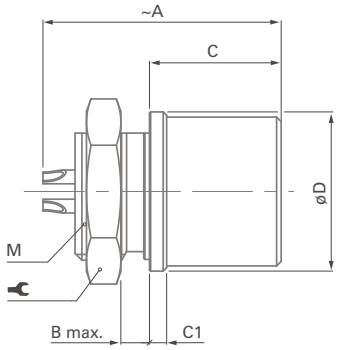
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED

DB

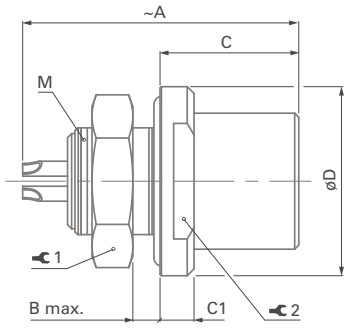
BODY STYLE



Size	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								

DBEU/DBEE

BODY STYLES



Size	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

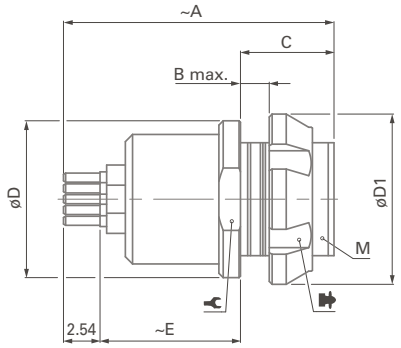
Torque *[Nm]* are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests have to be made to evaluate the exact values.

RECEPTACLES

PANEL
MOUNTED

DBP

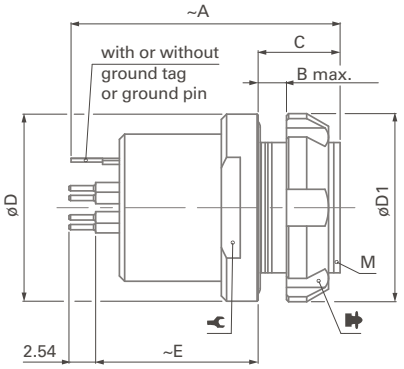
BODY STYLE



Size	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										

DBPU/DBPE

BODY STYLES



Size	A	B max.	C	D	D1	E	M		1)	Torque [Nm]
102	20	3.5	6.5	14	12	11.5	9x0.5	11	TC00.000	1.3
103	26	4.0	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	17	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										

[1] Assembly tool for decorative slotted nut, see Tooling section, page B 6-20, 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.

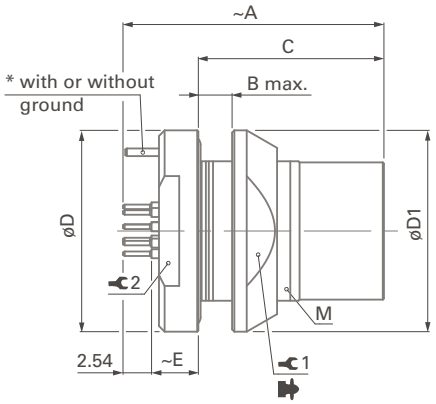
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED

DBPLU/DBPLE

BODY STYLES



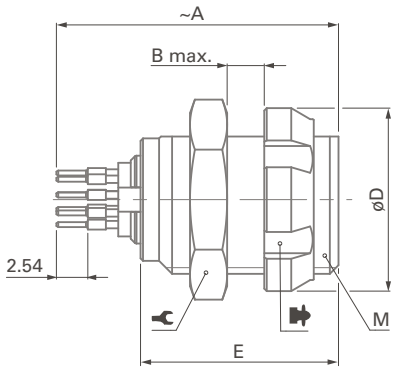
Size	A	B max.	C	D	D1	E	M	1)	1	Torque 1 [Nm]	2
102	21	4.5	14.2	14	13	3.6	10x0.5	TC00.007	11	1.5	11
103	24	5.0	16.5	18	18	4.2	14x1	TG00.001	15	3.0	15
1031	23	5.5	16.0	19	20	4.2	15x1	TK00.000	17	4.0	15
104	27	6.5	18.5	22	20	5.0	16x1	TK00.002	17	4.5	17
105	31	8.0	22.5	27	25	5.5	20x1	TP00.005	22	6.5	22
106	Please contact us for additional information										
107											

* – Pin for PCB contacts versions; all Sizes.
– Tag for solder contact versions; Sizes 103 to 107.
– Barrel for solder contact versions; Size 102.

[1] Assembly tool for decorative slotted nut, see Tooling section, page B 6-20 , for details.

DG/DGP

BODY STYLES

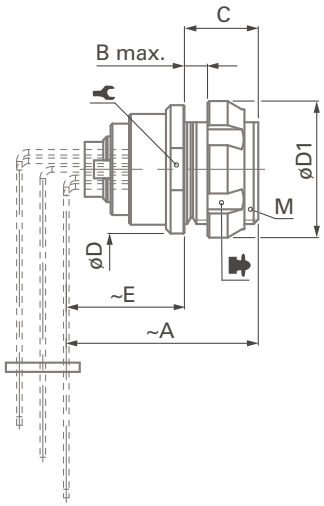


Size	A	B max.	D	E	M		1)	Torque [Nm]
102	20	6	12	14	9x0.5	11	TC00.000	1.3
103	23	7	15	15	12x1	14	TF00.001	2.5
1031	23	7	18	18	14x1	17	TG00.001	3.0
104	26	9	19	18	15x1	17	TK00.000	4.0
105	30	15	23	24	18x1	22	TP00.011	6.0
106	Please contact us for additional information							
107								

RECEPTACLES

PANEL
MOUNTED

DBPC
BODY STYLE

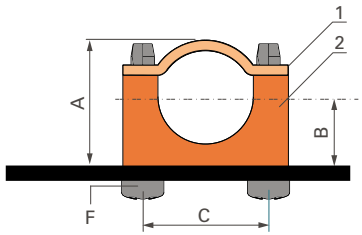


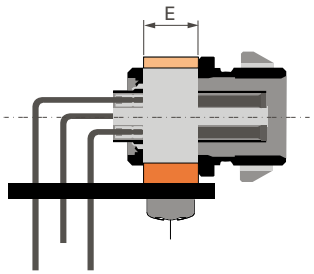
Size	A	B max.	C	D	D1	E[1]	M		[2]	Torque [Nm]
102	20.0	3.5	6.5	11	12	13	9x0.5	10	TC00.000	1.3
103	22.0	4.0	8.0	14	15	13	12x1	-	TF00.001	2.5
1031	21.5	3.0	7.0	16	18	14	14x1	-	TG00.001	3.0

[1] Please refer to online technical drawings at www.fischerconnectors.com/technical for precise value and layout dimensions.

[2] Assembly tool for decorative slotted nut, see Tooling section, page B 6-20, for details.

DBPC
MOUNTING CLAMP





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

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

Material:
1 - Nickel plated brass copper
2 - PBT

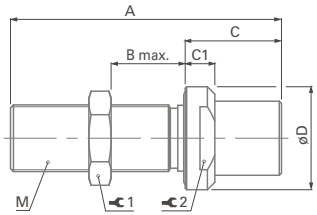
All dimensions and images shown are in millimeters and are for reference only.

FEEDTHROUGH

PANEL
MOUNTED

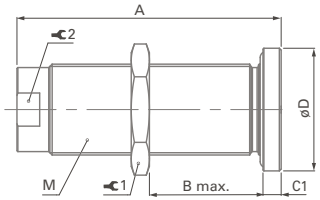
WDE : 102, 103 & 104 SIZE

BODY STYLE



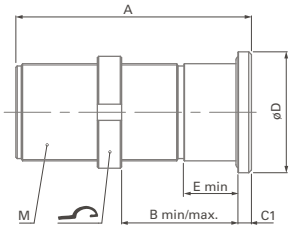
WDE : 105 SIZE

BODY STYLE



WDE : 106 & 107 SIZE[1)]

BODY STYLE



Size	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	25	6.5	17
106 [1) 3)]	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 chapter B 6.

[1)] Feedthroughs of sizes 106 and 107 are supplied with slotted nuts. For nuts dimensions see Accessories section B 6-2.

[2)] Assembly tool for side slotted nut, see Tooling section, section B 6-20, for details.

[3)] For Size WDE 106 the interface is not sealed (no interface O-ring).

PLUGS

PANEL MOUNTED

Body style		SF	SFU	SFE	SFPU	SFPE	References to detailed information
Protection	Unsealed (IP50)	●					Sealing categories, page A-6
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp	●					Electrical & contact configurations, B 2-23
	Solder	●	●	●	●	●	
	PCB	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	Options, page B 2-38
	Anthracite	●	●	●	●	●	
Assembly	Front-mounting	●	●	●			Body style selection, chapter B 1-2
	Rear-mounting				●	●	
Accessories	Sealing caps	●	●	●	●	●	Accessories, section B 6-2
	Spacers						
	Color-coded washers	●					
	Insulating washers	●					
	Grounding washers	●	●	●			
	Locking washers	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	Technical dimensions, page B 2-18 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	
	1031 Size	●	●	●	●	●	
	104 Size	●	●	●	●	●	
	105 Size	●	●	●	●	●	
	106 Size	●					
	107 Size	●					

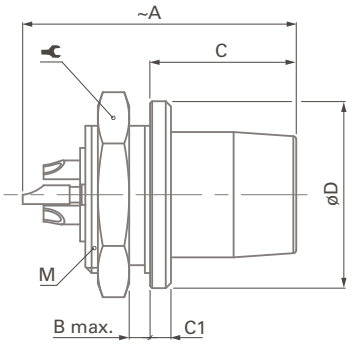
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

PANEL
MOUNTED

SF

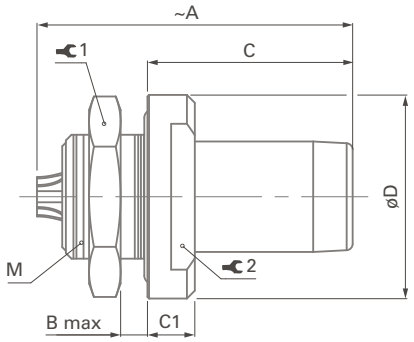
BODY STYLE



Size	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

SFU/SFE

BODY STYLES



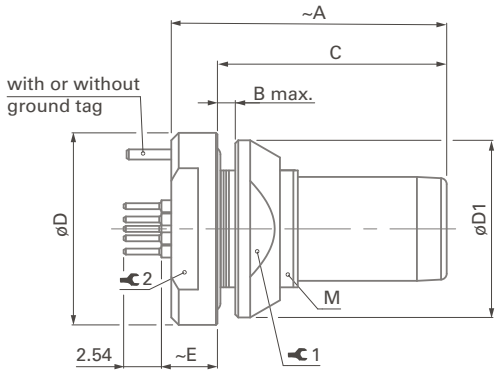
Size	A	B max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	21	2.5	13.0	3.0	13	9x0.5	11	1.3	9
103	26	5.0	14.0	3.0	17	12x1	14	2.5	12
1031	26.5	4.0	13.7	3.7	19	14x1	17	3.0	12
104	28	7.5	15.5	3.5	22	16x1	19	4.5	17
105	32	6.0	19.0	4.0	27	20x1	25	6.5	-
106	Please contact us for additional information								
107									

PLUGS

PANEL
MOUNTED

SFPU/SFPE

BODY STYLES



Size	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.

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

RECEPTACLES

PANEL
MOUNTED CABLE



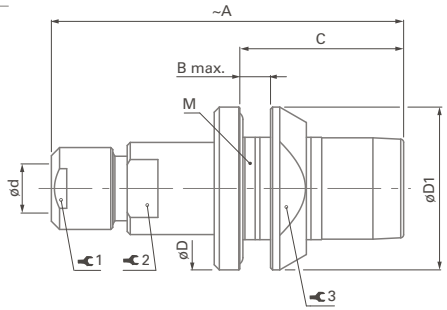
Body style		DKBE	DK	DKE	References to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, section A-6
	Sealed up to IP68	●		●	
Contacts	Crimp	●	●	●	Electrical & contact configurations, page B 2-23
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B 2-38
	Anthracite	●	●	●	
Design	Flush		●		Body styles, chapter B 1-3
	Front-projecting	●		●	
Assembly	Panel mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable clamp sets	●	●	●	Cable clamp sets, page B 2-42
Accessories	Cable bend reliefs	●	●	●	Accessories, section B 6-2
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●		
	Insulating washers				
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Size	●	●	●	Technical dimensions, page B 2-21 For more information visit our website **www.fischerconnectors.com/technical**
	103 Size	●	●	●	
	1031 Size	●			
	104 Size	●	●	●	
	105 Size	●	●	●	
	106 Size	●	●	●	
	107 Size	●	●	●	

RECEPTACLES

PANEL REAR
MOUNTED CABLE

DKBE

BODY STYLE

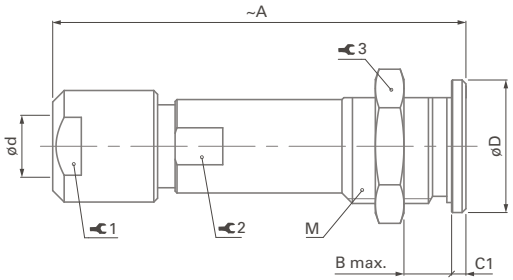


Size	A	B max.	C	D	d max	D1	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	35	3.5	16.0	16	4.3	16	12x1	7	0.6	7	13	2.5
103	43	4.0	19.0	19	6.2	20	15x1	10	1.0	10	17	4.0
1031	46	4.0	18.0	21	6.7	20	16x1	12	1.5	11	17	4.5
104	50	5.0	22.5	23	8.7	23	18x1	12	2.0	13	20	6.0
105	60	5.0	26.0	28	10.7	27	22x1	15	3.5	16	24	8.0
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



Size	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 [1]	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 [1]	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.

[1] Cable assembly operation possible only after housing mounted on panel

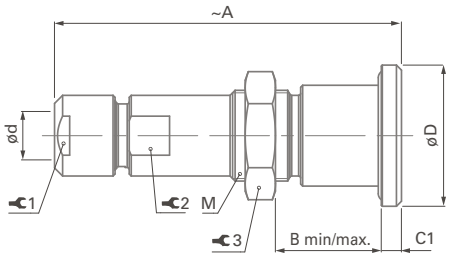
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL FRONT
MOUNTED CABLE

DKE - 102, 103 & 1031 SIZE

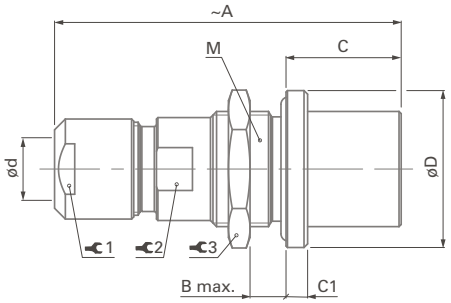
BODY STYLE



Size	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 SIZE

BODY STYLE



Size	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

ELECTRICAL & CONTACT CONFIGURATIONS

A/Z POLARITY

CONTACT TYPES

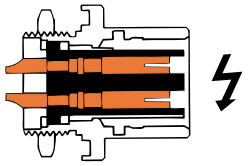
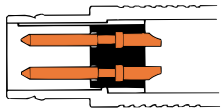
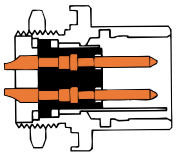
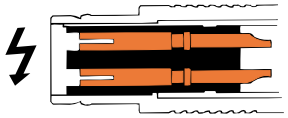
CONTACT CONFIGURATIONS

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.

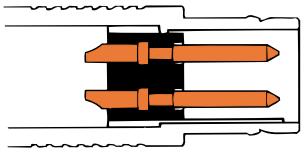
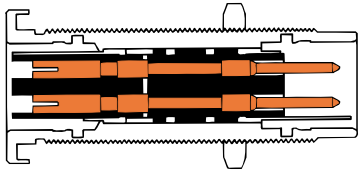
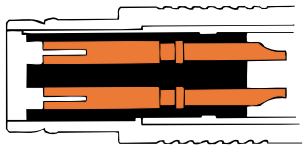
INVERTED **"Z" POLARITY**
The contacts of the plug are protected against accidental touch.
Recommended when voltage is present on the plug.

	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.

Type "A" plug (S)	WDE, type "AZ"	Type "Z" plug (S)
		

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

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 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

Size	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 6-21, for description of Crimping Tool and Positioner.

Please refer to www.fischerconnectors.com/technical for detailed information and assembly instructions.

102 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp [6]	PCB			Solder contacts [1][8]	Crimp contacts	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**066** [9]		2	●		●	PEEK	0.5	max Ø0,88mm AWG21 [1] AWG22 [7/30]	–	1.2	1.8	1.8	3.4	≤ 200	6.2
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] Testing may be required. For a given AWG, the diameter of some stranded conductor designs could exceptionally be larger than the hole diameter of the barrel.

[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-12 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 B 2-43.

[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].

[9] Layout dedicated to SPE data protocol 1 Gbit/s

103 SIZE

● = 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]*
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	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]	–	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 A-12 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.

1031 SIZE

● = 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		
1031 A **009** [7]		9 / 2	●		●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.3	1.7	2.0	≤ 250	9.0
		9 / 6	●		●		0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	-	0.9	1.1	1.3	1.6	≤ 250	1.0
		9 / 1	●		●		0.5	max ø0.63mm AWG24 [1] AWG 26 [19/38]	-	0.9	1.1	1.3	1.6	≤ 250	1.0
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 **029** [6]		12 / 3	●			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.4	1.6	2.0	2.4	≤ 160	7.0
		12 / 9					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.4	1.5	2.0	2.1		1.0

[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-12 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.

[6] Not available in sealed version.

[7] Layout dedicated to USB 3.2 Gen2 10 Gbit/s. The 2 power contacts 0.7mm are positioned to make contact first & break last .

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

1031 SIZE

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types: Solder	Contact types: Crimp	Contact types: PCB	Insulating material	Contact ø [mm]	Wire size [2]: Solder contacts [1]	Wire size [2]: Crimp contacts	Test voltage [5] [kV] in mated position: AC r.m.s: Contact to body	AC r.m.s: Contact to contact	DC: Contact to body	DC: Contact to contact	Rated voltage [4] r.m.s [V]	Current [3] [A]
1031 A **105** [6] [7]		14 / 3	●			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.1	1.5	1.8	2.2	≤ 200	8.1
		14 / 11	●			PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	–	1.1	1.0	2.3	2.0	≤ 200	1.0
1031 A/Z **015** [6]		15 / 2	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	1.4	2.0	2.0	3.0	≤ 200	12.5
		15 / 13	●		●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	–	1.4	1.4	2.0	2.0	≤ 200	1.0
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] 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-12 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.

[6] Not available in sealed version.

[7] The 3 power contacts 0.9 mm as well as contact 0.5 mm No. 1 are positioned to make contact first & break last.

104 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
104 AZ 051		2	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	–	1.8	2.2	2.8	3.2	≤ 500	20
104 AZ 040		3	●	●	●	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 AZ 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 AZ 087		4 + 2	●		●	PBT	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	–	1.5	1.6	2.2	2.5	≤ 400	28
		2					0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	2.0		2.8			3.0
104 AZ 053		5	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	1.4	1.7	2.4	2.7	≤ 320	11
104 AZ 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 AZ 054		7	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.5	1.8 [6] 2.1	2.2	2.0 [6] 2.8	≤ 320	6.5

[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 A-12 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.

[6] Test voltages between the contacts with the shortest distance.

104 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
104 AZ **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 AZ **055**		9 / 1	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	2.4	2.2	3.8	3.6	≤ 250	12
		9 / 8					0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.4	1.5	2.0	2.4		6.0
104 AZ **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 AZ **104** [6]		12 / 3	●			PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	2.2	2.0	3.3	3.0	≤ 200	12.0
		12 / 9					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.4	1.7	2.1	2.4		1.0
104 A **131** [7]		12	●		●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	–	2.5	1.9	4.4	2.7	≤ 250	4.2

[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-12 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.

[6] Not available in sealed version.

[7] Contact No. 1 is positioned to make contact first & break last. Only available in sealed version.

104 SIZE

● = 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		
104 A **130** [8]		14 / 3	●		●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.7	1.4	3.0	1.8	≤ 250	9.5
		14 / 11					0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	–	1.7	1.2	3.0	1.7		1.0
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 A **135** [7] [9]		20	●		●	PEEK	0.5	12x max ø0.55mm AWG26 [1] AWG26 [19/38] + 8x max ø0.43mm AWG28 [1] AWG28 [19/40]	–	1.2	1.2	1.8	1.8	≤ 250	2.1 [9]
104 A **124** [6]		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 A-12 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.

[6] Solder and PCB contact types available only for DBPU and DBPLU receptacles. Crimp contact type available only for plugs.

[7] Layout dedicated to UHD-Video 18 Gbit/s. Only available in sealed version.

[8] The 3 power contacts 0.9 mm as well as contact 0.5 mm No. 1 are positioned to make contact first & break last. Only available in sealed version.

[9] Current of 1.8 A at maximum temperature rise of 30 °C according to UHD specifications.

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

105 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contact[1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 AZ **051**		2	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	2.5	3.0	4.0	4.0	≤ 630	26
105 AZ **087**		2	●			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	–	1.2	1.6	2.3	3.0	≤ 400	30
105 AZ **052**		3	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	2.0	2.5	3.0	3.5	≤ 400	23
105 AZ **053**		4	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	1.8	1.8	2.6	2.6	≤ 320	20
105 AZ **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 AZ **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 AZ **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 A-12 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 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 AZ 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 AZ 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 AZ 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
		13 / 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
		13 / 10					0.7	–	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9		1.0
105 AZ 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 AZ 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
		16 / 12					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.0	1.2	1.5	2.0		1.0
105 AZ 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 AZ 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 AZ 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-12 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.

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

106 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Male solder contacts [1]	Female solder contacts [1]	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 A-12 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 SIZE

● = 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Male solder contacts [1]	Female solder contacts [1]	Contact to body	Contact to contact	Contact to body	Contact to contact		
107 A Z **013**		4	● ○			PTFE PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	3.6	4.3	5.0	5.6	≤ 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]	3.4	3.4	4.3	4.3	≤ 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**		55	●			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
		8 / 47					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 A-12 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

OPTIONS **PART NUMBERING**

HOUSING COLORS & CABLE BEND RELIEFS

CONNECTOR HOUSING COLORS

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

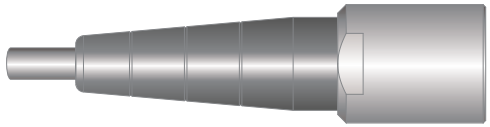
- Natural chrome connector housing with red guide mark.

- Non reflective anthracite housing with white guide mark.

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

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).

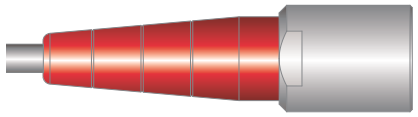


It helps to:

- 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.

Color-coding is achieved by using accessories:



- Cable bend reliefs for cable connectors.

- Washers for panel receptacles.

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

HOUSING COLORS & CABLE BEND RELIEFS

1	**Housing color** Which housing color do you need?		**NATURAL CHROME with red guide mark**					**ANTHRACITE 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	-AN70	-AN90	-AN110	-AN140	-AN160
		Code 2 	-2060	-2080	-2100	-230	-250	-AN2070	-AN2090	-AN2110	-AN240	-AN260
		Code 3 	-3060	-3080	-3100	-330	-350	-AN3070	-AN3090	-AN3110	-AN340	-AN360

[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	Decorative black slotted nut
	D	Decorative slotted nut
	F	Decorative nut (with 2 flats)
	C	Decorative anthracite slotted nut

CABLE BEND RELIEFS PART NUMBERING

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-AN260
Anthracite 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-AN260
Anthracite 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 anthracite nut and EPDM interface O-ring

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

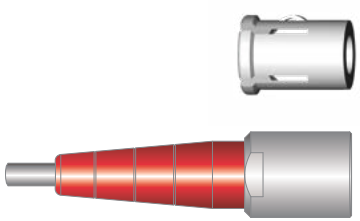
INTRODUCTION

DIMENSIONS

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

WSO BODY STYLE

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.
- 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 sizes, only S and E cable clamp sets are available.

PART NUMBERING

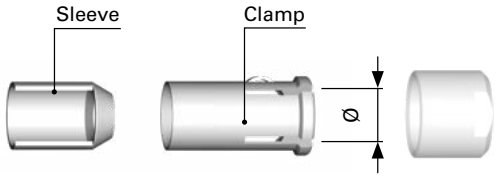
Below cable clamp sets should be ordered separately		Below cable clamp sets are included with connector	
Multipole low voltage	Triax	Coax low voltage	Coax high voltage
S 102 A056-130**+**		Shielded (S) or Environmental (E) cable clamp set diameter should be added to the connector part number separated by ø.	
Examples connector ordering line		Examples for S - Shielded clamp sets	
S 102 A056-130**+**		K 103 A002-600 **Ø6.2**	
Clamp set ordering line		For E - Environmental clamp sets	
E3 102.5/2.0		K**E** 103 A002-600 **Ø6.2**	
See following pages for cable clamp sets set selection.		See following pages for S or E cable clamp sets set selection.	

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

102 SIZE

S
SHIELDED

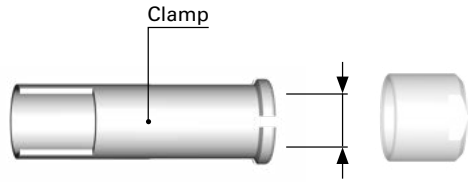
Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	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

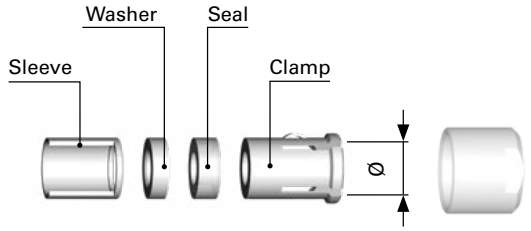
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	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.



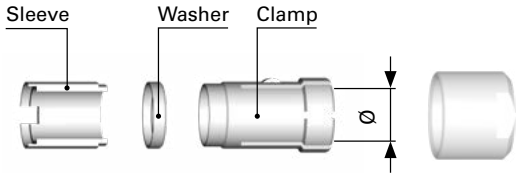
Cable dia. range	Collet Ø	Cable clamp set[1]
1.5 - 2.1	2.1	E31 102.2/2.1 + B
2.1 - 2.6	2.6	E31 102.2/2.6 + B
2.6 - 3.1	3.1	E31 102.2/3.1 + B
3.1 - 3.6	3.6	E31 102.2/3.6 + B
3.6 - 4.1	4.1	E31 102.2/4.1 + B
4.1 - 4.3	4.3	E31 102.2/4.3 + B

[1] For ordering information see page B 2-43.

103 SIZE

S
SHIELDED

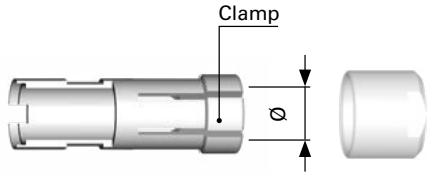
Shielded cable clamp with with sleeve, washer and clamp.



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

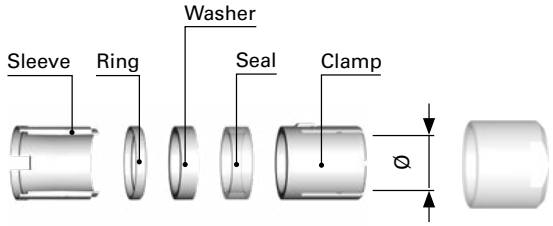
Unshielded, one-piece cable clamp.



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

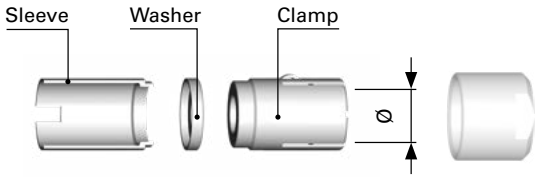
[1] For ordering information see page B 2-43.

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

1031 SIZE

S
SHIELDED

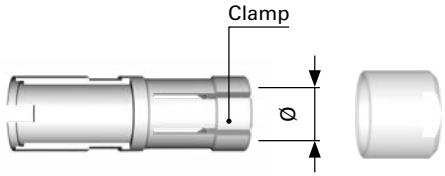
Shielded cable clamp with with sleeve, washer and clamp.



Cable Ø range	Collet Ø	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

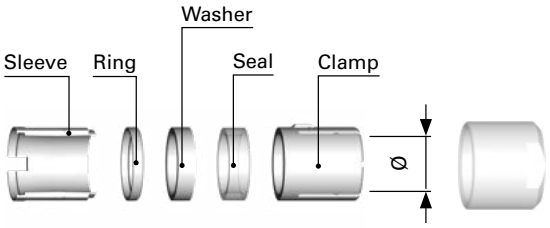
Unshielded, one-piece cable clamp.



Cable Ø range	Collet Ø	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.



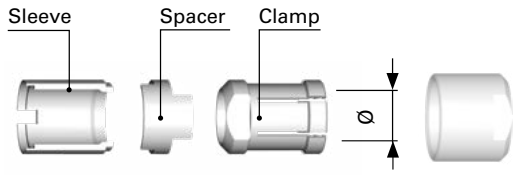
Cable Ø range	Collet Ø	Cable clamp set[1)]
2.2 - 2.7	2.7	E3 1031.2/2.7
2.7 - 3.2	3.2	E3 1031.2/3.2
3.2 - 3.7	3.7	E3 1031.2/3.7
3.7 - 4.2	4.2	E3 1031.2/4.2
4.2 - 4.7	4.7	E3 1031.2/4.7
4.7 - 5.2	5.2	E3 1031.2/5.2
5.2 - 5.7	5.7	E3 1031.2/5.7
5.7 - 6.2	6.2	E3 1031.2/6.2
6.2 - 6.7	6.7	E3 1031.2/6.7

[1)] For ordering information see page B 2-43.

104 SIZE

S
SHIELDED

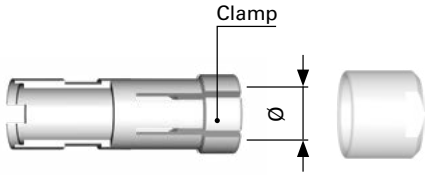
Shielded cable clamp with with sleeve, spacer and clamp.



Cable Ø range	Collet Ø	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

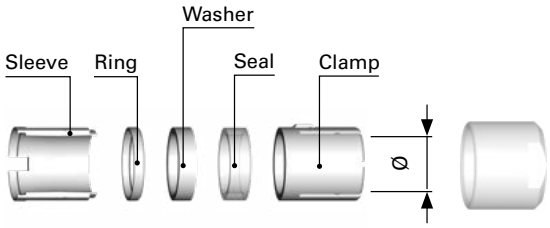
Unshielded, one-piece cable clamp.



Cable Ø range	Collet Ø	Cable clamp set [1] PEEK or PBT insulator
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 Ø range	Collet Ø	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

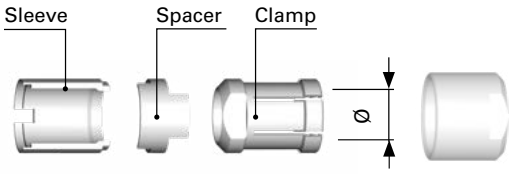
[1] For ordering information see page B 2-43.

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

105 SIZE

S
SHIELDED

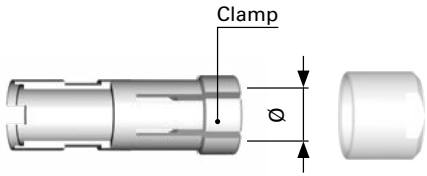
Shielded cable clamp with sleeve, spacer and clamp.



Cable Ø 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

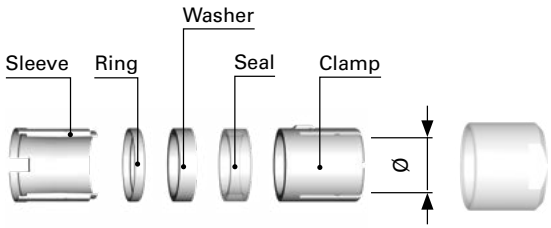
Unshielded, one-piece cable clamp.



Cable Ø 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.



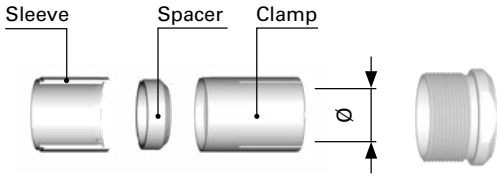
Cable Ø range	Collet Ø	Cable clamp set [1] PEEK or PBT insulator
3.2 - 4.2	4.2	E31 105.2/4.2 + B
4.2 - 5.2	5.2	E31 105.2/5.2 + B
5.2 - 6.2	6.2	E31 105.2/6.2 + B
6.2 - 7.2	7.2	E31 105.2/7.2 + B
7.2 - 8.2	8.2	E31 105.2/8.2 + B
8.2 - 9.2	9.2	E31 105.2/9.2 + B
9.2 - 10.0	10.0	E31 105.2/10.0 + B
10.0 - 10.7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

[1] For ordering information see page B 2-43.

106 SIZE

S
SHIELDED

Shielded cable clamp with sleeve, spacer and clamp.



Cable Ø 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

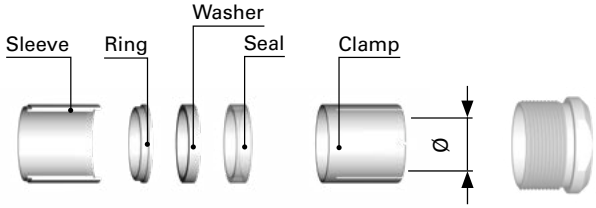
Cable Ø range	Collet Ø	Cable clamp set [1] PTFE insulator	
		Standard	DKBE long housings
9.2 - 10.2	10.2	E3 106.1/10.2	E3 106.3/10.2
10.2 - 11.2	11.2	E3 106.1/11.2	E3 106.3/11.2
11.2 - 12.2	12.2	E3 106.1/12.2	E3 106.3/12.2
12.2 -13.2	13.2	E3 106.1/13.2	E3 106.3/13.2
13.2 - 14.2	14.2	E3 106.1/14.2	E3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

Cable Ø 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 Ø 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 Ø 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 Ø 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

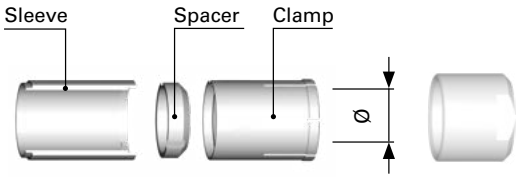
[1] For ordering information see page B 2-43.

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

107 SIZE

S
SHIELDED

Shielded cable clamp with sleeve, spacer and clamp.



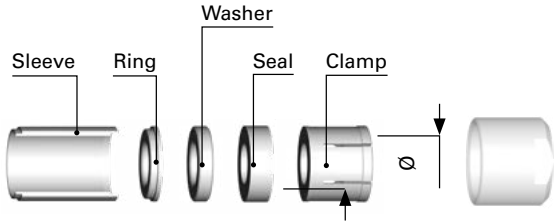
Cable Ø range	Collet Ø	Cable clamp set [1] PTFE insulator
5.7 - 7.2	7.2	E3 107.1/7.2
7.2 - 8.2	8.2	E3 107.1/8.2
8.2 - 9.2	9.2	E3 107.1/9.2
9.2 - 10.2	10.2	E3 107.1/10.2
10.2 - 11.2	11.2	E3 107.1/11.2

Cable Ø 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 Ø 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 Ø 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

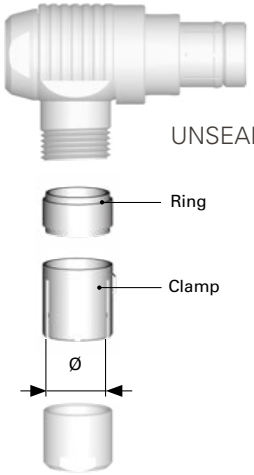
Cable Ø range	Collet Ø	Cable clamp set [1] PTFE insulator
11.2 - 12.2	12.2	E3 107.2/12.2
12.2 -13.2	13.2	E3 107.2/13.2
13.2 - 14.2	14.2	E3 107.2/14.2
14.2 - 15.2	15.2	E3 107.2/15.2
15.2 - 16.2	16.2	E3 107.2/16.2

Cable Ø 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

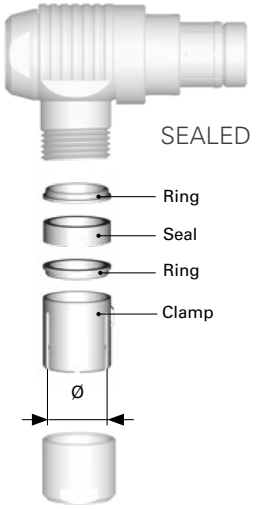
[1] For ordering information see page B 2-43.

WSO 102, 103, 1031, 104 & 105 SIZE

S/U
SHIELDED/UNSHIELDED



E
ENVIRONMENTAL



Size	Cable Ø 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	-

Size	Cable Ø 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	-

Size	Cable Ø 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

Size	Cable Ø 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 2-43.

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

B2-52 / B2-62

Table of contents

MULTIPOLE
HIGH VOLTAGE

PLUGS

CABLE MOUNTED

RECEPTACLES

PANEL MOUNTED

FOR ALL MULTIPOLE HIGH VOLTAGE

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		S	SA	SV	References to detailed information
Protection	Unsealed (IP50)	●	●	●	Sealing categories, page A-6
	Sealed up to IP68	1)	1)	1)	
Locking system	Friction				Locking systems, page A-5
	Push-pull	●	●	●	
	Quick-release				
	Lanyard		●		
	Tamperproof			●	
Contacts	Crimp				Electrical & contact configurations, page B 2-57
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B 2-35
	Anthracite	●	●		
Design	Shortened body				Body styles, chapter B 1-2
	Right-angle				
Cabling	Cable clamp sets	●	●	●	Insulating cable clamps, B 2-59
	Overmoldable				
	Heat shrinkable				
Accessories	Cable bend reliefs	●	●	●	Accessories, section B 6-2
	Protective sleeves	●			
	Sealing caps	●	●	●	
Size	102 Size				Dimensions, page B 2-52
	103 Size				
	1031 Size				
	104 Size	●	●	●	For more Information visit our website **www.fischerconnectors.com/technical**
	105 Size	●	●	●	
	106 Size	●		●	
	107 Size	●		●	

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

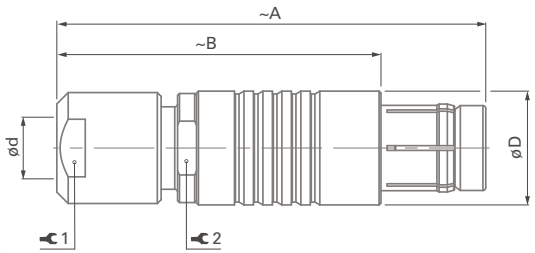
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S

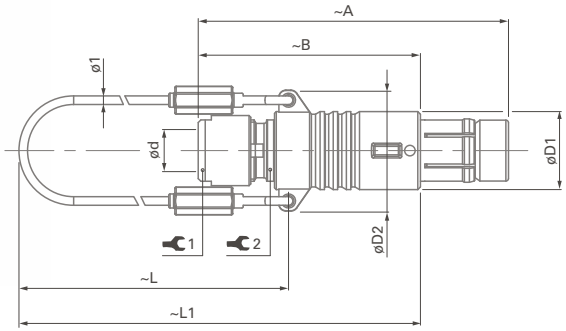
BODY STYLE



Size	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



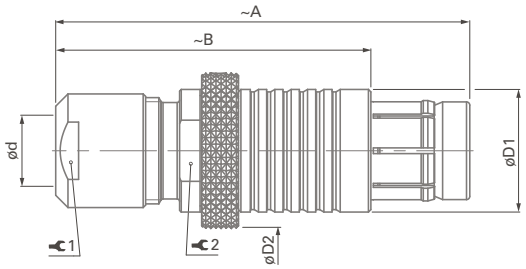
Size	A	B	D1	D2	L	L1	d *max*	1	Torque 1 *[Nm]*	2
104	50	38	15	21	65	83	8.6	12	2.0	13
105	62	47	18	25	70	96	10.5	15	3.5	16
106	Please contact us for additional information									
107										

PLUGS

CABLE
MOUNTED

SV

BODY STYLE



Size	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.

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

RECEPTACLES

PANEL MOUNTED



Body style		D	DEE	DBEE	References to detailed information
Protection	Unsealed (IP50)	●			Sealing categories, page A-6
	Sealed up to IP68[1)]		●	●	
	Hermetic[1)]		●	●	
Contacts	Crimp				Electrical & contact configurations, page B 2-57
	Solder	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B 2-35
	Anthracite	●	●	●	
Design	Right-angle				Body styles, chapter B 1-3
	Flush	●	●		
	Front-projecting			●	
	Bulkhead feedthrough				
Assembly	Front-mounting	●	●	●	
	Rear-mounting				
Accessories	Sealing caps	●	●	●	Accessories, section B 6-2
	Spacers		●		
	Color-coded washers	●			
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Size				Technical dimensions, page B 2-55 For more Information visit our website **www.fischerconnectors.com/technical**
	103 Size				
	1031 Size				
	104 Size	●	●	●	
	105 Size	●	●	●	
	106 Size	●	●	●	
	107 Size	●	●	●	

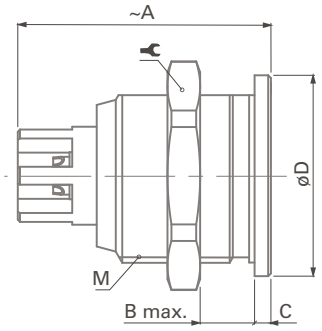
[1)] Please contact us.

RECEPTACLES

PANEL
MOUNTED

D

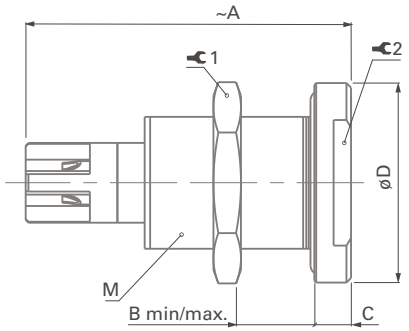
BODY STYLE



Size	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

DEE

BODY STYLE



Size	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	19.3/24	5	41	32x1	TX00.106	15	–
107	64	19.5/22	5	45	35x1	TX00.107	16	–

Receptacles of 106 and 107 Sizes are supplied with slotted nuts.
For nut dimensions see Accessories section B 6-2.
For wrenches see section Tooling section, page B 6-19.
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.

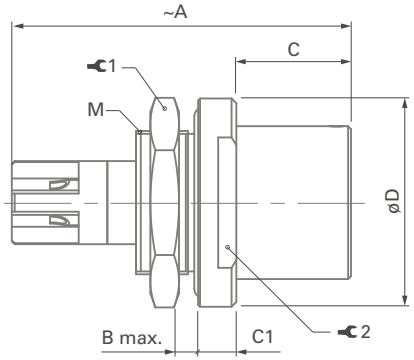
Other connector styles and contact configurations are available on request.

RECEPTACLES

PANEL
MOUNTED

DBEE

BODY STYLE



Size	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

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.

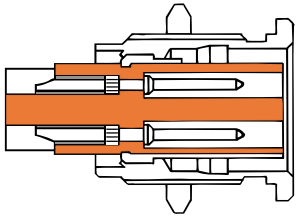
This version should be used when the voltage is sourced from the plug.

Protected contacts are usually female contacts recessed in the insulator.

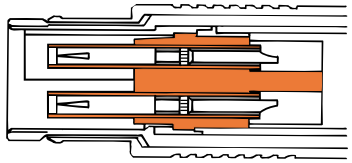
For Multipole High Voltage connectors, however, it is safer to recess the male contacts. In these cases, the plug type "A" is equipped with female contacts and the receptacle with protected male contacts.

EXAMPLE

receptacle type "A"
D 105 A039



plug type "A"
S 105 A039



104, 105, 106 & 107 SIZE

● = 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]*
								AC rms		DC		
			Solder	Crimp				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	7.0	7.0	10.5	10.5	12
107 A **034**[2][3][10]		7	●		PTFE	2.0	2.0	6.5	6.0	12.0	11.0	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 A-12 for details.

[2] For clamp sets selection see page B 2-50.

[3] See Tooling section, page B 6-24, 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.

INSULATED CABLE CLAMP SETS

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 ø should be added to the connector part number separated by **ø** (select the collet ø according to the cable clamping range) and followed by-**UI** (Unshielded Insulated).		
Example		
S 104 A062-130 **ø 6.6-UI**		

104 size 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 CLAMP SETS

Size	Multipole high voltage	Mixed high voltage	Mixed coax
104	104 A/Z 062	104 A/Z 083	104 A 078
			104 A 093
105	105 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 A/Z 013	106 A 014	
107	Insulating cable clamps set, not available. See page B2-50.		

Size	Cable dia. range	Collet Ø
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

Size	Cable dia. range	Collet Ø
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. See page B2-50	

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

Notes

B3

CHAPTER

FISCHER CORE SERIES **BRASS**

COAX

B3-2 / B3-27

COAX
LOW VOLTAGE

Table of contents

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		S	SE[1)]	SC	SCE[1)]	SOV	SOVE[1)]	SA	SAE[1)]	SV[1)]	SVE	WSO	References to detailed information
Protection	Unsealed (IP50)	●		●		●		●		●		●	Sealing categories, page A-6
	Sealed up to IP68		●		●		●		●		●	●	
Locking system	Friction					●	●						Locking systems, page A-5
	Push-pull	●	●					●	●	●	●	●	
	Quick-release			●	●								
	Lanyard							●	●				
	Tamperproof									●	●		
Contacts	Crimp												Electrical & contact configurations, page B 3-22
	Solder	●	●	●	●	●	●	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	●	●	●	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	●	●	●	●	●			●	
Design	Shortened body												Body styles, page B 1-2
	Right-angle											●	
Cabling	Cable clamp sets	●	●	●	●	●	●	●	●	●	●	●	Cable clamp set included in product except for WSO, page B 2-39
	Overmoldable												
	Heat shrinkable												
Accessories	Cable bend reliefs	●	●	●	●	●	●	●	●	●	●	●	Accessories, page B 6-2
	Protective sleeves	●	●	●	●	●	●						
	Sealing caps	●	●	●	●	●	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	●	●	●	●	●	Technical dimensions, page B 3-4 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	●	●	●	●	
	1031 Size												
	104 Size	●	●	●	●	●	●	●	●	●	●	●	
	105 Size	●	●	●	●	●	●	●	●	●	●	●	
	106 Size												
	107 Size												

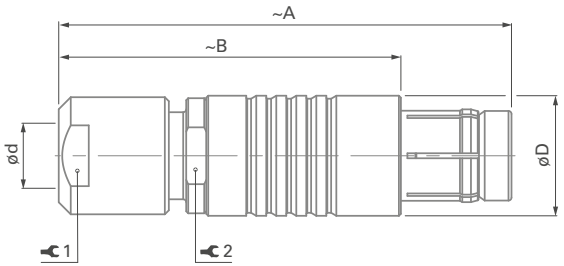
[1)] Environmental cable clamp set included.

PLUGS

CABLE
MOUNTED

S/SE/SC/SCE

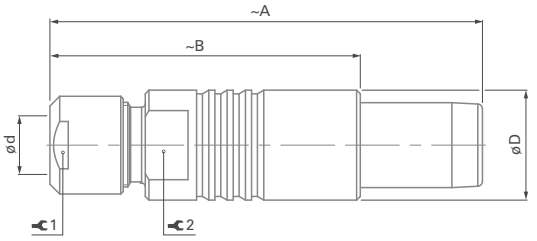
BODY STYLES



Size	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
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

SOV/SOVE

BODY STYLE



Size	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
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

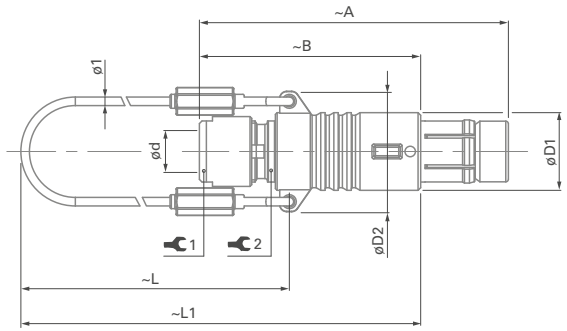
Torque *[Nm]* are recommended values that may be influenced by the characteristics of the cable jacket.
Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

PLUGS

CABLE
MOUNTED

SA/SAE

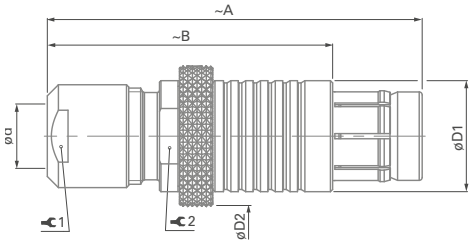
BODY STYLE



Size	A	B	D1	D2	L	L1	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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/SVE

BODY STYLE



Size	A	B	D1	D2	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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.

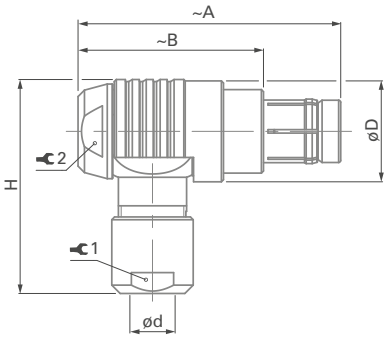
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

WSO

BODY STYLE



Size	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
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

Remark: Layout 102 A017, 104 A002, 104 A060, 105 A090, 105 Z090 are not available in WSO body style.

RECEPTACLES

CABLE
MOUNTED

Body style		K	KE[1)]	References to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, page A-6
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & contact configurations, page B3-22
	Solder	●	●	
Housing	Natural chrome	●	●	Options, page B3-26 Body styles, page B1-3
	Anthracite	●	●	
	Shortened body			
Cabling	Cable clamp sets	●	●	Cable clamp set included in product, pages B2-39
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, page B 6-2
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	102 Size	●	●	Technical dimensions, page B3-8 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	
	1031 Size			
	104 Size	●	●	
	105 Size	●	●	
	106 Size			
	107 Size			

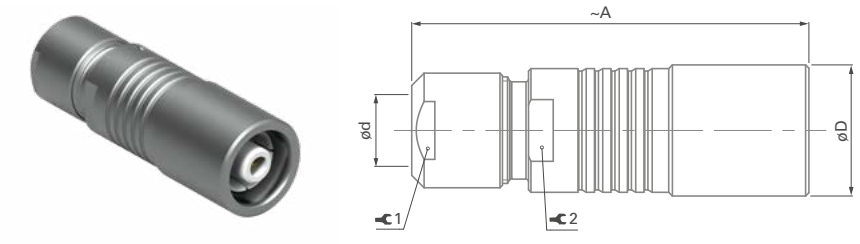
[1)] Environmental cable clamp set included.

RECEPTACLES

CABLE
MOUNTED

K/KE

BODY STYLES



Size	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	References to detailed information
Protection	Unsealed (IP50)	●			●			●	Sealing categories, page A-6
	Sealed up to IP68		●	●		●	●		
	Hermetic			●			●		
Contacts	Crimp								Electrical & contact configurations, page B3-22
	Solder	●	●	●	●	●	●	●	
	PCB								
Housing color	Natural chrome	●	●	●	●	●	●	●	Options, page B3-26
	Anthracite	●	●	●	●	●	●	●	
Design	Right-angle								Body style selection, page B1-3
	Flush	●	●	●				●	
	Front projecting				●	●	●		
	Bulkhead feedthrough								
Assembly	Front-mounting	●	●	●	●	●	●		
	Rear-mounting							●	
Accessories	Sealing caps	●	●	●	●	●	●	●	Accessories, page B6-2
	Spacers		●	●					
	Color-coded washers	●			●			●	
	Grounding washers	●	●	●	●	●	●	●	
	Locking washers	●	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	●	Technical dimensions, page B3-11 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	
	1031 Size								
	104 Size	●	●	●	●	●	●	●	
	105 Size	●	●	●	●	●	●	●	
	106 Size								
	107 Size								

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

RECEPTACLES

PANEL MOUNTED

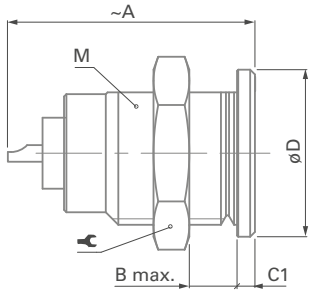



Body style		DBPU	DBPE	DBPLU	DBPLE	DG	WDE	References to detailed information
Protection	Unsealed (IP50)					●		Sealing categories, page A-6
	Sealed up to IP68	●	●	●	●		●	
	Hermetic		●		●		●	
Contacts	Crimp							Electrical & contact configurations, page B 3-22
	Solder	●	●	●	●	●		
	PCB							
Housing color	Natural chrome	●	●	●	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	●	●		
Design	Right-angle							Body styles, page B 1-3
	Flush	●	●			●	●	
	Front projecting			●	●	●	●	
	Bulkhead feedthrough						●	
Assembly	Front-mounting					●	●	
	Rear-mounting	●	●	●	●	●		
Accessories	Sealing caps	●	●	●	●	●	●	Accessories, page B 6-2
	Spacers						●	
	Color-coded washers					●		
	Grounding washers	●	●			●		
	Locking washers	●	●	●	●	●		
Size	102 Size	●	●	●	●	●	●	Technical dimensions, page B 3-13 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	
	1031 Size							
	104 Size	●	●	●	●	●	●	
	105 Size	●	●	●	●	●	●	
	106 Size							
	107 Size							

RECEPTACLES

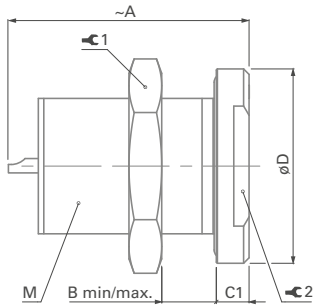
PANEL
MOUNTED

D
BODY STYLE



Size	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

DEU/DEE
BODY STYLES



Size	A	B min/max.	C1	D	M	1	Torque 1 *[Nm]*	2
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	-

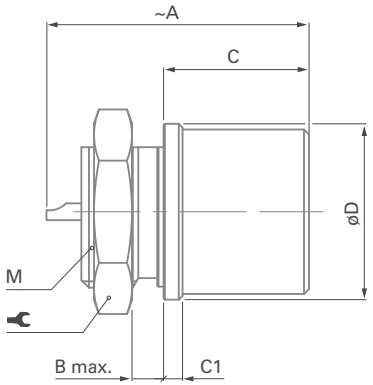
Torque *[Nm]* are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests must be conducted to evaluate the exact values.

RECEPTACLES

PANEL
MOUNTED

DB

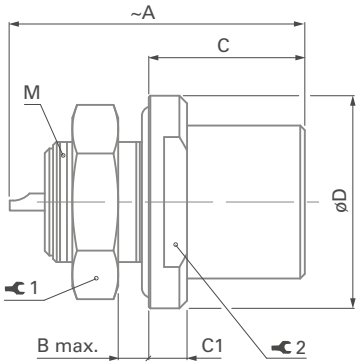
BODY STYLE



Size	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

DBEU/DBEE

BODY STYLES



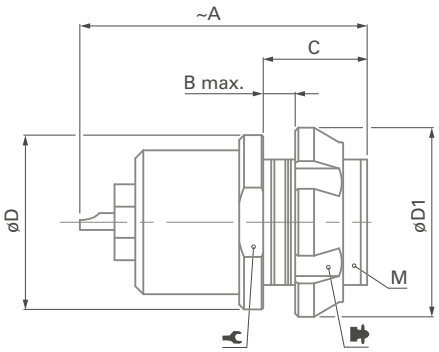
Size	A	B max.	C	C1	D	M	1	Torque 1 *[Nm]*	2
102	20	3.5	10.2	2.5	14	9x0.5	11	1.3	-
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14
104	30	3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	5.0	19.0	4.0	27	18x1	22	6.0	22

RECEPTACLES

PANEL
MOUNTED

DBP

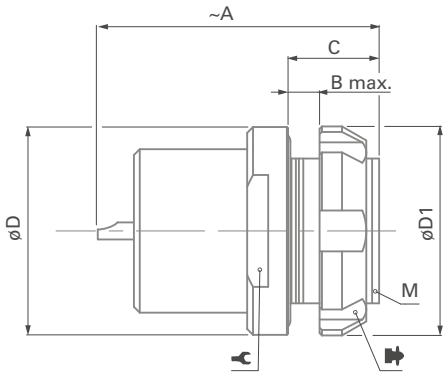
BODY STYLE



Size	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

DBPU/DBPE

BODY STYLES



Size	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	4.0	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 section, page B 6-20 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.

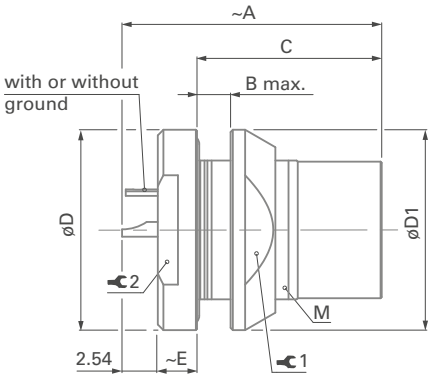
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL MOUNTED

DBPLU/DBPLE

BODY STYLES

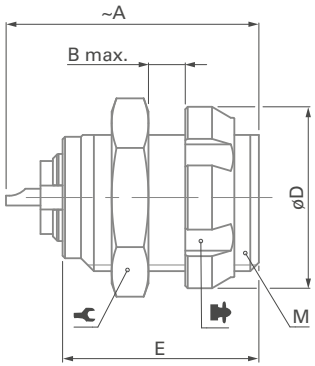


Size	A	B max.	C	D	D1	M	1	Torque 1 *[Nm]*	2
102	21	4.5	14.2	14	13	10x0.5	11	1.5	11
103	24	5.0	16.5	18	18	14x1	15	3.0	15
104	27	6.5	18.5	22	20	16x1	17	4.5	17
105	31	8.0	22.5	27	25	20x1	22	6.5	22

[1] Assembly tool for decorative slotted nut, see Tooling section, page B 6-20, for details.

DG

BODY STYLE



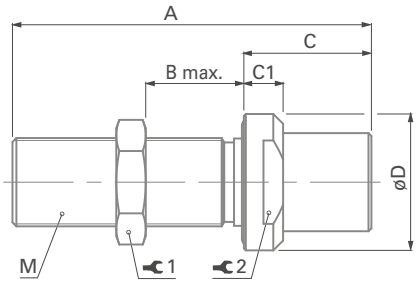
Size	A	B max.	D	E	M		[1]	Torque *[Nm]*
102	20	6	12	14	9x0.5	11	TC00.000	1.3
103	23	7	15	15	12x1	14	TF00.001	2.5
104	26	9	19	18	15x1	17	TK00.000	4.0
105	30	15	23	24	18x1	22	TP00.011	6.0

RECEPTACLES

PANEL
MOUNTED

WDE FOR 102, 103 & 104 SIZE

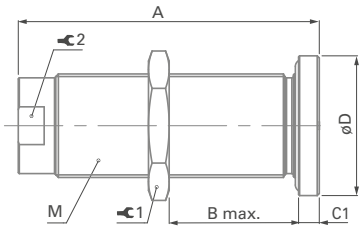
BODY STYLE



Size	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

WDE FOR 105 SIZE

BODY STYLE



Size	A	B max	C	C1	D	M	1	Torque 1 *[Nm]*	2
105	62	47	-	4	27	20x1	22	6.5	-

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-10.

Dimension "B max" specifies the maximum panel thickness.

PLUGS

PANEL MOUNTED

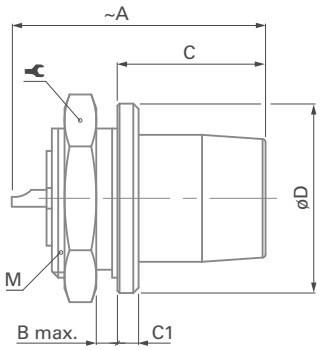
Body style		SF	SFU	SFE	SFPU	SFPE	References to detailed information
Protection	Unsealed (IP50)	●					Sealing categories, page A-6
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp						Electrical & contact configurations, page B 3-22
	Solder	●	●	●	●	●	
	PCB						
Housing color	Natural chrome	●	●	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	●	●	
Assembly	Front-mounting	●	●	●			Body styles, page B 1-2
	Rear-mounting				●	●	
Accessories	Sealing caps	●	●	●	●	●	Accessories, page B 6-2
	Spacers						
	Color-coded washers	●					
	Insulating washers	●					
	Grounding washers	●	●	●			
	Locking washers	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	Technical dimensions, page B 3-17 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	
	1031 Size						
	104 Size	●	●	●	●	●	
	105 Size	●	●	●	●	●	
	106 Size						
	107 Size						

PLUGS

PANEL
MOUNTED

SF

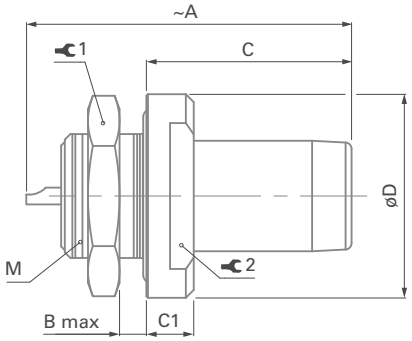
BODY STYLE



Size	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

SFU/SFE

BODY STYLES



Size	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	-

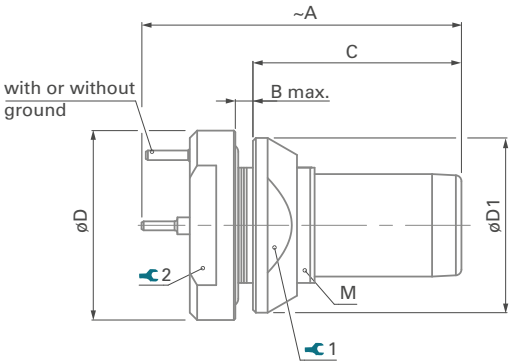
Torque *[Nm]* are recommended values that may be influenced by the quality of the panel surface under the nut.
Tests must be conducted to evaluate the exact values.

PLUGS

PANEL
MOUNTED

SFPU/SFPE

BODY STYLES



Size	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

RECEPTACLES

PANEL
MOUNTED CABLE

Body style		DKBE[1]	DK	DKE[1]	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, page A-6
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & contact configurations, page B 3-22
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	
Design	Flush		●		Body styles, page B 1-3
	Front-projecting	●		●	
Assembly	Panel-mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable mounted	●	●	●	
	Cable clamp sets	●	●	●	Cable clamp set included in product, pages B2-39
Accessories	Cable bend reliefs	●	●	●	Accessories, page B 6-2
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●		
	Insulating washers				
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Size	●	●	●	Technical dimensions, page B 3-20 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	
	1031 Size				
	104 Size	●	●	●	
	105 Size	●	●	●	
	106 Size				
	107 Size				

[1] Environmental cable clamp set included.

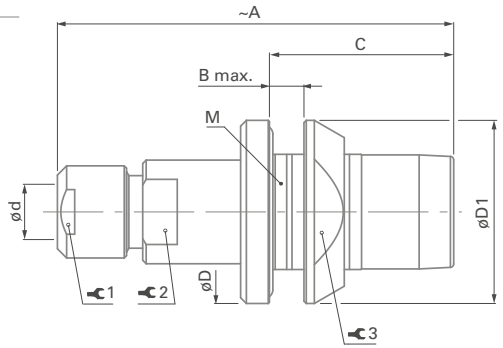
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED CABLE

DKBE

BODY STYLE

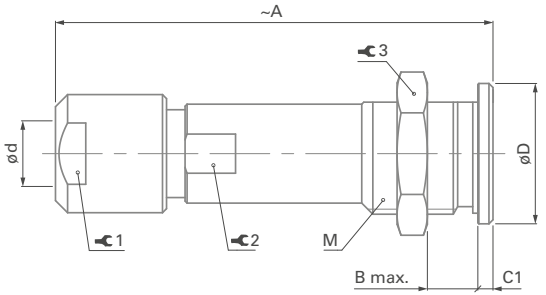


Size	A	B max.	C	D	d *max*	D1	M
102	35	3.5	16.0	16	4.3	16	12x1
103	43	4.0	19.0	19	6.2	20	15x1
104	50	5.0	22.5	23	8.7	23	18x1
105	60	5.0	26.0	28	10.7	27	22x1

Size	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

DK

BODY STYLE



Size	A	B max.	C1	D	d *max*	M
102	35	9	1.5	11	4.7	9x0.5
103 [1]	44	10	1.5	14	6.7	12x1
104	50	11	2.0	19	8.7	15x1
105 [1]	60	16	2.0	22	10.7	18x1

Size	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

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.

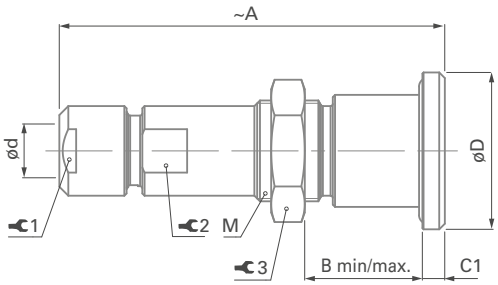
[1] Cable assembly operation possible only after housing mounted on panel

RECEPTACLES

PANEL
MOUNTED CABLE

DKE FOR 102 & 103 SIZE

BODY STYLES

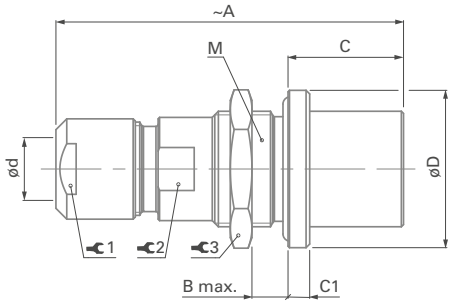


Size	A	B min/max.	C	C1	D	d *max*	M
102	35	9/12	-	2	14	4.3	9x0.5
103	45	9/14	-	3	17	6.2	14x1

Size	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 SIZE

BODY STYLES



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

Size	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

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

102 & 103 SIZE

● = 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]*
									AC r.m.s.		DC		
		Solder [5]	Crimp						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

[1] See list of recommended cables on page B 3-24.

[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 A-12 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].

104 & 105 SIZE

● = 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]*
									AC r.m.s.		DC		
		Solder [5]	Crimp						Contact to body	Contact to contact	Contact to body	Contact to contact	
104 A **002**		●		PTFE	6/7	1.6	1.9	75	4.8	-	6.8	-	15
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 3-24.

[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 A-12 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	
	RG-174/U	50±2	7 x 0.16	AcCu	0.48	1.5	PE	2.0	CuSn	2.6	PVC	50-2-1
	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 mm²	[1]	18 x 0.1	CuSn	0.5	1.1	PVC	1.6	CuSn	2.4	PVC	
	LifYCY 1 x 0.04 mm²	[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 8218	75±3	7 x 0.14	AcCu	0.43	2.54	PE	3.0	CuSn	3.81	PVC	Belden(USA)
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 mm²	[1]	14 x 0.15	CuSn	0.66	1.3	PVC	1.8	CuSn	2.6	PVC	
	LiYCY 1 x 0.38 mm²	[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 mm²	[1]	16 x 0.2	CuSn	0.95	1.8	PVC	2.4	CuSn	3.1	PVC	
	LiYCY 1 x 0.75 mm²	[1]	24 x 0.2	CuSn	1.2	2.0	PVC	2.6	CuSn	3.2	PVC	
	LifYCY 1 x 0.50 mm²	[2]	256 x 0.05	CuSn	1.0	2.0	PVC	2.6	CuSn	3.2	PVC	
	LifYCY 1 x 0.75 mm²	[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	
	RG-223/U	50±2	1 x 0.89	CuAg	0.89	2.95	PE	4.2	2x CuAg	5.4	PVC	50-3-5
	RG-302/U	75±3	1 x 0.64	AcCuAg	0.64	3.7	PTFE	4.4	CuAg	5.1	FEP	75-4-6

[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	Fluorethylenepropylene	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		

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	
7	RG-212/U	50±2	1 x 1.35	CuAg	1.35	4.7	PE	6.2	2x CuAg	8.5	PVC	
	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	Suhner (CH)
	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	
	RG-165/U	50±2	7 x 0.82	CuAg	2.46	7.25	PTFE	8.0	CuAg	10.4	PTFE	50-7-8
	RG-213/U	50±2	7 x 0.75	Cu	2.25	7.25	PE	8.2	Cu	10.3	PVC	50-7-1
	RG-11A/U	75±3	7 x 0.4	CuSn	1.2	7.25	PTFE	8.2	Cu	10.3	PVC	75-7-1
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	
	RG-218/U	50±2	1 x 5.0	Cu	5.0	17.3	PE	18.6	Cu	22.1	PVC	50-17-1
	RG-164/U	75±3	1 x 2.65	Cu	2.65	17.3	PE	18.6	Cu	22.1	PVC	75-17-1
11	RG-403/U Triaxal	50±2	7 x 0.1	AcCuAg	2. screen and jacket :			1.3 2.4	CuAg CuAg	1.9 3.1	FEP FEP	Habia (UK)
	RG-178 Type Triax	50±2	7 x 0.1	AcCuAg	2. screen and jacket :			1.8 2.9	CuAg CuAg	2.6 3.6	FEP FEP	Filotex (F)
	SUHNER G 02332 Triaxial	50±2	7 x 0.15	Cu	2. screen and jacket :			2.0 3.0	Cu Cu	2.55 4.25	PVC PVC	Suhner (CH)
12	BELDEN 9222 RG-58 Type Triax	50±2	7 x 0.32	CuSn	2. screen and jacket :			3.5 5.2	CuSn CuSn	4.65 6.1	PE PVC	Belden (USA)

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

COAX LOW & HIGH VOLTAGE, TRIAX & MIXED COAX & MIXED HIGH VOLTAGE

1	**Housing color** Which housing color do you need?	**NATURAL CHROME** **without guide mark**	**ANTHRACITE** **without guide mark**
2	**Contact block material**	**PTFE**	**PTFE**
3	**Contact type**	**Solder**	**Solder**
4	**Keying code** None	-600	-AN700

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	Decorative black slotted nut
	D	Decorative slotted nut
	F	Decorative nut (with 2 flats)
	C	Decorative anthracite slotted nut

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 -AN709EGD
Anthracite 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

B3-28 / B3-34

COAX
HIGH VOLTAGE

Table of contents

PLUGS

RECEPTACLES

FOR ALL COAX HIGH VOLTAGE

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		S	SE[1)]	SV	SVE[1)]	References to detailed information
Protection	Unsealed (IP50)	●		●		Sealing categories, page A-6
	Sealed up to IP68		●		●	
Locking system	None					Locking systems, page A-5
	Push-pull	●	●	●	●	
	Quick-release					
	Lanyard					
	Tamperproof			●	●	
Contacts	Crimp					Electrical & contact configurations, page B 3-34
	Solder	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	Options, page B 3-26
	Anthracite	●	●			
Design	Shortened body					Body styles, page B 1-2
	Right-angle					
Cabling	Cable clamp sets	●	●	●	●	Cable clamp set included in product, page B 2-39
	Overmoldable					
	Heat shrinkable					
Accessories	Cable bend reliefs	●	●	●	●	Accessories, page B 6-2
	Protective sleeves	●	●			
	Sealing caps	●	●	●	●	
Size	102 Size	●	●	●	●	Technical dimensions, page B 3-30 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	
	1031 Size					
	104 Size	●	●	●	●	
	105 Size	●	●	●	●	
	106 Size					
	107 Size	●	●	●	●	

[1)] Environmental cable clamp set included.

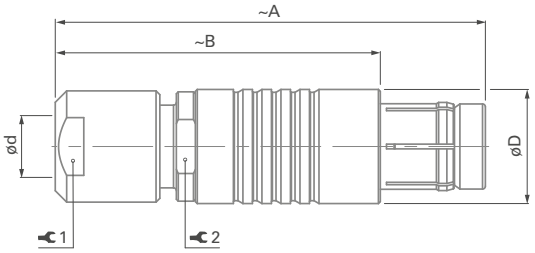
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

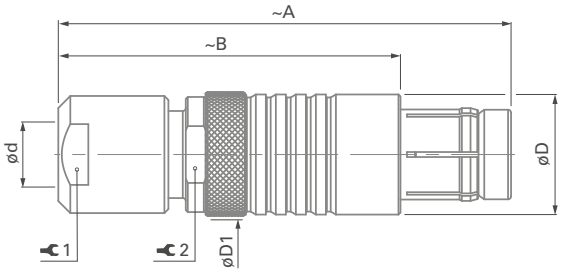
S/SE

BODY STYLES



SV/SVE

BODY STYLES



FOR S/SE & SV/SVE

Type	A	B	D	D1	d *max*		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

[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 size.

[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 6-24.

Type	A	B	D	D1	d *max*		1	Torque 1 *[Nm]*	2
					Unsealed	Sealed			
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 3-24. 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 2-39. 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	References to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, page A-6
	Sealed up to IP68		●	
	Hermetic		●	
Contacts	Crimp			Electrical & contact configurations, page B 3-34
	Solder	●	●	
	PCB			
Housing color	Natural chrome	●	●	Options, page B 3-26
	Anthracite	●	●	
Design	Right-angle			Body styles, page B 1-3
	Flush	●	●	
	Front-projecting			
	Bulkhead feedthrough			
Assembly	Front-mounting	●	●	
	Rear-mounting			
Accessories	Sealing caps	●	●	Accessories, page B 6-2
	Spacers		●	
	Color-coded washers	●		
	Grounding washers	●	●	
	Locking washers	●	●	
Size	102 Size	●	●	Technical dimensions, page B 3-32 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	
	1031 Size			
	104 Size	●	●	
	105 Size	●	●	
	106 Size			
	107 Size	●	●	

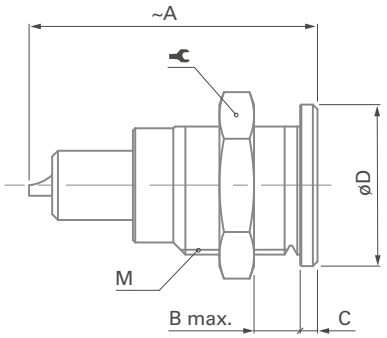
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED

D

BODY STYLE



Types	A	B max.	C	D	M		Torque *[Nm]*
102 A/Z **018**	24	8	1.5	11	9x0.5	11	1.3
102 A/Z **025**	45	7	2.0	11	9x0.5	11	1.3
103 A/Z **023**	27	7	1.5	14	12x1	14	2.5
104 A/Z **010**	35	10	2.5	19	15x1	17	4.0
105 A/Z **004**	46	15	2.0	22	18x1	22	6.0
105 A/Z **005** [1]	46	15	2.0	22	18x1	22	6.0

Types	A	B max.	C	D	M		Torque *[Nm]*
105 A/Z[2] **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 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 A/Z **017**	89	18	4.0	40	35x1	TX00.107	16

[1] Also available with an optional micro switch.

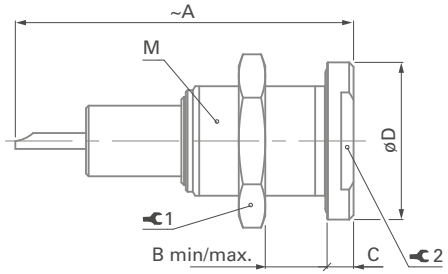
[2] For insertion of center contact which has to be assembled after wiring we recommend tool TP00.000, as shown on the Tooling section, page B 6-24.

RECEPTACLES

PANEL
MOUNTED

DEE

BODY STYLE



Types	A	B min/max.	C	D	M	1	Torque 1 *[Nm]*	2
102 A Z **018**	26	8/12	2	14	9x0.5	11	1.3	-
102 A Z **025**[1]	45	0.5/7	2	15	11x0.75	14	2.0	-
103 A Z **023**	39 38	0/12	3	18	14x1	17	3.0	14
104 A Z **010**	41 40	0/15	4	22	16x1	19	4.5	17

[1] Non standard dimension of panel cut-out: ø11.1

Types	A	B min/max.	C	D	M	1	Torque 1 *[Nm]*	2
105 A Z **005**[2]	46 50	10.5/18	4	27	20x1	25	6.5	-
105 A Z **049**[2]	72 74	10.5/30	4	27	20x1	25	6.5	-
107 A Z **003**	73	19.2/22	5	45	35x1	TX00.107	16	-
107 A Z **017**	90 95	19.2/22	5	45	35x1	TX00.107	16	-

[2] Also available with an optional micro switch.

Receptacles of 106 and 107 sizes are supplied with slotted nuts.
For wrenches see Tooling section page B 6-19.

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 SIZE

● = Standard ○ = Option

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

[1] See list of recommended cables on page B 3-24.

[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 A-12 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 B 6-23, for insertion tool of contact.

[6] Measured with S plug and D receptacle.

[7] PEEK is mainly used for hermetic connectors.

B4

CHAPTER

FISCHER CORE SERIES **BRASS**

TRIAX

B4-2 / B4-18

TRIAX

Table of contents

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		S	SC	SOV	SA	SV	WSO	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	Sealing categories, page A-6
	Sealed up to IP68	●	●	●	●	●	●	
Locking system	Friction			●				Locking systems, page A-5
	Push-pull	●			●	●	●	
	Quick-release		●					
	Lanyard				●			
	Tamperproof					●		
Contacts	Crimp							Electrical & contact configurations, page B 4-18
	Solder	●	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	●		●	
Design	Shortened body							Body styles, page B 1-2
	Right-angle						●	
Cabling	Cable clamp sets	●	●	●	●	●	●	Cable clamp set, page B 2-39
	Overmoldable							
	Heat shrinkable							
Accessories	Cable bend reliefs	●	●	●	●	●	●	Accessories, page B 6-2
	Protective sleeves	●	●	●				
	Sealing caps	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	Technical dimensions, page B 4-4
	103 Size	●	●	●	●	●	●	
	1031 Size							
	104 Size							For more information visit: **www.fischerconnectors.com/technical**
	105 Size							
	106 Size							
	107 Size							

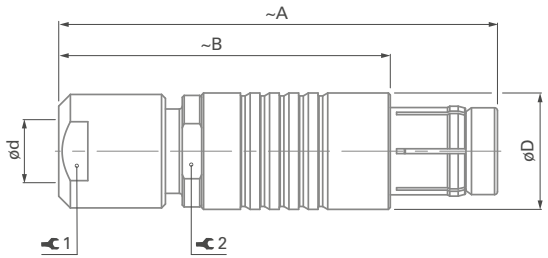
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S/SC

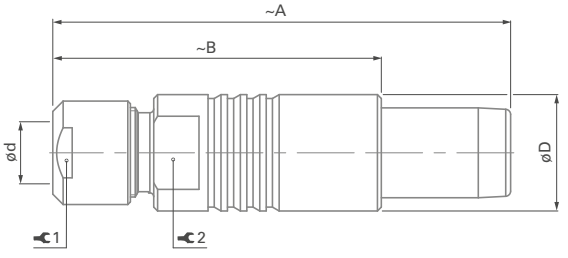
BODY STYLES



Size	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

SOV

BODY STYLE



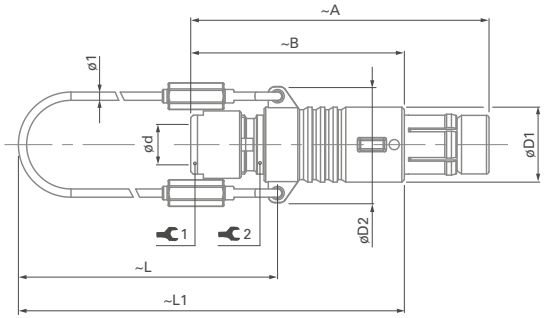
Size	A	B	D	d *max*		1	Torque 1 *[Nm]*	2
				Unsealed	Sealed			
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

PLUGS

CABLE
MOUNTED

SA

BODY STYLE

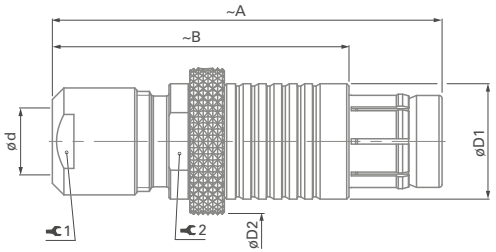


Size	A	B	D1	D2	L	L1	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10

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.

SV

BODY STYLE



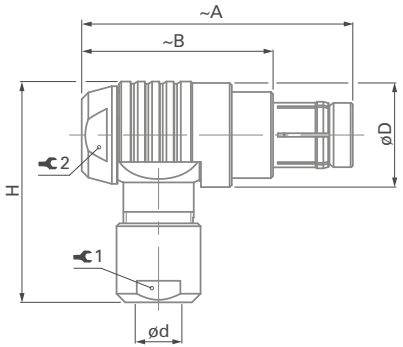
Size	A	B	D1	D2	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-

PLUGS

CABLE
MOUNTED

WSO

BODY STYLE



Size	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

RECEPTACLES

CABLE
MOUNTED

Body style		K	KE	References to detailed information
Protection	Unsealed (IP50)	●		Sealing categories, page A-6
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & contact configurations, page B 4-18
	Solder	●	●	
Housing	Natural chrome	●	●	Options, page B 3-26
	Anthracite	●	●	
	Shortened body			
Cabling	Cable clamp sets	●	●	Cable clamp set, page B 2-39
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, page B 6-2
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	102 Size	●	●	Technical dimensions, page B 4-8 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	
	1031 Size			
	104 Size			
	105 Size			
	106 Size			
	107 Size			

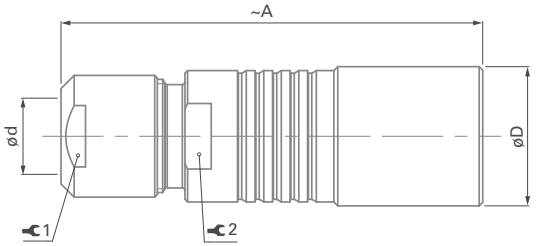
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

CABLE
MOUNTED

K/KE

BODY STYLES



Size	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.

RECEPTACLES

PANEL MOUNTED





Body style		D	DEU	DEE	DB	DBEU	DBEE	DG	References to detailed information
Protection	Unsealed (IP50)	●			●			●	Sealing categories, page A-6
	Sealed up to IP68		●	●		●	●		
	Hermetic			●			●		
Contacts	Crimp								Electrical & contact configurations, page B 4-18
	Solder	●	●	●	●	●	●	●	
	PCB								
Housing color	Natural chrome	●	●	●	●	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	●	●	●	●	
Design	Right-angle								Body styles, page B 1-3
	Flush	●	●	●				●	
	Front projecting				●	●	●	●	
	Bulkhead feedthrough								
Assembly	Front-mounting	●	●	●	●	●	●	●	
	Rear-mounting							●	
Accessories	Sealing caps	●	●	●	●	●	●	●	Accessories, page B 6-2
	Spacers		●	●					
	Color-coded washers	●			●			●	
	Insulating washers	●	●	●	●	●	●	●	
	Grounding washers	●	●	●	●	●	●	●	
	Locking washers	●	●	●	●	●	●	●	
Size	102 Size	●	●	●	●	●	●	●	Technical dimensions, page B 4-10 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	●	●	●	●	
	1031 Size								
	104 Size								
	105 Size								
	106 Size								
	107 Size								

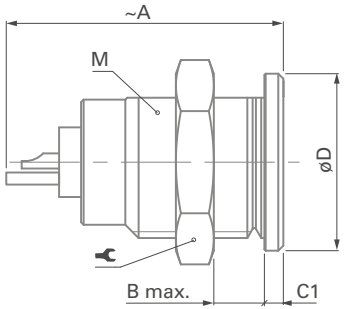
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED

D

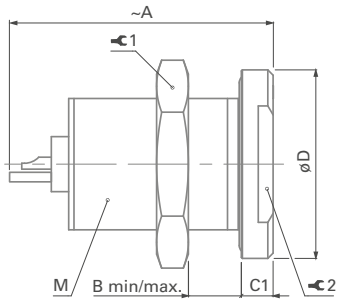
BODY STYLE



Size	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



Size	A	B min/max	C1	D	M	1	Torque1 *[Nm]*	2
102	20	8/10	2.5	14	9x0.5	11	1.3	11 [1)]
103	23	0/12	3.0	18	14x1	17	3.0	14

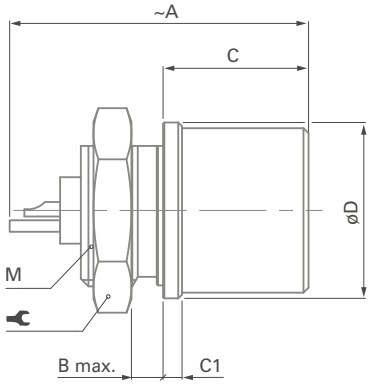
[1)]Not applicable for 102 A021.

RECEPTACLES

PANEL
MOUNTED

DB

BODY STYLE

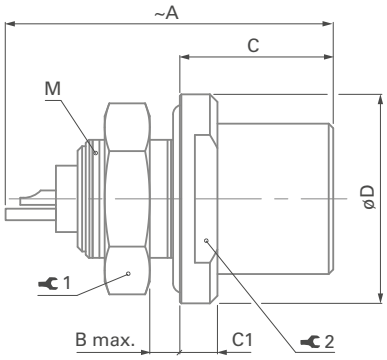


Size	A	B max.	C	C1	D	M		Torque *[Nm]*
102	18	3	11.0	1.0	11	9x0.5	11	1.3
103	21	4	11.5	1.5	14	12x1	14	2.5

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.

DBEU/DBEE

BODY STYLES



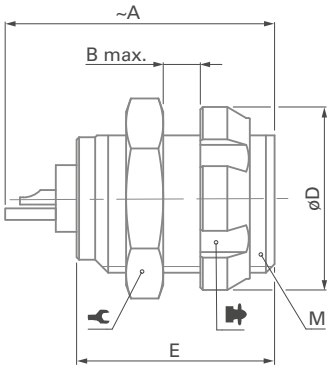
Size	A	B max.	C	C1	D	M	1	Torque 1 *[Nm]*	2
102	20	3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	4.0	13.0	3.0	18	14x1	17	3.0	14

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

RECEPTACLES

PANEL
MOUNTED

DG
BODY STYLE



Size	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

PLUGS

PANEL MOUNTED

Body style		SF	SFU	SFE	References to detailed information
Protection	Unsealed (IP50)	●			Sealing categories, page A-6
	Sealed up to IP68		●	●	
	Hermetic			●	
Contacts	Crimp				Electrical & contact configurations, page B4-18
	Solder	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B3-26
	Anthracite	●	●	●	
Assembly	Front-mounting	●	●	●	Body styles, page B 1-2
	Rear-mounting				
Accessories	Sealing caps	●	●	●	Accessories, page B 6-2
	Spacers				
	Color-coded washers	●			
	Insulating washers	●			
	Grounding washers	●			
	Locking washers	●			
Size	102 Size	●	●	●	Technical dimensions, page B4-14 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	
	1031 Size				
	104 Size				
	105 Size				
	106 Size				
	107 Size				

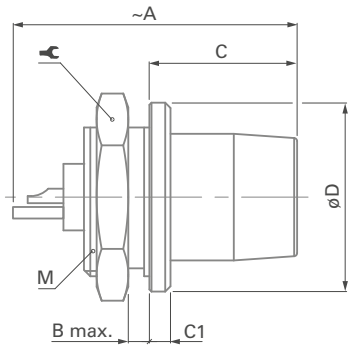
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

PANEL
MOUNTED

SF

BODY STYLE

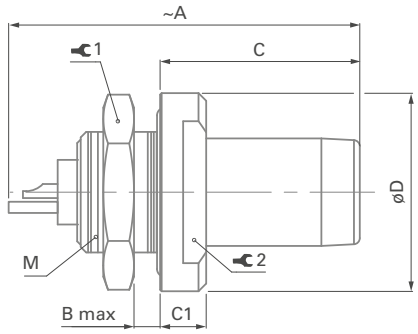


Size	A	B max.	C	C1	D	M		Torque *[Nm]*
102	20.0	4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	3.0	12.5	1.5	14	12x1	14	2.5

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.

SFU/SFE

BODY STYLES



Size	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

RECEPTACLES

PANEL
MOUNTED CABLE



Body style		DKBE	DK	DKE	Links to detailed information
Protection	Unsealed (IP50)		●		Sealing categories, page A-6
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & contact configurations, page B 4-18
	Solder	●	●	●	
Housing color	Natural chrome	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	
Design	Flush		●		Body styles, page B 1-3
	Front-projecting	●		●	
Assembly	Panel mounted	●	●	●	
	Front-mounting		●	●	
	Rear-mounting	●			
	Cable mounted	●	●	●	
	Cable clamp sets	●	●	●	Cable clamp sets, page B 2-39
Accessories	Cable bend reliefs	●	●	●	Accessories, page B 6-2
	Sealing caps	●	●	●	
	Spacers			●	
	Color-coded washers	●	●		
	Insulating washers				
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Size	●	●	●	Technical dimensions, page B 4-16 For more information visit: **www.fischerconnectors.com/technical**
	103 Size	●	●	●	
	1031 Size				
	104 Size				
	105 Size				
	106 Size				
	107 Size				

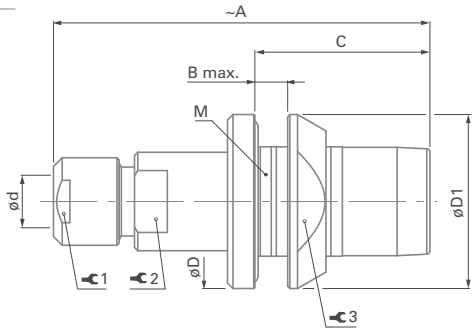
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED CABLE

DKBE

BODY STYLE



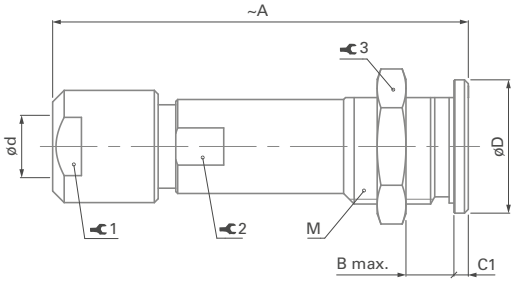
Size	A	B max.	C	D	d *max*	D1	M
102	35	3.5	16.0	16	4.3	16	12x1
103	43	4.0	19.0	19	6.2	20	15x1

Size	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

[1] Cable assembly operation possible only after housing mounted on panel

DK

BODY STYLE



Size	A	B max.	C1	D	d *max*	M
102	35	9	1.5	11	4.7	9x0.5
103 [1]	44	10	1.5	14	6.7	12x1

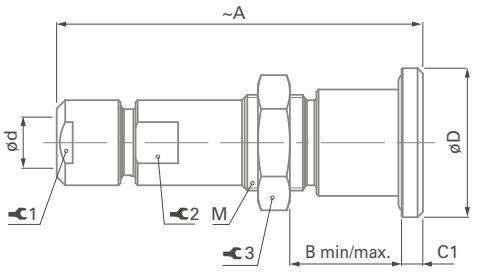
Size	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	7	0.6	-	11	1.3
103	10	1.0	9	14	2.5

RECEPTACLES

PANEL
MOUNTED CABLE

DKE

BODY STYLE



Size	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

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.

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

102 & 103 SIZE

● = 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]*
									AC r.m.s		DC		
		Solder	Crimp						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 3-24.

[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 A-12 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.

B5

CHAPTER

FISCHER CORE SERIES **BRASS**

MIXED

B5-2 / B5-15

MIXED COAX

Table of contents

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		S	SC	SOV	SA	SV	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	Sealing categories, page A-6
	Sealed up to IP68						
Locking system	Friction			●			Locking systems, A-5
	Push-pull	●			●	●	
	Quick-release		●				
	Lanyard				●		
	Tamperproof					●	
Contacts	Crimp (coax)	●	●	●	●	●	Electrical & contact configurations, page B5-15
	Solder (others)	●	●	●	●	●	
Housing color	Natural chrome	●	●	●	●	●	Options, page B3-26
	Anthracite	●	●	●	●		
Design	Shortened body						Body styles, page B1-2
	Right angle						
Cabling	Cable clamp sets	●	●	●	●	●	Insulating cable clamp sets, page B2-61
	Overmoldable						
	Heat shrinkable						
Accessories	Cable bend reliefs	●	●	●	●	●	Accessories, page B6-2
	Protective sleeves	●	●	●			
	Sealing caps	●	●	●	●	●	
Size	102 Size						Technical dimensions, page B5-4 For more information visit: **www.fischerconnectors.com/technical**
	103 Size						
	1031 Size						
	104 Size	●	●	●	●	●	
	105 Size	●	●	●	●	●	
	106 Size						
	107 Size						

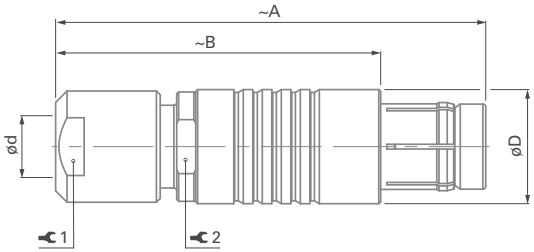
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S/SC

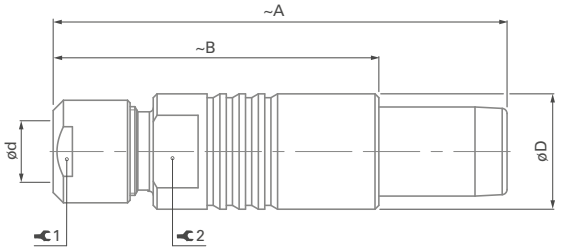
BODY STYLES



Size	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

SOV

BODY STYLE



Size	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

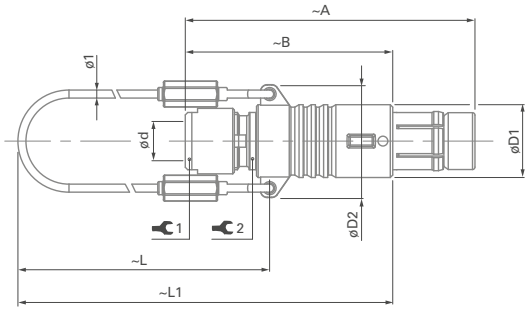
Torque *[Nm]* are recommended values that may be influenced by the characteristics of the cable jacket.
Tests must be conducted to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

PLUGS

CABLE
MOUNTED

SA

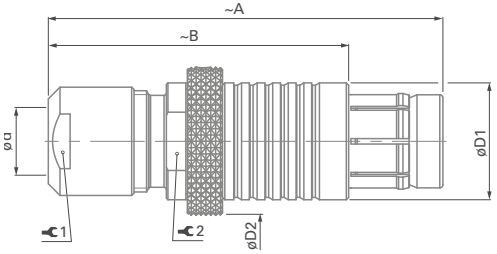
BODY STYLE



Size	A	B	D1	D2	L	L1	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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



Size	A	B	D1	D2	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
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

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

RECEPTACLES

CABLE
MOUNTED

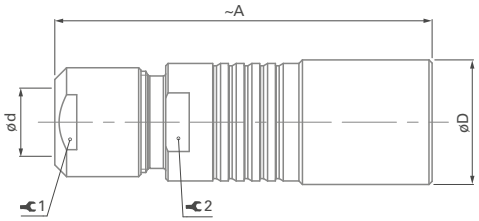
Body style		K	Links to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, page A-6
	Sealed up to IP68		
Contacts	Crimp (coax)	●	Electrical & contact configurations, page B5-16
	Solder (others)	●	
Housing	Natural chrome	●	Options, page B 3-26
	Anthracite	●	
	Shortened body		
Cabling	Cable clamp sets	●	Insulating cable clamp sets, page B 2-61
	Overmoldable		
	Heat shrinkable		
Accessories	Cable bend reliefs	●	Accessories, page B 6-2
	Protective sleeves	●	
	Sealing caps	●	
Size	102 Size		Technical dimensions, page B 5-7 For more information visit: **www.fischerconnectors.com/technical**
	103 Size		
	1031 Size		
	104 Size	●	
	105 Size	●	
	106 Size		
	107 Size		

RECEPTACLES

CABLE
MOUNTED

K

BODY STYLES



Size	A	D	d max		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.

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

RECEPTACLES

PANEL MOUNTED



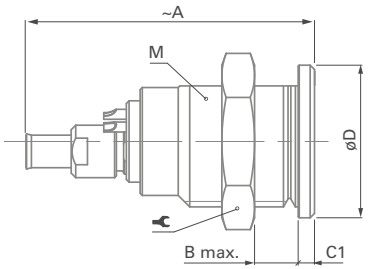
Body style		D	DB	DG	Links to detailed information
Protection	Unsealed (IP50)	●	●	●	Sealing categories, page A-6
	Sealed up to IP68				
	Hermetic				
Contacts	Crimp (coax)	●	●	●	Electrical & contact configurations, page B 5-16
	Solder (others)	●	●	●	
	PCB				
Housing color	Natural chrome	●	●	●	Options, page B 3-26
	Anthracite	●	●	●	
Design	Right-angle				Body styles, page B1-3
	Flush	●		●	
	Front-projecting		●	●	
	Bulkhead feedthrough				
Assembly	Front-mounting	●	●	●	
	Rear-mounting			●	
Accessories	Sealing caps	●	●	●	Accessories, page B 6-2
	Spacers				
	Color-coded washers	●	●	●	
	Grounding washers	●	●	●	
	Locking washers	●	●	●	
Size	102 Size				Technical dimensions, page B 5-9 For more information visit: **www.fischerconnectors.com/technical**
	103 Size				
	1031 Size				
	104 Size	●	●	●	
	105 Size	●		●	
	106 Size				
	107 Size				

RECEPTACLES

PANEL
MOUNTED

D

BODY STYLE

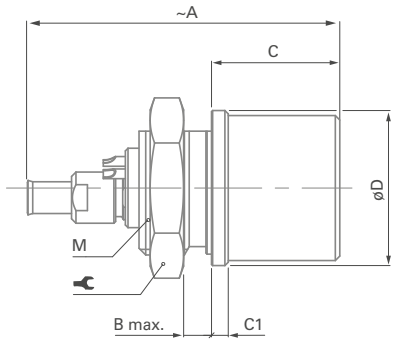


Size	A	B max.	C1	D	M		Torque *[Nm]*
104	33	11	2.2	19	15x1	17	4.0
105	38	15	2.0	22	18x1	22	6.0

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.

DB

BODY STYLE



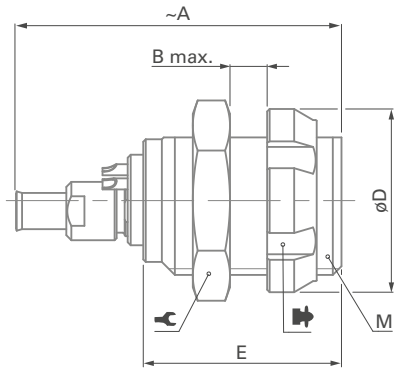
Size	A	B max.	C	C1	D	M		Torque *[Nm]*
104	33	3	14.5	2.5	19	16x1	19	4.5

RECEPTACLES

PANEL
MOUNTED

DG

BODY STYLE



Size	A	B max.	D	E	M			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 6-20 for details.

PLUGS

PANEL MOUNTED

Body style		SF	Links to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, page A-6
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp (coax)	●	Electrical & contact configurations, page B 5-16
	Solder (others)	●	
	PCB		
Housing color	Natural chrome	●	Options, section B 3-26
	Anthracite	●	
Assembly	Front-mounting	●	Body styles, page B 1-2
	Rear-mounting		
Accessories	Sealing caps	●	Accessories, page B 6-2
	Spacers		
	Color-coded washers	●	
	Insulating washers	●	
	Grounding washers	●	
	Locking washers	●	
Size	102 Size		Technical dimensions, page B 5-12 For more information visit: **www.fischerconnectors.com/technical**
	103 Size		
	1031 Size		
	104 Size	●	
	105 Size	●	
	106 Size		
	107 Size		

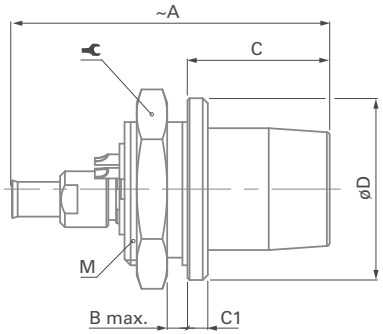
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

PANEL
MOUNTED

SF

BODY STYLE



Size	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		DK	References to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, page A-6
	Sealed up to IP68		
Contacts	Crimp (coax)	●	Electrical & contact configurations, page B 5-16
	Solder (others)	●	
Housing color	Natural chrome	●	Options, page B 3-26
	Anthracite	●	
Design	Flush	●	Body styles, page B 1-3
	Front-projecting		
Assembly	Panel mounted	●	
	Front-mounting	●	
	Rear-mounting		
	Cable mounted	●	
	Cable clamp sets	●	Insulating cable clamp sets, page B 2-61
Accessories	Cable bend reliefs	●	Accessories, page B 6-2
	Sealing caps	●	
	Spacers		
	Color-coded washers	●	
	Insulating washers		
	Grounding washers	●	
	Locking washers	●	
Size	102 Size		Technical dimensions, page B 5-14 For more information visit: **www.fischerconnectors.com/technical**
	103 Size		
	1031 Size		
	104 Size	●	
	105 Size	●	
	106 Size		
	107 Size		

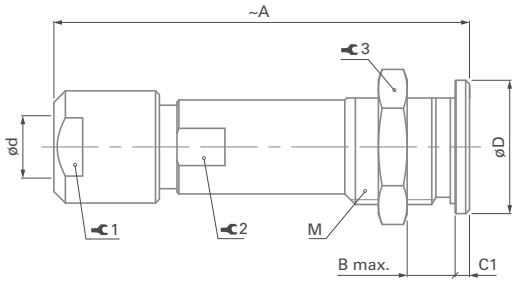
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL
MOUNTED CABLE

DK

BODY STYLE



Size	A	B max.	C1	D	d *max*	M
104	50	11	2.0	19	8.7	15x1
105 [1)]	60	16	2.0	22	10.7	18x1

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

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.

[1)] Cable assembly operation possible only after housing mounted on panel

104 & 105 SIZE

● = 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]
											AC r.m.s		DC		
				Solder	Crimp						Contact to body [2]	Contact to contact	Contact to body [2]	Contact to contact	
104 A **078**		2	Coax		●	PEEK [4]	1	0.7	0.6	50	1.8	-	3.0	-	4.0
			1	●				0.9	0.8	-	0.8	-	1.6	-	9.0
104 A **093**		5	Coax		●	PTFE	1	0.7	0.6	50	1.8	-	3.0	-	4.0
			4	●				0.7	0.6	-	0.8	1.0	1.0	1.4	4.0
105 A **074** [6]		2	Coax		●	PTFE	4	1.3	1.0	50	4.5	-	6.0	-	12.0
			1	●				1.3	1.1	-	1.6	-	2.0	-	12.0
105 A **089** [6]		5	Coax		●	PTFE	4	1.3	1.0	50	4.5	-	6.0	-	12.0
			4	●				0.9	0.75	-	1.5	2.0	2.3	2.8	7.0
105 A **095** [6]		10	Coax		●	PTFE	1	0.7	0.55	50	1.8	-	3.5	-	4.0
			9	●				0.9	0.75	-	1.4	1.5	2.2	2.5	6.0

[1] See list of recommended cables on page B 3-24.

[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 A-12 for details.

[4] PEEK for main insulator and PTFE for Coax.

[5] Measured with S plug and D receptacle.

[6] DB body style not available.

B5-16 / B5-22

MIXED HIGH VOLTAGE

PLUGS

CABLE MOUNTED

RECEPTACLES

PANEL MOUNTED

FOR ALL MIXED HIGH VOLTAGE

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		S	SV	Links to detailed information
Protection	Unsealed (IP50)	●	●	Sealing categories, page A-6
	Sealed up to IP68			
Locking system	Friction			Locking systems, page A-5
	Push-pull	●	●	
	Quick-release			
	Lanyard			
	Tamperproof		●	
Contacts	Crimp			Electrical & contact configurations, page B 5-21
	Solder	●	●	
Housing color	Natural chrome	●	●	Options, page B 3-26
	Anthracite	●		
Design	Shortened body			Body styles, page B 1-2
	Right-angle			
Cabling	Cable clamp sets	●	●	Insulating cable clamp sets, page B 2-61 Cable assembly, page A-16
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs	●	●	Accessories, page B 6-2
	Protective sleeves	●		
	Sealing caps	●	●	
Size	102 Size			Technical dimensions, page B 5-18 For more information visit: **www.fischerconnectors.com/technical**
	103 Size			
	1031 Size			
	104 Size	●	●	
	105 Size	●	●	
	106 Size	●	●	
	107 Size			

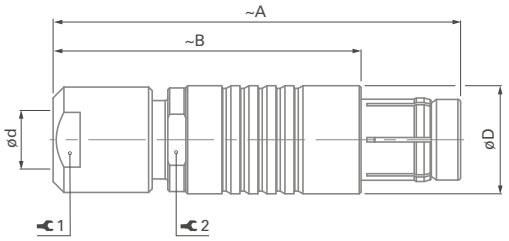
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S

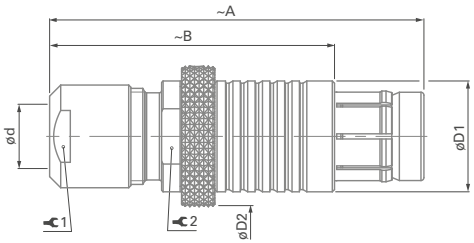
BODY STYLE



Size	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	-

SV

BODY STYLE



Size	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 6-24.

These connectors are supplied with insulating cable clamps sets. The available inner diameters are listed on page B 2-61.

Some of these versions, however, can be delivered with special metal clamps, allowing the clamping of a cable screen. Please contacrt 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.

RECEPTACLES

PANEL MOUNTED

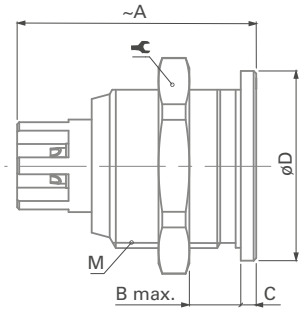
Body style		D	Links to detailed information
Protection	Unsealed (IP50)	●	Sealing categories, page A-6
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp		Electrical & contact configurations, page B 5-21
	Solder	●	
	PCB		
Housing color	Natural chrome	●	Options, page B 3-26
	Anthracite	●	
Design	Right-angle		Body styles, page B 1-3
	Flush	●	
	Front-projecting		
	Bulkhead feedthrough		
Assembly	Front-mounting	●	
	Rear-mounting		
Accessories	Sealing caps	●	Accessories, page B 6-2
	Spacers		
	Color-coded washers	●	
	Grounding washers	●	
	Locking washers	●	
Size	102 Size		Technical dimensions, page B 5-20 For more information visit: **www.fischerconnectors.com/technical**
	103 Size		
	1031 Size		
	104 Size	●	
	105 Size	●	
	106 Size	●	
	107 Size		

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

RECEPTACLES

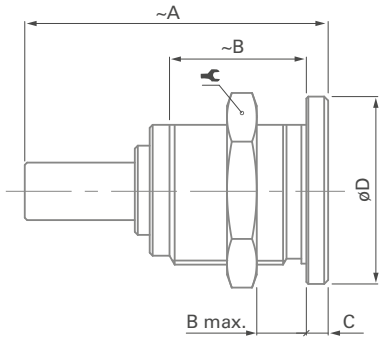
PANEL
MOUNTED

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 Size**
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 B 6-20.
For insertion of male high voltage contacts which have to be assembled after wiring, we recommend tool TP00.001, shown on page B 6-24.

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.

A/Z POLARITY

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

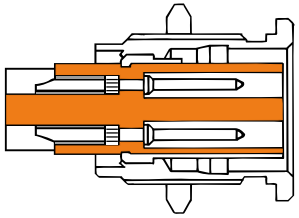
Type "A" Standard Polarity
The contacts of the receptacle are recessed to reduce the possibility of electric shock in the unmated position.
This version should be used when the voltage is sourced from the receptacle.

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 V oltage connectors, however, it is safer to recess the male contacts.

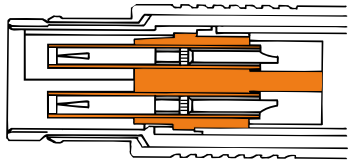
In these cases, the plug type "A" is equipped with female contacts and the receptacle with protected male contacts.
This applies to all connectors on page B 5-24 except 104 $\frac{A}{Z}$ 083 and 105 A 112.

EXAMPLE

receptacle type "A"
D 105 A036



plug type "A"
S 105 A036



FOR 104, 105 & 106 SIZE

● = Standard ○ = Option

Reference	Pin layout	Number of contacts		Contact type		Insulating material	Contact ø [2] [mm]	Wire barrel ø [mm]	Test voltage [6] [kV] in mated position				Current [1] [A]
									AC r.m.s		DC		
				Solder	Crimp				Contact to body	Contact to contact	Contact to body	Contact to contact	
104 A Z **083** [5]		3	2 HV	●		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 HV	●		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 HV	●		PTFE	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 HV	●		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 HV	●		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 HV	●		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 A-12 for details.

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

[3] See Tooling section, page B6-24, for insertion tool of contact dia. 2.0.

[4] HV contacts are female and LV contact is male on plug.

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

[6] Measured with S plug and D receptacle.

B6

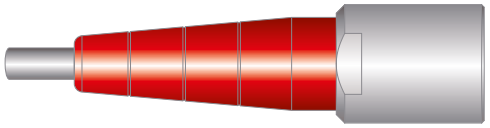
CHAPTER

FISCHER CORE SERIES **BRASS**
ACCESSORIES & TOOLING

CABLE MOUNTED PLUGS & RECEPTACLES

CABLE
BEND RELIEFS

FOR INCREASED PROTECTION OF YOUR CONNECTIONS



Suitable for :

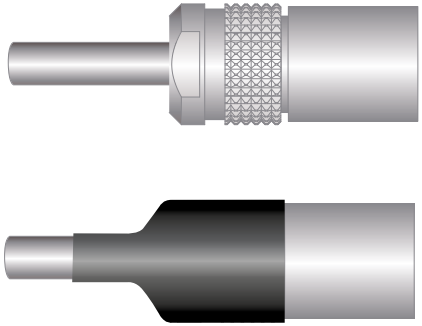
- Cable mounted plugs (S/SC, SOV, SA, SV, WSO)
- Cable mounted receptacles (K/KE)
- Panel mounted cable receptacles (DKBE, DK, DKE)

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 :

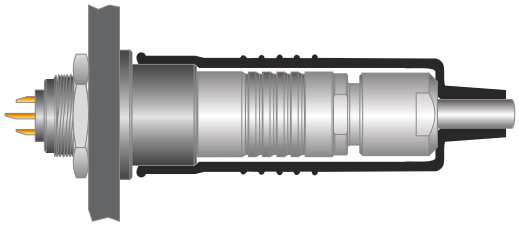
- Cable mounted plugs (S/SC, SOV, SA, SV, WSO)
- Cable mounted receptacles (K/KE)
- Panel mounted cable receptacles (DKBE, DK, DKE)

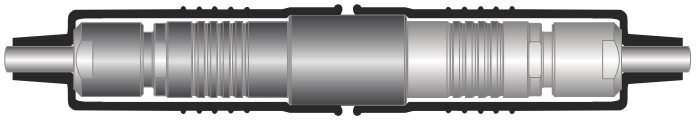
Facilitates grip for a heat shrinkable tube acting as cable bend relief.

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

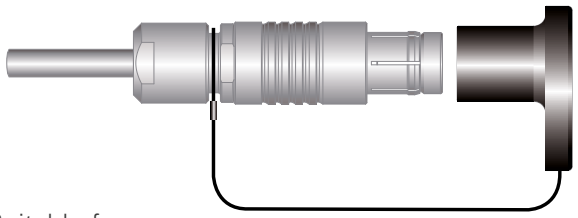
Minimize mechanical damage from impact on hard surfaces.

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

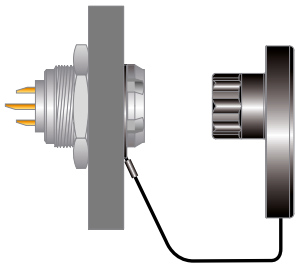
SEALING
CAPS

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)



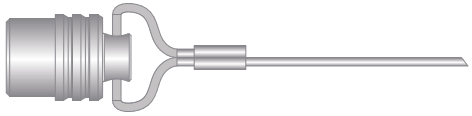
Suitable for:

- 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

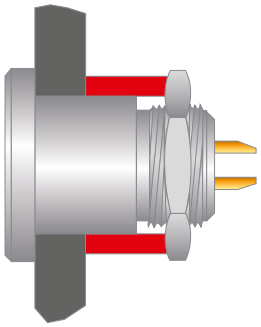


- Rugged
- Fitted with an o-ring seal
- Operating temperature – 30°C to + 200°C
- Protect & seal the mating face of the connector
- IP68
- State colors available

PANEL MOUNTED PLUGS & RECEPTACLES

SPACERS

TO ALLOW MOUNTING ON ALL PANELS



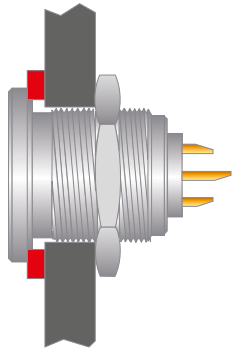
Suitable for :

- 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



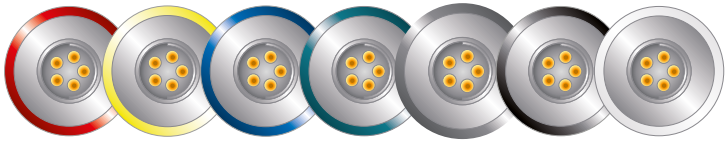
Suitable for :

- 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 colored cable bend relief for cable mounted connectors.

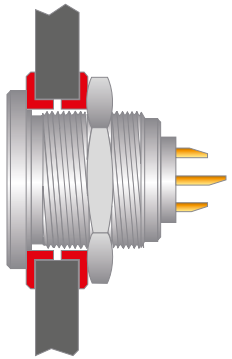
Not suitable for sealed version.



PANEL MOUNTED PLUGS & RECEPTACLES

INSULATING & COLOR WASHERS

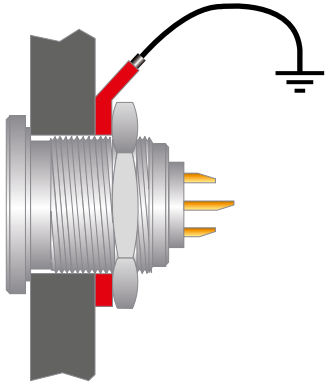
FOR EASY CONNECTOR IDENTIFICATION AND EFFICIENT INSULATION



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 colored cable bend relief for cable mounted connectors.
- Isolate the connector body electrically from the panel
- Not suitable for sealed versions

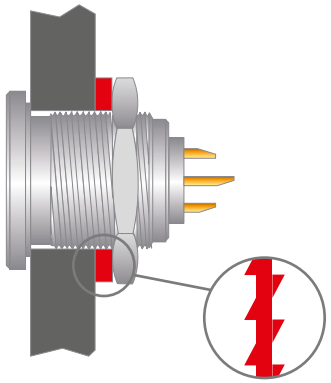
GROUNDING WASHERS



Suitable for panel mounted connectors

LOCKING WASHERS

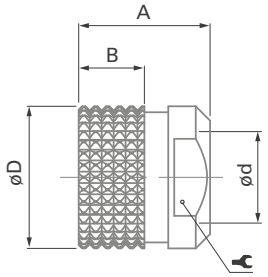
TO ALLOW SECURE MOUNTING ON ALL PANELS



Suitable for panel mounted connectors

KNURLED CLAMP NUTS & CABLE BEND RELIEFS

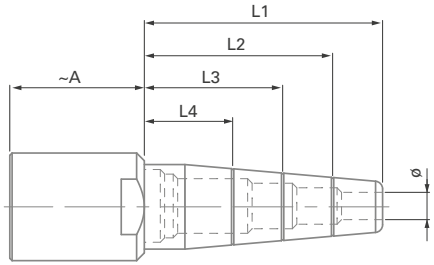
KNURLED
CLAMP NUTS



Size	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)

CABLE
BEND RELIEFS



Size [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	

Size [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 Size, cable bend reliefs are designed specifically for a given cable ø range.
For all other Sizes, 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.

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

CABLE BEND RELIEFS

NATURAL CHROME
CONNECTORS

PART NUMBERS

Size[1]	Cable ø range	Bend relief color						
		White	Black	Green	Blue	Yellow	Red	Grey
102	1.5 - 3.4	-	E4 102.190.2	E4 102.190.3	E4 102.190.4	E4 102.190.5	E4 102.190.6	E4 102.190.7
	3.5 - 4.5	-	E4 102.192.2	E4 102.192.3	E4 102.192.4	E4 102.192.5	E4 102.192.6	E4 102.192.7
103	3.0 - 6.2	E4 103.190.1	E4 103.190.2	E4 103.190.3	E4 103.190.4	E4 103.190.5	E4 103.190.6	E4 103.190.7
1031	3.0 - 6.5	E4 1031.190.1	E4 1031.190.2	E4 1031.190.3	E4 1031.190.4	E4 1031.190.5	E4 1031.190.6	E4 1031.190.7
104	4.0 - 7.5	E4 104.190.1	E4 104.190.2	E4 104.190.3	E4 104.190.4	E4 104.190.5	E4 104.190.6	E4 104.190.7
105	4.0 - 10.5	E4 105.190.1	E4 105.190.2	E4 105.190.3	E4 105.190.4	E4 105.190.5	E4 105.190.6	E4 105.190.7

ANTHRACITE
CONNECTORS

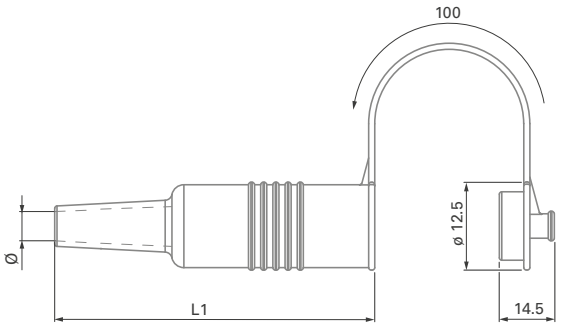
PART NUMBERS

Size[1]	Cable ø range	Bend relief color						
		White	Black	Green	Blue	Yellow	Red	Grey
102	1.5 - 3.4	-	E4 102.291.2	E4 102.291.3	E4 102.291.4	E4 102.291.5	E4 102.291.6	E4 102.291.7
	3.5 - 4.5	-	E4 102.293.2	E4 102.293.3	E4 102.293.4	E4 102.293.5	E4 102.293.6	E4 102.293.7
103	3.0 - 6.2	E4 103.291.1	E4 103.291.2	E4 103.291.3	E4 103.291.4	E4 103.291.5	E4 103.291.6	E4 103.291.7
1031	3.0 - 6.5	E4 1031.291.1	E4 1031.291.2	E4 1031.291.3	E4 1031.291.4	E4 1031.291.5	E4 1031.291.6	E4 1031.291.7
104	4.0 - 7.5	E4 104.291.1	E4 104.291.2	E4 104.291.3	E4 104.291.4	E4 104.291.5	E4 104.291.6	E4 104.291.7
105	4.0 - 10.5	E4 105.291.1	E4 105.291.2	E4 105.291.3	E4 105.291.4	E4 105.291.5	E4 105.291.6	E4 105.291.7

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

PROTECTIVE SLEEVES - 102 SIZE

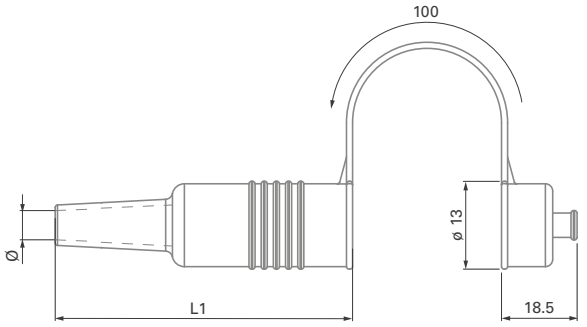
S/SC & SOV



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

Material: TPE (Thermoplastic elastomer).

K & KE

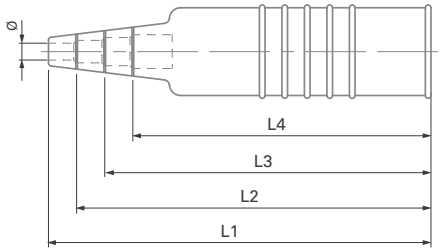


Size	Cable Ø Range	L1	Part Number
102	1.8 - 4.5	47	102.786

Material: TPE (Thermoplastic elastomer).

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

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



For S, SC and SOV

Size	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	

Size	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	

Size	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).

For K and KE

Size	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	

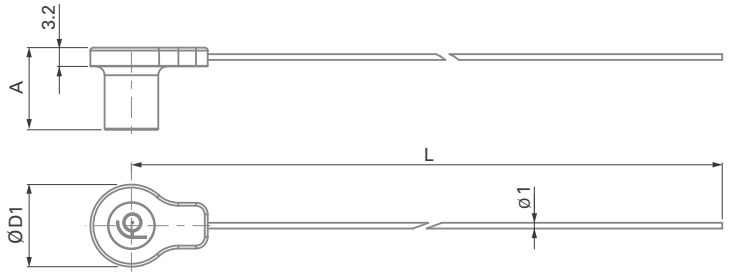
Size	Cable Ø range	Length	Part number
104	4.0 - 5.1	L1 = 68	104.862
	5.2 - 6.1	L2 = 61	
	6.2 - 7.1	L3 = 55	
	7.2 - 8.5	L4 = 48	
105	3.5 - 5.6	L1 = 88	105.1546
	5.7 - 7.6	L2 = 80	
	7.7 - 8.6	L3 = 72	
	8.7 - 10.5	L4 = 64	

Size	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.

SOFT CAPS LANYARD WITH POLYESTER CORD

FOR PLUGS



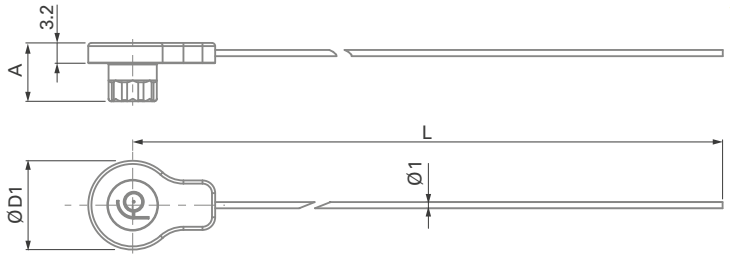
Accessories	Description	Part number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

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

Size	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

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

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.

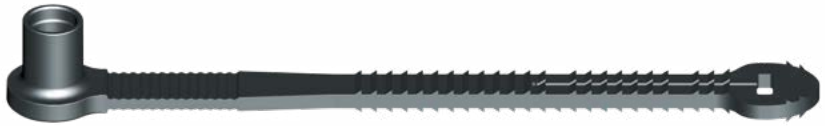
Size	A	D1	L	Part number
102	9.2	14	200	102.2181
103	9.7	17	200	103.2406
1031	9.5	18	200	1031.1433
104	10.0	20	200	104.2808
105	10.0	23	200	105.3265

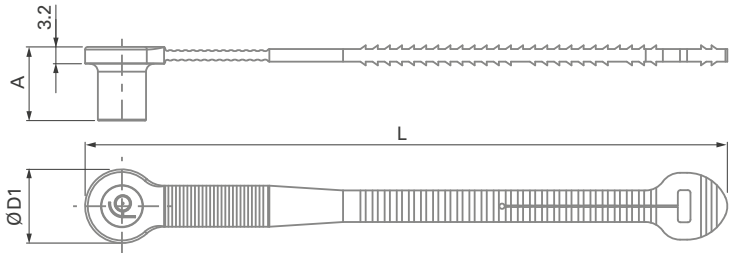
To attach the crimp ferrule or the crimp lug to the polyester cord, use a crimp tool, a vice or a pair of pliers with parallel jaws. There are no specific Fischer Connectors tools.

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

SOFT CAPS - ONE-PIECE

FOR PLUGS

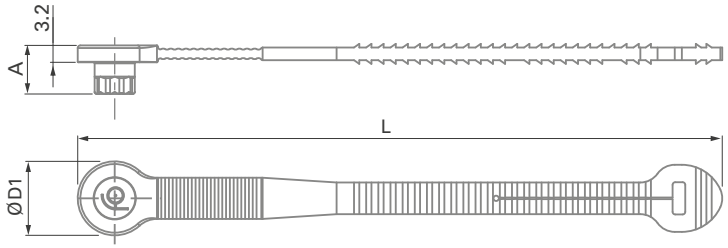




Size	A	D1	L	Part number
102	14.0	14	122	102.2169
103	14.7	17	147	103.2399
1031	14.0	18	148	1031.1425
104	16.0	20	164	104.2766
105	19.0	23	186	105.3253

Material: cap: Santoprene™ TPV 101-80.

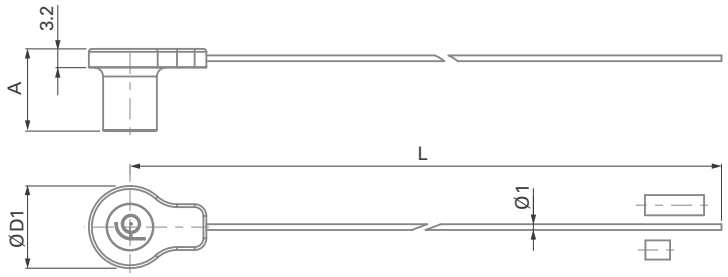
FOR RECEPTACLES



Size	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

SOFT CAPS - LANYARD WITH STAINLESS STEEL CABLE

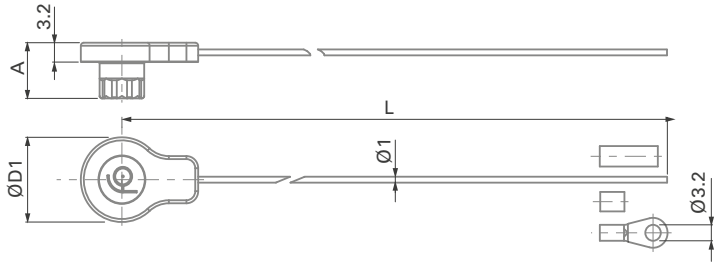
FOR PLUGS



Size	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.

FOR RECEPTACLES



Size	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

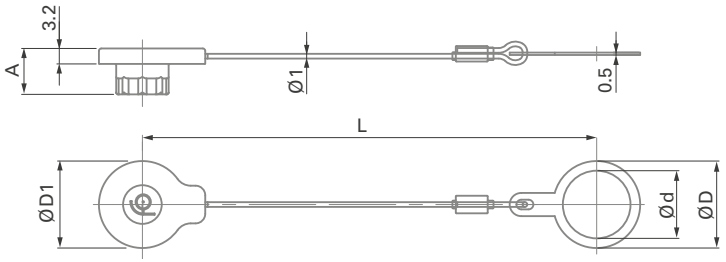
Crimp ferrule (300.922), crimp lug (300.299) and heat shrink tube (300.930) are included.

To attach the crimp 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 B6-22 for recommended crimping tool for ferrule.

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

SOFT CAPS - LANYARD WITH STAINLESS STEEL CABLE (PRE-ASSEMBLED)

FOR RECEPTACLES



Size	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

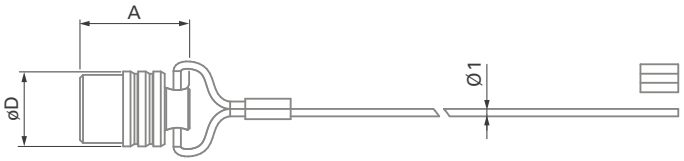
Crimp ferrule, heat shrink tube and fixing lug are included and mounted.

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

Caps are intermateable to provide additional dust protection.

METAL CAPS

FOR PLUGS [3]



Size	Part number		O-ring material	Caps		Stainless steel cable		Crimp ferrule
	Natural chrome [1]	Anthracite [2]		A	D	Length	Covering material	Part number
102	102.1948	102.1953	FPM - Viton®	14.5	10	100	FEP - Teflon®	300.922
103	103.2274	103.2278		21.0	14	100		
1031	1031.825	1031.829		20.0	15	100		
104	104.715	104.722		21.0	15	150		
105	105.3002	105.3007		29.0	20	150		
106	106.813	106.816		37.0	33	250		
107	107.2312	107.2315		42.0	38	300		

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

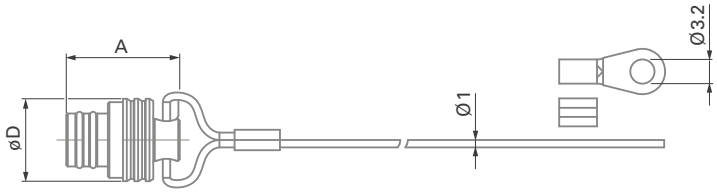
These metal caps are fitted with an O-ring seal. They protect and seal the mating face of the plugs and receptacles.
To attach the crimp ferrule or the crimp lug to the stainless steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws. See page B6-22 for recommended crimping tool 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.

FOR RECEPTACLES



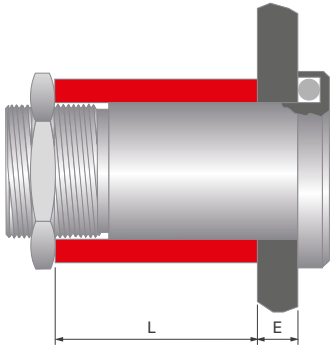
Size	Part number		O-ring material	Caps		Stainless steel cable		Crimp ferrule	Crimp lug
	Natural chrome [1]	Anthracite [2]		A	D	Length	Covering material	Part number	Part number
102	102.1947	102.1954	NBR	15.0	11	100	FEP - Teflon®	300.922	300.299
103	103.2273	103.2279		15.0	13	100			
1031	1031.824	1031.843		17.0	15	100			
104	104.714	104.723		17.5	16	150			
105	105.3001	105.3008		21.0	19	150			
106	106.812	106.817		24.0	31	250			
107	107.2311	107.2318		26.0	36	300			

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

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

SPACERS

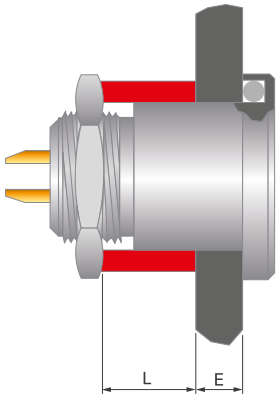
FOR WDE



Size	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 & DKE [1)]



Size	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

Size	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

Size	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

Size	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

Size	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.

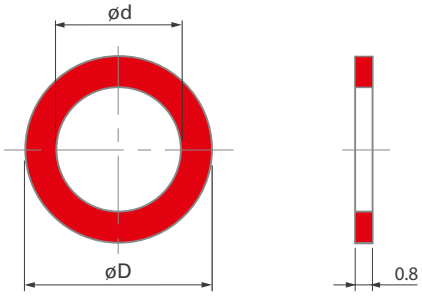
Size	E	L	Part number
107	1.0 - 4.0	18.5	107.556
	4.0 - 7.0	15.5	107.557
	7.0 - 10.0	12.5	107.558
	10.0 - 13.0	9.5	107.559
	13.0 - 16.0	6.5	107.560
	16.0 - 19.0	3.5	107.561

[1)] Spacers are useful and available for DKE only in 102 and 103 Sizes.

WASHERS

COLOR CODING
WASHERS

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



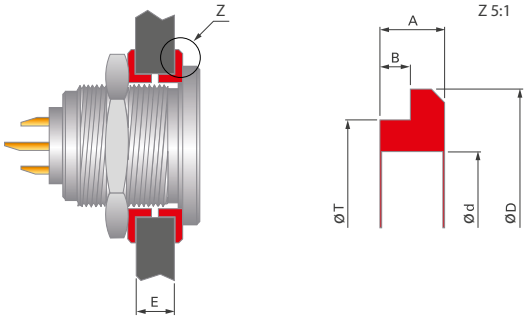
Size	D	d	Color						
			White	Black	Green	Blue	Yellow	Red	Grey
102	14.5	9	102.681	102.682	102.683	102.684	102.685	102.686	102.687
103	18.0	12	103.781	103.782	103.783	103.784	103.785	103.786	103.787
1031	20.0	14	1031.781	1031.782	1031.783	1031.784	1031.785	1031.786	1031.787
104 [1)]	23.0	15	104.981	104.982	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



Size	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	-	-	-	-	-

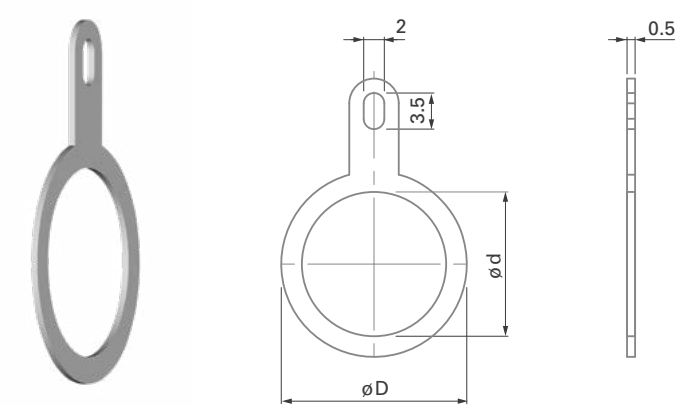
Material:
102 Size: ABS (Acrylonitrile butadiene styrene).
103 and 104 Sizes: POM (Polyoxymethylene) Delrin®

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

WASHERS

GROUNDING
WASHERS

FOR PANEL CONNECTORS

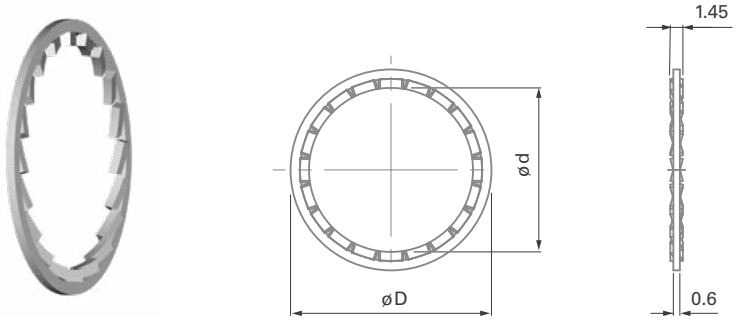


Size	D	d	Part number
102	13	**9**	102.680
	14	**10**	102.679
103	16	**12**	103.385
1031	18	**14**	1031.315
	20	**15**	104.680
104	21	**16**	104.679
105	23	**18**	105.680
	25	**20**	105.679

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

LOCKING
WASHERS

FOR PANEL CONNECTORS



D	d	Part number
12.0	**9**	300.874
15.0	**12**	300.875
17.5	**14**	300.876
18.5	**15**	300.877

D	d	Part number
20	**16**	300.878
23	**18**	300.879
26	**20**	300.880
33	**25**	1052.338

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

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°.

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

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.	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

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 B2-26.

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

CRIMPING TOOLS

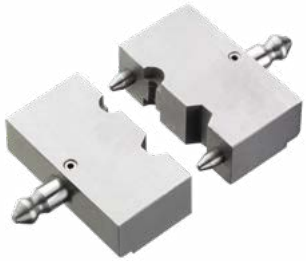
CRIMP TOOL

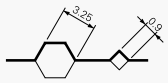
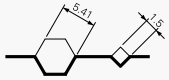
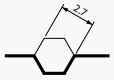
FOR COAXIAL CABLE

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 B3-23 for the table of cable designation.

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. The sleeve of this tool is pushed over the contact, to release the contact retaining mechanism. The tool plunger is then pushed to eject the contact.
TX00.200	0.7	
TX00.205	0.9	
TX00.212	1.3	
TX00.201	1.6	

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

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

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 Receptacle 107 A034 - Coax HV Plugs 105 A005 & 105 A108 - Mixed HV 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

B7

CHAPTER

FISCHER CORE SERIES
STAINLESS STEEL

ULTRA-RESISTANT | STERILIZABLE | EASY TO HANDLE

KEY FEATURES

- IP68 or hermetic
- Nuclear decontamination fluids compatible
- Easy to handle with gloves or remotely

B7-2 / B7-30

STAINLESS STEEL

PLUGS

RECEPTACLES

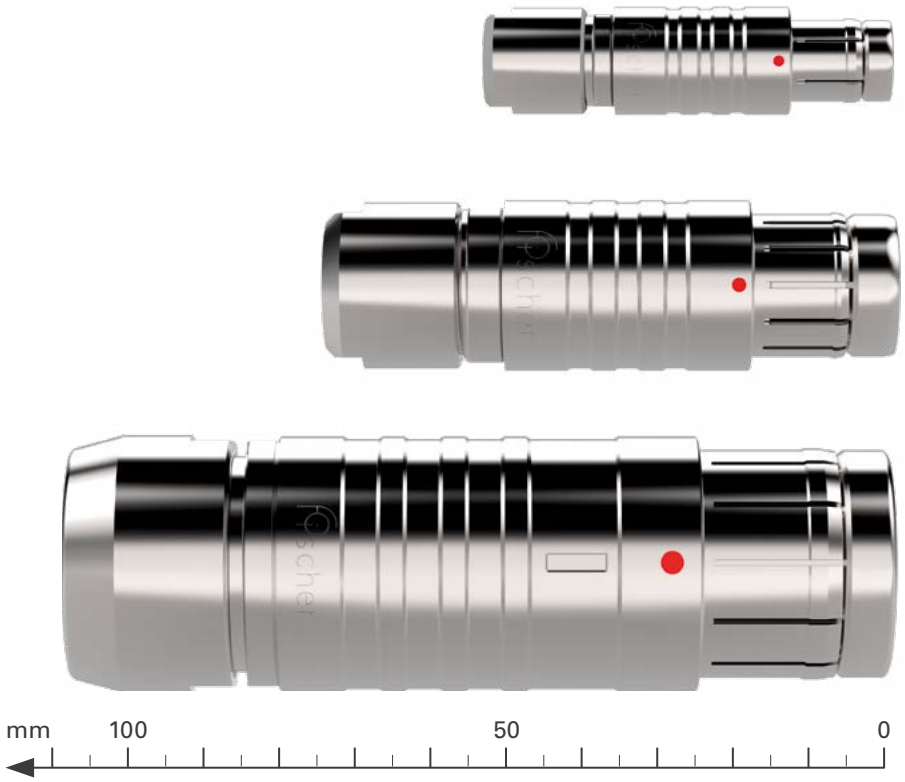
FEEDTHROUGH

FOR ALL STAINLESS STEEL

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

AVAILABLE SIZES

CONNECTOR SIZE
VERSUS
CABLE DIAMETER



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

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

STAINLESS STEEL

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

PLUGS

CABLE
MOUNTED

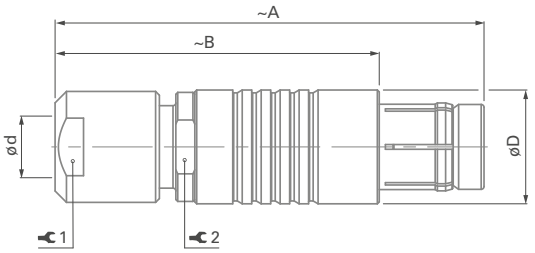
Body style		ST-S	ST-ST	References to detailed information
Protection	Unsealed (IP50)	●	●	Sealing categories, section A-6
	Sealed up to IP68	●	●	
Locking system	Friction			Locking systems, page A-5
	Push-pull	●	●	
	Quick-release			
	Lanyard			
	Tamperproof			
Contacts	Crimp	●	●	Electrical & configurations, page B7-10
	Solder	●	●	
Housing	Standard	●		Options, page B7-17
	Remote handling		●	
Design	Shortened body			Body styles, chapter B7-4
	Straight	●	●	
	Right-angle			
Cabling	Cable clamp sets	●	●	Cable clamp sets, page B7-20
	Overmoldable			
	Heat shrinkable			
Accessories	Cable bend reliefs			Accessories, pages B6-10 and B7-24
	Protective sleeves	●	●	
	Sealing caps	●	●	
Size	103 Series	●		Technical dimensions, page B7-5 For more information visit our website **www.fischerconnectors.com/technical**
	105 Series	●		
	107 Series	●	●	

PLUGS

CABLE
MOUNTED

ST-S

BODY STYLE



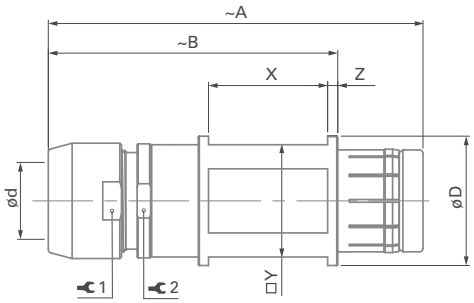
Series	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
103	46	35	12	6.7	6.2	10	1.0	10
105	62	47	18	10.7	10.7	15	3.5	16
107	110	85	34	22.7	22.7	32	10.0	32

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-ST

BODY STYLE



Series	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 *[Nm]*	2
107	110	85	38	22.7	22.7	32	10.0	32

Series	X	Y	Z
107	35	33	3

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

RECEPTACLES

PANEL
MOUNTED



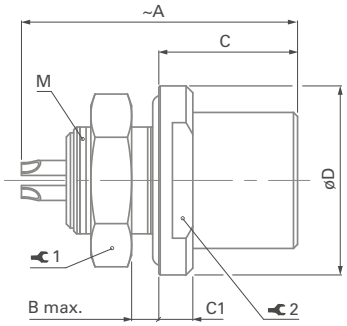
Body style		ST-DBEE	ST-DBPE	ST-WDE	References to detailed information
Protection	Unsealed (IP50)				Sealing categories, page A-6
	Sealed up to IP68	●	●	●	
	Hermetic	●	●	●	
Contacts	Crimp				Electrical & contact configurations, page B7-10
	Solder	●	●		
	PCB	●	●		
Housing color	Natural stainless steel	●	●	●	
Design	Right-angle				Body styles, page B7-6
	Flush		●	●	
	Front-projecting	●		●	
	Rear-projecting		●		
	Bulkhead feedthrough			●	
Assembly	Front-mounting	●		●	
	Rear-mounting		●		
Accessories	Sealing caps	●	●	●	Accessories, pages B7-24, B6-16 and B6-18
	Spacers			●	
	Color-coded washers				
	Grounding washers	●	●		
	Locking washers	●	●		
	103 Series	●	●	●	Technical dimensions, page B7-7 For more information visit our website **www.fischerconnectors.com/technical**
	105 Series	●		●	
	107 Series	●		●	

RECEPTACLES

PANEL FRONT
MOUNTED

ST-DBEE

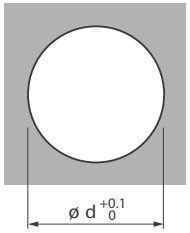
BODY STYLE



Series	A	B max.	C	C1	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

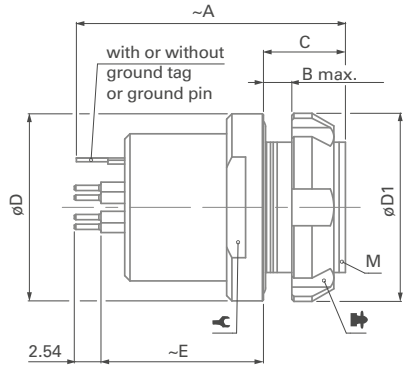
Series	d
103	14.1
105	18.1
107	36.2



PANEL REAR
MOUNTED

ST-DBPE

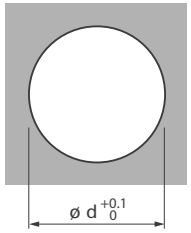
BODY STYLE



Series	A	B max.	C	D	D1	E	M			Torque [Nm]
103	26	4.0	7.8	18	18	15.5	14x1	15	TG00.001	3.0

PANEL CUT-OUT

Series	D
103	14.1



STAINLESS STEEL

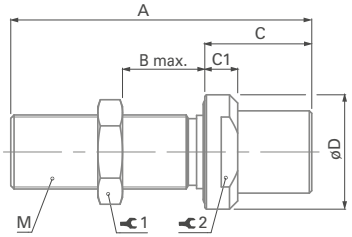
All dimensions and images shown are in millimeters and are for reference only.

FEEDTHROUGH

PANEL FRONT
MOUNTED

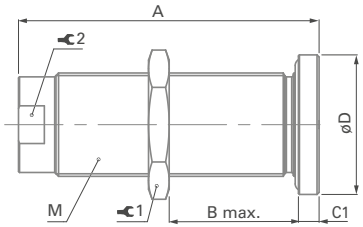
ST-WDE 103

BODY STYLE



ST-WDE 105

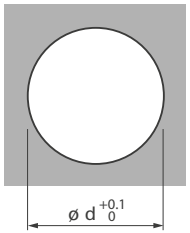
BODY STYLE



Series	A	B max	C	C1	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	d
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 B 6-16.

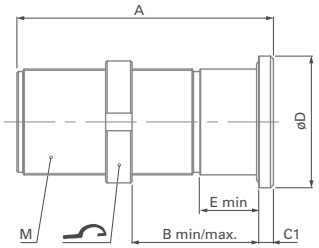
[1] Assembly tool for side hex nut, see Accessories section, page B 7-25.

FEEDTHROUGH

PANEL FRONT
MOUNTED

ST-WDE 107

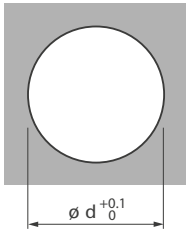
BODY STYLE



Series	A	B min/max	C1	D	E min	M	⌒ 1)	Torque 1 *[Nm]*
107	92	20/76	5	45	20	36x2	TX00.107	17

PANEL CUT-OUT

Series	d
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 B 6-16.

1) Assembly tool for side slotted nut, see Accessories section, page B 7-25.

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.

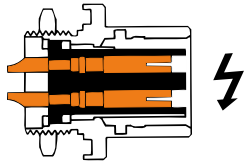
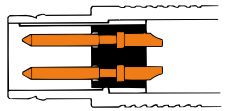
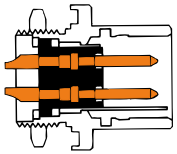
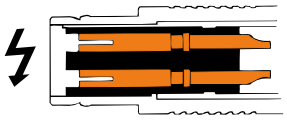
STAINLESS STEEL

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.

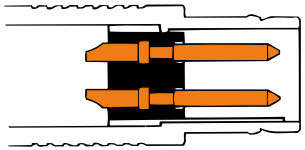
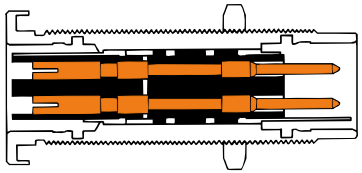
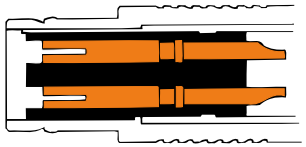
INVERTED **"Z" POLARITY**
The contacts of the plug are protected against accidental touch.
Recommended when voltage is present on the plug.

	Receptacle ST-DBEE	Plug ST-S/ST-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 "ST-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 ST-WDE. The flange side accepts an "A" type plug, and the threaded side accepts a "Z" type plug.

Type "A" plug (ST-S)	ST-WDE, type "AZ"	Type "Z" plug (ST-S)
		

The "ZA" version of the ST-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.

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

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 ensure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering 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
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.
Please refer to www.fischerconnectors.com/technical for detailed information and assembly instructions.

103 SERIES

● = Standard

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]*
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	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 A-12 for details.

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

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

105 SERIES

● = Standard

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]*
										AC r.m.s		DC			
			Solder	Crimp	PCB			Solder contact[1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 AZ **051**		2	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	2.5	3.0	4.0	4.0	≤ 630	26
105 AZ **087**		2	●			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	–	1.2	1.6	2.3	3.0	≤ 400	30
105 AZ **052**		3	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	2.0	2.5	3.0	3.5	≤ 400	23
105 AZ **053**		4	●			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	–	1.8	1.8	2.6	2.6	≤ 320	20
105 AZ **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 AZ **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 AZ **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 A-12 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

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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			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
		13 / 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
		13 / 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
		16 / 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-12 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]
										AC r.m.s		DC			
			Solder	Crimp	PCB			Male solder contacts [1]	Female solder contacts [1]	Contact to body	Contact to contact	Contact to body	Contact to contact		
107 AZ **013**		4	●			PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	3.6	4.3	5.0	5.6	≤ 1000	26
107 AZ **018**		6	●			PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	3.4	3.4	4.3	4.3	≤ 800	25
107 AZ **015**		19	●			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 AZ **051**		27	●			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 AZ **052**		40	●			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

[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.

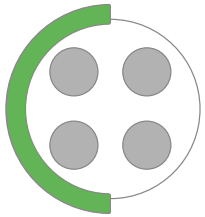
[3] Current per contact at 40°C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max. operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A-12 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.

	Code 1
Receptacle	

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**	**Crimp**[1)]
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: ST-DBEE	0	Standard: solder contacts
	9	With PCB (Printed Circuit Board) contacts instead of solder contacts
Rear mounted: ST-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.

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
ST-S ST-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 B 7-3 or Technical dimensions B 7-5	See page B 7-10
ST-DBEE ST-DBPE ST-WDE		

ORDERING INFORMATION

Contact configuration	Options	Cable clamp sets for cable mounted plugs & receptacles
056	-130	+
	Stainless steel housing, PEEK contact blocks with solder contacts, keying code 1 and clamp nut without bend relief.	
056	-130E	Not applicable as panel mounted
	Stainless steel housing, PEEK contact blocks with solder contacts and keying code 1.	

Three-digit number specific for each pin layout

See page B 7-13

Specific suffix corresponding to selected options

Housing color

Natural Stainless Steel

Contact block insulating material

PEEK

Contact type

Solder Crimp PCB

Keying code of the contact block

Clamp nut type & color

Other options

See page B 7-17

Below cable clamp sets should be ordered separately

Multipole low voltage

Example: ST- S 103 A056-130+

Clamp set ordering line E31 103.1/6.7+B

See page B 7-20

RELATED ITEMS

Accessories

Ex: ST-CR105C 2C3 A150

Stainless steel cap

- Protective sleeves
- Soft caps
- Metal caps
- Spacers
- Washers
- Mounting nuts

See page B 7-24

Tooling

Ex: TX00.240

Crimping tool

- Spanners / Wrenches
- Crimping tools
- Tools for crimp contacts and high voltage contacts

See page B 7-12

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.

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 Series connectors, only S and E cable clamp sets are available.

PART NUMBERING

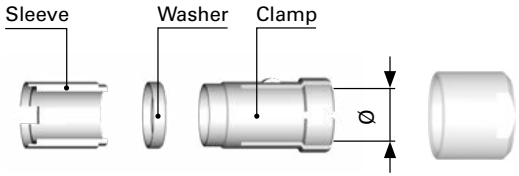
Cable clamp sets below should be ordered separately
Multipole low voltage
ST- S 103 A056-130**+**
Examples connector ordering line
ST- S103 A056-130**+**
Clamp set ordering line
E3 102.5/2.0

See following pages for cable clamp sets selection.

103 SERIES

S
SHIELDED

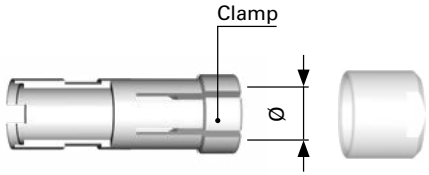
Shielded cable clamp with spacer and sleeve.



Cable dia. range	Collet Ø	Cable clamp set
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

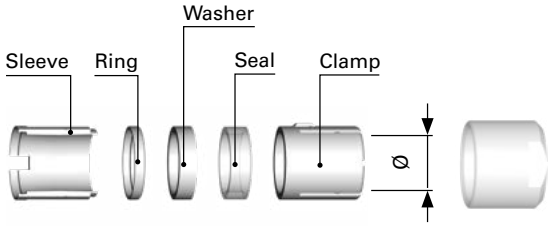
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set
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.



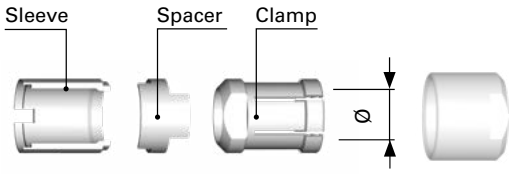
Cable dia. range	Collet Ø	Cable clamp set
1.7 - 2.2	2.2	E31 103.2/2.2 + B
2.2 - 2.7	2.7	E31 103.2/2.7 + B
2.7 - 3.2	3.2	E31 103.2/3.2 + B
3.2 - 3.7	3.7	E31 103.2/3.7 + B
3.7 - 4.2	4.2	E31 103.2/4.2 + B
4.2 - 4.7	4.7	E31 103.2/4.7 + B
4.7 - 5.2	5.2	E31 103.2/5.2 + B
5.2 - 5.7	5.7	E31 103.2/5.7 + B
5.7 - 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

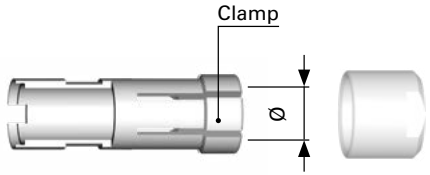
Shielded cable clamp with spacer and sleeve.



Cable dia. range	Collet Ø	Cable clamp set
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

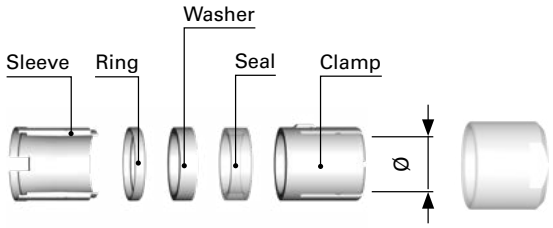
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set
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
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.

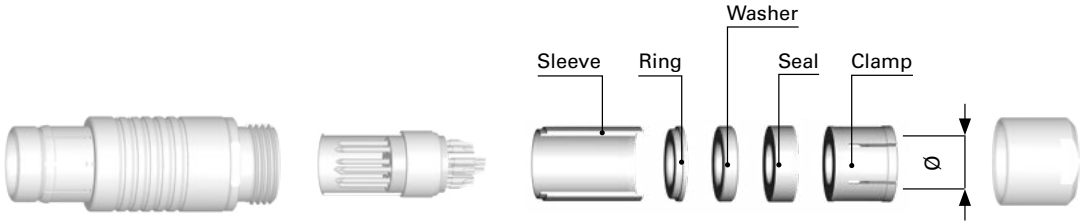
Cable dia. range	Collet Ø	Cable clamp set
5.7 - 7.2	7.2	E3 107.1/7.2
7.2 - 8.2	8.2	E3 107.1/8.2
8.2 - 9.2	9.2	E3 107.1/9.2
9.2 - 10.2	10.2	E3 107.1/10.2
10.2 - 11.2	11.2	E3 107.1/11.2

Cable dia. range	Collet Ø	Cable clamp set
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
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
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

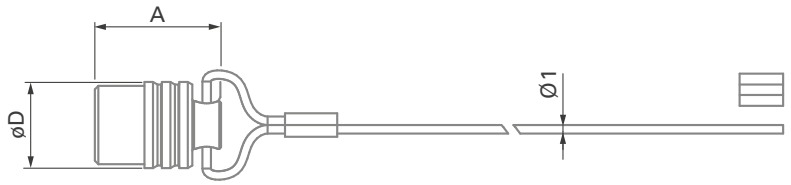
Cable dia. range	Collet Ø	Cable clamp set
11.2 - 12.2	12.2	E3 107.2/12.2
12.2 -13.2	13.2	E3 107.2/13.2
13.2 - 14.2	14.2	E3 107.2/14.2
14.2 - 15.2	15.2	E3 107.2/15.2
15.2 - 16.2	16.2	E3 107.2/16.2

Cable dia. range	Collet Ø	Cable clamp set
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

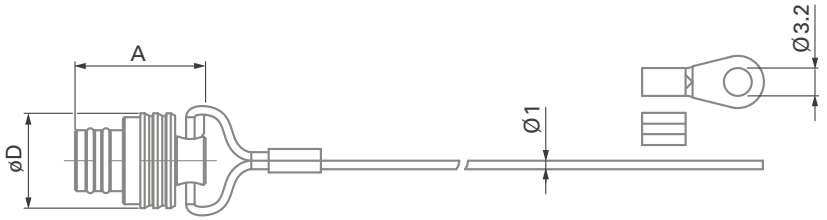
FOR PLUGS



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 E100	EPDM	13	15	100	FEP - Teflon®	300.922	300.299
105	ST-CR105C 2C3 E150		21	19	150			
107	ST-CR107C 2C3 E350		26	36	350			

Material- Cap: Stainless steel 316L – Crimp ferrule: aluminium

They protect and seal the mating face of the plugs and receptacles.
To attach the crimp 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 B6-22 for recommended.
Other available accessories listed on page B7-30. Cable strain relief, Protective Boots, sealing caps)Plastic, Soft caps).

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

NUT DRIVER 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

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

CRIMPING TOOLS

CRIMP TOOL
ULTRA PRECISION

FOR CLOSED CRIMP TERMINATION

Part number	Contact dia.	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 2-26.

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. The sleeve of this tool is pushed over the contact, to release the contact retaining mechanism. The tool plunger is then pushed to eject the contact.
TX00.200	0.7	
TX00.205	0.9	
TX00.212	1.3	
TX00.201	1.6	

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

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

MATERIAL & SURFACE TREATMENT

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	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		

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 for each connector series are listed under Electrical & contact configurations in pages B 7-13 through B 7-16. Ceramics and other dielectrics are available on special order.

Insulator and sealing	International symbol	Flammability
Insulator	PEEK	UL 94 V-O
Panel and contact block O-rings (receptacles)	FPM (Viton®)	-
Interface O-rings (receptacles)	EPDM	-
Sealant material (receptacles) - IP68	Silicon compound	UL 94 V-O
- Hermetic	Epoxy compound	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.

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/s	IEC 60068-2-17 test Qk method 3, alternative b
		IP69	IEC 60529
Operating temperature range	See details on page A-9 and page B7-30		IEC 60512-6-11 i+j / IEC 60068-2-14-Nb
Corrosion resistance		Salt mist, 1000 hours, 5% salt solution, 35°C	IEC 60068-2-11 test Ka MIL-STD-202 method 101 condition A
Endurance		5000 mating cycles	IEC 60512-9-1 / 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

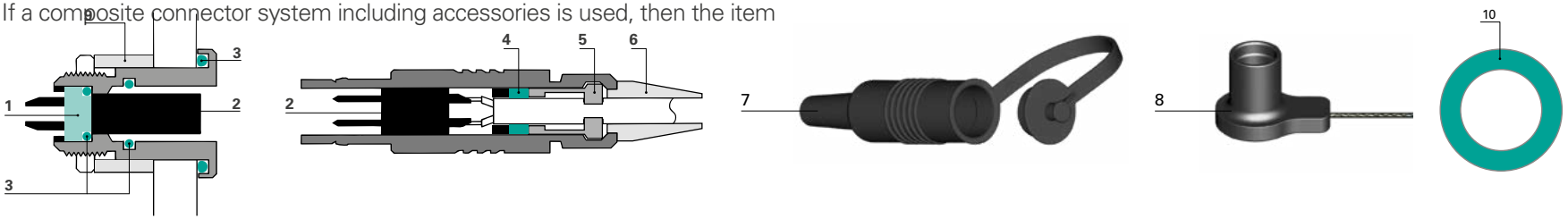
Characteristic	Contact size	Typical values	Standard
Contact resistance 5,000 mating cycles	ø 0.5 mm ø 0.7 mm ø 0.9 mm ø 1.3 mm ø 1.6 mm ø 2.3 mm ø 3.0 mm	5.0 mΩ 5.0 mΩ 4.0 mΩ 2.5 mΩ 2.5 mΩ 2.5 mΩ 1.5 mΩ	IEC 60512-2-1, Test 2a IEC 60512-2-2, Test 2b
Insulation resistance		$> 10^{10}\Omega$	IEC 60512-3-1-3a Method C

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

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 unachievable.

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 +250°C
3	**Panel and contact block O-rings**	FPM (Viton®)		-20°C to +200°C [1]
	Interface O-rings	EPDM		-50°C to +160°C [2]
4	**Cable Clamp Seal**	TPE		-70°C to +130°C
5	**Cable Clamp**	Brass		
6	**Cable Strain Relief**	TPE		-60°C to +100°C
		VMQ - Silicone rubber		-60°C to +180°C
7	**Protective Boots**	TPE		-60°C to +100°C
8	**Sealing Caps**	Metallic	Plug: Stainless steel with EPDM O-ring	-20°C to +200°C [1]
			Receptacle: Stainless steel with EPDM O-ring	-30°C to +110°C [1]
		Plastic	POM with FPM O-ring	-20°C to +100°C [1]
		Soft Caps	TPE	-20°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.

TEMPERATURE °C
0°C

B8

CHAPTER

FISCHER CORE SERIES
ALULITE™

ULTRALIGHT | RUGGED | HIGHLY CONFIGURABLE

KEY FEATURES

- 50% lighter than brass equivalent
- Sealed up to IP68 or hermetic
- Wide range of colors for visual coding
- Over 10,000 mating cycles
- 360° EMC shielded

B8-2 / B8-32

ALULITE

Table of contents

PLUGS

RECEPTACLES

FOR ALL ALULITE

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 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 B8-6 B8-9, B8-11).

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

PLUGS

CABLE
MOUNTED

Body style		S	SC	SS	SSC	References to detailed information
Protection	Unsealed (IP50)	●	●	●	●	Sealing categories, page A-6
	Sealed up to IP68	●	●	●	●	
Locking system	Push-pull	●		●		Locking systems, page A-5
	Quick-release		●		●	
Contacts	Crimp	●	●	●	●	Electrical & contact configurations, page B8-12
	Solder	●	●	●	●	
Design	Colored housing	●	●	●	●	Body styles, page B8-3
	Shortened body			●	●	
Cabling	Cable clamp sets	●	●			Cable clamp sets, page B 2-39
	Overmoldable			●	●	
	Heat shrinkable			●	●	

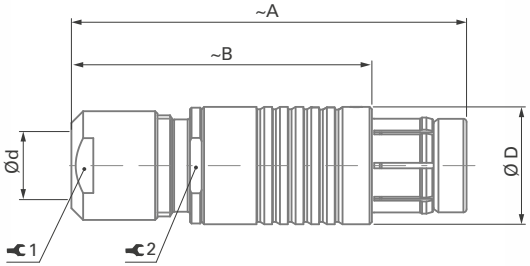
Other body styles available on request.

PLUGS

CABLE
MOUNTED

S/SC

BODY STYLES

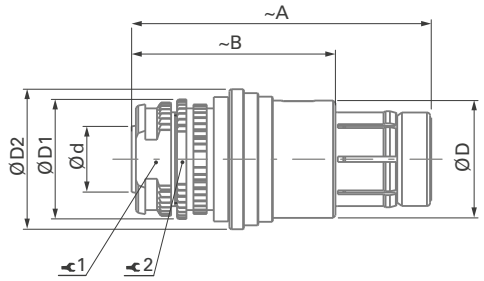


Series	Weight[1] (~g)	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 [Nm]	2
102	3	36	26	9	4.7	4.3	7	0.6	7
103	8	46	35	12	6.7	6.2	10	1.0	10
1031	8	48	38	13	7.2	6.7	12	1.5	11
104	11	50	38	15	9.1	8.7	12	2.0	13
105	19	62	47	18	10.7	10.7	15	3.5	16

[1] Weight shown is without cable clamp set, overmolding or heat shrinking.
[2] Max. cable diameter below shield.

SS/SSC

BODY STYLES



Series	Weight[1] (~g)	A	B	D	D1	D2	d *max*[2]	1	Torque 1 [Nm]	2
102	3	30	20	9.0	9.5	12.0	3.8	7	0.4 – 0.6	8
103	7	33	22	12.0	12.5	15.0	6.0	10	0.8 – 1.0	11
1031	8	33	23	12.4	13.0	15.5	6.2	10	0.8 – 1.0	11
104	8	38	26	15.0	15.3	18.0	8.0	12	1.5 – 2.0	13
105	16	44	29	18.0	18.4	21.2	10.0	15	1.5 – 2.0	16

PLUGS

The configurator is designed
for multipole contact blocks only.
For coax or triax blocks, please contact us.

Example:

Housing			Body style		Size	Contact blocks				Options
AL	12	31	S	C	103	A	053	SR	11	11

Housing material
- **AL** = Aluminum

Housing color [1)]

Housing treatment

1541 = Anthracite (nickel)
1411 = Blue (anodized)
1611 = Red (anodized)
1731 = Grey (chromium)

Connector style
- **S** = Standard body length
- **SS** = Shortened body length

Locking system

If standard automatic push-pull locking system is desired, leave field blank.
Other option possible:
- **C** = Clic Loc, quick-release

Connector size

102, 103, 1031, 104, or 105 = Series
(See dimensions page B8-5)

Clamp nut

For standard body length plugs (S):
- **11** =Standard clamp nut, no bend relief. (See pages B8-19 to B8-24)

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 B8-12 to B8-18)

Polarity
- **A** = Male contacts on plug
- **Z** = Female contacts on plug

[1)] Fischer Connectors cannot be held liable for small color variations that may appear from one batch to another.

Example 1
AL1541-S-103-A062SR11-11

Example 2
AL1541-S-103-A053SR11-11
AL1731-SS-102-A056SR12-13

RECEPTACLES

PANEL MOUNTED




Body Style		D	DEU	DEE	DBPU	DBPE	DBPLU	DBPLE	References to detailed information
Protection	Unsealed (IP50)	●	●	●	●	●	●	●	Sealing categories, page A-6
	Sealed up to IP68		●	●	●	●	●	●	
	Hermetic			●		●		●	
Contacts	Crimp	●							Electrical & contact configurations, page B8-12
	Solder	●	●	●	●	●	●	●	
	PCB	●	●	●	●	●	●	●	
Design	Colored housing	●	●	●	●	●	●	●	Body styles, chapter B8-3
	Flush	●	●	●	●	●			
	Front-projecting						●	●	
Assembly	Front-mounting	●	●	●					
	Rear-mounting				●	●	●	●	

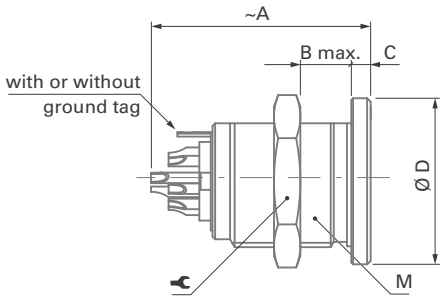
Other body styles available on request.

RECEPTACLES

PANEL FRONT
MOUNTED

D

BODY STYLES



Series	Weight[1] (~g)	A	B *max*	C	D	M		Torque *[Nm]*
102	3	19	9	1.5	11	9x0.5	11	1.3
103	5	23	8	1.5	14	12x1	14	2.5
1031	8	25	10	2.0	16	14x1	17	3.0
104	9	25	11	2.2	19	15x1	17	4.0
105	18	32	15	2.0	22	18x1	22	6.0

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

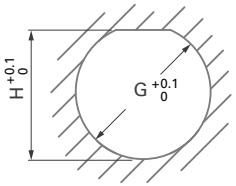


Fig. 1

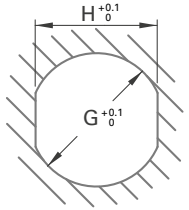
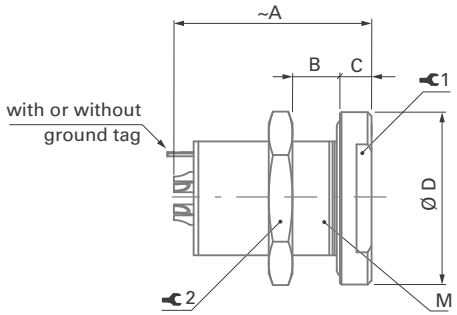


Fig. 2

DEU/DEE

BODY STYLES



Series	Weight[1] (~g)	A	B *min/max*	C	D	M	1	Torque 1 *[Nm]*	2
102	4	20	8/10[2]	2.5	14	9x0.5	11	1.3	11
103	9	23	0/12	3.0	18	14x1	14	3.0	17
1031	10	25	0/12	3.0	19	14x1	15	3.0	17
104	13	25	0/15	4.0	22	16x1	17	4.5	19
105	28	33	0/18	4.0	27	20x1	22	6.5	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

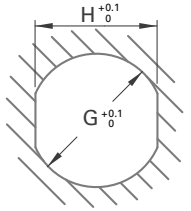


Fig. 2

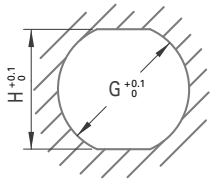


Fig. 3

[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 is designed for multipole contact blocks only.
For coax or triax blocks, please contact us.

Example:

Housing	Body style	Size	Contact blocks			Options		
AL	12	31	D	EE	103	A	062	SR	11	11	G	11

Housing material
- **AL =** Aluminum

Housing color[1)]

Housing treatment
- **1541 =** Anthracite (nickel)
- **1411 =** Blue (anodized)
- **1611 =** Red (anodized)
- **1731 =** Grey (chromium)

Connector style
- **D =** Flush (vs. panel) Front-mounting receptacle

Sealing level

If no sealing level is 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)

[1)] Fischer Connectors can not be held liable for small color variations that may appear from one batch to another.

Example 1
AL1611-DEU-1031-A019SR11-11G11

Example 2
AL1411-DEU-102-A053SR11-11G11

Polarity
- **A =** Female contacts on receptacle
- **Z =** Male contacts on receptacle

Contact configuration

Three-digit number
(see pages B8-12 to B8-18)

Contact type

Options possible if no sealing level is required:
- **SR =** Solder
- **CP =** Crimp "D" only
- **PB =** PCB

Options possible if selected sealing level is 'Sealed (IP68) even unmated' or 'Hermetic':
- **SR =** Solder
- **PB =** PCB

Keying code
- **11 =** Code 1
- **12 =** Code 2
- **13 =** Code 3

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)

Grounding
- **G =** Yes
- **Z =** No

Nut type
- **11 =** Hexagonal
- **12 =** None

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

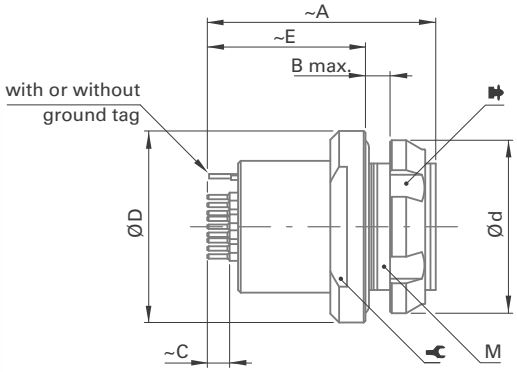
All dimensions and images shown are in millimeters and are for reference only.

RECEPTACLES

PANEL REAR MOUNTED

DBPU/DBPE

BODY STYLES



SERIES	Weight[1] (~g)	A[2]	B *max*	D	d	E[2]	C[2]	M[3]		Torque *[Nm]*
102	3	20	3.5	14	12	13	2.54	9x0.5	11	1.3
103	8	26	4.0	18	18	18	2.54	14x1	15	3.0
1031	8	23	3.0	19	18	15	2.54	14x1	15	3.0
104	11	26	4.0	22	20	18	2.54	16x1	17	4.5
105	26	30	5.0	27	25	20	2.54	20x1	22	6.5

[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 B8-29.

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

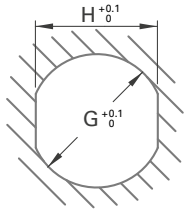


Fig. 2

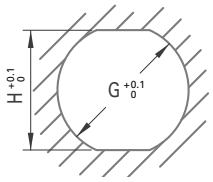
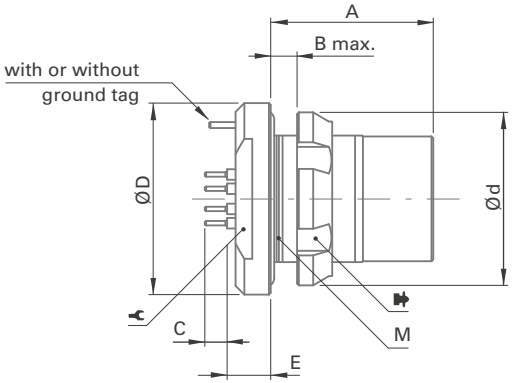


Fig. 3

DBPLU/DBPLE

BODY STYLES



SERIES	Weight[1] (~g)	A	B	C	d	D	E	M[3]		Torque *[Nm]*
102	3	14.2	4.5	2.54	13	14	3.6	10x0.5	11	1.5
103	8	16.5	5.0	2.54	18	18	4.2	14x1	15	3.0
1031	8	16.0	5.5	2.54	20	19	4.2	15x1	15	4.0
104	11	18.5	6.5	2.54	20	22	5.0	16x1	17	4.5
105	26	22.5	8.0	2.54	25	27	5.5	20x1	22	6.5

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

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

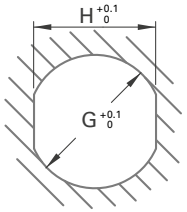


Fig. 2

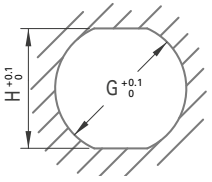


Fig. 3

RECEPTACLES

PANEL REAR MOUNTED

The configurator is designed
for multipole contact blocks only.
For coax or triax blocks, please contact us.

Example 1:
AL1541-DBPLU-102-A059PB12-12G13

Example 2:
AL1541-DBPLE-102-Z054SR11-11G13

Example:

Housing			Body style	Size	Contact blocks				Options		
AL	12	31	DBPL	E	103	A	062	PB	11	11	G	13

Housing material
- **AL =** Aluminum

Housing color[1)]

Housing treatment
- **1541 =** Anthracite (nickel)
- **1411 =** Blue (anodized)
- **1611 =** Red (anodized)
- **1731 =** Grey (chromium)

Connector style
- **DBP =** Flush (vs. panel) Rear-mounting receptacle
- **DBPL =** Front-projecting (vs. panel) Rear-mounting receptacle

Sealing level
- **U =** Sealed (IP68) even unmated
- **E =** Hermetic

Connector size
102, 103, 1031, 104 or 105 = Series
(See dimensions section)

[1)] Fischer Connectors can not be held liable for small color variations that may appear from one batch to another.

Nut type
- **13 =** Slotted nut

Grounding
- **G =** Yes
- **Z =** No

O-ring at plug interface
- **11 =** Viton
- **12 =** EPDM (low temperature)

Keying code
- **11 =** Code 1
- **12 =** Code 2
- **13 =** Code 3

Contact type
- **SR =** Solder
- **PB =** PCB

Contact configuration
Three-digit number
(see pages B8-12 to B8-18)

Polarity
- **A =** Female contacts on receptacle
- **Z =** Male contacts on receptacle

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

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] rms *[V]*	Current[3] *[A]*
										AC rms		DC			
			Solder	Crimp[6]	PCB			Solder contacts[1]	Crimp contacts	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 A-12 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]
										AC rms		DC			
			Solder	Crimp	PCB			Solder contacts[1]	Crimp contacts	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 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 A-12 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: Solder	Contact types: Crimp	Contact types: PCB	Insulating material	Contact ø *[mm]*	Wire size[2]: Solder contacts[1]	Wire size[2]: Crimp contacts	Test voltage[6] *[kV]* in mated position: AC rms: Contact to body	AC rms: Contact to contact	DC: Contact to body	DC: Contact to contact	Rated voltage[4] rms *[V]*	Current[3] *[A]*
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	●	●	●	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 (2)	●		●	PBT	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	–	1.5	1.6	2.2	2.5	≤ 400	28
		4 (2)					0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	2.0		2.8			3.0
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] 2.1	2.2	2.0[5] 2.8	≤ 320	6.5

[1] Stranding values are in brackets.

[2] For a given AWG, the diameter of some stranded conductor designs could 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-12 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: Solder	Contact types: Crimp	Contact types: PCB	Insulating material	Contact ø *[mm]*	Wire size[2]: Solder contacts[1]	Wire size[2]: Crimp contacts	Test voltage[6] *[kV]* in mated position: AC rms: Contact to body	AC rms: Contact to contact	DC: Contact to body	DC: Contact to contact	Rated voltage[4] rms *[V]*	Current[3] *[A]*
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**		9	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 A-12 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.

105 SERIES

● = Standard ○ = Option

Reference	Pin layout	Number of contacts	Contact types: Solder	Contact types: Crimp	Contact types: PCB	Insulating material	Contact ø *[mm]*	Wire size[2]: Solder contact[1]	Wire size[2]: Crimp contacts	Test voltage[6] *[kV] in mated position*: AC rms: Contact to body	AC rms: Contact to contact	DC: Contact to body	DC: Contact to contact	Rated voltage[4] rms *[V]*	Current[3] *[A]*
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
		7 / 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
		8 / 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
		9 / 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 A-12 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]
											AC rms		DC			
				Solder	Crimp	PCB			Solder contacts [1]	Crimp contacts	Contact to body	Contact to contact	Contact to body	Contact to contact		
105 AZ 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 AZ 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 AZ 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 AZ 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 AZ 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 AZ 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 AZ 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 AZ 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-12 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.

CONTACT TYPES

CRIMP CONTACTS

- Selectively annealed area
- Special tools required
- Limited range of wire sizes

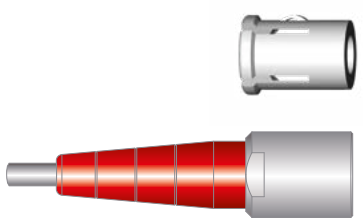
- Each contact has a selectively annealed area which is crushed during assembly by specialized tooling to ensure proper termination of the wire to the contact.
- Commonly used for field termination or repair, as no soldering is required.
- Not available for sealed or hermetic connectors.

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 6-21, for description of Crimping Tool and Positioner.
Please refer to www.fischerconnectors.com/technical for detailed information and assembly instructions.

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 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 & 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

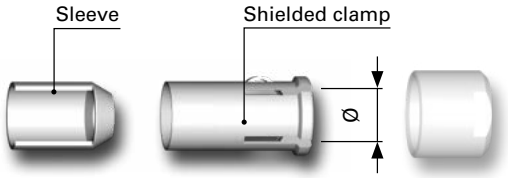
Cable clamp sets are ordered separately
Multipole low voltage
AL1731-S-102-A056SR11-11
Examples connector ordering line
AL1731-S-102-A056SR11-11
Clamp set ordering line
E3 102.5/2.0

See following pages for cable clamp set selection.

102 SERIES

S
SHIELDED

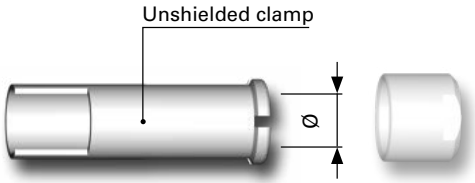
Shielded cable clamp with sleeve and clamp.



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

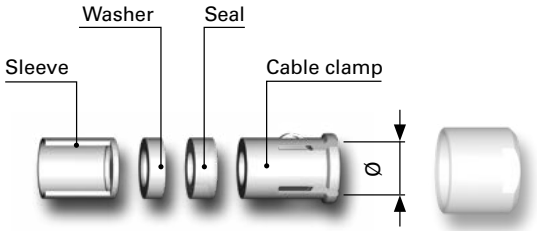
Unshielded, one-piece cable clamp.



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.

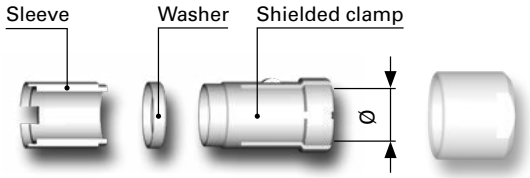


Cable dia. range	Collet Ø	Cable clamp set
1.5 - 2.1	2.1	E31 102.2/2.1 + B
2.1 - 2.6	2.6	E31 102.2/2.6 + B
2.6 - 3.1	3.1	E31 102.2/3.1 + B
3.1 - 3.6	3.6	E31 102.2/3.6 + B
3.6 - 4.1	4.1	E31 102.2/4.1 + B
4.1 - 4.3	4.3	E31 102.2/4.3 + B

103 SERIES

S
SHIELDED

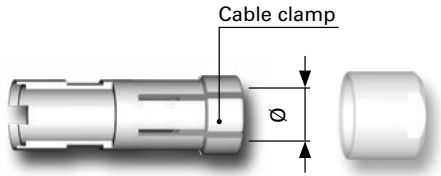
Shielded cable clamp with sleeve and clamp.



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

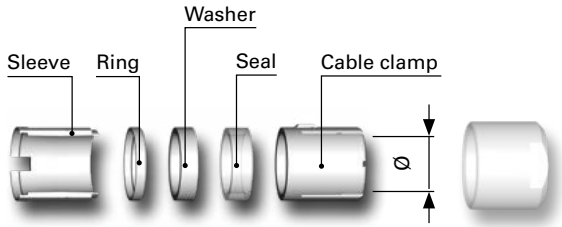
Unshielded, one-piece cable clamp.



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.



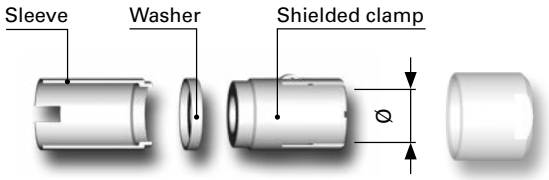
Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
1.7 - 2.2	2.2	E31 103.2/2.2 + B
2.2 - 2.7	2.7	E31 103.2/2.7 + B
2.7 - 3.2	3.2	E31 103.2/3.2 + B
3.2 - 3.7	3.7	E31 103.2/3.7 + B
3.7 - 4.2	4.2	E31 103.2/4.2 + B
4.2 - 4.7	4.7	E31 103.2/4.7 + B
4.7 - 5.2	5.2	E31 103.2/5.2 + B
5.2 - 5.7	5.7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

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

1031 SERIES

S
SHIELDED

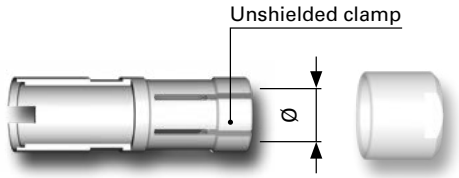
Shielded cable clamp with sleeve and clamp.



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

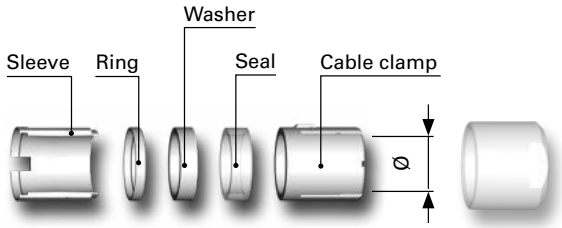
Unshielded, one-piece cable clamp.



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.

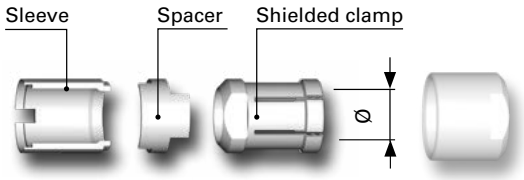


Cable dia. range	Collet Ø	Cable clamp set
2.2 - 2.7	2.7	E3 1031.2/2.7
2.7 - 3.2	3.2	E3 1031.2/3.2
3.2 - 3.7	3.7	E3 1031.2/3.7
3.7 - 4.2	4.2	E3 1031.2/4.2
4.2 - 4.7	4.7	E3 1031.2/4.7
4.7 - 5.2	5.2	E3 1031.2/5.2
5.2 - 5.7	5.7	E3 1031.2/5.7
5.7 - 6.2	6.2	E3 1031.2/6.2
6.2 - 6.7	6.7	E3 1031.2/6.7

104 SERIES

S
SHIELDED

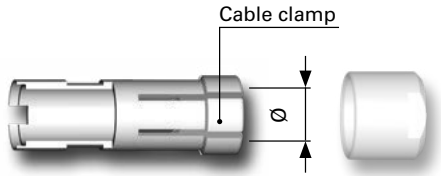
Shielded cable clamp with sleeve and clamp.



Cable dia. range	Collet Ø	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

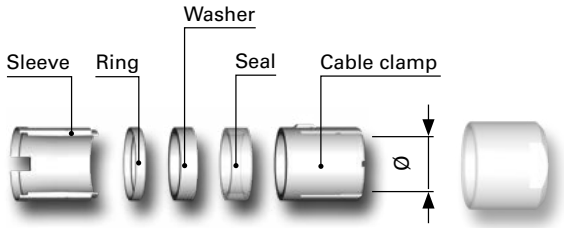
Unshielded, one-piece cable clamp.



Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
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.



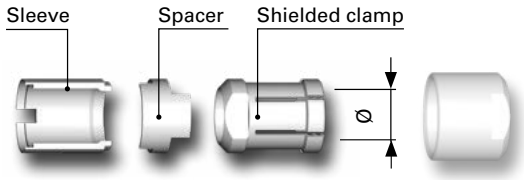
Cable dia. range	Collet Ø	Cable clamp set PEEK or PBT insulator
		Plug
2.9 - 4.0	4.0	E3 104.2/4.0 + B
4.0 - 4.7	4.7	E3 104.2/4.7 + B
4.7 - 5.7	5.7	E3 104.2/5.7 + B
5.7 - 6.7	6.7	E3 104.2/6.7 + B
6.7 - 7.7	7.7	E3 104.2/7.7 + B
7.7 - 8.7	8.7	E3 104.2/8.7 + B

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

105 SERIES

S
SHIELDED

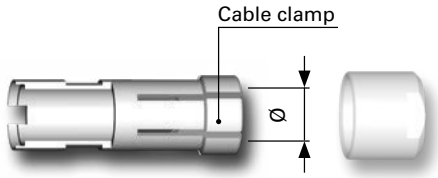
Shielded cable clamp with sleeve and clamp.



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

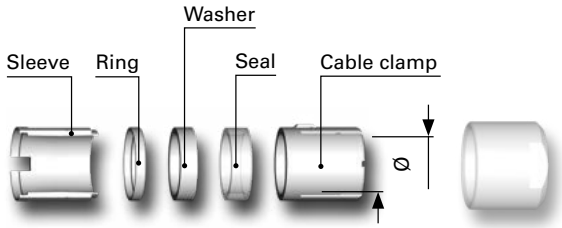
Unshielded, one-piece cable clamp.



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

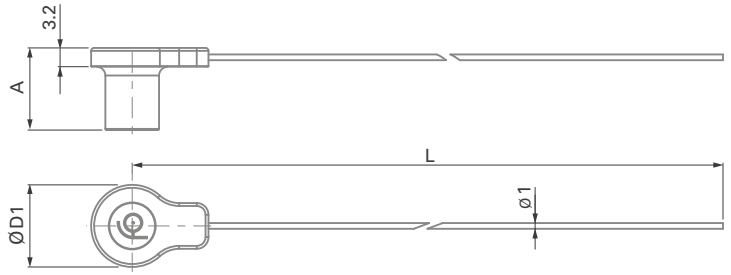
Environmentally sealed clamp for use with shielded or unshielded cables.



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

SOFT CAPS - LANYARD WITH POLYESTER CORD

FOR PLUGS

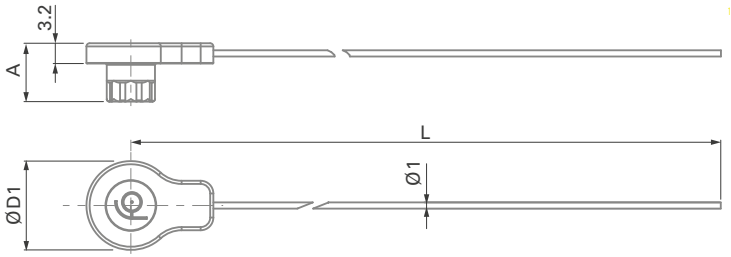


Accessories	Description	Part Number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.
Material: Cap: Santoprene™ TPV 101-80 / Cord: Polyester.

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

FOR RECEPTACLES



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

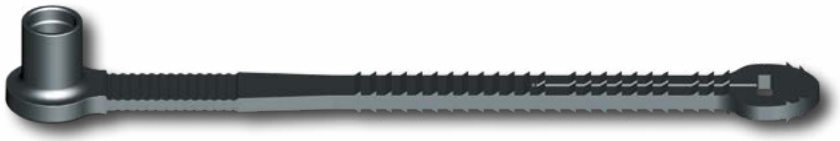
Series	A	D1	L	Part Number
102	9.2	14	200	102.2181
103	9.7	17	200	103.2406
1031	9.5	18	200	1031.1433
104	10.0	20	200	104.2808
105	10.0	23	200	105.3265

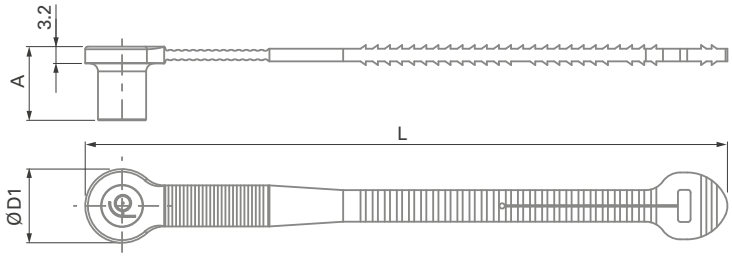
To attach the crimp ferrule or the crimp lug to the polyester cord, use a crimp tool, a vice or a pair of pliers with parallel jaws. There are no specific Fischer Connectors tools.

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

SOFT CAPS - ONE-PIECE

FOR PLUGS

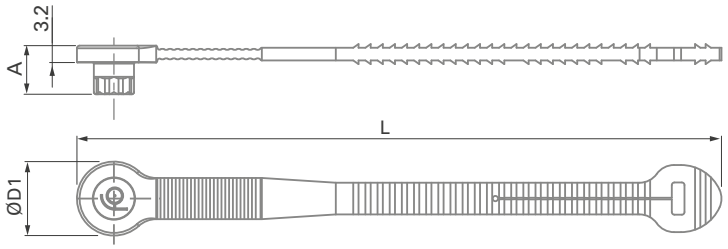




Series	A	D1	L	Part Number
102	14.0	14	122	102.2169
103	14.7	17	147	103.2399
1031	14.0	18	148	1031.1425
104	16.0	20	164	104.2766
105	19.0	23	186	105.3253

Material: Santoprene™ TPV 101-80

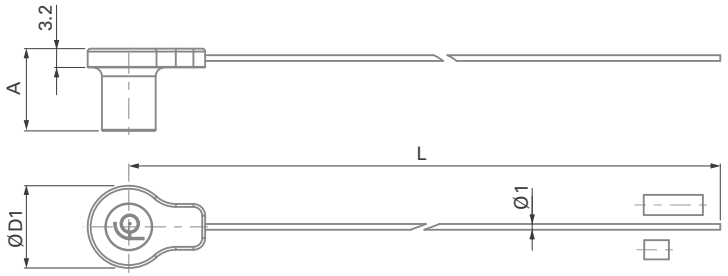
FOR RECEPTACLES



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

SOFT CAPS - LANYARD WITH STAINLESS STEEL CABLE

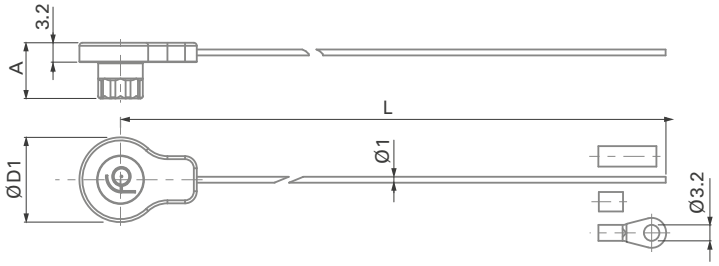
FOR PLUGS



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

FOR RECEPTACLES



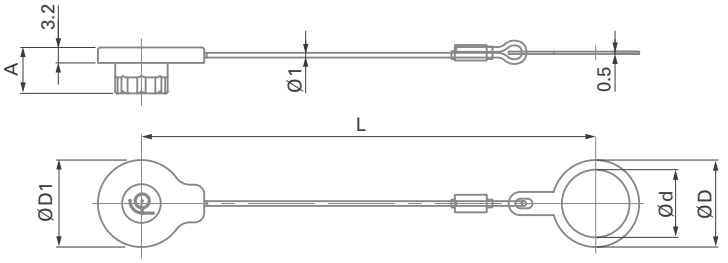
Series	A	D1	L	Part Number
102	9.2	14	200	102.2167
103	9.7	17	200	103.2397
1031	9.5	18	200	1031.1423
104	10.0	20	200	104.2764
105	10.0	23	200	105.3251

To attach the crimp 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 B6-22 for recommended crimping tool for ferrule.

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

SOFT CAPS - LANYARDS WITH STAINLESS STEEL CABLE (PRE-ASSEMBLED)

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: anthracite plated brass (ISO CuZn37)

Caps are intermateable to provide additional dust protection.

NUT DRIVER FOR SLOTTED NUTS

NUT DRIVER WITH T-HANDLE
AND HEX DRIVE

FOR DECORATIVE 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.

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

MECHANICAL & ENVIRONMENTAL DATA

Parameter	Value	Standard
Mating cycles	10,000	IEC 60512-9-1 EIA-364-09
Operating 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 See details on page A-9 and B8-32	IEC 60068-2-14
Sealing	IP68; 2m submersion for 24 hours	IEC 60529
Hermeticity - DEE, DBPE, DBPLE	Hermetic: Tested: $<10^{-8}$ mbar l/s 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

Characteristic	Contact size	Typical values	Standard
Contact resistance **10,000 mating cycles**	ø 0.5 mm ø 0.7 mm ø 0.9 mm ø 1.3 mm ø 1.6 mm ø 2.3 mm ø 3.0 mm	5.0 mΩ 5.0 mΩ 4.0 mΩ 2.5 mΩ 2.5 mΩ 2.5 mΩ 1.5 mΩ	IEC 60512-2-1, Test 2a IEC 60512-2-2, Test 2b
Insulation resistance		$> 10^{10}\Omega$	IEC 60512-3-1-3a Method C

MATERIAL & SURFACE TREATMENTS

Metal Parts	Material				Finish	
		Standards				
	Designation	ISO	UNS	EN	Designation	Standard
Plug body, cable clamp, latching sleeve, nuts	Brass	CuZn39Pb3	–	CW614N UNS C 38500	Electroless nickel	SAE-AMS-QQ-N-290 / SAE-AMS2404
Plug housing, receptacle housing, slotted nut, clamp nut	Aluminum[1)]	AlMgSi1SnBi	–	AW-6023	Chrome over nickel	SAE-AMS2460
					Anthracite nickel	SAE-AMS-QQ-N-290 / SAE-AMS2404
					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

[1)] Aluminum is not recommended for marine or corrosive environments. In this case, we recommend the Fischer Core Series Brass or Core Series Stainless Steel.

Insulator and sealing

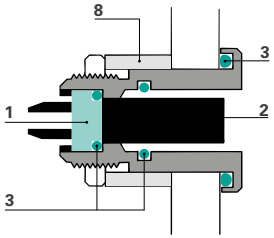
Contact blocks and other insulators for our standard connectors are manufactured from high performance engineering plastic materials. The standard materials of each connector series are listed under Electrical & Contact configurations in pages B 8-12 through B 8-18. Ceramics and other dielectrics are available on special order.

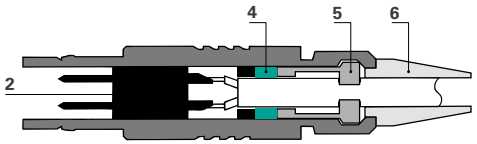
Insulator and sealing	International symbol	Flammability
Insulator	PEEK - PTFE - PBT	UL 94 V-O
Interface O-rings (receptacles)	FPM (Viton®) / EPDM	-
Sealant material (receptacles) - IP68	Silicon compound	UL 94 V-O
- Hermetic	Epoxy compound	UL 94 HB

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 +250°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	
		High Voltage Connectors	POM	-40°C to +100°C
6	**Cable strain relief**	TPE		-60°C to +100°C
		VMQ - Silicone rubber		-60°C to +180°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.

TEMPERATURE °C

0°C

ALULITE

B9

CHAPTER

FISCHER CORE SERIES
PLASTIC

EASY TO USE | DURABLE | LIGHTWEIGHT

KEY FEATURES

- Sealed up to IP68
- Resistant to large temperarure variations
- Over 5,000 mating cycles
- Color coding for easy operation

PLASTIC

B9-2 / B9-11

PLASTIC 405

Table of contents

PLUGS

RECEPTACLE

FOR ALL PLASTIC 405

PLASTIC

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

PLUGS

CABLE MOUNTED

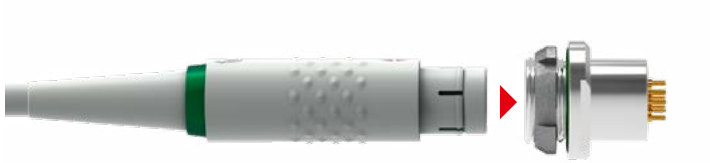
BODY STYLES	S 405	SI 405
Locking system	Push-pull	Push-pull
Sealing	IP50/IP67	IP50/IP67
Design	Standard	Standard
Integral shielding	Yes	No

RECEPTACLE

PANEL MOUNTED

BODY STYLE	DBP 405
Sealing	IP50
Design	Standard

COMPATIBILITY



Mateable with all high performance Fischer Connectors' panel receptacles of the Fischer Core Series Brass 105.

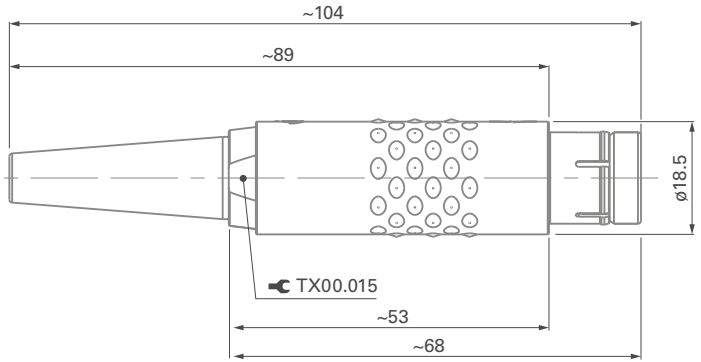
All dimensions and images shown are in millimeters and are for reference only.

PLUGS

CABLE
MOUNTED

S/SI 405

BODY STYLES

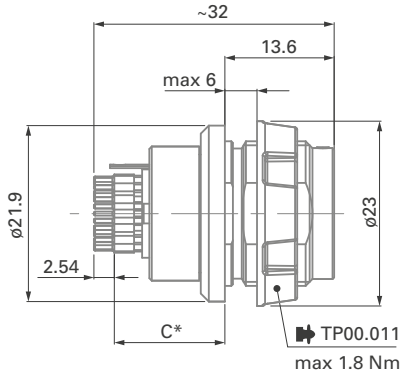


RECEPTACLE

PANEL
MOUNTED

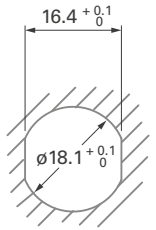
DBP 405

BODY STYLE



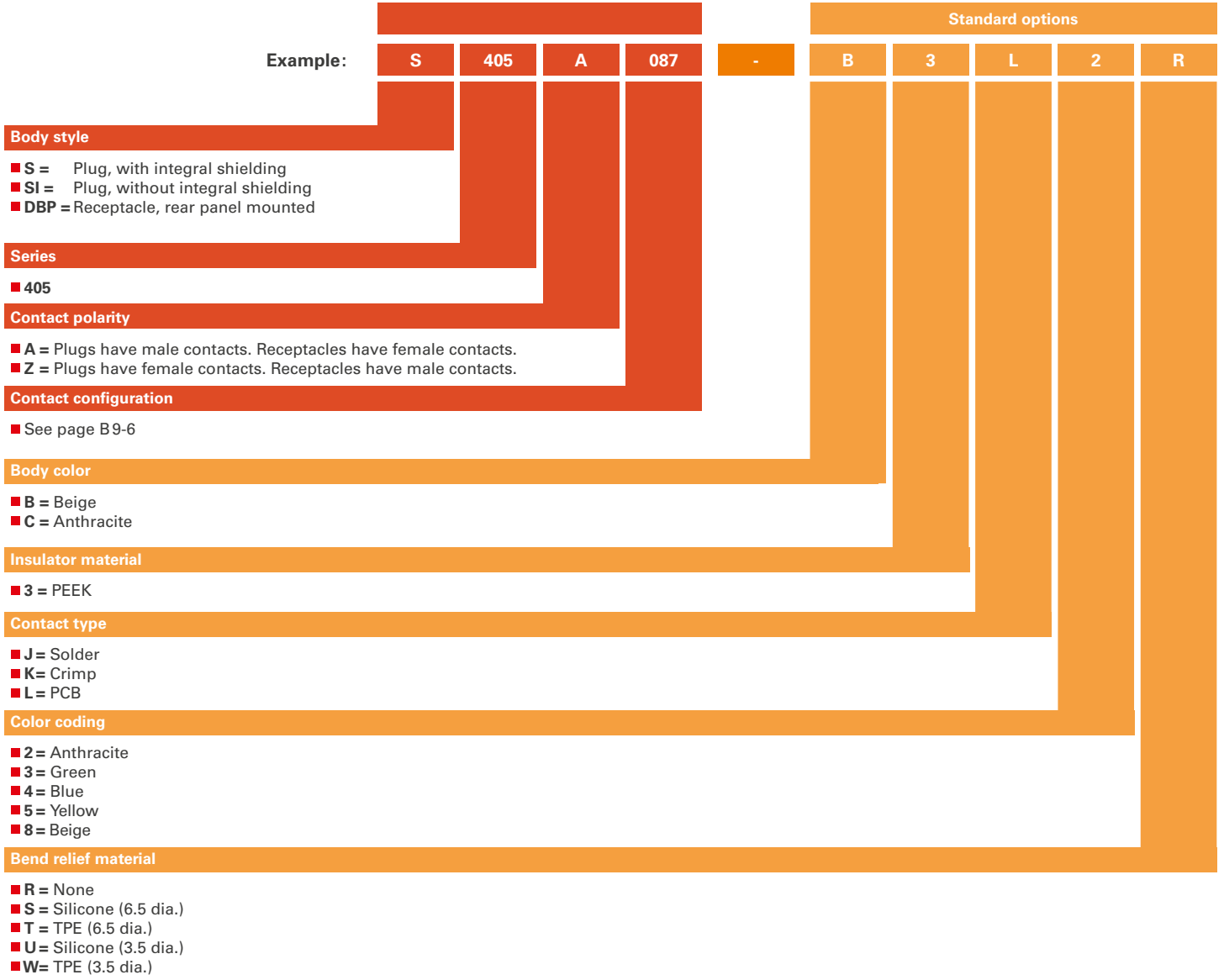
* See contact configurations page B9-6.

PANEL CUT-OUT
Figure 1



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

PLASTIC 405


Standard options
Example:
S
405
A
087
-
B
3
L
2
R
Body style
S = Plug, with integral shielding
SI = Plug, without integral shielding
DBP = Receptacle, rear panel mounted
Series
405
Contact polarity
A = Plugs have male contacts. Receptacles have female contacts.
Z = Plugs have female contacts. Receptacles have male contacts.
Contact configuration
See page B9-6
Body color
B = Beige
C = Anthracite
Insulator material
3 = PEEK
Contact type
J = Solder
K= Crimp
L = PCB
Color coding
2 = Anthracite
3 = Green
4 = Blue
5 = Yellow
8 = Beige
Bend relief material
R = None
S = Silicone (6.5 dia.)
T = TPE (6.5 dia.)
U = Silicone (3.5 dia.)
W= TPE (3.5 dia.)

PLASTIC 405

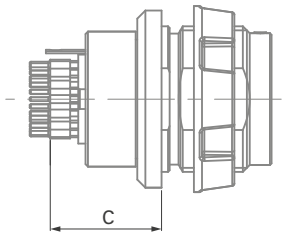


Figure 1

References	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø [mm]	Wire size		PCB		Test voltage [kV] in mated position				Current [1] [A]
			Solder	Crimp	PCB			Solder contacts	Crimp contacts	Pin diameter [mm]	C [mm] see Figure 1	AC r.m.s		DC		
												Contact to body	Contact to contact	Contact to body	Contact to contact	
405 A/Z 087		2	●	–	–	PEEK	3.0	max ø3.13mm AWG9 [1] / AWG10 [105/30]	–	–	–	1.2	1.6	2.3	3.0	30
405 A/Z 052		3	●	–	–	PEEK	2.0	max ø2.03mm AWG13 [1] / AWG14 [7/22]	–	–	–	2.0	2.5	3.0	3.5	23
405 A/Z 054		7 (1)	●	–	–	PEEK	2.0	max ø2.03mm AWG13 [1] / AWG14 [7/22]	–	–	–	3.0	2.0	4.0	3.0	25
		7 (6)					1.3	max ø1.18mm AWG17 [1] / AWG18 [16/30]	–	–	–	1.8	1.5	2.5	2.0	7.0
405 A/Z 101		9 (1)	●	–	●	PEEK	2.0	max ø2.03mm AWG13 [1] / AWG14 [7/22]	–	A: 0.50 Z: -	A: 10.8 Z: -	3.0	2.0	4.0	3.0	25
		9 (8)					1.3	max ø1.18mm AWG17 [1] / AWG18 [16/30]	–	A: 0.50 Z: -	A: 10.8 Z: -	1.8	1.5	2.5	2.0	5.0
405 A/Z 069		12	●	–	●	PEEK	1.3	max ø1.18mm AWG17 [1] / AWG18 [16/30]	–	A: 0.50 Z: -	A: 13.8 Z: -	1.4	1.5	1.8	2.0	8.0
405 A/Z 104		13 (3)	●	–	●	PEEK	1.3	max ø1.18mm AWG17 [1] /AWG18 [16/30]	–	A: 0.50 Z: -	A: 13.8 Z: -	2.5	1.5	3.8	2.2	14
		13 (10)					0.7	max ø0.79mm AWG21 [1] / AWG22 [7/30]	–	A: 0.50 Z: -	A: 13.8 Z: -	1.3	1.5	1.8	2.2	1.0
405 A/Z 110		16 (4)	●	–	●	PEEK	1.6	max ø1.86mm AWG13 [1] / AWG14 [7/22]	–	A: 0.50 Z: -	A: 13.8 Z: -	1.6	1.3	2.8	2.1	14
		16 (12)					0.7	max ø0.79mm AWG21 [1] / AWG22 [7/30]	–	A: 0.50 Z: -	A: 13.8 Z: -	1.0	1.2	1.5	2.0	1.0
405 A/Z 038		18	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] / AWG22 [7/30]	max ø0.83mm min ø0.38mm AWG22-26	A: 0.50 Z: -	A: 13.3 Z: -	1.4	1.6	1.8	2.2	4.5
405 A/Z 102		27	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] / AWG22 [7/30]	max ø0.62mm min ø0.38mm 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 A-12 for details.

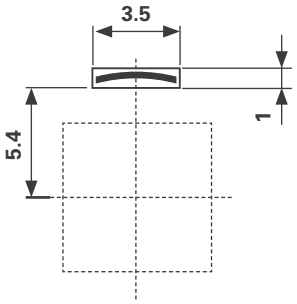
PCB LAYOUT

S/SI 405 **DBP 405**

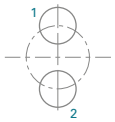
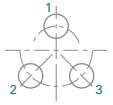
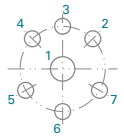
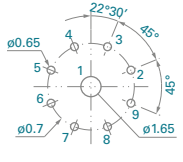
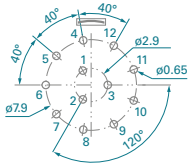
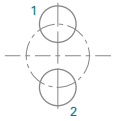
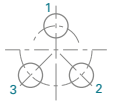
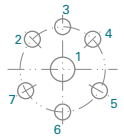
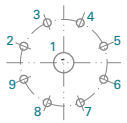
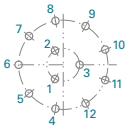
BODY STYLES

F

Minimum clearance for ground lug of receptacle.



View from F - Number of contacts (reference)

Polarity	2 (087)	3 (052)	7 (054)	9 (101)	12 (069)
A					
Z					

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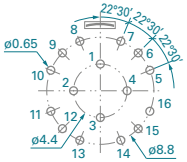
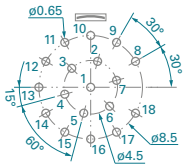
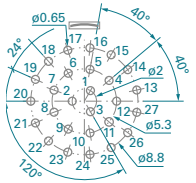
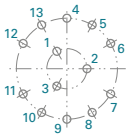
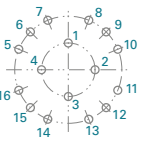
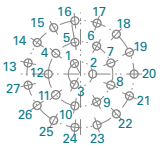
A				
Z			-	

CABLE CLAMP SETS

UNSHIELDED

Cable Ø range *(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

Cable Ø range *(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.

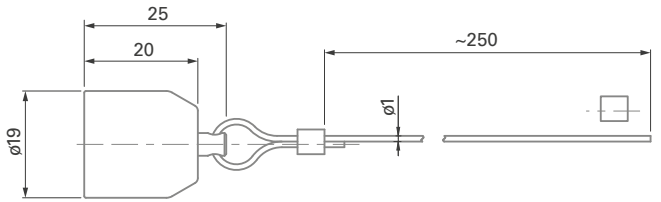
ENVIRONMENTAL

Cable Ø range *(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.

SEALING CAPS

FOR PLUGS



Part number	Cap material	Stainless steel cable covering material
105.2741 (Black)	PEI	FEP –Teflon®

Crimp ferrule (300.637) is included.

To attach the crimp ferrule to the stainless steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws. There are no specific Fischer Connectors tools.

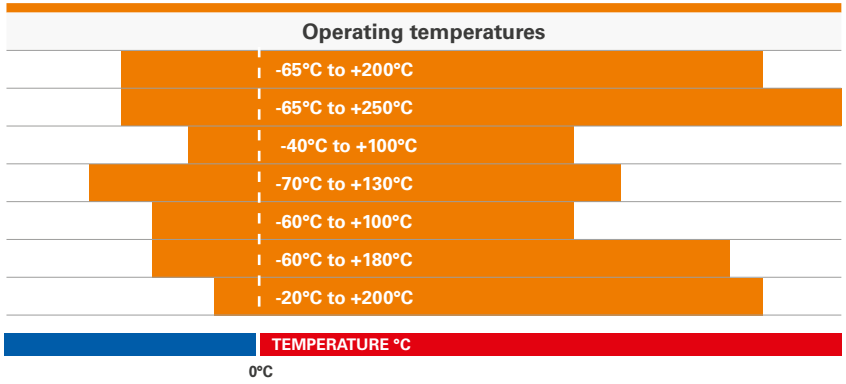
All dimensions and images shown are in millimeters and are for reference only.

ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type		Value
Sealing performance	Plug (S or SI 405)	with sealed cable clamp set and cap	IP67
			IP50
	Receptacle (DBP 405)		IP50
Endurance	5,000 mating cycles		

OPERATING TEMPERATURE RANGE

Component	Material
Body	PEI
Insulator	PEEK
Plastic Cable Clamp	POM (Delrin®)
Cable clamp seal	TPE
Cable strain relief	TPE
	VMQ - Silicone rubber
Sealing cap	PEI with FPM O-ring



MATERIAL & SURFACE TREATMENTS

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		

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

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

B9-12 / B9-20

PLASTIC 4032

Table of contents

PLUG

CABLE MOUNTED

RECEPTACLES

PANEL MOUNTED

FOR ALL PLASTIC 4032

PLASTIC

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

PLUG

CABLE MOUNTED

BODY STYLE	**SI 4032**
Locking system	Push-pull
Sealing	P50/IP68 with cap or mated with DBPO
Design	Standard
Integral shielding	No

RECEPTACLES

PANEL MOUNTED

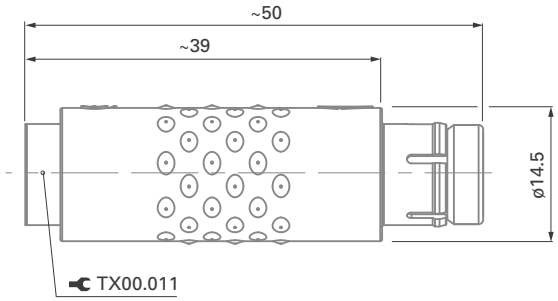
BODY STYLES	**DBP 4032**	**DBPO 4032**
Sealing	IP50	IP68
Design	Standard	Standard

PLUG

CABLE
MOUNTED

SI 4032

BODY STYLE

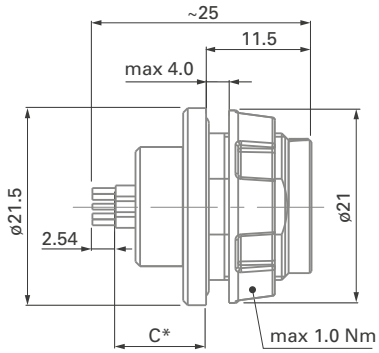


RECEPTACLES

PANEL
MOUNTED

DBP / DBPO 4032

BODY STYLES



* See contact configurations page B9-16.

PANEL CUT-OUT

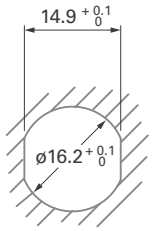
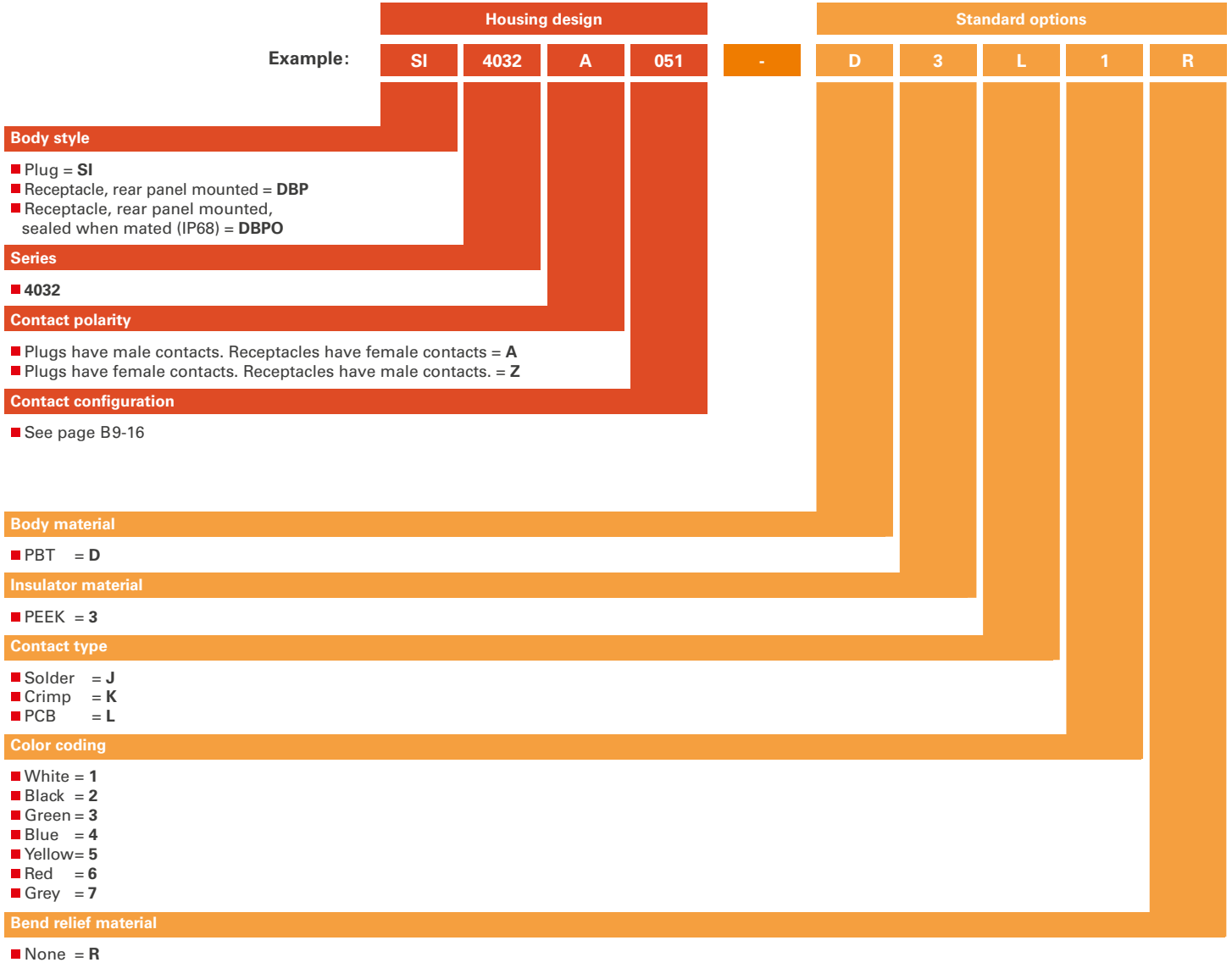


Figure 1

PLASTIC 4032



PLASTIC 4032

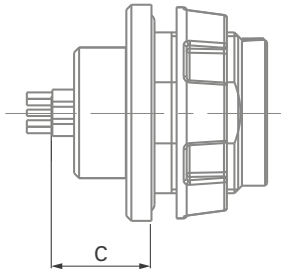


Figure 1

References	Pin layout	Number of contacts	Contact types			Insulating material	Contact ø *[mm]*	Wire size		PCB		Test voltage *[kV] in mated position*				Current [1] *[A]*
												AC r.m.s		DC		
			Solder	Crimp	PCB			Solder contacts	Crimp contacts	Pin diameter *[mm]*	C *[mm]* see Figure 1	Contact to body	Contact to contact	Contact to body	Contact to contact	
4032 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	13
4032 A/Z **052**		3	●	–	–	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	–	–	1.2	1.5	1.8	2.0	12
4032 A/Z **053**		4	●	–	●	PEEK	0.9	max ø0.79mm 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 A/Z **054**		5	●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	A: 0.63 Z: -	A: 9.9 Z: -	1.1	1.4	1.9	2.2	6.8
4032 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	5.2
4032 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	5.0
4032 A/Z **010**		10	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	A: 0.50 Z: -	A: 8.9 Z: -	1.4	1.5	2.0	2.2	4.5
4032 A/Z **012**		12	●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	A: 0.50 Z: -	A: 8.9 Z: -	1.4	1.5	2.0	2.2	4.2
4032 A/Z **019**		19	●	●	●	PEEK	0.5	max ø0.43mm AWG26 [1] AWG28 [19/40]	max ø0.43mm min ø0.20mm 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 A-12 for details.

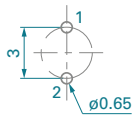
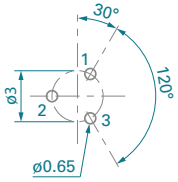
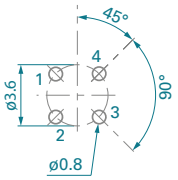
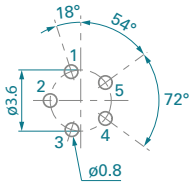
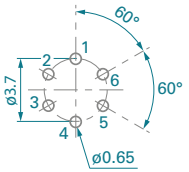
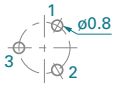
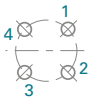
PCB LAYOUT

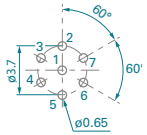
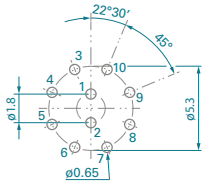
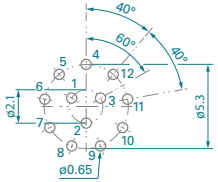
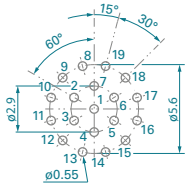
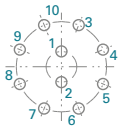
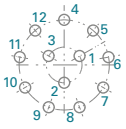
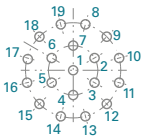
SI 4032 **DBP/DBPO 4032**

BODY STYLES

F →

View from F - Number of contacts (reference)

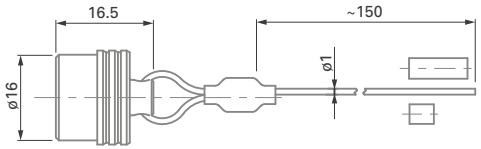
Polarity	2 (051)	3 (052)	4 (053)	5 (054)	6 (056)
A					
Z					

Polarity	7 (057)	10 (010)	12 (012)	19 (019)
A				
Z				

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

SEALING CAPS

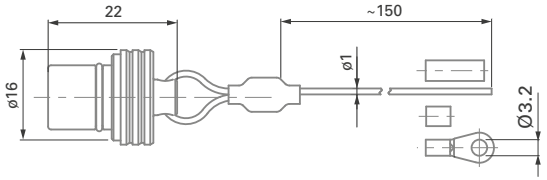
FOR PLUGS



Part number	Cap Material	Stainless steel cable covering material
4032.703	POM (Delrin®)	FEP –Teflon®

Crimp ferrule (300.922) and heat shrink tube (300.930) are included.

FOR RECEPTACLES



Part number	Cap Material	Stainless steel cable covering material
4032.701	POM (Delrin®)	FEP –Teflon®

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

To attach the crimp 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 B6-22 for recommended crimping tool for ferrule.

CABLE CLAMP SETS

UNSHIELDED

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.

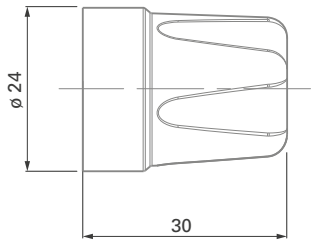
CABLE CLAMP SETS

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



Part number	Cap material
TH00.001	ABS

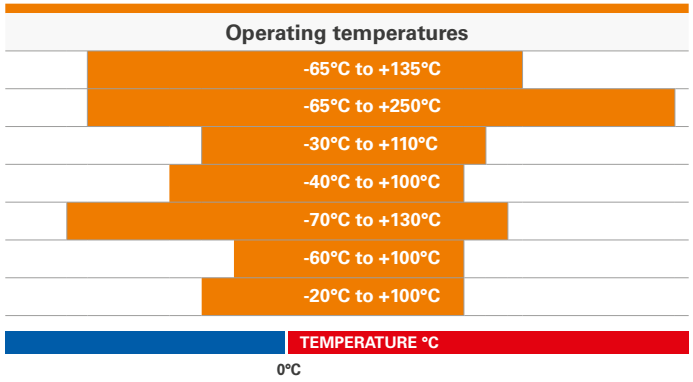
All dimensions and images shown are in millimeters and are for reference only.

ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Product type		Value
Sealing performance	SI plug	- with sealed cable clamp - with cap or mated with DBPO	IP68
			IP50
	DBPO receptacle	Mated with sealed plug or with cap	IP68
	DBP receptacle		IP50
Endurance	5,000 mating cycles		

OPERATING TEMPERATURE RANGE

Component	Material
Body	**PBT**
Insulator	**PEEK**
O-rings - receptacle	**NBR**
Unshielded cable clamp	**POM (Delrin®)**
Cable clamp seal	**TPE**
Sealing cap for plug	**POM (Delrin®) with O-ring**
Sealing cap receptacle	**POM (Delrin®) with NBR O-ring**



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		

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

B10

CHAPTER

FISCHER CORE SERIES
DISPOSABLE

COST-EFFECTIVE | EASY TO USE | MODULAR

KEY FEATURES

- Sterilizable (EtO), gamma)
- Color-coded for easy integration
- Single or two-piece shell
- Lightweight and shock resistant

B10-2 / B10-8

DISPOSABLE

Table of contents

PLUGS

FOR ALL DISPOSABLE

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 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

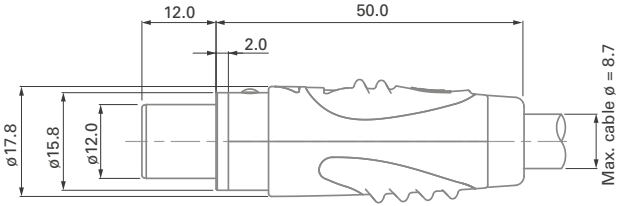
COMPATIBILITY

Mateable with all high performance Fischer Connectors' panel receptacles of the Fischer Core Series Brass 104.

PLUGS

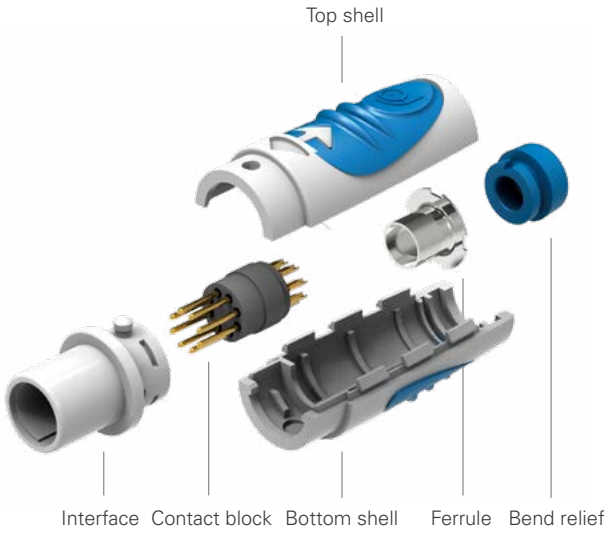
TWO-PIECE SHELL

WHITE* BLUE VIOLET TURQUOISE



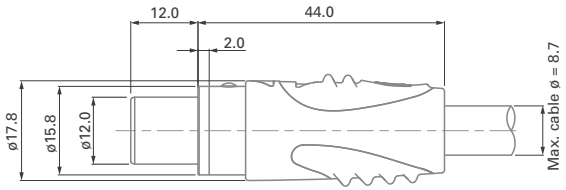
Part	Part number	Description
Interface	U1 504-A	Interface white
Top shell	U31 504-B01	White top shell
	U31 504-A03	White top shell + blue soft touch
	U31 504-A04	White top shell + violet soft touch
	U31 504-A09	White top shell + turquoise soft touch
Bottom shell	U32 504-B01	White bottom shell
	U32 504-A03	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.

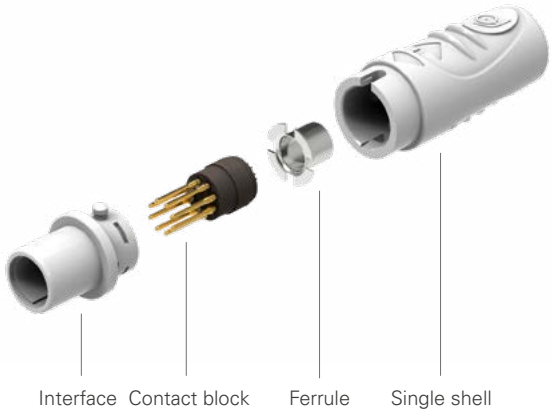


PLUGS

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



PLUGS

DISPOSABLE CABLE SOLUTION ON DEMAND

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

SINGLE OR TWO-PIECE SHELL

References	Pin layout	Number of contacts	Insulating material	Contact ø *[mm]*	Wire size	Test Voltage *[kV] in mated position*				Max. admissible current [1] *[A]* at 10°C temperature rise	Contact block insulator
						AC rms		DC			 Part number
						Contact to receptacle body	Contact to contact	Contact to receptacle body	Contact to contact		
A 037		4	PBT	1.3	AWG18 [16/30]	1.8	2.2	2.5	3.0	-	E21 504 A037-J
A 087		4 2	PBT	2.3	AWG12 [7/20]	1.5	1.6	2.2	2.5	-	E21 504 A065-J
		2		0.9	AWG22 [7/30]	2.0		2.8		-	
A 066		8	PBT	0.9	AWG22 [7/30]	1.5	1.6	2.2	2.7	3.0	E21 504 A066-J
A 056		11	PBT	0.9	AWG22 [7/30]	1.4	1.5	2.1	2.2	-	E21 504 A056-J
A 086		16	PBT	0.7	AWG22 [7/30]	0.8	1.5	1.3	2.1	1.7	E21 504 A086-J
A 092		19	PBT	0.7	AWG22 [7/30]	0.8	1.2	1.2	1.8	-	E21 504 A092-J

[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 A-12 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	–

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

A GLOBAL PARTNER IN CONNECTIVITY

A pioneer in high-reliability and rugged connector technology, **Fischer Connectors** has kept the spirit of innovation alive for more than 60 years. Since 1954, it has been reimagining connectivity, turning its customers' challenges into success stories through breakthrough technologies, high-quality products and highly responsive customer service.

Fischer Connectors helps its customers around the world produce innovative and reliable applications by designing, manufacturing and distributing high-performance, rugged connectivity solutions that withstand the most demanding environments. Its high-quality solutions are particularly suited to applications requiring faultless precision, durability and resistance to extreme conditions, including defense and security, medical, industrial, instrumentation, audiovisual, transportation, and energy.

Headquartered in Saint-Prex, Switzerland (Canton of Vaud), where its R&D Center and manufacturing facilities are also located, the Fischer Connectors Group has cable assembly sites in EMEA, the United States and Asia. The Group also includes local subsidiaries and a wide network of distributors and agents all over the world.

« Since 1954, we have grown from a provider of connectors to a global partner in connectivity for our customers. We have expanded to meet market demand, providing a range of tailored connectivity solutions that not only meet our customers' needs, but that also have the potential to shape the future. Thank you for joining us on this adventure to reimagine connectivity, together. »

Jonathan Brossard, Group CEO

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ISO 9001 ISO 13485 ISO 14001 ISO 45001 NUCLEAR KTA 1401 - QN 100 REACH compliant RoHS compliant SONY green partner

UPDATES

Date	Version	Page	Update
06.2023	3.5	B1-10	Addition of configurations 1031-15, 1031-29, 104-104
06.2023	3.5	B2-29, B2-31	Addition of configurations 1031-15, 1031-29, 104-104
06.2023	3.5	B7-24	Stainless steel caps for receptacles: correction of part numbers
09.2023	3.6	B1-10, B1-11	Addition of configurations 1031-105, 104-130, 104-131, 104-135
09.2023	3.6	B2-29 - B2-33	Addition of configurations 1031-105, 104-130, 104-131, 104-135
09.2023	3.6	B10-5	Modifications to the Cable Solutions section
09.2023	3.6	B10-6	Table modifications, addition of references A 37 and A 87
10.2023	3.7	B2-29 - B2-33	Adding data for configurations 1031-105, 104-130, 104-131, 104-135
02.2024	3.8	B3-6	New remark about the availability of the WSO body style.
02.2024	3.8	B2-28, B7-13, B8-13	Modification of contact type for configuration 103-062
02.2024	3.8	B9-12 - B9-14	Correction on body style plug designation
07.2024	4.0		Introduction of new contact layout USB3.2 Gen 2.
08.2024	4.1		Changes in product finish (Nickel Anthracite/Black Chrome over nickel)
11.2024	4.2	B2-4, B2-8, B2-28, B6-8, B6-15, B9-9	Values corrections
12.2024	4.3	B2-31, B2-37, B8-14, B8-16	Tables modifications
01.2025	4.4	A-14	Text corrections
03.2025	4.5	B6-24, B8-8, B8-10	Text corrections
05.2025	4.6	B1-6, B3-10, B3-33	Values corrections
05.2025	4.6	A-21	Map update

VOLUME 1

BRASS- STAINLESS STEEL- ALULITE
PLASTIC- DISPOSABLE

VOLUME 2

ULTIMATE- FIBEROPTIC- MINIMAX- FREEDOM

Technical & Downloads

Headquarters
FISCHER CONNECTORS SA
Ch. du Glapin 20
1162 Saint-Prex - Switzerland
Phone +41 21 800 95 95
Free phone +41 800 800 008
www.fischerconnectors.com
mail@fischerconnectors.ch

United States, Canada & South America
FISCHER CONNECTORS, Inc.
Atlanta, GA
Phone +1 678 393 5400
Toll free : 800 551 0121
www.fischerconnectors.com/us
mail@fischerconnectors.com

France
FISCHER CONNECTORS Sarl
Chanteloup-en-Brie
Phone +33 1 5578 2578
Appel gratuit : 0 800 590 444
www.fischerconnectors.fr
mail@fischerconnectors.fr

Germany, Austria & Eastern Europe
FISCHER CONNECTORS GmbH
Zorneding
Phone +49 8106 37722 0
Gebührenfrei : 0 800 233 3233
www.fischerconnectors.de
mail@fischerconnectors.de

Italy
FISCHER CONNECTORS Srl
Monza
Phone +39 039 734 072
www.fischerconnectors.it
mail@fischerconnectors.it

United Kingdom & Ireland
FISCHER CONNECTORS Ltd.
Waterlooville, Hampshire
Phone +44 23 9245 9600
Toll free : 0 800 432 0301
www.fischerconnectors.co.uk
sales@fischerconnectors.co.uk

India
FISCHER CONNECTORS India Pvt. Ltd.
504 GF& FF , Pace City 2
Sector 37
Gurugram 122004
Haryana
Phone +91 (0)124 5063725
www.fischerconnectors.com
salesin@fischerconnectors.in

Asia
FISCHER CONNECTORS ASIA Ltd.
Hong Kong
Phone +852 2620 6118
www.fischerconnectors.hk
mail@fischerconnectors.hk

Japan
FISCHER CONNECTORS K.K
Tokyo
Phone +81 70 1056 6637
www.fischerconnectors.jp
mail@fischerconnectors.jp

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