fischer connectors

Core Series Catalogue

fischer CONNECTORS

www.fischerconnectors.com

High Performance Push-Pull Connector and Cable Assembly Solutions

For more than 50 years, Fischer Connectors has designed, manufactured, and distributed high performance push-pull connector and cable assembly solutions. Known for their quality and ruggedness, our products prove to be reliable in the most demanding environments.

Fischer Connectors is committed to working closely with its customers to equip their application with the most appropriate connector and cable system. Our product range comprises over 10,000 standard items and we are always prepared to develop customized solutions for specific requests.

Primary design and manufacturing facilities are in Switzerland, with subsidiaries and distributors located worldwide.

Core Competencies

- High performance push-pull connectors
- Complete cable assembly solutions
- Rugged solutions for demanding environments
- Sealed and hermetic connector solutions
- Lightweight and compact connectors
- High flexibility of product configurations
- Standard solutions or customized product development
- World-class customer service
- Specialized advice and support
- High quality industrial processes
- Trusted by high-end industries
- Certified ISO 9001 and ISO 14001

RoHS compliant

fischer CONNECTORS
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Complete Customer Solutions

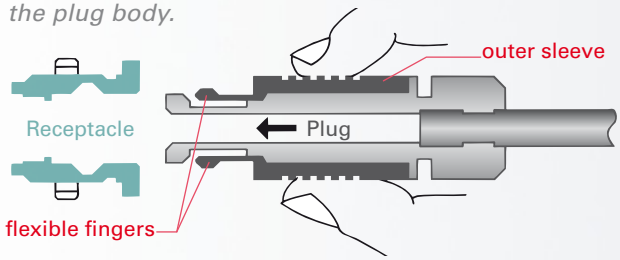
- **Leading edge connector technology**
  innovative and high performance products
- **Cable assembly service**
  standard or custom cabling and cable design assistance
- **Standard or customized solutions**
  > 10,000 standard items or custom developments
- **Specialized technical and sales support**
  assistance through advice, design, prototype and assembly
- **Worldwide network**
  close to our customers to offer unequaled service

Original Push-Pull Locking System

- **Original push-pull locking system**
  widely adopted by the industry
- **Unparalleled signal integrity**
  fully secured against accidental disconnection
- **Self-locking mechanism**
  designed for frequent connect/disconnect operations
- **Ideal for compact product designs**
  locking system integrated into connector housing
- **Push-pull locking system delivered as standard**
  non-locking or emergency quick release solutions also available

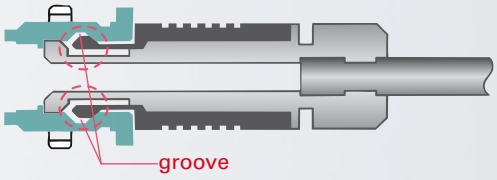
How Does it Work ?

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



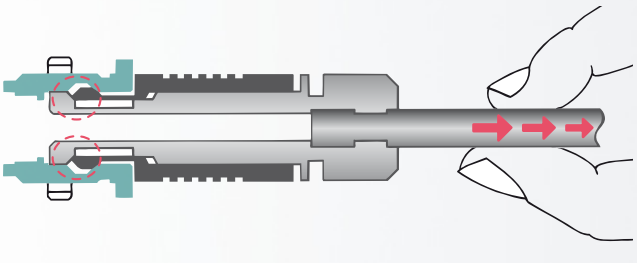
When Mated

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



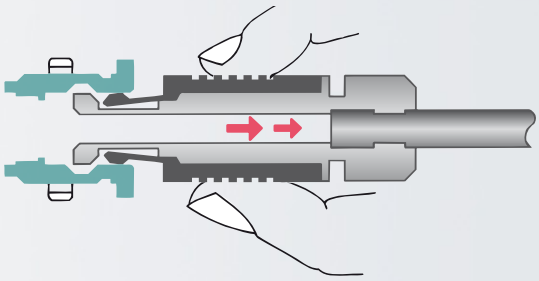
When Cable Pulled

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



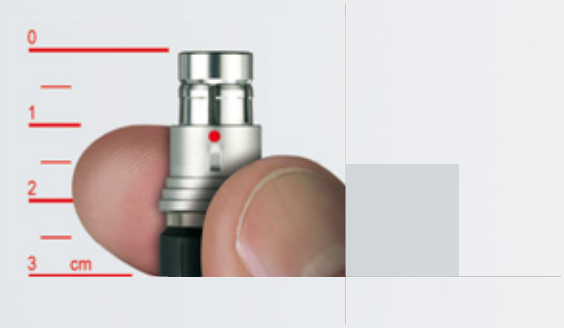
When Unplugging

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



Designed for Easy Connect/ Disconnect Operations

- **Easy mating, can be blind-mated**
  guiding mechanism ensures precise alignment
- **Increased safety and user friendliness**
  mechanical and color coding prevent misconnection
- **Convenient grip even with gloves**
  circular connectors with ribbed housing profile
- **Increased equipment life span**
  guiding mechanism optimally protects the contacts



Proven Rugged, Lightweight and Compact Solutions

- **Robust and shock resistant designs**
  ideal for equipment used in the field
- **Compact and lightweight construction**
  ideal for miniature and portable devices
- **High pin density and hybrid contacts**
  contributing to equipment miniaturization
- **Long product durability**
  10,000 mating cycles guaranteed

Operational in Demanding and Harsh Environments

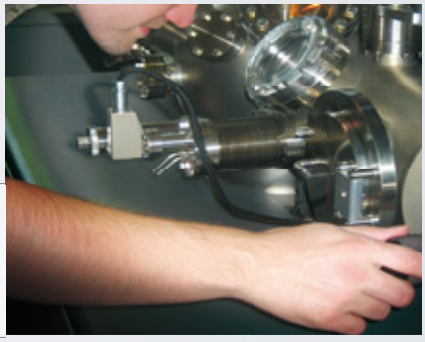
- **High performance connectors**
  designed and tested to withstand extreme conditions
- **Sealed up to IP68 and corrosion resistant**
  usable underwater
- **Hermetic**
  for use in vacuum or pressurized environments
- **Sterilizable**
  ideal for medical applications
- **360° EMC shielded**
  preventing electromagnetic interferences
- **Functional in a wide temperature range**
  from -65°C to +200°C

Medical

- Diagnostic devices
- Surgical instrumentation
- Therapy applications
- Medical imaging
- Cardiac assist devices
- Disposable equipment

Instrumentation

- Test & measurement
- Sensors
- Data acquisition
- Automation
- Scientific research
- Vacuum



Transport

- Avionics
- Maritime
- Automotive
- Railways

Energy

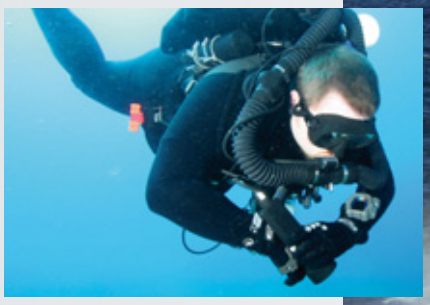
- Petrol & gas
- Nuclear
- Renewable energies
- Batteries
- Fuel cells

Broadcast

- Studios and outside broadcasting
- TV and motion picture
- HD and SD cameras
- Remote camera control

Defense & Security

- Communication systems
- Surveillance equipment
- Computers
- Target acquisition



Extreme

- Motorsports
- Sailboat racing
- Diving
- Submarine industry
- Weatherproof applications

A Connector Solution for Every Application

This catalogue features Fischer Connectors Core Series and related items.
To find information on other connector solutions, visit **www.fischerconnectors.com/catalogues**

Fischer Connectors Product Range Overview

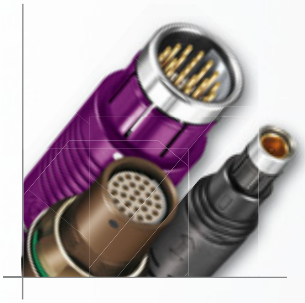
Generic Connectors

Core Series

Brass connectors ideal for a wide array of applications

Fischer Core Series

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

Fischer AluLite™ Series

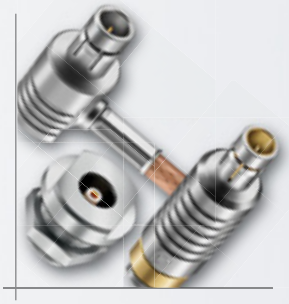
Plastic Series

Plastic connectors ideal for lightweight applications

Fischer 405 Series
Fischer 4032 Series

Specific Connectors

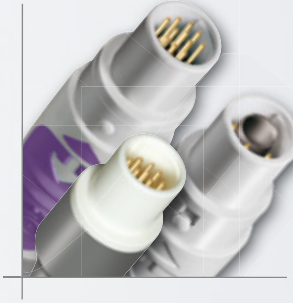
Nim-Camac



Coax and Triax Connectors engineered according to Nim-Camac standards

Fischer Nim-Camac 101 Series

Disposable



Low cost, high performance connectors developed for disposable equipments

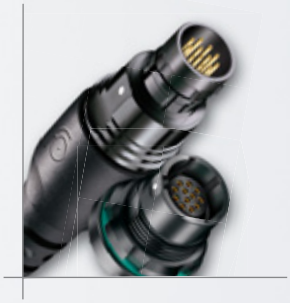
Fischer L.U.C™ Series

SD/HD Broadcast Cameras

Triax or Fiber Optic connector solutions

Fischer 1051 Series
Fischer 1052 Series
Fischer 1053 HDTV Series

Fischer UltiMate™



High performance connectors specially designed for military land forces

Fischer LandForce™ Series

Our catalogue features standard solutions. For customized solutions, please contact us.

Fiber Optic and Hybrid Connector Solutions

Fiber Optic and Hybrid connector solutions are developed based on specific applications needs.
They are not featured in this catalogue.

However, Fischer Connectors has a broad experience in fiber optic, hybrid connector and cable systems.
Please, contact us for more information.

Fiber Optic

- Wide range of body styles and sizes
- Signal or light
- Single or multimode
- Single or multi-fiber (up to 16)
- Sealed or unsealed

To find more information on Fiber Optic Series,
visit **www.fischerconnectors/catalogues**

Hybrids

- High flexibility of contact configurations, mixing:
  - Low voltage
  - High voltage
  - Coax
  - Fiber optic
  - Fluid/Gas
- Solving complex interconnection needs
- Wide range of body styles & sizes
- Sealed or unsealed

Contact Us

What is the optimal connector shell size for my application? Would a plastic housing be better than a metal one? Could my connection mix fiber optic and electrical contacts? For my application, what would be the appropriate sealing level? Selecting the right connector and cable system is an important and challenging process.

If in doubt, just ask! Our specialists are on hand to help you equip your application with the most suitable connector solution. Please contact us.

Our Website is your Starting Point to:

Find your Local Fischer Connectors Office

www.fischerconnectors.com/contacts

Access our Technical Library

- 3D CAD models
- Technical and dimensional specifications
- Assembly instructions

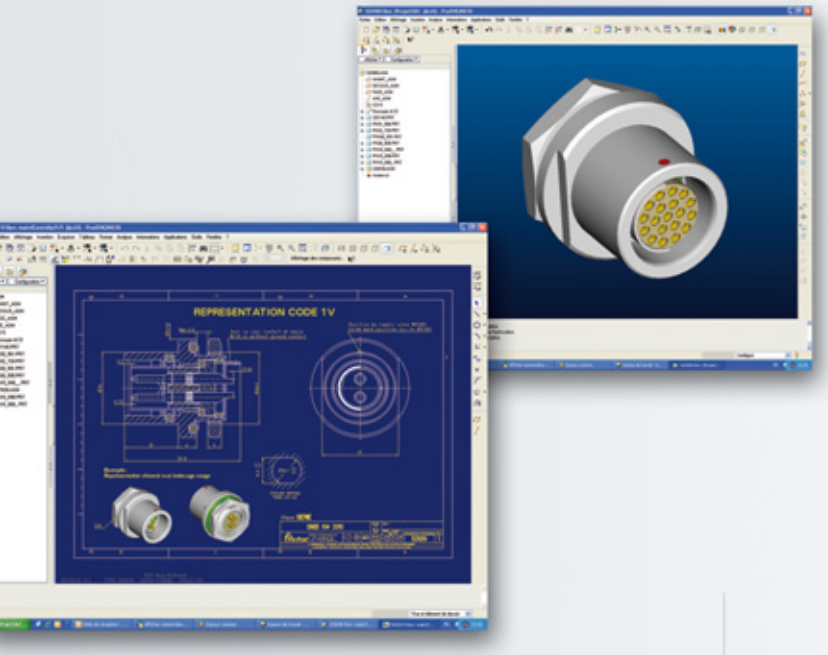
www.fischerconnectors.com/technical

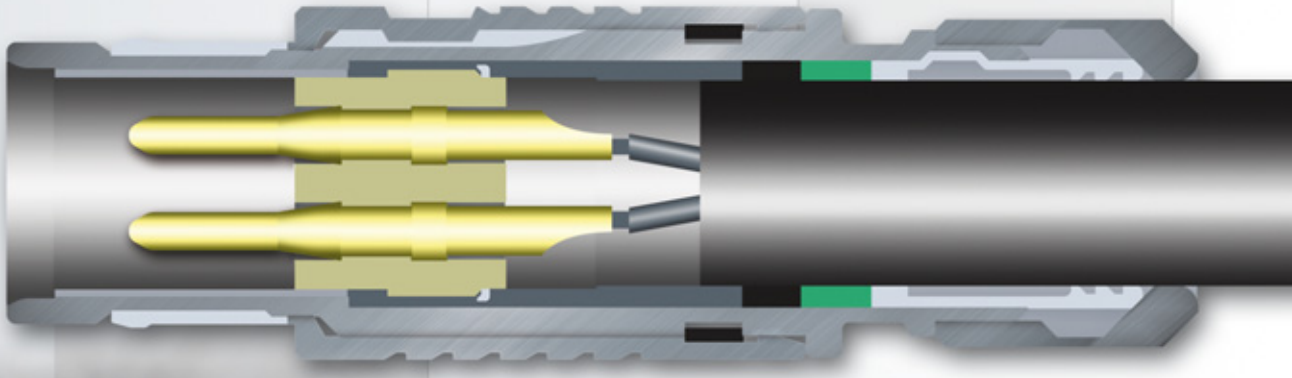
Download our Catalogues

www.fischerconnectors.com/catalogues

www.fischerconnectors.com

2 General Information



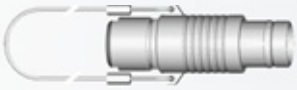


Cable Mounted Plugs

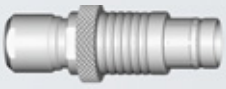
S Locking plug
SC Quick release plug

SOV Non-locking plug

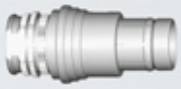
SA Plug with lanyard



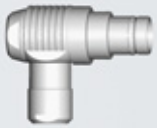
SV Tamperproof plug



SS Short plug
SSC Quick release short plug



WSO Right-angle plug



Cable Mounted Receptacles

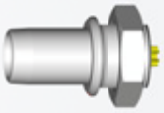
K Cable receptacle
KE Sealed cable receptacle

KS Short cable receptacle
KSE Short sealed cable receptacle

Panel Mounted Plugs

Front Mounted

SF Non-locking panel plug



SFU IP68 sealed non-locking panel plug
SFE Hermetic non-locking panel plug

Rear Mounted

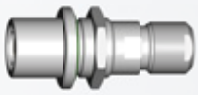
SFPU IP68 sealed panel plug
SFPE Hermetic panel plug

Panel Mounted Cable Receptacles

Front Mounted

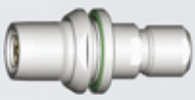
DK Panel mounted cable receptacle

DKE Sealed panel mounted cable receptacle



Rear Mounted

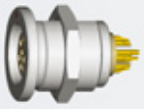
DKBE Sealed panel mounted cable receptacle



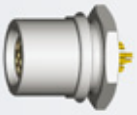
Panel Mounted Receptacles

Front Mounted

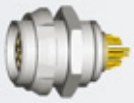
D Panel receptacle



DB Front projecting receptacle

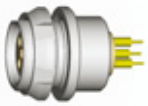


DG Completely threaded receptacle



Rear Mounted

DBP Rear-mounted panel receptacle



DBPC Rear-mounted receptacle, right-angle with PCB contacts

DGP Completely threaded receptacle with PCB contacts

Sealed and Hermetic Receptacles

DEE Hermetic panel receptacle

DEU IP68 sealed panel receptacle

DBEE Hermetic front projecting receptacle

DBEU IP68 sealed front projecting receptacle

DBPE Hermetic panel receptacle

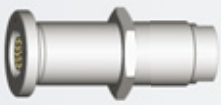
DBPU IP68 sealed panel receptacle

DBPLE Hermetic low profile front projecting receptacle

DBPLU IP68 sealed low profile front projecting receptacle

Bulkhead Feedthrough

WDE Hermetic bulkhead feedthrough for connection of 2 plugs



Ordering Information: How to Build a Part Number?

Fischer Connectors Core Series is built on a modular design and offers over 10,000 standard configurations. Refer to the table below 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**	**Contact Configuration**
Part Number Examples:				
Plug	S	102	A	056
	S cable mounted plug in size 102 with 7 (multipole) low voltage male contacts and following options			
Receptacle	D	102	A	056
	D panel mounted receptacle in size 102 with 7 (multipole) low voltage female contacts and following options			

Cable Mounted Plugs

S/SC
SOV
SA
SV
SS/SSC
WSO

Cable Mounted Receptacles

K/KE
KS/KSE

Panel Mounted Cable Receptacles

DK/DKE
DKBE

Panel Mounted Receptacles

D
DEU/DEE
DB
DBEU/DBEE
DBP
DBPU/DBPE
DBPLU/DBPLE
DG/DGP
DBPC
WDE

Panel Mounted Plugs

SF
SFU/SFE
SFPU/SFPE

Series

102
103
1031
104
105
106
107

See page 2-5 Connector Size vs Cable Diameter for details on Series selection.

See page 2-1 Range Overview for body styles selection.
To check body styles available for each contact configurations see:

Multipole Low Voltage Section 4
Multipole High Voltage Section 5
Coax Low Voltage Section 6
Coax High Voltage Section 7
Triax Section 8
Mixed High Voltage Section 9
Mixed Coax Section 10

As Standard Rule

A = Male contacts on plug and Female contacts on receptacle

Z = Female contacts on plug and Male contacts on receptacle

See page 4-9-1 for details

Exceptions

Multipole High Voltage
Mixed High Voltage

See page 5-5 and 9-5 for details

Three-Digit Number Specific for Each Pin Layout

See Electrical & Contact specifications tables Column "Type"

Options

Cable Clamp Sets for Cable Mounted Plugs & Receptacles
+

130

Natural chrome housing, PEEK contact blocks with solder contacts, keying code 1 and clamp nut wihout bend relief.

130 — Not applicable as panel mounted

Natural chrome housing, PEEK contact blocks with solder contacts and keying code 1.

▼ ▼

Specific Suffix Corresponding to Selected Options

Housing Color

Natural Chrome

Black Chrome

Contact Block Insulating Material

PTFE

PBT

PEEK

Contact Type

Solder

Crimp

PCB

Mechanical Coding of the Contact Block

Clamp Nut Type & Color

Other Options

See page 4-10 for Multipole Low Voltage, High Voltage and Mixed Multipole options

See page 6-10 for Coax Low and High Voltage, Triax and Mixed Coax options

Below Cable Clamp Sets Should be Ordered Separetly

Multipole Low Voltage Triax

Example:

S 102 A 056 - 130 +

Clamp set ordering line

E3 102.5/2.0

See page 4-11 for Cable Clamp Set selection

Below Cable Clamp Sets are Included with Connector

Coax Low Voltage
Coax High Voltage

Shielded (S) or Environmental (E) Cable Clamp Set diameter should be added to the connector part number separated by ø.

Examples:

For Shielded S Clamp Sets

K 103 A002-600 ø6.2

For Environmental E Clamp Sets

KE 103 A002-600 ø6.2

See page 4-11 for S or E Cable Clamp Set selection

Multipole High Voltage
Mixed High Voltage
Mixed Coax

Insulating Clamp Set ø (104, 105 and 106 Series) should be added to the connector part number separated by ø and followed by UI (Unshielded Insulated).

Example:

S 104 A062-130 ø6.6 - UI

See page 5-6 for Insulating Clamp Set selection

RELATED ITEMS

Accessories

Example:

102.785

Protective sleeve

▼

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

See Section 11

Tooling

TX00.240

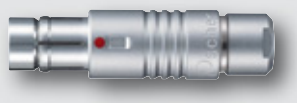
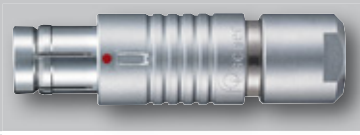
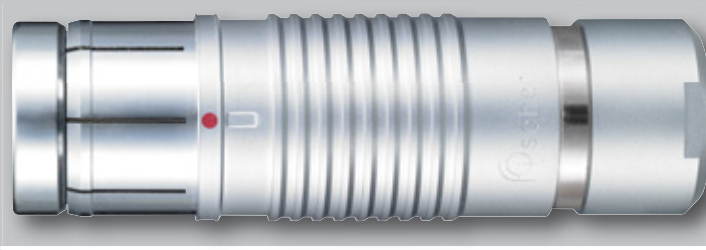
Crimping tool

▼

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

See Section 12

Connector Size Versus Cable Diameter

Series	Actual Connector Size 1:1	Multipole Low Voltage		
		Min Cable ø	Max Cable ø	Number of Contacts
102		1.5	4.7 (4.3) [2]	2-9
103		1.7	6.7 (6.2) [2]	2-12
1031		2.2	7.2 (6.7) [2]	10-19
104		2.9	8.7	2-27
105		1.5	10.7	2-27
106		4.2	19.2	3-24
107		5.7	22.7	4-55
		More Information See Section 4		

[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).

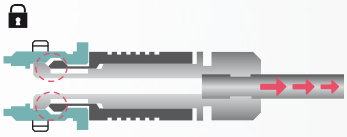
LV = Low Voltage HV = High Voltage

Multipole High Voltage			Coax Low Voltage		Coax High Voltage		Triax		Mixed High Voltage			Mixed Coax		
Min Cable ø	Max Cable ø	Number 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	Number of Contacts	Min Cable ø	Max Cable ø	Number of Contacts
			1.5	4.7 (4.3)[2]	1.5	4.7 (4.3)[2]	1.5	4.7 (4.3)[2]						
			1.7	6.7 (6.2)[2]	1.7	6.7 (6.2)[2]	1.7	6.7 (6.2)[2]						
2.9	8.7	4HV	2.9	8.7	2.9	8.7			2.9	8.7	1LV 2HV	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	6LV 2HV			
5.7	22.7	7HV			5.7	22.7								
More Information See Section 5			More Information See Section 6		More Information See Section 7		More Information See Section 8		More Information See Section 9			More Information See Section 10		

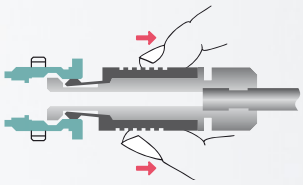
All dimensions shown are in millimeters and are for reference only.

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.



Secure locking when cable pulled

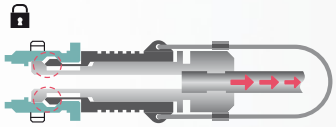


Pull the outer sleeve to unlock

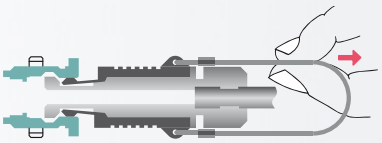
- Fully secured against accidental disconnection, it provides unparalleled signal integrity.
- Integrated into the connector housing, it is ideal for compact product design.
- For more details on Fischer locking expertise, see: **www.fischerconnectors.com/push-pull.**

Lanyard Plug: SA

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



Secure locking when cable pulled

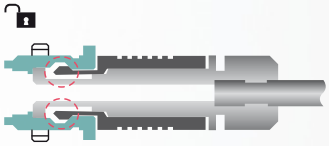


Pull the lanyard to unlock

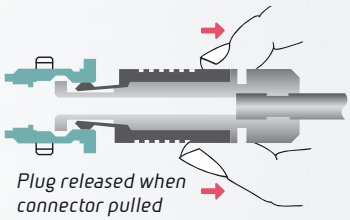
- A strong pull on the lanyard will unlock the latching mechanism.
- Specially suited to allow quick unmating on the field.

Quick Release Plugs: SC - SSC

Fischer Quick Release plugs are designed without locking mechanism for emergency release.



Snapping mechanism

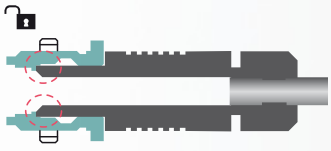


Plug released when connector pulled

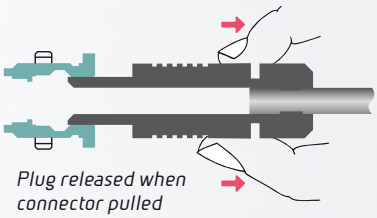
- Quick Release plugs snap into the receptacle with an audible “click”.
- A strong pull on the cable will allow unmating of the plug.
- Specially suited to avoid injuries to the users and damages to the material in case of accidental stress.

Non-Locking Plugs: SOV - SF - SFE/SFU - SFPE/SFPU

Fischer non-locking plugs are designed without snapping mechanism.



No snapping

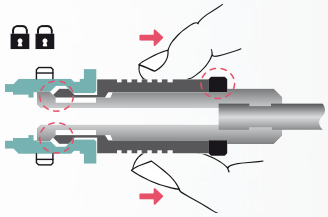


Plug released when connector pulled

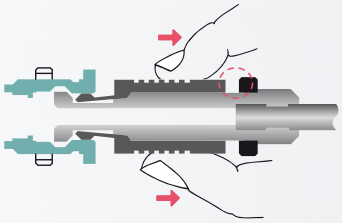
- A soft pull on the cable will release the plug.
- Specially suitable for connections with limited accessibility and/or requiring no locking.

Tamperproof Plug: SV

Fischer tamper proof plug features an integral safety locking ring to prevent unauthorized or unintentional disengagement.



Secure locking when knurled ring tightened



Untighten the knurled ring and pull the outer sleeve to unlock

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

3 Cable Assembly

Fischer Connectors provides complete, high quality turnkey solutions – connectors, cable assemblies and overmolding – all from one supplier.

Fischer Cable Assembly Solutions

In addition to leading edge connector technology, Fischer Connectors also provides complete cable assembly solutions for:

- Data transmission
- Power transmission
- Coax / Triax
- Fiber-Optic applications
- Fluid / Gas transmission
- Hybrid applications

Fischer Value Added Services

Our services include:

- Design assistance and validation
- Prototyping for customized cable assembly solutions
- Engineering expertise in various assembly and termination techniques
- Advanced in-process testing to ensure optimum reliability

- Full control and responsibility over the complete assembly including connector, cable and termination
- Integration of third party connectors
- World-class customer service

Capabilities

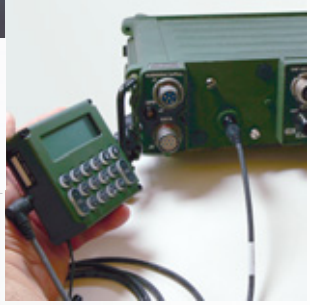
Fischer engineering expertise provides standard and customized high quality cable assembly solutions:

- Conventional cable termination using:
  Cable clamp sets, see pages 4-11 and 5-6
  Cable bend reliefs, see Accessories page 11-2
- Overmolding
- Heat shrink
- Potting
- Fiber optic termination
- Low cost and disposable

Application fields

Fischer provides complete cable assembly solutions for demanding applications.

- Medical
- Defense & Security
- Instrumentation
- Transportation
- Industry
- Energy
- Broadcast
- Extreme environment



Overmolding

For improved cable bend relief, sealing and aesthetics.
Suggested for short body connectors SS, SSC, KS and KSE.

Key Features and Benefits

- Straight and right-angle cable orientation
- Large variety of solutions available for different cable diameters
- Various materials depending on application: thermoplastic and silicone
- Aesthetic design
- Integrated cable bend relief improves cable flex life
- Submersible cable solutions: enhanced sealing level with internal potting

Heat Shrinking

For extra protection of wires and cable support.
Suitable for short body connectors SS, SSC, KS and KSE.

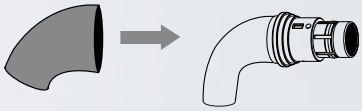
Key Features and Benefits

- Adds protection and support to exposed wires
- Potting and/or adhesive lined heat shrink can allow submersion
- Ideal for quick prototyping or low volume applications
- Use knurled clamp nut for resistant heat shrinking (See Accessories 11-1)
- Typical options:

Straight Tubing

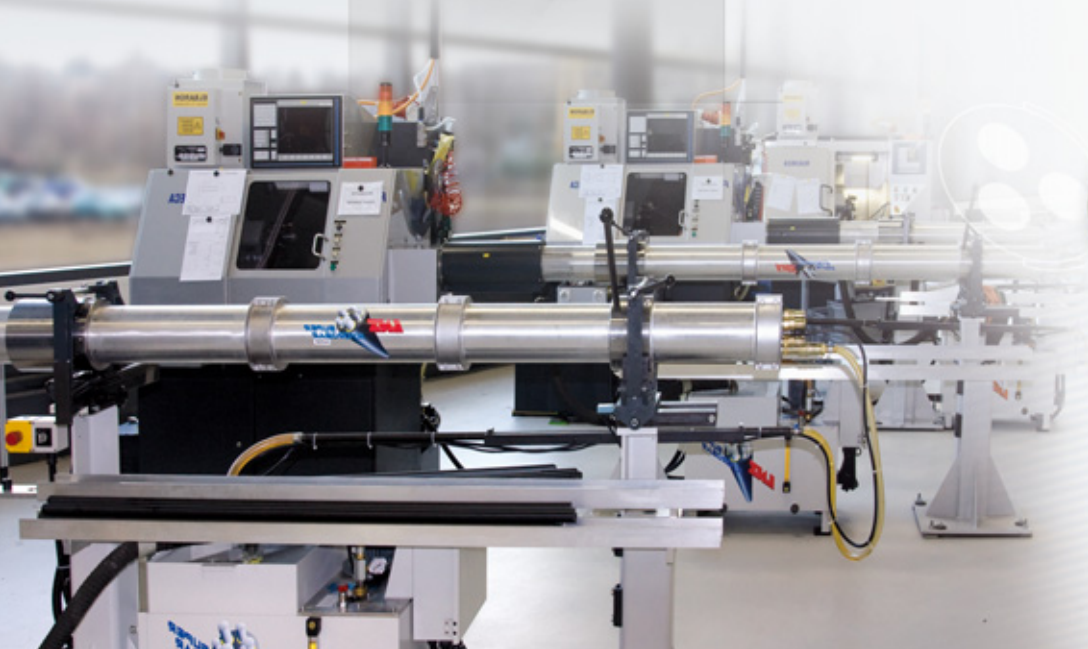
Straight Boot

Right Angle Boot



Please contact us for more details on cable assembly solutions.

4 Multipole Low Voltage Connectors



Key Features

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

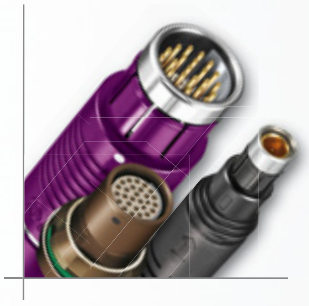
This catalogue covers our standard connector solutions.
For thermocouple connectors, check our online documentation on **www.fischerconnectors.com**
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set should be ordered separately, see page 4-11
- For details on Options, see page 4-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Multipole Low Voltage Contacts

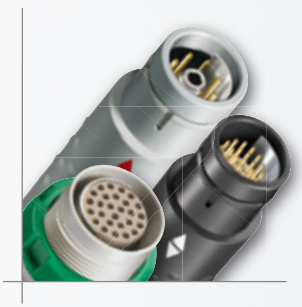
■ AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

Fischer AluLite™ Series

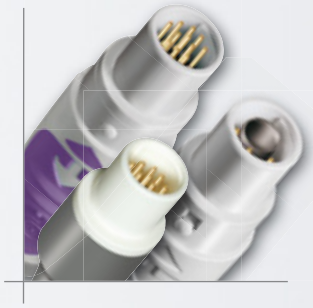
■ Plastic Series



Plastic connectors ideal for lightweight applications

Fischer 405 Series
Fischer 4032 Series

■ Disposable



Low cost, high performance connectors developped for disposable equipments

Fischer L.U.C™ Series

■ Fischer UltiMate™

High performance connectors specially designed for military land Forces

Fischer LandForce™ Series

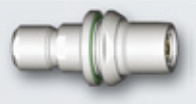
Cable Mounted Plugs

Cable Mounted Receptacles

Panel Mounted Receptacles

Panel Mounted Plugs

Panel Mounted Cable Receptacles



For all Multipole Low Voltage

Cable Mounted Plugs



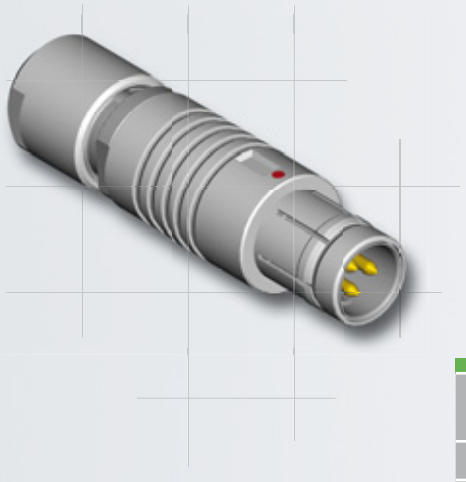


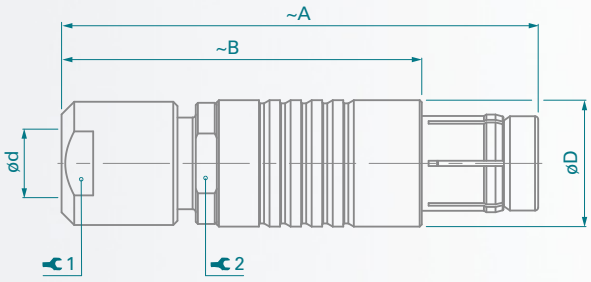

Body Style		S	SC	SOV	SA	SV	SS	SSC	WSO	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	●	●	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	●	●	●	●	●	●	
Locking System	None			●						Plug Locking Systems Page 2-7
	Push-Pull	●			●	●	●		●	
	Emergency Release		●					●		
	Lanyard				●					
	Tamperproof					●				
Contacts	Crimp	●	●	●	●	●	●	●	●	Electrical & Contact Specifications Page 4-9
	Solder	●	●	●	●	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	●	●	●	●	Options Page 4-10
	Black Chrome	●	●	●	●		●	●	●	
Design	Shortened Body						●	●		Core Series Overview Page 2-1
	Straight						●	●		
	Right Angle						●	●	●	
Cabling	Cable Clamp Sets	●	●	●	●	●			●	Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable						●	●		
	Heat Shrinkable						●	●		
Accessories	Cable Bend Reliefs	●	●	●	●	●			●	Accessories Section 11
	Protective Sleeves	●	●	●						
	Sealing Caps	●	●	●	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	●	●	●	Dimensions Page 4-3-1 For more Information Visit: **www.fischerconnectors.com /technical**
	103 Series	●	●	●	●	●	●	●	●	
	1031 Series	●	●	●	●	●	●	●	●	
	104 Series	●	●	●	●	●	●	●	●	
	105 Series	●	●	●	●	●	●	●	●	
	106 Series	●				●				
	107 Series	●				●				

Plugs mate with receptacles.

Cable Mounted Plugs

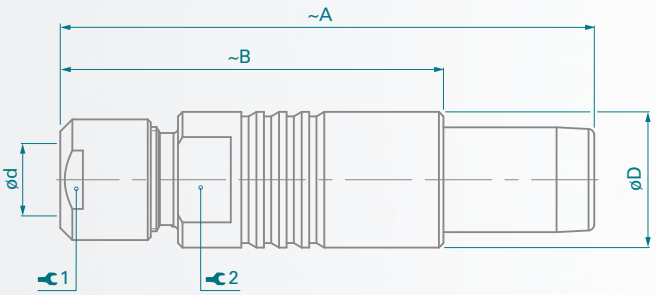
S / SC Body Styles





Series	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	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	80	55	28	19.2	19.2	22	8.0	-
107	110	85	34	22.7	22.7	32	10.0	32

SOV Body Style

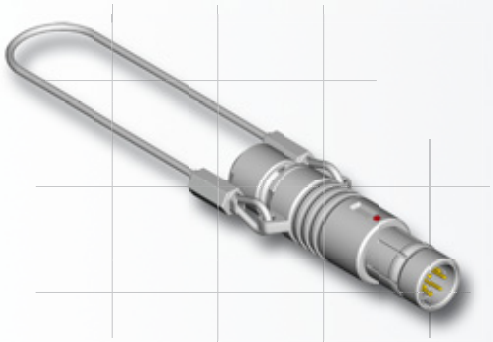


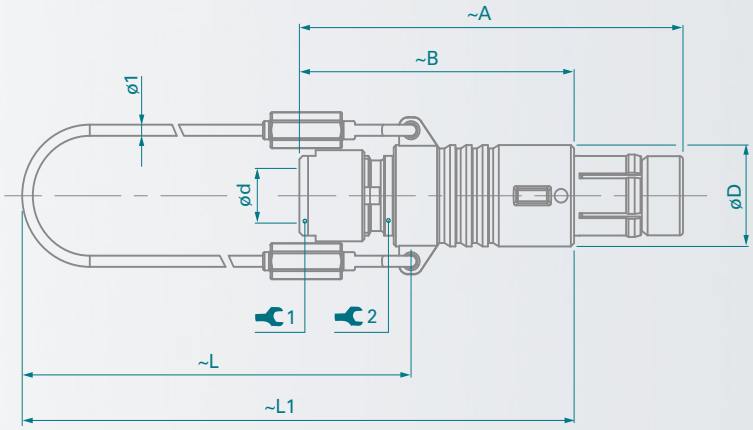
Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
1031	48	38	13	7.2	6.7	12	1.5	11
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	Please contact us for additional information							
107								

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

Cable Mounted Plugs

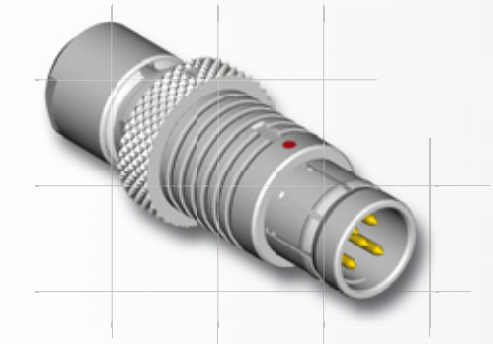
SA Body Style

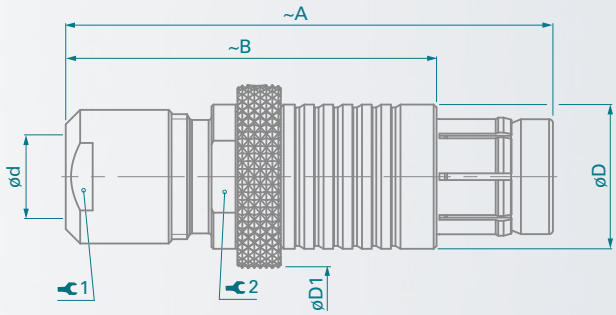




Series	A	B	D	L	L1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	50	65	4.7	4.3	7	0.6	7
103	46	35	12	60	77	6.7	6.2	10	1.0	10
1031	48	38	13	55	75	7.2	6.7	12	1.5	11
104	50	38	15	65	84	8.7	8.7	12	2.0	13
105	62	47	18	70	94	10.7	10.7	15	3.5	16
106	Please contact us for additional information			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

SV Body Style



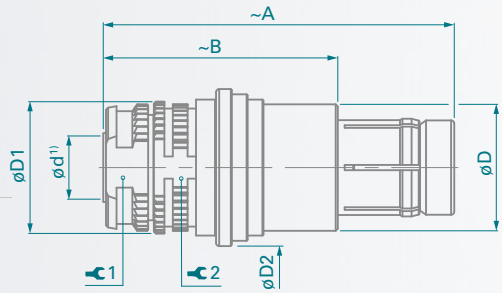


Series	A	B	D	D1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-
1031	Please contact us for additional information								
104	50	38	15	20	8.7	8.7	12	2.0	13
105	62	47	18	22	10.7	10.7	15	3.5	16
106	80	55	30	35	19.2	19.2	22	8.0	-
107	110	85	34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

Cable Mounted Plugs

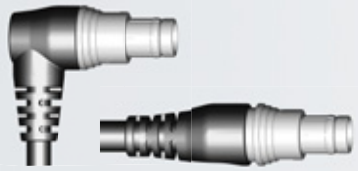
SS / SSC Body Styles



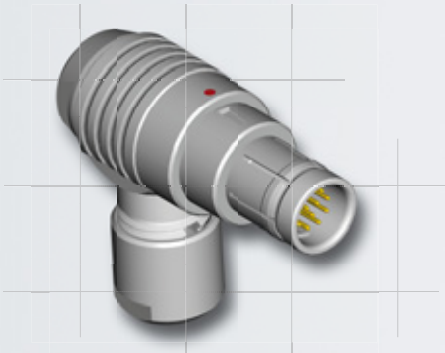
Series	A	B	D	D1	D2	d *max*	1	Torque 1 *[Nm]*	2
102	30	20	9.0	9.5	12.0	3.8	7	0.6	8
103	33	22	12.0	12.5	15.0	6.0	10	1.0	11
1031	33	23	12.4	13.0	15.5	6.2	10	1.0	11
104	38	26	15.0	15.3	18.0	8.0	12	2.0	13
105	44	29	18.0	18.4	21.2	10.0	15	3.5	16
106	Please contact us for additional information								
107									

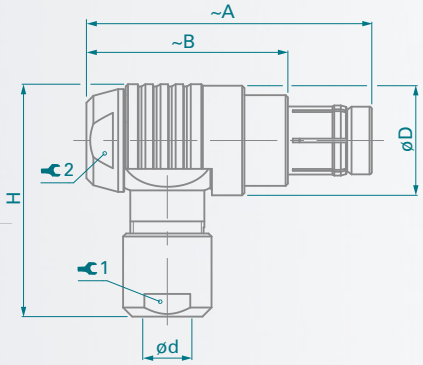
[1] Max. cable diameter below shield.

Cable Assembly: Overmolding Options

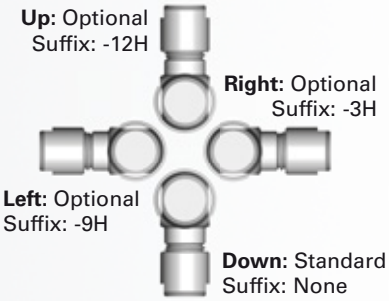


WSO Body Style





Cable Orientations: View from the back



Series	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	4.5
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

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

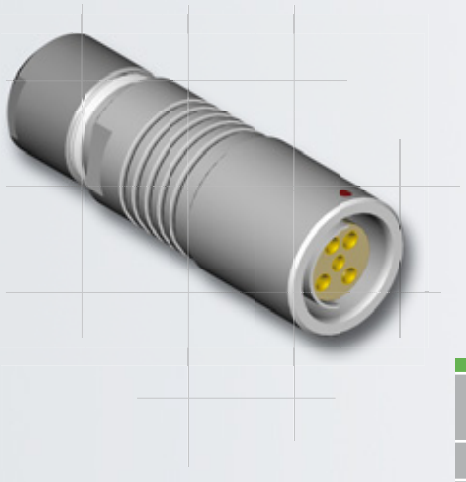
Cable Mounted Receptacles

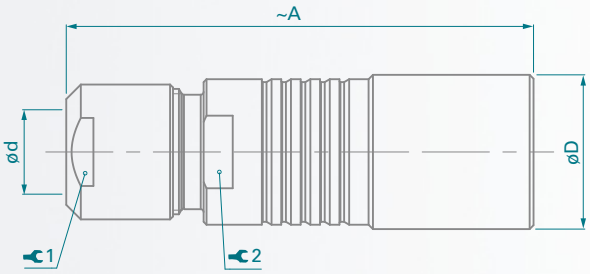
Body Style		K	KE	KS	KSE	Links to Detailed Information
Protection	Unsealed (IP50)	●		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●		●	
Contacts	Crimp	●	●	●	●	Electrical & Contact Specifications Page 4-9
	Solder	●	●	●	●	
Housing	Natural Chrome	●	●	●	●	Options Page 4-10 Core Series Overview Page 2-1
	Black Chrome	●	●	●	●	
	Shortened Body			●	●	
Design	Straight			●	●	Core Series Overview Page 2-1
	Right Angle			●	●	
Cabling	Cable Clamp Sets	●	●			Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable			●	●	
	Heat Shrinkable			●	●	
Accessories	Cable Bend Reliefs	●	●			Accessories Section 11
	Protective Sleeves	●	●			
	Sealing Caps	●	●	●	●	
Size	102 Series	●	●	●	●	Dimensions Page 4-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	●	
	1031 Series	●	●	●	●	
	104 Series	●	●	●	●	
	105 Series	●	●	●	●	
	106 Series	●	●			
	107 Series	●	●			

Plugs mate with receptacles.

Cable Mounted Receptacles

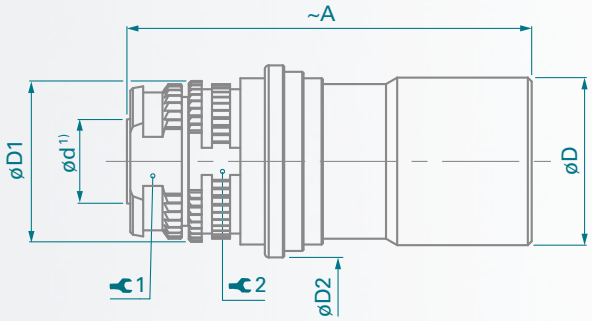
K / KE Body Styles





Series	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	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16
106	79	33	19.2	19.2	25	8	25
107	105	36	22.7	22.7	32	10	32

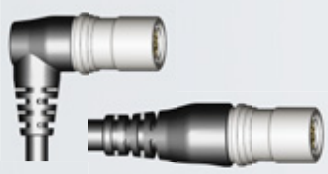
KS / KSE Body Styles



Series	A	D	D1	D2	d *max*	1	Torque 1 [Nm]	2
102	28	10.0	10.0	12.0	3.8	7	0.6	8
103	32	13.0	13.0	15.0	6.0	10	1.0	11
1031	31	13.5	13.5	15.5	6.2	10	1.0	11
104	35	16.0	16.0	18.0	8.0	12	2.0	13
105	43	19.0	18.0	21.2	10.0	15	3.5	16
106	Please contact us for additional information							
107								

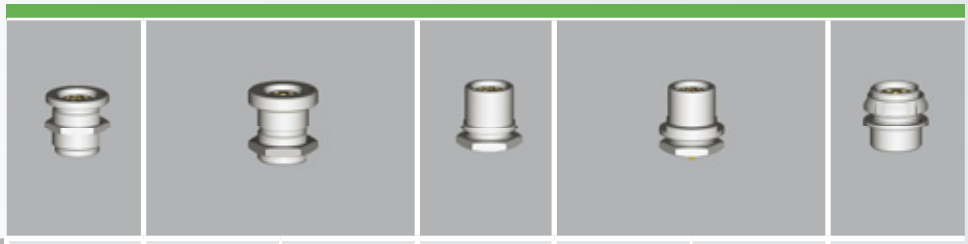
[1] Max. cable diameter below shield.

Cable Assembly: Overmolding Options



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

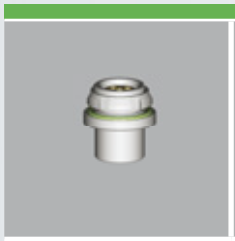
Panel Mounted Receptacles



Body Style		D	DEU	DEE	DB	DBEU	DBEE	DBP
Protection	Unsealed (IP50)	●			●			●
	Sealed up to IP68		●	●		●	●	
	Hermetic			●			●	
Contacts	Crimp	●			●			●
	Solder	●	●	●	●	●	●	●
	PCB	●	●	●	●	●	●	●
Housing Color	Natural Chrome	●	●	●	●	●	●	●
	Black Chrome	●	●	●	●	●	●	●
Design	Right Angle							
	Flush	●	●	●				●
	Front Projecting				●	●	●	
	Bulkhead Feedthrough							
Assembly	Front Mounting	●	●	●	●	●	●	
	Rear Mounting							●
Accessories	Sealing Caps	●	●	●	●	●	●	●
	Spacers	●	●	●	●	●	●	●
	Color-Coded Washers	●			●			●
	Grounding Washers	●	●	●	●	●	●	●
	Locking Washers	●	●	●	●	●	●	●
	Decorative Nuts							●
Size	102 Series	●	●	●	●	●	●	●
	103 Series	●	●	●	●	●	●	●
	1031 Series	●	●	●	●	●	●	●
	104 Series	●	●	●	●	●	●	●
	105 Series	●	●	●	●	●	●	●
	106 Series	●		●			●	
	107 Series	●		●			●	

Plugs mate with receptacles.

Panel Mounted Receptacles

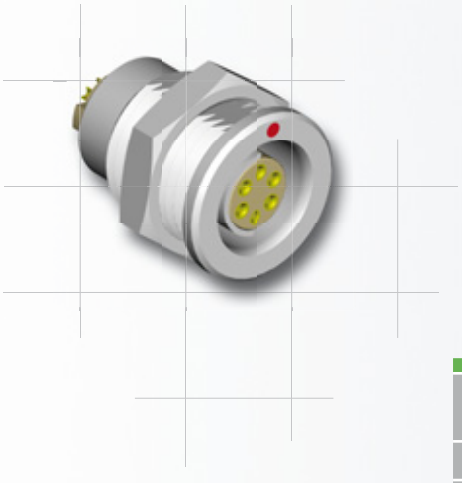


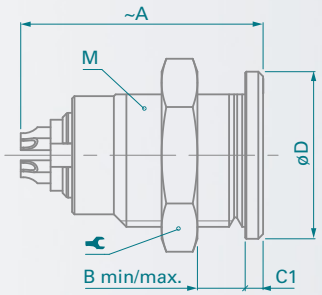



DBPU	DBPE	DBPLU	DBPLE	DG	DGP	DBPC	WDE	Links to Detailed Information
				●	●	●		Sealed and Hermetic Connectors Page 13-8
●	●	●	●				●	
	●		●				●	
				●	●			Electrical & Contact Specifications Page 4-9
●	●	●	●	●	●			
●	●	●	●	●	●	●		
●	●	●	●	●	●	●	●	Options Page 4-10
●	●	●	●	●	●	●		
						●		Core Series Overview Page 2-1
●	●			●	●	●	●	
		●	●	●	●		●	
							●	
				●	●		●	Core Series Overview Page 2-1
●	●	●	●	●	●	●		
●	●	●	●	●	●	●	●	Accessories Section 11
●	●	●	●	●	●	●	●	
				●	●	●		
●	●	●	●	●	●	●		
●	●	●	●	●	●	●		
●	●	●	●	●	●	●		
●	●	●	●	●	●	●	●	Dimensions Page 4-5-2
●	●	●	●	●	●	●	●	
●	●	●	●	●	●	●		
●	●	●	●	●	●		●	For more Information Visit: **www.fischerconnectors.com /technical**
●	●	●	●	●	●		●	
				●	●		●	
	●						●	

Panel Mounted Receptacles

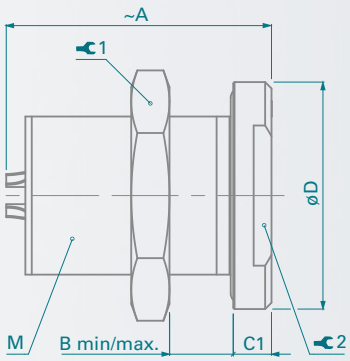
D Body Style





Series	A	B	C1	D	M		Torque [Nm]
102	19	0/9	1.5	11	9x0.5	11	1.3
103	23	0/8	1.5	14	12x1	14	2.5
1031	25	0/10	2.0	16	14x1	17	3.0
104	25	0/11	2.2	19	15x1	17	4.0
105	32	0/15	2.0	22	18x1	22	6.0
106	50	0/18	3.0	37	32x1	TX00.106	15
107	46	0/18	4.0	40	35x1	TX00.107	16

DEU / DEE Body Styles

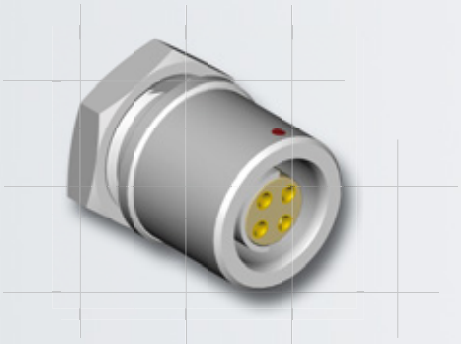


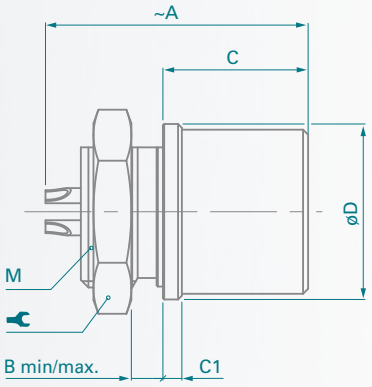
Series	A	B	C1	D	M	1	Torque 1 [Nm]	2
102	20	8/10	2.5	14	9x0.5	11	1.3	11
103	23	0/12	3.0	18	14x1	17	3.0	14
1031	25	0/12	3.0	19	14x1	17	3.0	15
104	25	0/15	4.0	22	16x1	19	4.5	17
105	33	10.5/18	4.0	27	20x1	25	6.5	-
106	50	19/24	5.0	41	32x1	TX00.106	15	-
107	47	19.2/22	5.0	45	35x1	TX00.107	16	-

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

Panel Mounted Receptacles

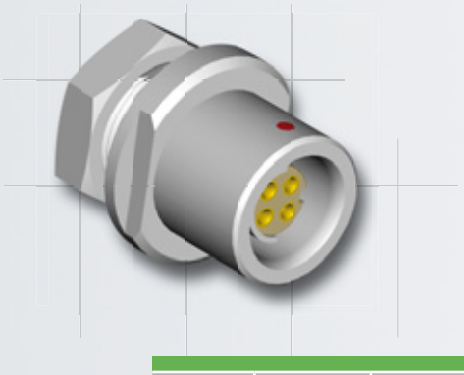
DB Body Style

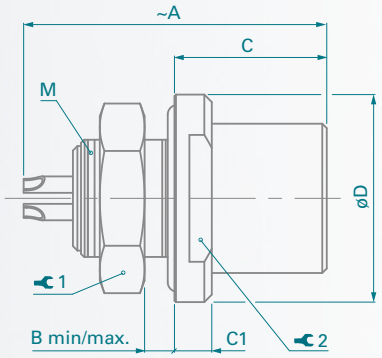




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	18	0/3	11.0	1.0	11	9x0.5	11	1.3
103	21	0/4	11.5	1.5	14	12x1	14	2.5
1031	Please contact us for additional information							
104	26	0/3	14.5	2.5	19	16x1	19	4.5
105	33	0/7	19.0	2.0	22	18x1	22	6.0
106	Please contact us for additional information							
107								

DBEU / DBEE Body Styles



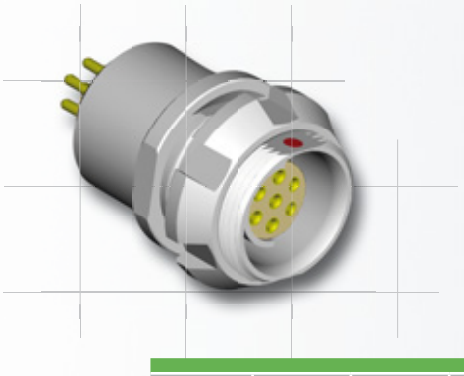


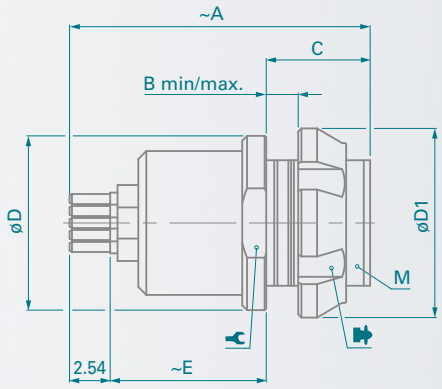
Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	20	0/3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	0/4.0	13.0	3.0	18	14x1	17	3.0	14
1031	24	0/4.0	12.0	3.0	19	14x1	17	3.0	15
104	30	0/3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	0/5.0	19.0	4.0	27	18x1	22	6.0	22
106	50	0/6.5	25.5	7.0	40	32x1	TX00.106	15	-
107	47	0/5.0	24.0	5.0	45	35x1	TX00.107	16	38

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

Panel Mounted Receptacles

DBP Body Style

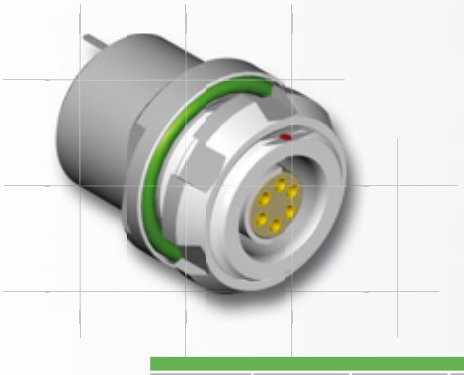


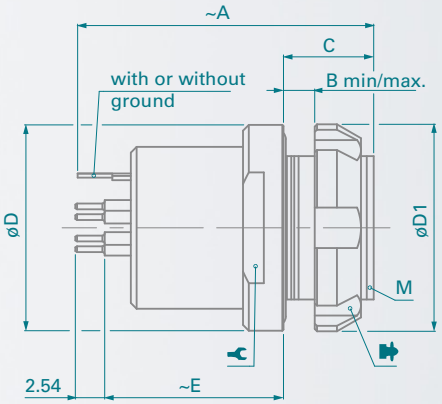


Series	A	B min/max.	C	D	D1	E	M		1)	Torque [Nm]
102	20	0/3.5	6.5	11	12	10.0	9x0.5	10	TC00.000	1.3
103	23	0/4.0	8.0	14	15	12.0	12x1	-	TF00.001	2.5
1031	23	0/3.0	7.0	16	18	13.0	14x1	-	TG00.001	3.0
104	26	0/5.0	9.0	19	19	11.5	15x1	-	TK00.000	4.0
105	30	0/12.0	17.0	22	23	10.0	18x1	-	TP00.011	6.0
106	Please contact us for additional information									
107										

[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

DBPU / DBPE Body Styles





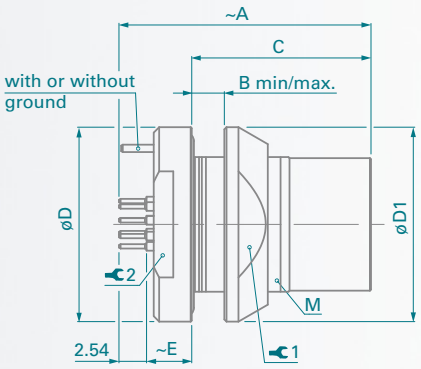
Series	A	B min/max.	C	D	D1	E	M		1)	Torque [Nm]
102	20	0/3.5	6.5	14	12	13.0	9x0.5	11	TC00.000	1.3
103	26	0/3.0	7.8	18	18	15.5	14x1	15	TG00.001	3.0
1031	23	0/3.0	7.0	19	18	13.0	14x1	15	TG00.001	3.0
104	26	0/4.0	8.0	22	20	15.5	16x1	-	TK00.002	4.5
105	30	0/5.0	10.0	27	25	14.0	20x1	-	TP00.005	6.5
106	Please contact us for additional information									
107										

[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

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

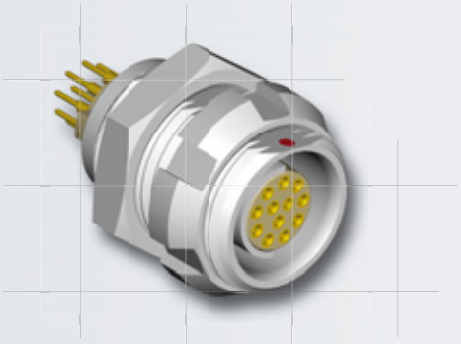
Panel Mounted Receptacles

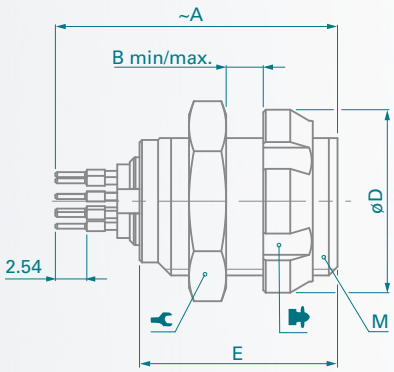
DBPLU / DBPLE Body Styles



Series	A	B min/max.	C	D	D1	E	M	1	Torque 1 [Nm]	2
102	21	0/4.5	14.2	14	13	3.6	10x0.5	11	1.5	11
103	24	0/5.0	16.5	18	18	4.2	14x1	15	3.0	15
1031	23	0/5.5	16.0	19	20	4.2	15x1	17	4.0	15
104	27	0/6.5	18.5	22	20	5	16x1	17	4.5	17
105	31	0/7.0	22.5	27	25	5.5	20x1	22	6.5	22
106	Please contact us for additional information									
107										

DG / DGP Body Styles





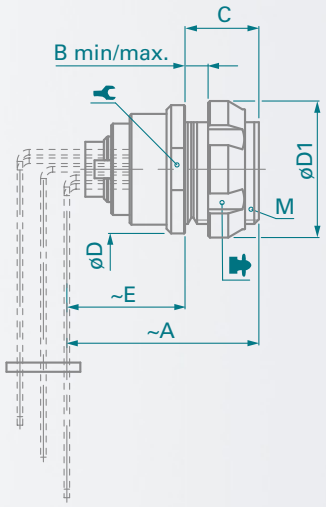
Series	A	B min/max.	D	E	M		1)	Torque [Nm]
102	20	0/6	12	14	9x0.5	11	TC00.000	1.3
103	23	0/7	15	15	12x1	14	TF00.001	2.5
1031	23	0/7	18	18	14x1	17	TG00.001	3.0
104	26	0/9	19	18	15x1	17	TK00.000	4.0
105	30	0/15	23	24	18x1	22	TP00.011	6.0
106	Please contact us for additional information							
107								

1) Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

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

Panel Mounted Receptacles

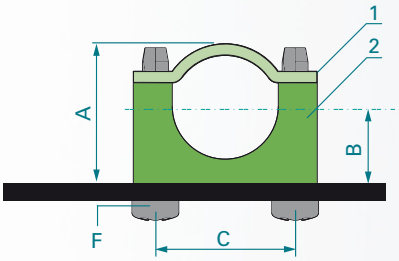
DBPC Body Style

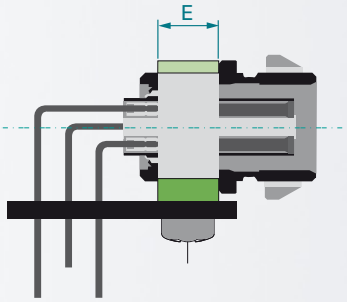


Series	A	B	C	D	D1	E[1]	M		[2]	Torque [Nm]
102	20.0	0/3.5	6.5	11	12	13	9x0.5	10	TC00.000	1.3
103	22.0	0/4.0	8.0	14	15	13	12x1	-	TF00.001	2.5
1031	21.5	0/3.0	7.0	16	18	14	14x1	-	TG00.001	3.0

[1] Please refer to online Dimensional Specifications for precise value and layout dimensions.
[2] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

DBPC Mounting Clamp





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

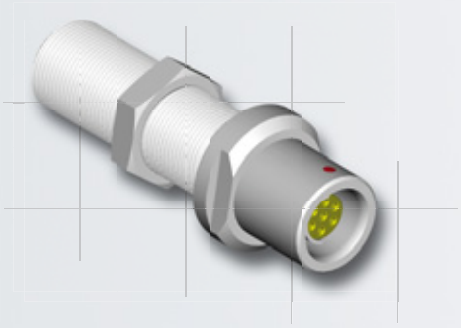
Series	A	B	C	E	F	Part Number
102	11.5	6.0	12	3.8	ø 2.2x13	102.1943
103 1031	15.2	8.2	16	4.9	ø 2.9x16	103.2253

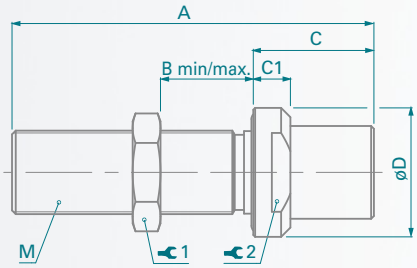
Material:
1 - Nickel plated brass copper
2 - PBT

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

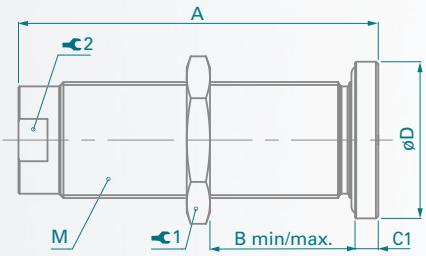
Panel Mounted Receptacles

WDE Body Style for 102, 103 and 104 Series

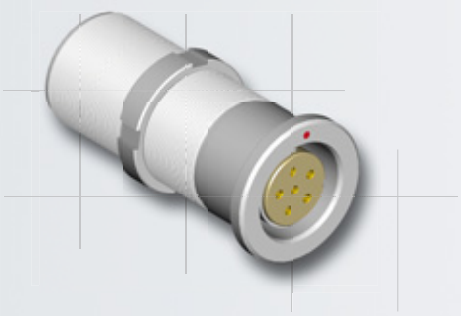


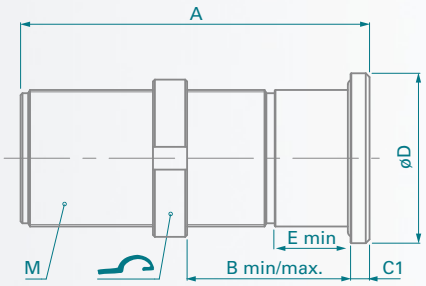


WDE Body Style for 105 Series



WDE Body Style for 106 and 107 Series [1)]





Series	A	B min/max	C	C1	D	E min	M	1 [2)]	Torque 1 [Nm]	2
102	39	0/23	13	4	14	-	9x0.5	11	1.3	11
103	40	0/23	14	4	17	-	12x1	14	2.5	14
1031	Please contact us for additional information									
104	40	0/21	16	4	22	-	15x1	17	4.0	17
105	62	0/47	-	4	27	-	20x1	22	6.5	-
106 [1)]	74	0/39	-	12	42	30	32x1	TX00.106	15	-
107 [1)]	92	0/76	-	5	45	20	36x1	TX00.107	17	-

[1)] Feedthroughs of series 106 and 107 are supplied with slotted nuts. For nuts dimensions see Section 11 Accessories.
[2)] Assembly tool for side slotted nut, see Tooling Page 12-1 for details.

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 4-9-1.

Dimension "B max" specifies the maximum panel thickness. For panels thinner than the unthreaded section "E min" , we can provide spacers as shown in Section 11 Accessories.

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

Panel Mounted Plugs

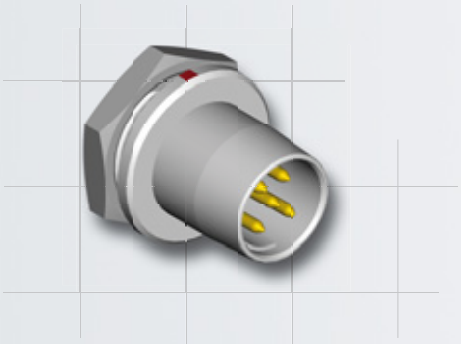


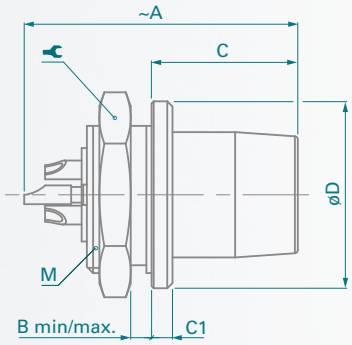
Body Style		SF	SFU	SFE	SFPU	SFPE	Links to Detailed Information
Protection	Unsealed (IP50)	●					Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp	●					Electrical & Contacts Specifications Page 4-9
	Solder	●	●	●	●	●	
	PCB	●	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	●	Options Page 4-10
	Black Chrome	●	●	●	●	●	
Assembly	Front Mounting	●	●	●			Core Series Overview Page 2-1
	Rear Mounting				●	●	
Accessories	Sealing Caps	●	●	●	●	●	Accessories Section 11
	Spacers	●	●	●	●	●	
	Color-Coded Washers	●					
	Insulating Washers	●					
	Grounding Washers	●	●	●			
	Locking Washers	●	●	●	●	●	
	Decorative Nuts				●	●	
Size	102 Series	●	●	●	●	●	Dimensions Page 4-6-1 For more Information Visit: **www.fischerconnectors.com /technical**
	103 Series	●	●	●	●	●	
	1031 Series	●	●	●	●	●	
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series	●					
	107 Series	●					

Plugs mate with receptacles.

Panel Mounted Plugs

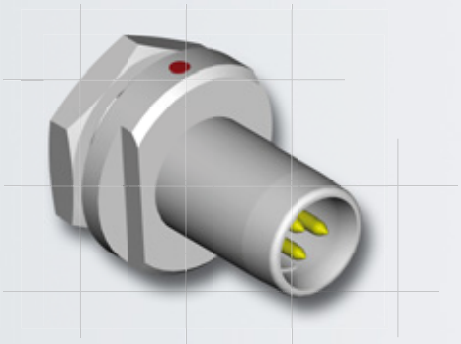
SF Body Style

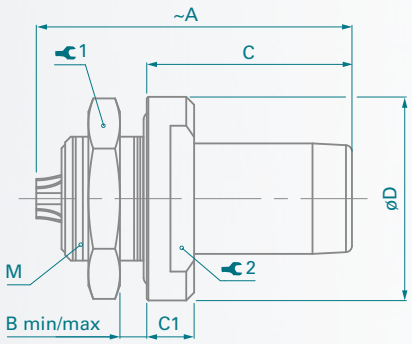




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	20.0	0/4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	0/3.0	12.5	1.5	14	12x1	14	2.5
1031	26.0	0/4.0	12.0	2.0	16	14x1	17	3.0
104	28.0	0/3.0	14.0	2.0	18	15x1	17	4.0
105	30.5	0/5.5	16.8	1.2	22	16x1	19	4.5
106	42.5	0/5.5	27.5	2.5	34	30x1	TX00.106	14
107	50.0	6.0	28.0	3.0	36	32x1	TX00.106	15

SFU / SFE Body Styles



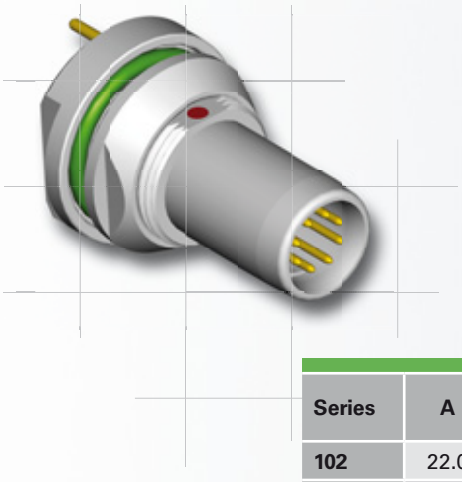


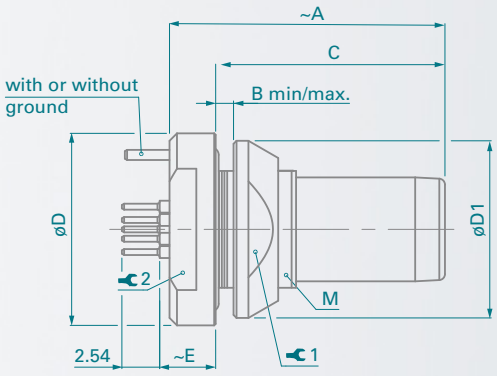
Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	21	0/2.5	13	3	13	9x0.5	11	1.3	9
103	26	0/5.0	14	3	17	12x1	14	2.5	12
1031	26.5	0/4.0	13.7	3.7	19	14x1	17	3.0	12
104	28	0/7.5	15	3	22	16x1	19	4.5	-
105	32	0/6.0	4	4	27	20x1	25	6.5	-
106	Please contact us for additional information								
107									

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

Panel Mounted Plugs

SFPU / SFPE Body Styles

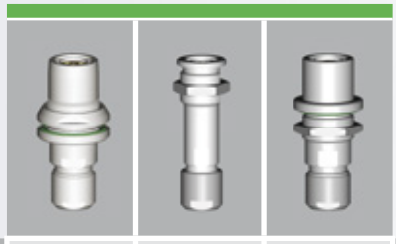




Series	A	B min/max.	C	D	D1	E	M	1	Torque 1 [Nm]	2
102	22.0	0/2.5	15.4	13	12	3.8	9x0.5	10	1.3	9
103	25.5	0/4.0	18.5	17	16	4.5	12x1	13	2.5	12
1031	25.0	0/4.0	18.0	19	18	4.5	14x1	15	3.0	15
104	29.0	0/6.0	22.0	22	20	4.2	16x1	17	4.5	17
105	32.5	0/5.0	25.0	27	25	5.0	20x1	22	6.5	19
106	Please contact us for additional information									
107										

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

Panel Mounted Cable Receptacles

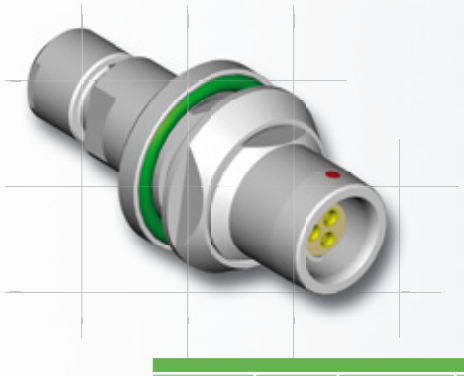


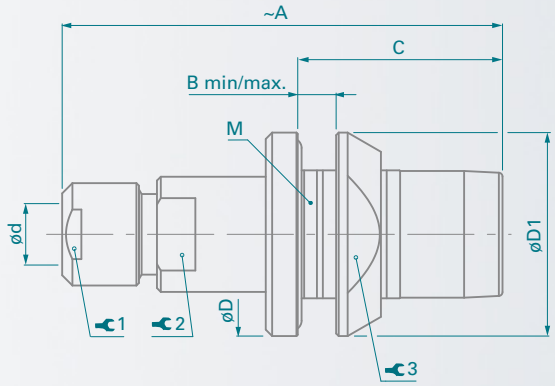
Body Style		DKBE	DK	DKE	Links to Detailed Information
Protection	Unsealed (IP50)		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●		●	
Contacts	Crimp	●	●	●	Electrical & Contacts Specifications Page 4-9
	Solder	●	●	●	
Housing Color	Natural Chrome	●	●	●	Options Page 4-10
	Black Chrome	●	●	●	
Design	Flush		●		Core Series Overview Page 2-1
	Front Projecting	●		●	
Assembly	Panel Mounted	●	●	●	Core Series Overview Page 2-1
	Front Mounting		●	●	
	Rear Mounting	●			
	Cable Clamp Sets	●	●	●	Cable Clamp Sets Page 4-11
Accessories	Cable Bend Reliefs	●	●	●	Accessories Section 11
	Sealing Caps	●	●	●	
	Spacers	●	●	●	
	Color-Coded Washers	●	●		
	Insulating Washers				
	Grounding Washers	●	●	●	
	Locking Washers	●	●	●	
	Decorative Nuts	●			
Size	102 Series	●	●	●	Dimensions Page 4-7-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	
	1031 Series	●			
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series	●	●	●	
	107 Series	●	●	●	

Plugs mate with receptacles.

Panel Mounted Cable Receptacles

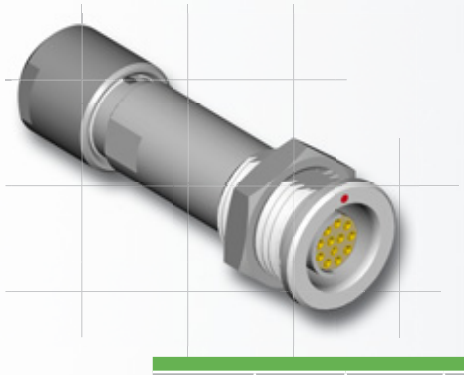
DKBE Body Style

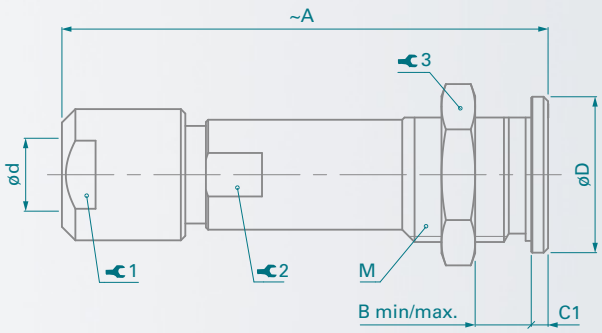




Series	A	B min/max.	C	D	d *max*	D1	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	0/3.5	16.0	16	4.3	16	12x1	7	0.6	7	13	2.5
103	43	0/4.0	19.0	19	6.2	20	15x1	10	1.0	10	17	4.0
1031	46	0/4.0	18.0	21	6.7	20	16x1	12	1.5	11	17	4.5
104	50	0/5.0	22.5	23	8.7	23	18x1	12	2.0	13	20	6.0
105	60	0/5.0	26.0	28	10.7	27	22x1	15	3.5	16	24	8.0
106	101	0/6.5	32.0	41	19.2	40	34x1	25	8.0	25	36	15
107	105	0/8.0	34.0	45	22.7	45	38x1	32	10.0	30	40	18

DK Body Style



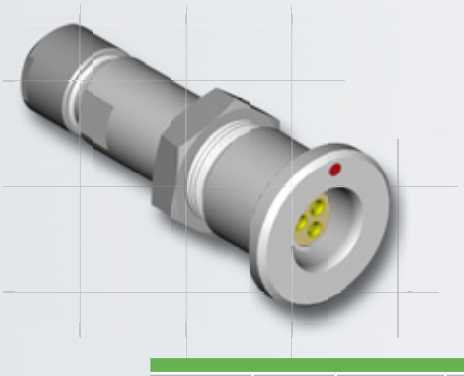


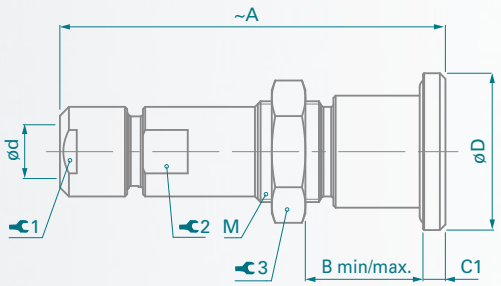
Series	A	B min/max.	C1	D	d *max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	0/9	1.5	11	4.7	9x0.5	7	0.6	-	11	1.3
103	44	0/10	1.5	14	6.7	12x1	10	1.0	9	14	2.5
1031	Please contact us for additional information										
104	50	0/11	2.0	19	8.7	15x1	12	2.0	12	17	4.0
105	60	0/16	2.0	22	10.7	18x1	15	3.5	14	22	6.0
106	80	0/21	3.0	37	19.2	32x1	25	8.0	25	TX00.106	15
107	105	0/17	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 jacket and by the quality of the surface under the nut. Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

Panel Mounted Cable Receptacles

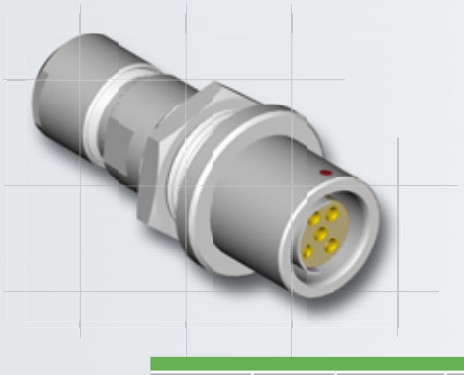
DKE Body Style for 102, 103 and 1031 Series

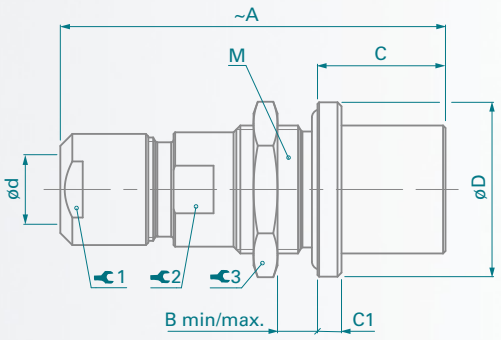




Series	A	B min/max.	C	C1	D	d *max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	9/12	-	2	14	4.3	9x0.5	7	0.6	7	11	1.3
103	45	9/14	-	3	17	6.2	14x1	10	1.0	10	17	3.0
1031	Please contact us for additional information											

DKE Body Style for 104, 105, 106 and 107 Series





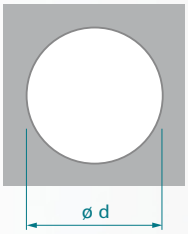
Series	A	B min/max.	C	C1	D	d *max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
104	50	0/8	16.0	3	22	8.7	16x1	12	2.0	13	19	4.5
105	61	0/9	19.0	4	27	10.7	20x1	15	3.5	16	25	6.5
106	85	0/9	25.5	7	37	19.2	30x1	25	8.0	25	TX00.106	14
107	110	0/21	25.0	5	45	22.7	35x1	32	10.0	30	TX00.107	16

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

Panel Cut-Outs

The dimension of panel cut-outs varies according to the body style and size of the panel mounted connector. Refer to table below for more details.

Check details on dimensional specifications on our web site: **www.fischerconnectors.com/technical**



Panel Mounted Receptacles

Series	D	DEU DEE	DB	DBEU DBEE	DBP	DBPU DBPE	DBPLU DBPLE	DG DGP	DBPC	WDE
	ø d									
102	9.1	10.1	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

Panel Mounted Plugs

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

Panel Mounted Cable Receptacles

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

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

Contents

A/Z Polarity

Contact Types

For Multipole Low Voltage Connectors

- Contact Configurations
- Wire Size
- Test & Rated Voltages
- Current Rating

A/Z Polarity

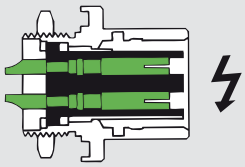
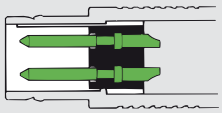
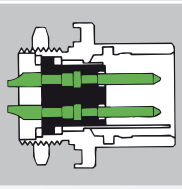
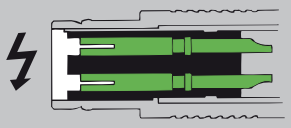
To protect users from contact with dangerous voltages, most Fischer connectors exist in two versions:

- **Type "A" Standard Polarity:**

The contacts of the receptacle are protected against accidental touch.
This version is recommended when voltage is present on the receptacle.

- **Type "Z" Inverted Polarity:**

The contacts of the plug are protected against accidental touch.
This version is recommended when voltage is present on the plug.

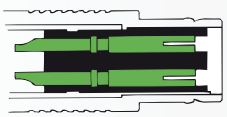
	Receptacle D	Plug S
Type "A" Standard Polarity		
Type "Z" Inverted Polarity		

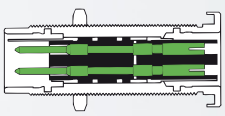
- **Important: An "A" type connector can never be mated with a "Z" type connector.**

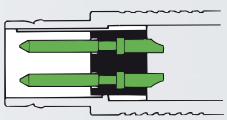
A plug "S" has the same housing in type "A" as in type "Z", but type "A" comes with unprotected contacts while type "Z" is equipped with touch-protected contacts.
In most cases these are female contacts which are recessed in the insulator.
For the exceptions, see High Voltage Connectors page 5-5 and Mixed High Voltage page 9-5

- **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 "Z" plug (S)


WDE, type "AZ"


Type "A" 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

The Fischer contact designs are highly reliable and are guaranteed up to 10,000 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.

The current Fischer design has very low insertion forces, improved contact area, and can be machined and calibrated in one operation.
The classic Fischer design, which has equivalent performance, is still in use on certain connectors.

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

Fischer Connectors manufactures as well connectors with thermocouple contacts.
Please check our online documentation on **www.fischerconnectors.com**

All contacts and connectors are RoHS compliant.

Solder Contacts

Solder contacts are the most versatile contact as they can be produced with any type of contact block material and can accept a wide range of wire sizes.

- The contacts are pre-installed in the insulator block, and the wires can be terminated with any appropriately sized soldering iron.
- Solder contacts may require operators who are qualified in specialized soldering techniques.

PCB Contacts

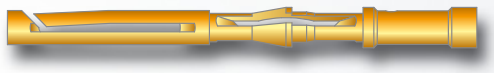
PCB contacts are available on some Panel Mounted Connectors.

- These connectors are designed to be mounted directly to a PCB or flex circuit, and can be used in wave solder operations for faster production assembly.
- The pin diameter has been necessarily reduced in the area that will mount to the PCB, and this can affect the current carrying capacity and voltage characteristics of the connector depending on the PCB design and assembly techniques. These requirements should be reviewed during the product design process.
- PCB pins are non standard for Cable Mounted products.

Contact Types

Crimp Contacts

Crimp contacts are often used in higher volume applications, and offer the advantage of being able to replace individual contacts if they become damaged.



- Each contact has a selectively annealed area that is deformed during assembly by specialized tooling to assure proper termination of the wire to the contact.
- Special tools are also required to insert the contact into the insulator block. See Section 12 Tooling.
- Teflon insulator blocks are not compatible with crimp contacts, and crimp contacts only accept a limited range of wire sizes.
- Crimp contacts are not available in sealed or hermetic connectors.

Tooling for Crimp Contacts

Series	Polarity	Contact Diameter (mm)									
		0.5		0.7		0.9		1.3		1.6	
		Contact Part Number	Positioner Part Number	Contact Part Number	Positioner Part Number	Contact Part Number	Positioner Part Number	Contact Part Number	Positioner Part Number	Contact Part Number	Positioner Part Number
102	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	-	-	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	-	-	-	-
103	Male	200.2113	TX00.300	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2114	TX00.302	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
1031	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	-	-
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	-	-
104	Male	200.2172	TX00.301	200.2884	TX00.304	200.2890	TX00.307	200.2402	TX00.311	200.1653	TX00.313
	Female	200.2183	TX00.303	200.2885	TX00.305	200.2892	TX00.309	200.2214	TX00.312	200.1654	TX00.314
105	Male	200.2172	TX00.301	200.2884	TX00.304	200.2891	TX00.308	200.2403	TX00.338	200.1653	TX00.313
	Female	200.2412	TX00.324	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 12 Tooling, Page 12-2 for description of Crimping Tool and Positioner.

102 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination			Insulating Material	Contact ø [mm]	Wire Size [2]		Test Voltage [V] in mated position				Rated Voltage [4] r.m.s [V]	Current Rating [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		
102 A Z 051		2	●	●	●	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] 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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

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

This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

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

103 and 1031 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination			Insulating Material	Contact ø [mm]	Wire Size [2]		Test Voltage [V] in mated position				Rated Voltage [4] r.m.s [V]	Current Rating [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] 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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

104 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination: Solder	Contact Termination: Crimp	Contact Termination: PCB	Insulating Material	Contact ø [mm]	Wire Size [2]: Solder Contacts [1]	Wire Size [2]: Crimp Contacts	Test Voltage [V] in mated position: AC rms: Contact to Body	Test Voltage [V] in mated position: AC rms: Contact to Contact	Test Voltage [V] in mated position: DC: Contact to Body	Test Voltage [V] in mated position: DC: Contact to Contact	Rated Voltage [4] r.m.s [V]	Current Rating [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	❍ ●	●	●	PEEK PBT	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	max ø1.78mm min ø1.17mm AWG14-18	1.6	2.0	2.6	3.0	≤ 500	18
104 A Z 037		4	●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.8	2.2	2.5	3.0	≤ 500	12
104 A Z 087		4 (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 exceptionally be larger than the hole diameter of the barrel. Testing may be required.

[3] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

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

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

104 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination: Solder	Contact Termination: Crimp	Contact Termination: PCB	Insulating Material	Contact ø [mm]	Wire Size[2]: Solder Contacts[1]	Wire Size[2]: Crimp Contacts	Test Voltage [V] in mated position: AC rms: Contact to Body	Test Voltage [V] in mated position: AC rms: Contact to Contact	Test Voltage [V] in mated position: DC: Contact to Body	Test Voltage [V] in mated position: DC: Contact to Contact	Rated Voltage[4] r.m.s [V]	Current Rating[3] [A]
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 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 AZ 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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

[5] This configuration has different environmental performances due to the use of another sealant material.
Please contact us for more information.

105 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination: Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Wire Size [2]: Solder Contacts [1]	Wire Size [2]: Crimp Contacts	Test Voltage [V] in mated position: AC rms: Contact to Body	AC rms: Contact to Contact	DC: Contact to Body	DC: Contact to Contact	Rated Voltage [4] r.m.s [V]	Current Rating [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**		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 PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	1.7	2.0	2.5	2.8	≤ 320	10
105 A **124**		8 (2)	●			PEEK	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	–	1.2	2.2	1.8	3.2	≤ 250	18.5
		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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

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

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

105 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts		Contact Termination			Insulating Material	Contact ø [mm]	Wire Size [2]		Test Voltage [V] in mated position				Rated Voltage [4] r.m.s [V]	Current Rating [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 A Z **062**		10		●	●	●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm min ø0.58mm AWG18-24	1.7	2.0	2.5	2.7	≤ 320	9.0
105 A Z **069**		12		●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.5	1.8	2.0	≤ 250	8.0
105 A Z **104** [5]		13	3	●		●	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	–	2.5	1.5	3.8	2.2	≤ 320	14
			10					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.3	1.5	1.8	2.2		1.0
105 A **127**		13	3		●		PEEK	1.3	–	max ø1.18mm min ø0.58mm AWG18-24	3.0	2.8	4.8	3.9	≤ 630	14
			10					0.7	–	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9		1.0
105 A Z **058**		15		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 250	5.3
105 A Z **110** [6]		16	4	●		●	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	–	1.6	1.3	2.8	2.1	≤ 250	14
			12					0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.0	1.2	1.5	2.0		1.0
105 A Z **038**		18		●	●	●	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.6	1.8	2.2	≤ 200	4.5
105 A Z **093**		24		●		●	PBT	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	–	1.2	1.5	1.5	2.0	≤ 250	3.5
105 A Z **102**		27		●	●	●	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.2	1.5	1.5	2.0	≤ 250	3.0

[1] Stranding values are in brackets.

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

[3] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

[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.

106 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination			Insulating Material	Contact ø [mm]	Wire Size [2]		Test Voltage [V] in mated position				Rated Voltage [4] r.m.s [V]	Current Rating [3] [A]
										AC rms		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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[4] Recommended operating voltage at sea level measured according to IEC 60664-1.
This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

[5] The contact solder cups are specially insulated.

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

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

107 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination: Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Wire size [2]: Male Solder Contacts [1]	Female Solder Contacts [1]	Test Voltage [V] in mated position: AC rms: Contact to Body	AC rms: Contact to Contact	DC: Contact to Body	DC: Contact to Contact	Rated Voltage [4] r.m.s [V]	Current Rating [3] [A]
107 A Z **013**		4	●			PTFE	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	6.5	7.0	10	11	≤ 1000	26
107 A Z **018**		6	● ❍			PTFE PEEK	2.3	max ø2.93mm AWG9 [1] AWG10 [37/26]	max ø2.28mm AWG12 [1] AWG14 [105/34]	4.5	4.5	6.0	6.0	≤ 800	25
107 A Z **015**		19	● ❍			PTFE PEEK	2.0	max ø2.08mm AWG12 [1] AWG14 [7/22]	max ø2.03mm AWG13 [1] AWG14 [7/22]	2.0	2.5	2.5	3.2	≤ 500	13
107 A Z **051**		27	● ❍			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	2.0	3.0	3.2	≤ 400	7.5
107 A Z **052**		40	● ❍			PTFE PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	1.8	1.5	2.5	2.0	≤ 320	6.5
107 A Z **023**		55 8	●			PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	max ø1.18mm AWG17 [1] AWG18 [16/30]	2.0	1.8	2.8	2.5	≤ 400	7.0
		47	❍			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.88mm AWG20 [1] AWG22 [19/34]	17	15	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] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

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

This rated voltage is a general purpose guideline where no other electrical safety standard applies. In cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first.
This must be evaluated in the framework of equipment engineering. In cases where other calculation methods are preferred, please use the Test Voltage to determine the operating voltage. See page 13-6 for details.

Contents

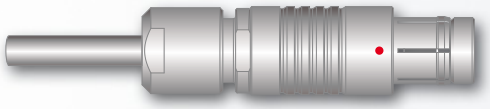
Options Presentation

Options Part Numbering

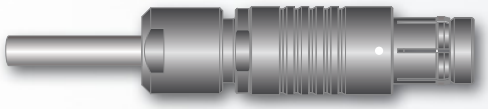
Housing Colors and Cable Bend Reliefs

Connector Housing Colors

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



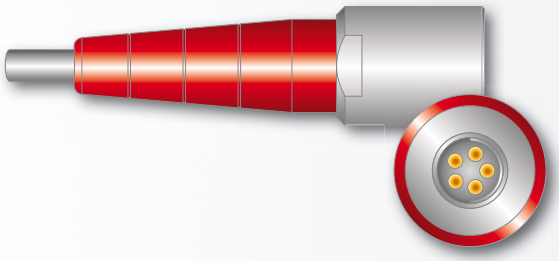
- Natural chrome connector housing with red guide mark.



- Non reflective black chrome housing with white guide mark.

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

Color-coding is achieved by using accessories:



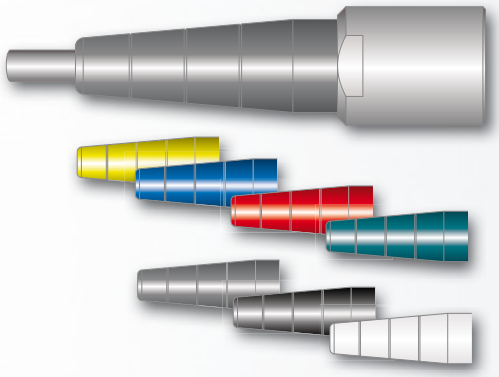
- Cable Bend Reliefs for Cable Connectors.
- Washers for Panel Connectors.

For detailed information on Cable Bend Reliefs and Washers,
See Section 11 Accessories.

Our AluLite™ connector Series – ideal for ultralight product development – features a wide array of housing colors. For more, **download** AluLite™ series catalogue at **www.fischerconnectors.com/catalogues.**

Cable Bend Reliefs and 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 enables to:

- Prevent cable torsion, enhancing your connections efficiency.
- Color-code your connectors for easy identification.

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

For detailed information on cable bend reliefs and washers,
see Section 11 Accessories.

Mechanical Coding

For Easy Connect / Disconnect Operations

Our contact blocks are engineered with arc-shape metal guides, which ensure precise alignement 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 (See table below).

	Female Block	Male Block
Code 1		
Code 2		
Code 3		

Other keying codes are available on request, please contact us.

Multipole Low Voltage, High Voltage & Mixed Connectors

1	**Housing Color** Which housing color do you need?		NATURAL CHROME with Red Guide Mark				
2	**Contact Block Material** Which contact block material do you need?		PTFE	PBT		PEEK	
3	**Contact Type** Which contact type do you need?		Solder	Solder	Crimp[1)]	Solder	Crimp[1)]
4	**Keying Code** Which keying code do you need?	Code 1 	-60	-80	-100	-130	-150
		Code 2 	-2060	-2080	-2100	-230	-250
		Code 3 	-3060	-3080	-3100	-330	-350

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

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 

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

Design and Accessories

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

Other options are available on request, please contact us.

Multipole Low Voltage, High Voltage & Mixed Connectors

BLACK CHROME with White Guide Mark				
PTFE	PBT		PEEK	
Solder	Solder	Crimp[1)]	Solder	Crimp[1)]
-70	-90	-110	-140	-160
-2070	-2090	-2110	-240	-260
-3070	-3090	-3110	-340	-360

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

Examples

Plugs

S 102 A056 - 130+
Natural chrome housing color with PEEK contact block, solder contacts, keying code 1, clamp nut without bend relief and without cable clamp set (To be ordered separately)

S 102 A056 - 232+
Natural chrome housing color with PEEK contact block, solder contacts, keying code 2, clamp nut with black bend relief, without cable clamp set

SS 102 A056 - 260
Black chrome housing color with PEEK contact block, crimp contacts, keying code 2

Receptacles

D 102 A056 - 130
Natural chrome housing color with PEEK contact block, solder contacts, keying code 1

D 102 A056 - 260
Black chrome housing color with PEEK contact block, crimp contacts, keying code 2

DBPU 102 A056 - 130G
Natural chrome housing color with PEEK contact block, PCB contacts, keying code 1 and ground pin

DBPU 102 A056 - 130NBE
Nickel plated body with PEEK contact block, solder contacts, keying code 1, with black nut and EPDM interface O-ring

Contents

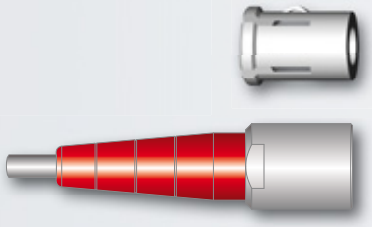
Introduction

Dimensions S/SC; SOV; SA; SV; K/KE; DK; DKE and DKBE; Body Styles

Dimensions 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. See Accessories, page 11-2.

Cable clamp sets are suitable for all cable mounted connectors, except SS/SSC and KS/KSE.
For these specific body styles, see Section 3 Cable Assembly for overmolding or heat shrinking techniques.

Range Overview: S, U and E Cable Clamp Sets

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

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

For 106 and 107 connector series, only S and E cable clamp sets are available. See page 4-11-7 and 4-11-8 for details.

Part Numbering

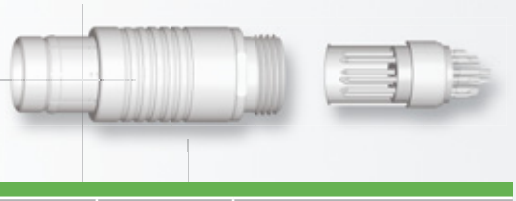
Below Cable Clamp Sets Should be Ordered Separately	
Multipole Low Voltage	Triax
S 102 A056-130 +	
Examples	
Connector ordering line	
S 102 A056-130 +	
Clamp Set ordering line	
E3 102.5/2.0	
See following pages for Cable Clamp Set selection.	

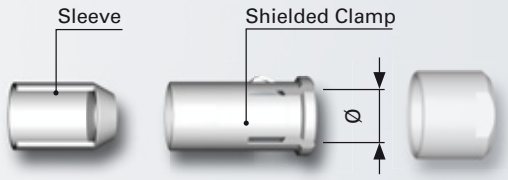
Below Cable Clamp Sets are Included with Connector	
Coax Low Voltage	Coax High Voltage
Shielded (S) or Environmental (E) Cable Clamp Set diameter should be added to the connector part number separated by ø.	
Examples	
For S - Shielded Clamp Sets	
K 103 A002-600 ø6.2	
For E - Environmental Clamp Sets	
KE 103 A002-600 ø6.2	
See following pages for S or E Cable Clamp Set selection.	

102 Series

S - Shielded

Shielded cable clamp with sleeve.



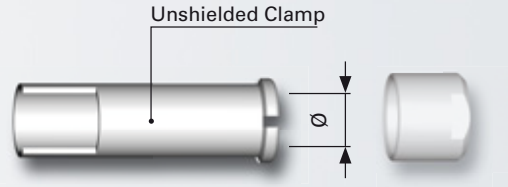


Cable dia. Range	Collet Ø	Cable Clamp Set [1]
1.5 - 2.1	2.1	E32 102.1/2.1 + A
2.1 - 2.6	2.6	E32 102.1/2.6 + A
2.6 - 3.1	3.1	E32 102.1/3.1 + A
3.1 - 3.6	3.6	E32 102.1/3.6 + A

Cable dia. Range	Collet Ø	Cable Clamp Set [1]
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	102.248 + A

U - Unshielded

Unshielded, one-piece cable clamp.

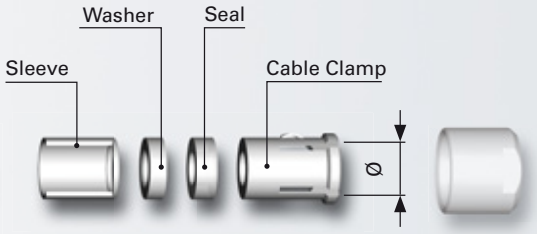


Cable dia. Range	Collet Ø	Cable Clamp Set [1]
1.4 - 2.0	2.0	E3 102.5/2.0
2.0 - 2.7	2.7	E3 102.5/2.7
2.7 - 3.5	3.5	E3 102.5/3.5

Cable dia. Range	Collet Ø	Cable Clamp Set [1]
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

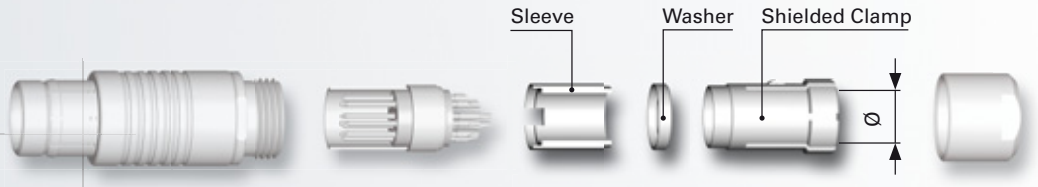
Cable dia. Range	Collet Ø	Cable Clamp Set [1]
3.1 - 3.6	3.6	E31 102.2/3.6 + B
3.6 - 4.1	4.1	E31 102.2/4.1 + B
4.1 - 4.3	4.3	E31 102.2/4.3 + B

[1] For ordering information see Page 4-11-1.

103 Series

S - Shielded

Shielded cable clamp with washer and sleeve.

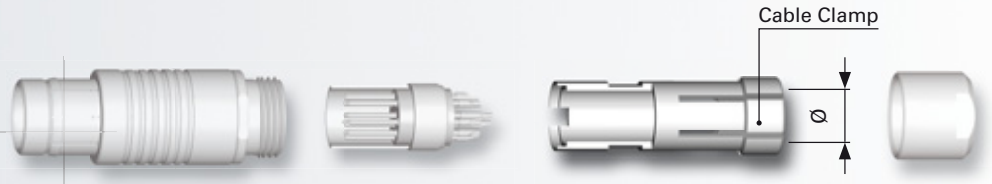


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
1.7 - 2.2	2.2	E31 103.1/2.2 +B
2.2 - 2.7	2.7	E31 103.1/2.7 +B
2.7 - 3.2	3.2	E31 103.1/3.2 +B
3.2 - 3.7	3.7	E31 103.1/3.7 +B
3.7 - 4.2	4.2	E31 103.1/4.2 +B

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
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.

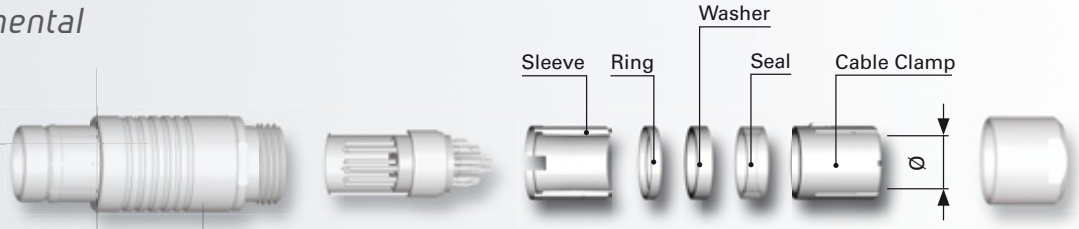


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
2.2 - 3.2	3.2	E3 103.6/3.2
3.2 - 4.2	4.2	E3 103.6/4.2
4.2 - 4.7	4.7	E3 103.6/4.7
4.7 - 5.2	5.2	E3 103.6/5.2

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
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

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
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

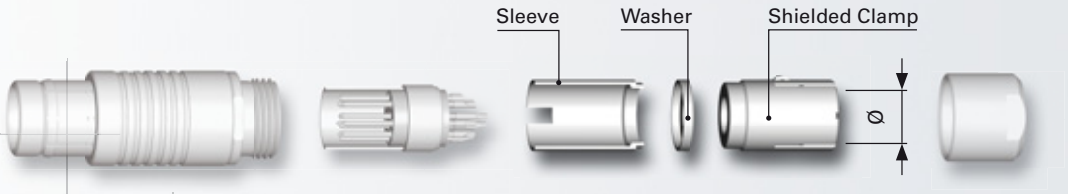
[1] For ordering information see Page 4-11-1.

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

1031 Series

S - Shielded

Shielded cable clamp with washer and sleeve.

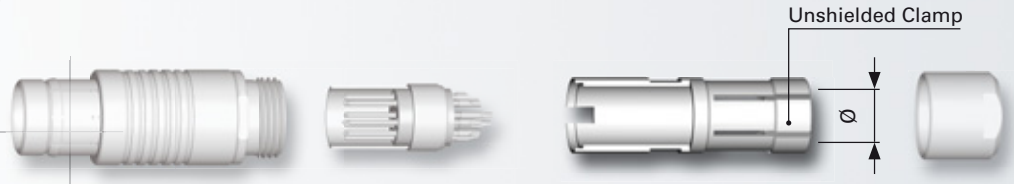


Cable dia. Range	Collet Ø	Cable Clamp Set [1]
2.2 - 2.7	2.7	E3 1031.1/2.7
2.7 - 3.2	3.2	E3 1031.1/3.2
3.2 - 3.7	3.7	E3 1031.1/3.7
3.7 - 4.2	4.2	E3 1031.1/4.2
4.2 - 4.7	4.7	E3 1031.1/4.7

Cable dia. Range	Collet Ø	Cable Clamp Set [1]
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.

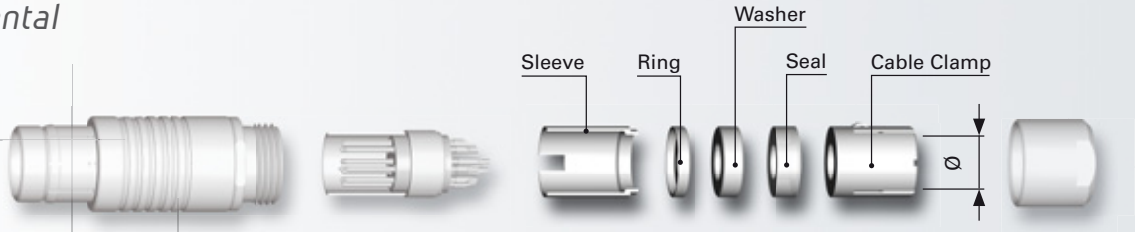


Cable dia. Range	Collet Ø	Cable Clamp Set [1]
2.2 - 2.7	2.7	E3 1031.6/2.7
2.7 - 3.2	3.2	E3 1031.6/3.2
3.2 - 3.7	3.7	E3 1031.6/3.7
3.7 - 4.2	4.2	E3 1031.6/4.2
4.2 - 4.7	4.7	E3 1031.6/4.7

Cable dia. Range	Collet Ø	Cable Clamp Set [1]
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 [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

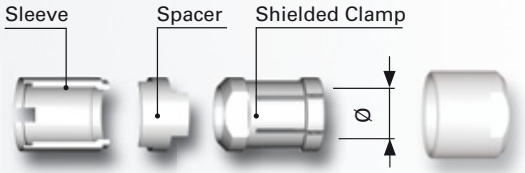
Cable dia. Range	Collet Ø	Cable Clamp Set [1]
4.7 - 5.2	5.2	E3 1031.2/5.2
5.2 - 5.7	5.7	E3 1031.2/5.7
5.7 - 6.2	6.2	E3 1031.2/6.2
6.2 - 6.7	6.7	E3 1031.2/6.7

[1] For ordering information see Page 4-11-1.

104 Series

S - Shielded

Shielded cable clamp with spacer and sleeve.

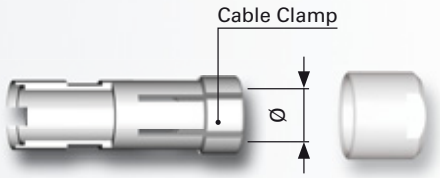


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator	
		Plug	Receptacle
2.9 - 4.0	4.0	E3 104.3/4.0 + B	E3 104.4/4.0 + C
4.0 - 4.7	4.7	E3 104.3/4.7 + B	E3 104.4/4.7 + C
4.7 - 5.7	5.7	E3 104.3/5.7 + B	E3 104.4/5.7 + C

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator	
		Plug	Receptacle
5.7 - 6.7	6.7	E3 104.3/6.7 + B	E3 104.4/6.7 + C
6.7 - 7.7	7.7	E3 104.3/7.7 + B	E3 104.4/7.7 + C
7.7 - 8.7	8.7	E3 104.3/8.7 + B	E3 104.4/8.7 + C
8.7 - 9.1	9.1	E3 104.3/9.1 + B	E3 104.4/9.1 + C

U - Unshielded

Unshielded, one-piece cable clamp.

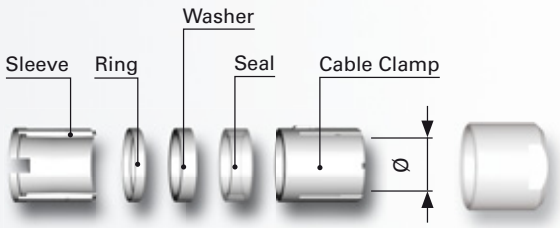


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
3.2 - 4.2	4.2	E3 104.6/4.2
4.2 - 4.7	4.7	E3 104.6/4.7
4.7 - 5.7	5.7	E3 104.6/5.7
5.7 - 6.7	6.7	E3 104.6/6.7

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
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 [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

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator	
		Plug	Receptacle
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

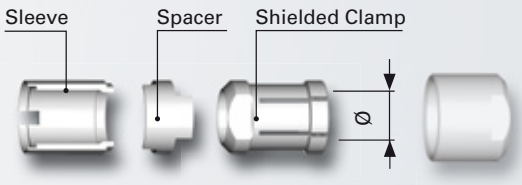
[1] For ordering information see Page 4-11-1.

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

105 Series

S - Shielded

Shielded cable clamp with spacer and sleeve.

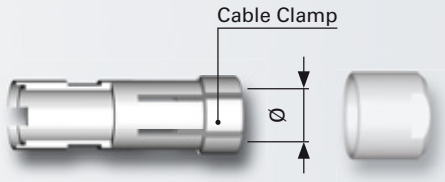


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
3.2 - 4.2	4.2	E3 105.1/4.2 + B
4.2 - 5.2	5.2	E3 105.1/5.2 + B
5.2 - 6.2	6.2	E3 105.1/6.2 + B
6.2 - 7.2	7.2	E3 105.1/7.2 + B

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
7.2 - 8.2	8.2	E3 105.1/8.2 + B
8.2 - 9.2	9.2	E3 105.1/9.2 + B
9.2 - 10.0	10.0	E3 105.1/10.0 + B
10.0 - 10.7	10.7	E3 105.1/10.7 + B

U - Unshielded

Unshielded, one-piece cable clamp.

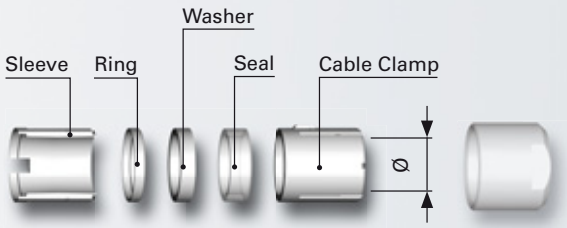


Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
2.5 - 3.5	3.5	E3 105.6/3.5
3.5 - 4.5	4.5	E3 105.6/4.5
4.5 - 5.5	5.5	E3 105.6/5.5
5.5 - 6.5	6.5	E3 105.6/6.5

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
6.5 - 7.5	7.5	E3 105.6/7.5
7.5 - 8.5	8.5	E3 105.6/8.5
8.5 - 9.5	9.5	E3 105.6/9.5
9.5 - 10.5	10.5	E3 105.6/10.5

E - Environmental

Environmentally sealed clamp for use with shielded or unshielded cables.



Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
3.2 - 4.2	4.2	E31 105.2/4.2 + B
4.2 - 5.2	5.2	E31 105.2/5.2 + B
5.2 - 6.2	6.2	E31 105.2/6.2 + B
6.2 - 7.2	7.2	E31 105.2/7.2 + B

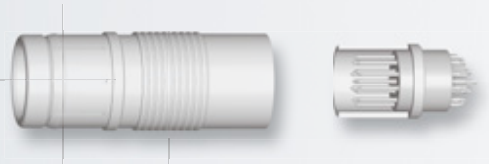
Cable dia. Range	Collet Ø	Cable Clamp Set [1] PEEK or PBT Insulator
7.2 - 8.2	8.2	E31 105.2/8.2 + B
8.2 - 9.2	9.2	E31 105.2/9.2 + B
9.2 - 10.0	10.0	E31 105.2/10.0 + B
10.0 - 10.7	10.7	E31 105.2/10.7 + B

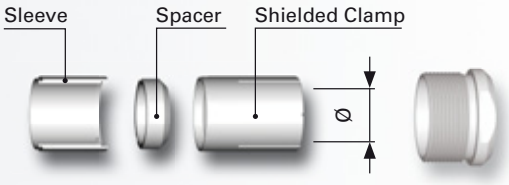
[1] For ordering information see Page 4-11-1.

106 Series

S - Shielded

Shielded cable clamp
with spacer and sleeve.





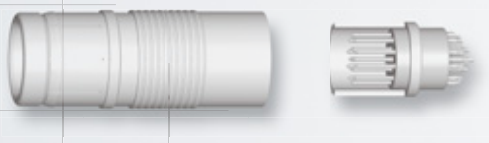
Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE Insulator	
		Plug	Receptacle
4.2 - 5.2	5.2	E3 106.1/5.2	E3 106.3/5.2
5.2 - 6.2	6.2	E3 106.1/6.2	E3 106.3/6.2
6.2 - 7.2	7.2	E3 106.1/7.2	E3 106.3/7.2
7.2 - 8.2	8.2	E3 106.1/8.2	E3 106.3/8.2
8.2 - 9.2	9.2	E3 106.1/9.2	E3 106.3/9.2
9.2 - 10.2	10.2	E3 106.1/10.2	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

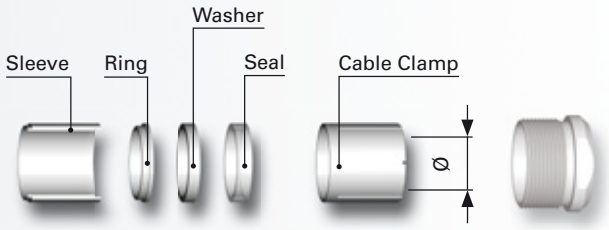
Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE Insulator	
		Plug	Receptacle
12.2 -13.2	13.2	E3 106.1/13.2	E3 106.3/13.2
13.2 - 14.2	14.2	E3 106.1/14.2	E3 106.3/14.2
14.2 - 15.2	15.2	E3 106.1/15.2	E3 106.3/15.2
15.2 - 16.2	16.2	E3 106.1/16.2	E3 106.3/16.2
16.2 - 17.2	17.2	E3 106.1/17.2	E3 106.3/17.2
17.2 - 18.2	18.2	E3 106.1/18.2	E3 106.3/18.2
18.2 - 19.2	19.2	E3 106.1/19.2	E3 106.3/19.2

Shielded cable clamps with washers and sleeves.

E - Environmental

Environmentally
sealed clamp
for use with shielded
or unshielded cables.





Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE Insulator	
		Plug	Receptacle
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
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

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE Insulator	
		Plug	Receptacle
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
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
18.2 - 19.2	19.2	E3 106.2/19.2	E3 106.4/19.2

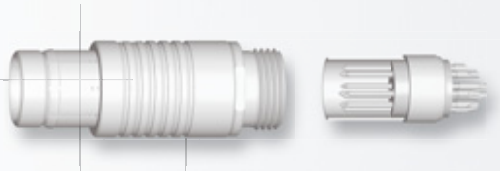
[1] For ordering information see Page 4-11-1.

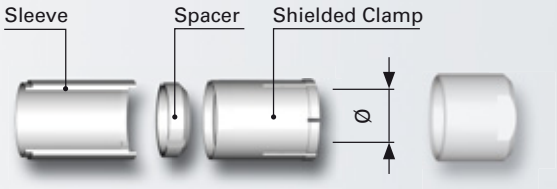
All dimensions shown are in millimeters and are for reference only.

107 Series

S - Shielded

Shielded cable clamp
with spacer and sleeve.



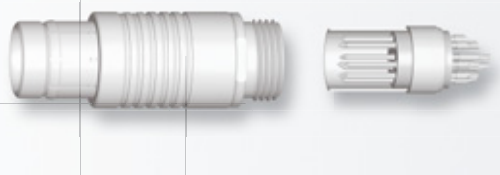


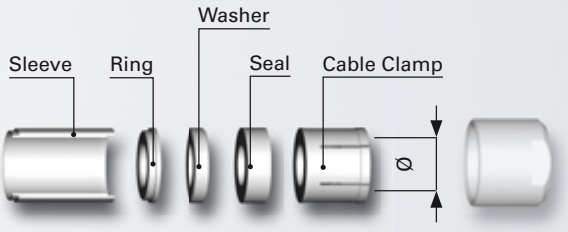
Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE insulator
5.7 - 7.2	7.2	E3 107.1/7.2
7.2 - 8.2	8.2	E3 107.1/8.2
8.2 - 9.2	9.2	E3 107.1/9.2
9.2 - 10.2	10.2	E3 107.1/10.2
10.2 - 11.2	11.2	E3 107.1/11.2
11.2 - 12.2	12.2	E3 107.1/12.2
12.2 - 13.2	13.2	E3 107.1/13.2
13.2 - 14.2	14.2	E3 107.1/14.2

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE insulator
14.2 -15.2	15.2	E3 107.1/15.2
15.2 - 16.2	16.2	E3 107.1/16.2
16.2 - 17.2	17.2	E3 107.1/17.2
17.2 - 18.2	18.2	E3 107.1/18.2
18.2 - 19.2	19.2	E3 107.1/19.2
19.2 - 20.2	20.2	E3 107.1/20.2
20.2 - 21.2	21.2	E3 107.1/21.2
21.2 - 22.7	22.7	E3 107.1/22.7

E - Environmental

Environmentally
sealed clamp
for use with shielded
or unshielded cables.





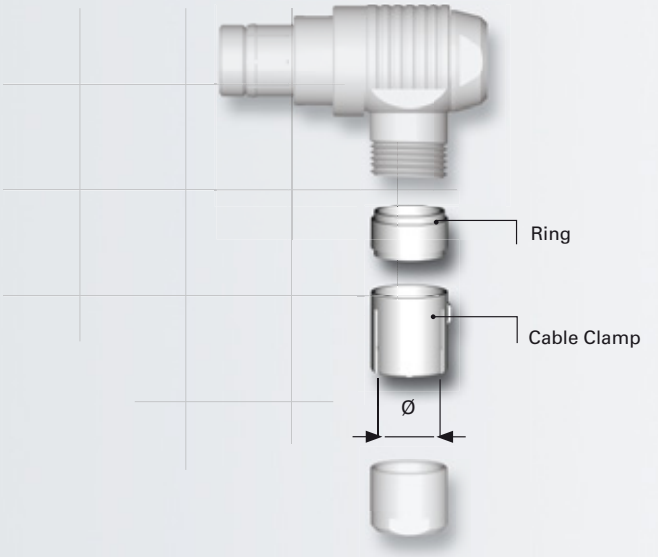
Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE insulator
5.7 - 7.2	7.2	E3 107.2/7.2
7.2 - 8.2	8.2	E3 107.2/8.2
8.2 - 9.2	9.2	E3 107.2/9.2
9.2 - 10.2	10.2	E3 107.2/10.2
10.2 - 11.2	11.2	E3 107.2/11.2
11.2 - 12.2	12.2	E3 107.2/12.2
12.2 - 13.2	13.2	E3 107.2/13.2
13.2 - 14.2	14.2	E3 107.2/14.2

Cable dia. Range	Collet Ø	Cable Clamp Set [1] PTFE insulator
14.2 - 15.2	15.2	E3 107.2/15.2
15.2 - 16.2	16.2	E3 107.2/16.2
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

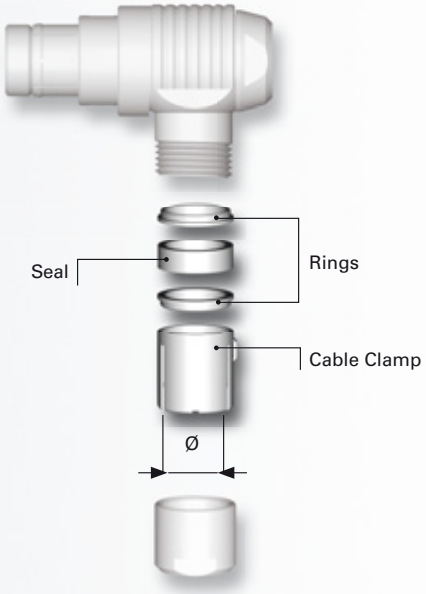
[1] For ordering information see Page 4-11-1.

WSO 102, 103, 1031, 104 and 105 Series

S-Shielded or U-Unshielded (Unsealed)



E-Environmental (Sealed)



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

Series	Cable dia. Range	Clamp Ø	Cable Clamp Set [1]	
			Unsealed	Sealed
1031	2.2 - 2.7	2.7	E3 1031.12/2.7	E3 1031.13/2.7
	2.7 - 3.2	3.2	E3 1031.12/3.2	E3 1031.13/3.2
	3.2 - 3.7	3.7	E3 1031.12/3.7	E3 1031.13/3.7
	3.7 - 4.2	4.2	E3 1031.12/4.2	E3 1031.13/4.2
	4.2 - 4.7	4.7	E3 1031.12/4.7	E3 1031.13/4.7
	4.7 - 5.2	5.2	E3 1031.12/5.2	E3 1031.13/5.2
	5.2 - 5.7	5.7	E3 1031.12/5.7	E3 1031.13/5.7
	5.7 - 6.2	6.2	E3 1031.12/6.2	E3 1031.13/6.2
	6.2 - 6.7	6.7	E3 1031.12/6.7	E3 1031.13/6.7
	6.7 - 7.2	7.2	E3 1031.12/7.2	-
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
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

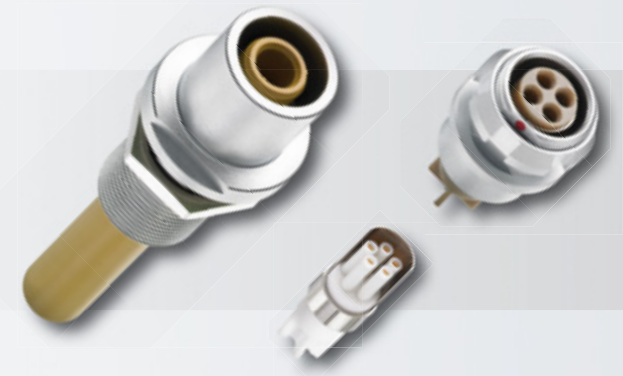
[1] For ordering information see Page 4-11-1

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

5 Multipole High Voltage Connectors

Key Features

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



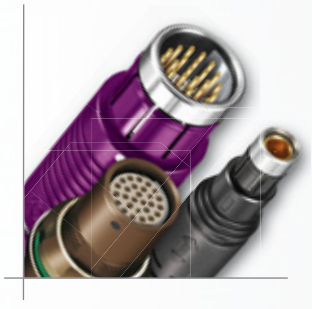
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set is included with connector, see Page 5-6
- For details on Options, see page 4-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Multipole High Voltage Contacts

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

Fischer AluLite™ Series

Plastic Series

Plastic connectors ideal for lightweight applications

Fischer 405 Series
Fischer 4032 Series

Cable Mounted Plugs

Panel Mounted Receptacle

For all Multipole High Voltage

Cable Mounted Plugs

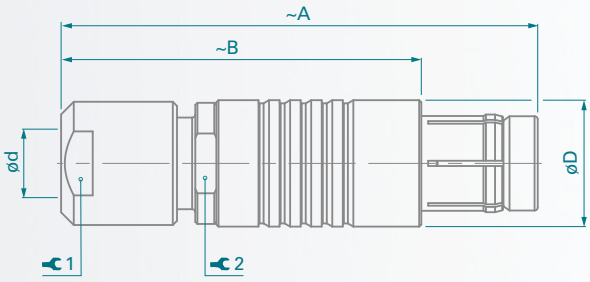


Body Style		S	SA	SV	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	●	
Locking System	None				Plug Locking Systems Page 2-7
	Push-Pull	●	●	●	
	Emergency Release				
	Lanyard		●		
	Tamperproof			●	
Contacts	Crimp				Electrical & Contact Specifications Page 5-5
	Solder	●	●	●	
Housing Color	Natural Chrome	●	●	●	Options Page 4-10
	Black Chrome	●	●		
Design	Shortened Body				Core Series Overview Page 2-1
	Right Angle				
Cabling	Cable Clamp Sets	●	●	●	Insulating Clamp Sets Page 5-6 Cable Assembly Section 3
	Overmoldable				
	Heat Shrinkable				
Accessories	Cable Bend Reliefs	●	●	●	Accessories Section 11
	Protective Sleeves	●			
	Sealing Caps	●	●	●	
Size	102 Series				Dimensions Page 5-3-1 For more Information Visit: **www.fischerconnectors.com /technical**
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series	●		●	
	107 Series	●		●	

Plugs mate with receptacles.

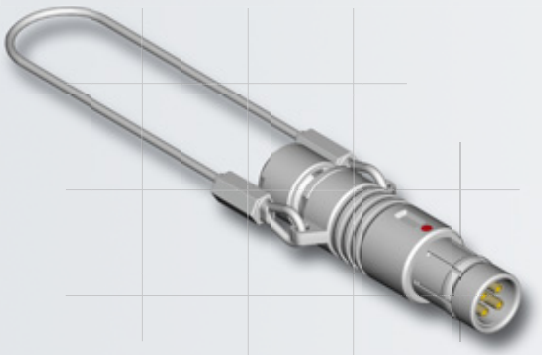
Cable Mounted Plugs

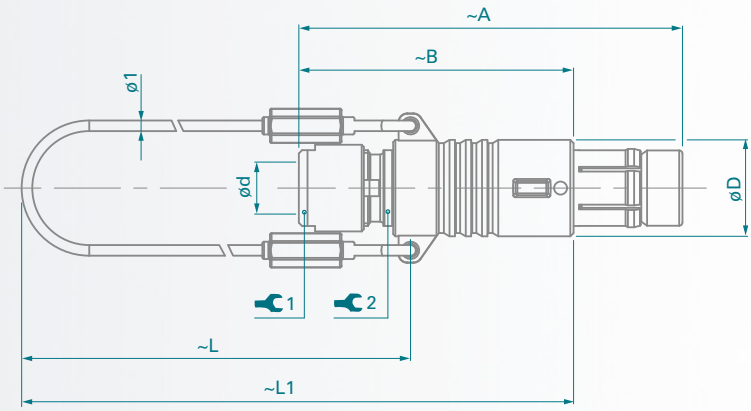
S Body Style



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

SA Body Style



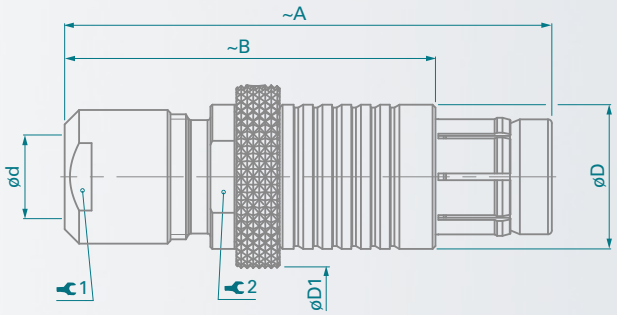


Series	A	B	D	L	L1	d *max*	1	Torque 1 *[Nm]*	2
104	50	38	15	65	83	8.6	12	2.0	13
105	62	47	18	70	96	10.5	15	3.5	16
106	Please contact us for additional information								
107									

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

Cable Mounted Plugs

SV Body Style



Series	A	B	D	D1	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.

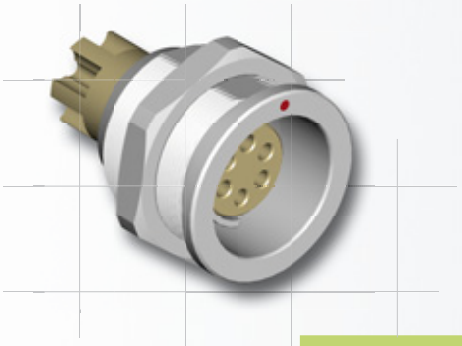
Panel Mounted Receptacle

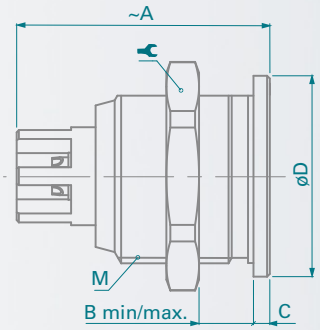
Body Style		D	Links to Detailed Information
Protection	Unsealed (IP50)	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	[1]	
	Hermetic	[1]	
Contacts	Crimp		Electrical & Contacts Specifications Page 5-5
	Solder	●	
	PCB		
Housing Color	Natural Chrome	●	Options Page 4-10
	Black Chrome	●	
Design	Right Angle		Core Series Overview Page 2-1
	Flush	●	
	Front Projecting		
	Bulkhead Feedthrough		
Assembly	Front Mounting	●	Core Series Overview Page 2-1
	Rear Mounting		
Accessories	Sealing Caps	●	Accessories Section 11
	Spacers	●	
	Color-Coded Washers	●	
	Grounding Washers	●	
	Locking Washers	●	
	Decorative Nuts		
Size	102 Series		Dimension Page 5-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series		
	1031 Series		
	104 Series	●	
	105 Series	●	
	106 Series	●	
	107 Series	●	

Plugs mate with receptacles.
[1] Sealed and hermetic connector styles are available on request.

Panel Mounted Receptacle

D Body Style





Series	A	B min/max.	C1	D	M		Torque [Nm]
104	28	0/10.5	2.25	19	15x1	17	4.0
105	34	0/15.0	2	22	18x1	22	6.0
106	51	0/18.0	3	37	32x1	TX00.106	15
107	63	0/18.0	4	40	35x1	TX00.107	16

Receptacles of 106 and 107 Series are supplied with slotted nuts.
For nut dimensions see section 11 Accessories.
For wrenches see section 12 Tooling.

Other connector styles and contact configurations are available on request.

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

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

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:

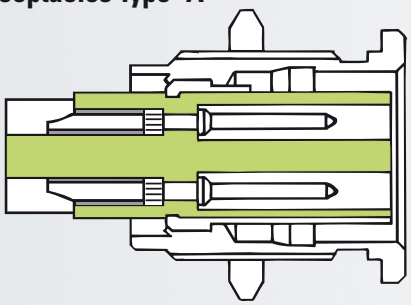
The contacts of the receptacle are recessed to reduce the possibility of electric shock in the unmated position. This version should be used when the voltage is sourced from the receptacle.

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.

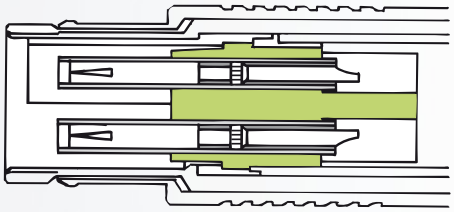
Example: **Receptacles Type "A"**

D105 A039



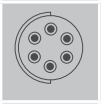
Plug Type "A"

S105 A039



104, 105, 106 and 107 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts	Contact Termination		Insulating Material	Contact ø [mm]	Wire Barrel ø [mm]	Test Voltage [V] in mated position				Current Rating[1] [A]
								AC rms		DC		
			Solder	Crimp				Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	
104 A/Z **062**		4	●		PEEK	0.9	0.8	4.5	4.5	7.5	7.5	8.0
105 A **057**		3	●		PTFE	1.3	1.2	4.5	6.0	8.0	10	14
105 A/Z **039**		5	●		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11
106 A/Z **013**		6	●		PTFE	1.3	1.2	8.0	8.0	12	12	12
107 A **034**[2)3)]		7	●		PTFE	2.0	2.0	8.0	7.5	14	14	20

[1] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.
[2] For clamp sets selection see page 4-11-8.
[3] See Section 12 Tooling, for insertion tool of contacts.

Part Numbering

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 Series 4 pole High Voltage S plug with Insulating Cable Clamp Set allowing cable diameter included between 4.7 & 6.6 mm

Connector Types with Insulating Cable Clamps

Series	Multipole High Voltage	Mixed High Voltage	Mixed Coax
104	104 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	

Insulating clamps for other cable diameters and shapes are available on request.
Cable clamp sets for sealed or shielded connectors are available on request.

Series	Cable Diameter	Collet Diameter
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
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

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

6 Coax Low Voltage Connectors

Key Features

- Wide range of body styles and sizes
- Unsealed, sealed or hermetic
- RF signal or power
- 50 and 75 Ohms impedance
- Up to 2GHz
- Standard or inverted polarity
- No guide mark standard

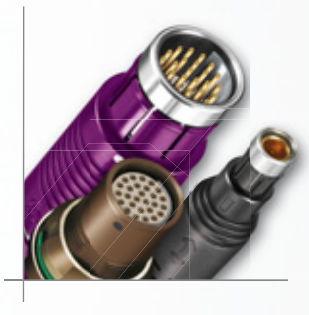
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set is included with connector, see page 4-11
- For details on Options, see page 6-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Coax Low Voltage Contacts

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

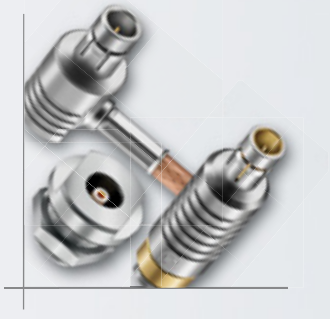
Fischer AluLite™ Series

Plastic Series

Plastic connectors ideal for lightweight applications

Fischer 405 Series
Fischer 4032 Series

Nim-Camac



Coax and Triax connectors engineered according to Nim-Camac standards

Fischer Nim-Camac 101 Series

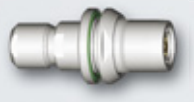
Cable Mounted Plugs

Cable Mounted Receptacles

Panel Mounted Receptacles

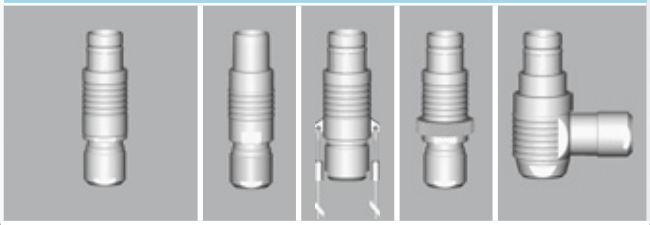
Panel Mounted Plugs

Panel Mounted Cable Receptacles



For all Coax Low Voltage

Cable Mounted Plugs

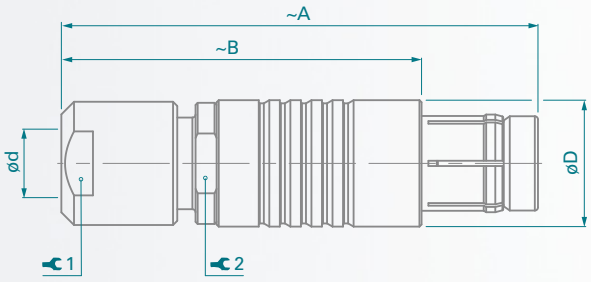


Body Style		S	SC	SOV	SA	SV	WSO	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	●	●	●	●	
Locking System	None			●				Plug Locking Systems Page 2-7
	Push-Pull	●			●	●	●	
	Emergency Release		●					
	Lanyard				●			
	Tamperproof					●		
Contacts	Crimp							Electrical & Contact Specifications Page 6-8
	Solder	●	●	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	●		●	
Design	Shortened Body							Core Series Overview Page 2-1
	Right Angle						●	
Cabling	Cable Clamp Sets	●	●	●	●	●	●	Cable Clamp Sets Page 4-11 See Cable Assembly Section 3
	Overmoldable							
	Heat Shrinkable							
Accessories	Cable Bend Reliefs	●	●	●	●	●	●	Accessories Section 11
	Protective Sleeves	●	●	●				
	Sealing Caps	●	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	●	Dimensions Page 6-3-1 For more Information Visit: **www.fischerconnectors.com /technical**
	103 Series	●	●	●	●	●	●	
	1031 Series							
	104 Series	●	●	●	●	●	●	
	105 Series	●	●	●	●	●	●	
	106 Series							
	107 Series							

Plugs mate with receptacles.

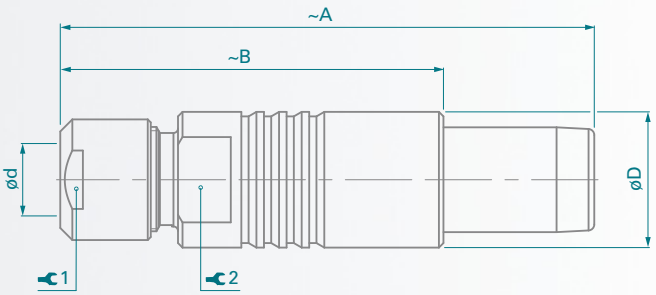
Cable Mounted Plugs

S / SC Body Styles



Series	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	6.7	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

SOV Body Style

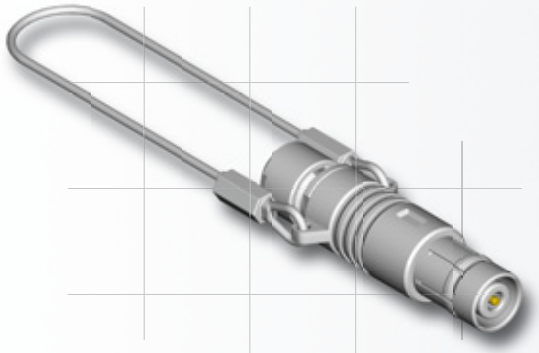


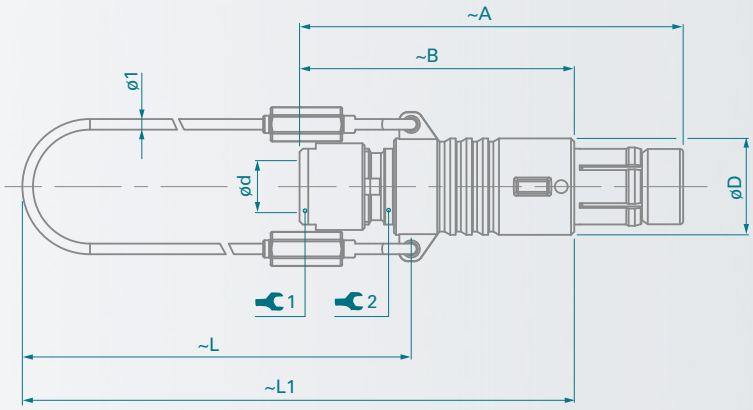
Series	A	B	D	d *max* Unsealed	d *max* Sealed	1	Torque 1 [Nm]	2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

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

Cable Mounted Plugs

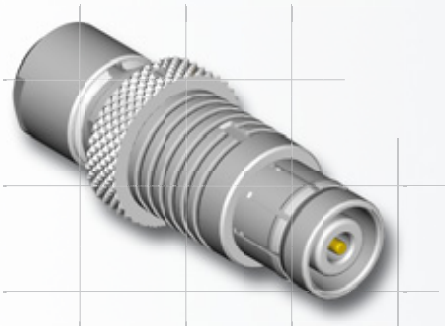
SA Body Style

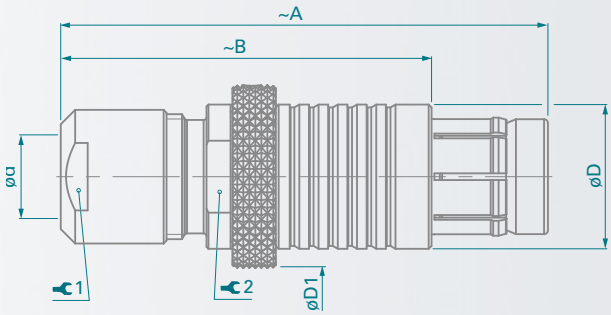




Series	A	B	D	L	L1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	50	65	4.7	4.3	7	0.6	7
103	46	35	12	60	77	6.7	6.2	10	1.0	10
104	50	38	15	65	84	8.7	8.7	12	2.0	13
105	62	47	18	70	94	10.7	10.7	15	3.5	16

SV Body Style



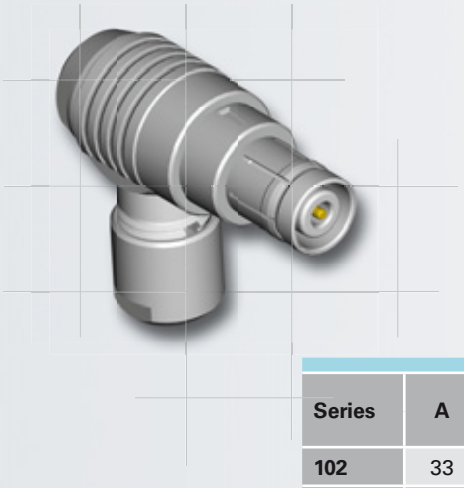


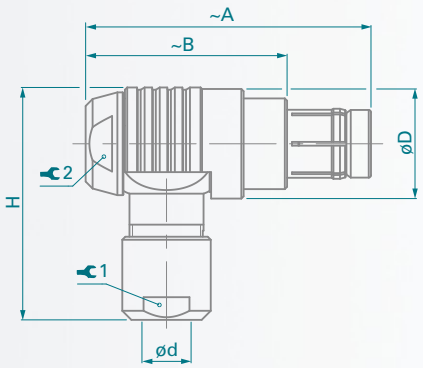
Series	A	B	D	D1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-
104	50	38	15	20	8.7	8.7	12	2.0	13
105	62	47	18	22	10.7	10.7	15	3.5	16

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

Cable Mounted Plugs

WSO Body Style





Series	A	B	D	H	dmax Unsealed	dmax 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
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	4.5

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

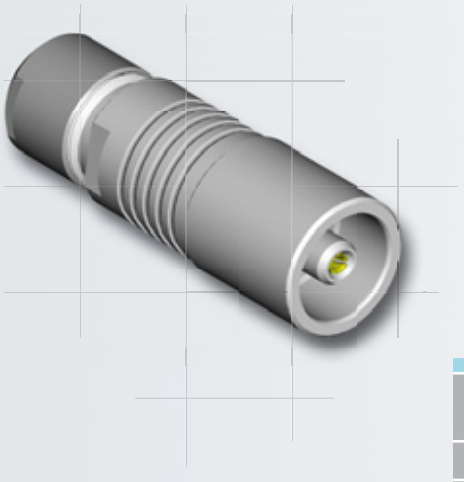
Cable Mounted Receptacles

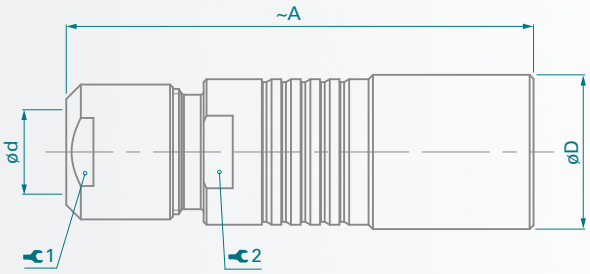
Body Style		K	KE	Links to Detailed Information
Protection	Unsealed (IP50)	●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & Contact Specifications Page 6-8
	Solder	●	●	
Housing	Natural Chrome	●	●	Options Page 6-10 Core Series Overview Page 2-1
	Black Chrome	●	●	
	Shortened Body			
Cabling	Cable Clamp Sets	●	●	Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable			
	Heat Shrinkable			
Accessories	Cable Bend Reliefs	●	●	Accessories Section 11
	Protective Sleeves	●	●	
	Sealing Caps	●	●	
Size	102 Series	●	●	Dimensions Page 6-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series			

Plugs mate with receptacles.

Cable Mounted Receptacles

K / KE Body Styles



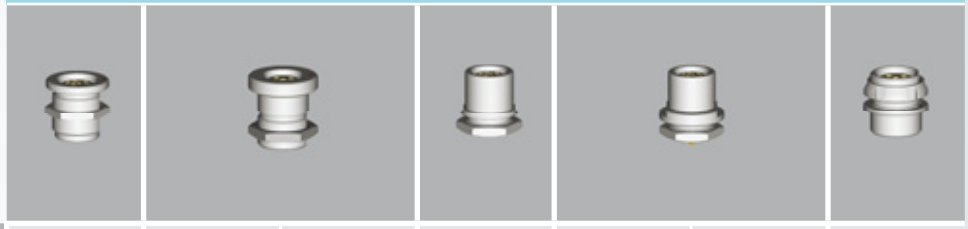


Series	A	D	d *max*		1	Torque 1 *[Nm]*	2
			Unsealed	Sealed			
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10
104	50	16	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16

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

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.

Panel Mounted Receptacles



Body Style		D	DEU	DEE	DB	DBEU	DBEE	DBP
Protection	Unsealed (IP50)	●			●			●
	Sealed up to IP68		●	●		●	●	
	Hermetic			●			●	
Contacts	Crimp							
	Solder	●	●	●	●	●	●	●
	PCB							
Housing Color	Natural Chrome	●	●	●	●	●	●	●
	Black Chrome	●	●	●	●	●	●	●
Design	Right Angle							
	Flush	●	●	●				●
	Front Projecting				●	●	●	
	Bulkhead Feedthrough							
Assembly	Front Mounting	●	●	●	●	●	●	
	Rear Mounting							●
Accessories	Sealing Caps	●	●	●	●	●	●	●
	Spacers	●	●	●	●	●	●	●
	Color-Coded Washers	●			●			●
	Grounding Washers	●	●	●	●	●	●	●
	Locking Washers	●	●	●	●	●	●	●
	Decorative Nuts							●
Size	102 Series	●	●	●	●	●	●	●
	103 Series	●	●	●	●	●	●	●
	1031 Series							
	104 Series	●	●	●	●	●	●	●
	105 Series	●	●	●	●	●	●	●
	106 Series							
	107 Series							

Plugs mate with receptacles.

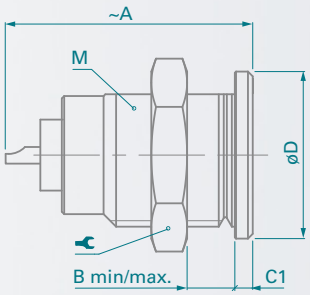
Panel Mounted Receptacles




DBPU	DBPE	DBPLU	DBPLE	DG	WDE	Links to Detailed Information
				●		Sealed and Hermetic Connectors Page 13-8
●	●	●	●		●	
	●		●		●	
						Electrical & Contact Specifications Page 6-8
●	●	●	●	●	●	
●	●	●	●	●	●	Options Section Page 6-10
●	●	●	●	●		
						Core Series Overview Page 2-1
●	●			●	●	
		●	●	●	●	
					●	
				●	●	Core Series Overview Page 2-1
●	●	●	●	●		
●	●	●	●	●	●	Accessories Section 11
●	●	●	●	●	●	
				●		
●	●			●		
●	●	●	●	●		
●	●	●	●	●		
●	●	●	●	●	●	Dimensions Page 6-5-2 For more Information Visit: **www.fischerconnectors.com/technical**
●	●	●	●	●	●	
●	●	●	●	●	●	
●	●	●	●	●	●	

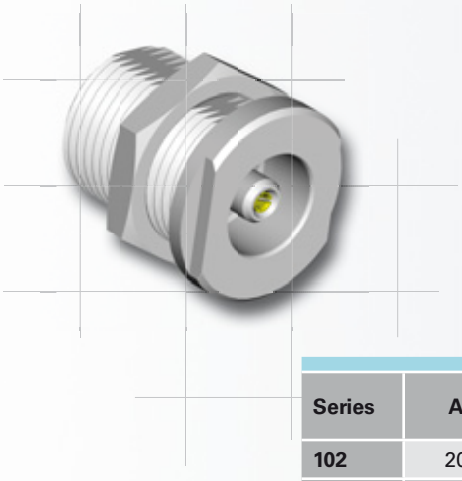
Panel Mounted Receptacles

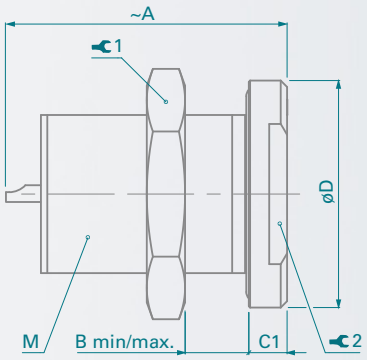
D Body Style



Series	A	B min/max.	C1	D	M		Torque 1 [Nm]
102	19	0/9	1.5	11	9x0.5	11	1.3
103	23	0/8	1.5	14	12x1	14	2.5
104	25	0/11	2.2	19	15x1	17	4.0
105	32	0/15	2.0	22	18x1	22	6.0

DEU / DEE Body Styles



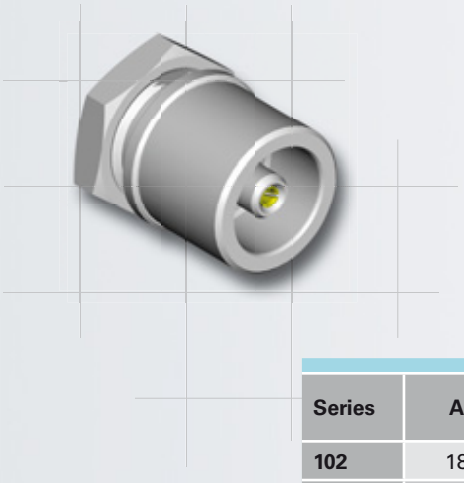


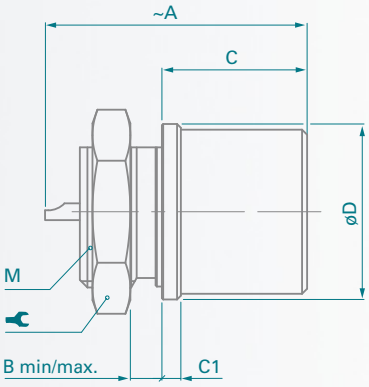
Series	A	B min/max.	C1	D	M	1	Torque 1 [Nm]	2
102	20	8/10	2.5	14	9x0.5	11	1.3	11
103	23	0/12	3.0	18	14x1	17	3.0	14
104	25	0/15	4.0	22	16x1	19	4.5	17
105	33	10.5/18	4.0	27	20x1	25	6.5	-

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

Panel Mounted Receptacles

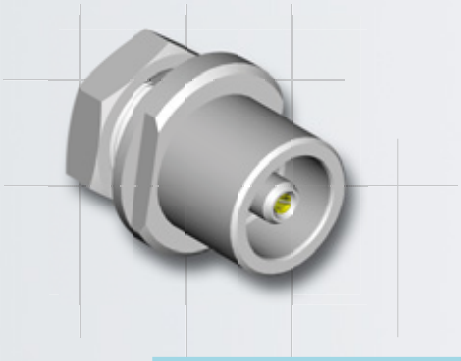
DB Body Style

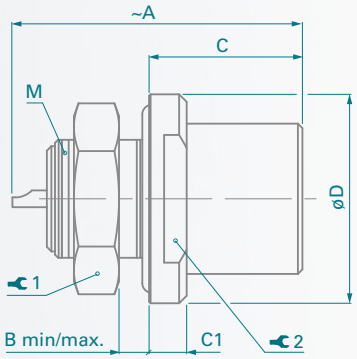




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	18	0/3	11.0	1.0	11	9x0.5	11	1.3
103	21	0/4	11.5	1.5	14	12x1	14	2.5
104	26	0/3	14.5	2.5	19	16x1	19	4.5
105	33	0/7	19.0	2.0	22	18x1	22	6.0

DBEU / DBEE Body Styles



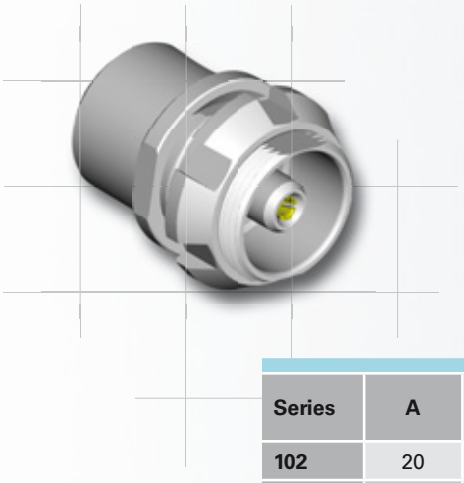


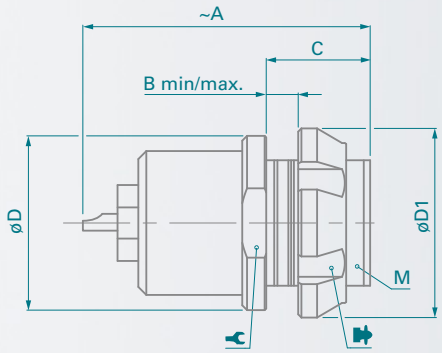
Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	20	0/3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	0/4.0	13.0	3.0	18	14x1	17	3.0	14
104	30	0/3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	0/5.0	19.0	4.0	27	18x1	22	6.0	22

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

Panel Mounted Receptacles

DBP Body Style

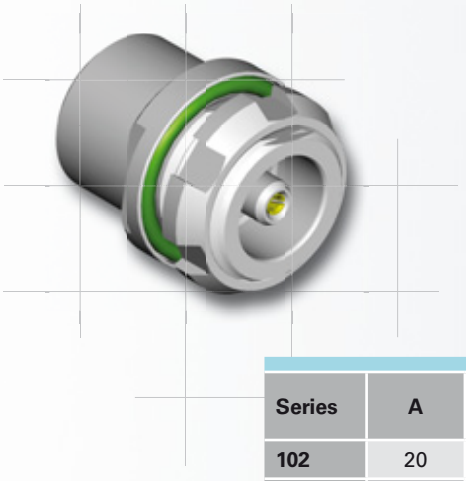


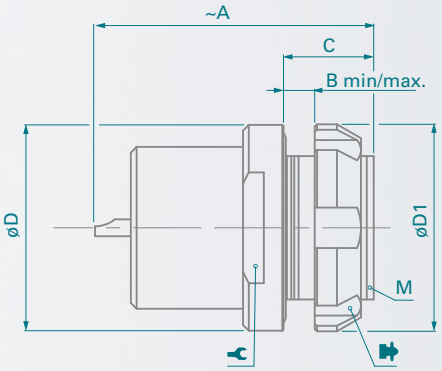


Series	A	B min/max.	C	D	D1	M		[1]	Torque [Nm]
102	20	0/3.5	6.5	11	12	9x0.5	10	TC00.000	1.3
103	23	0/4.0	8.0	14	15	12x1	-	TF00.001	2.5
104	26	0/5.0	9.0	19	19	15x1	-	TK00.000	4.0
105	30	0/12.0	17.0	22	23	18x1	-	TP00.011	6.0

[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

DBPU / DBPE Body Styles





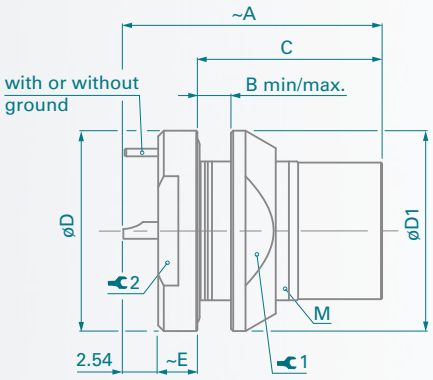
Series	A	B min/max.	C	D	D1	M		[1]	Torque [Nm]
102	20	0/3.5	6.5	14	12	9x0.5	11	TC00.000	1.3
103	26	0/3.0	7.8	18	18	14x1	15	TG00.001	3.0
104	26	0/4.0	8.0	22	20	16x1	-	TK00.002	4.5
105	30	0/5.0	10.0	27	25	20x1	-	TP00.005	6.5

[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

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

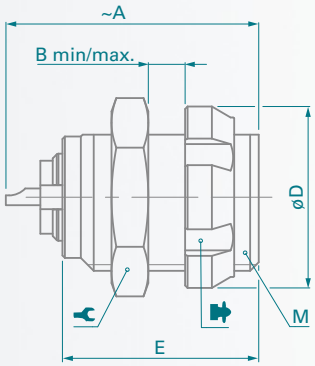
Panel Mounted Receptacles

DBPLU / DBPLE Body Styles



Series	A	B min/max.	C	D	D1	M	1	Torque 1 [Nm]	2
102	21	0/4.5	14.2	14	13	10x0.5	11	1.5	11
103	24	0/5.0	16.5	18	18	14x1	15	3.0	15
104	27	0/6.5	18.5	22	20	16x1	17	4.5	17
105	31	0/7.0	22.5	27	25	20x1	22	6.5	22

DG Body Style



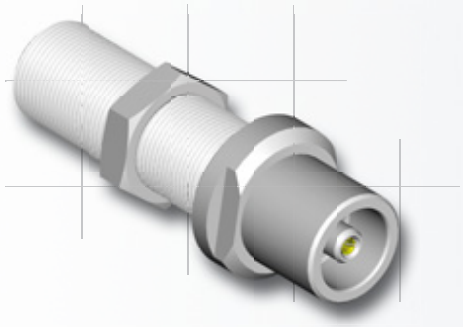
Series	A	B min/max.	D	E	M		[1]	Torque [Nm]
102	20	0/6	12	14	9x0.5	11	TC00.000	1.3
103	23	0/7	15	15	12x1	14	TF00.001	2.5
104	26	0/9	19	18	15x1	17	TK00.000	4.0
105	30	0/15	23	24	18x1	22	TP00.011	6.0

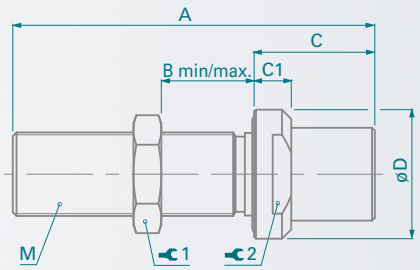
[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

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

Panel Mounted Receptacles

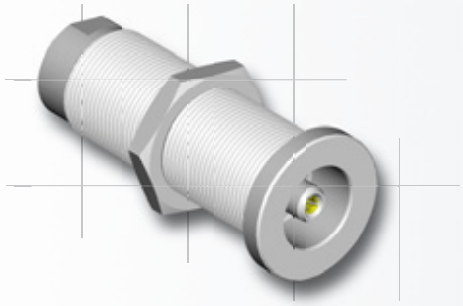
WDE Body Style for 102, 103 and 104 Series

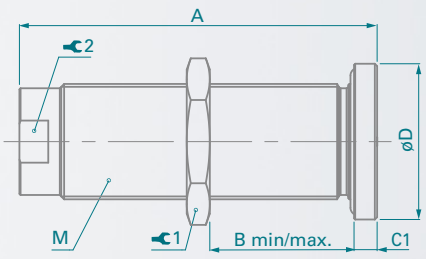




Series	A	B min/max	C	C1	D	M	1	Torque 1 [Nm]	2
102	39	0/23	13	4	14	9x0.5	11	1.3	11
103	40	0/23	14	4	17	12x1	14	2.5	14
104	40	0/21	16	4	22	15x1	17	4.0	17

WDE Body Style for 105 Series





Series	A	B min/max	C	C1	D	M	1	Torque 1 [Nm]	2
105	62	0/47	-	4	27	20x1	22	6.5	-

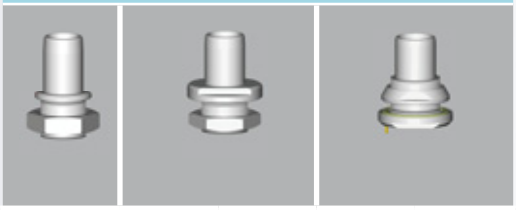
The bulkhead feedthrough connector allows the passing of electrical signals and power through a panel via two cable plugs.

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 4-9-1.

Dimension "B max" specifies the maximum panel thickness.

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

Panel Mounted Plugs

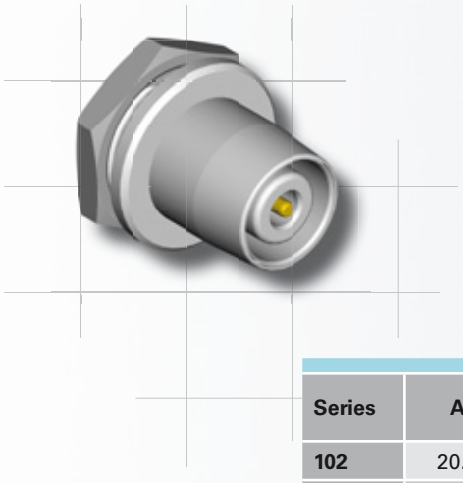


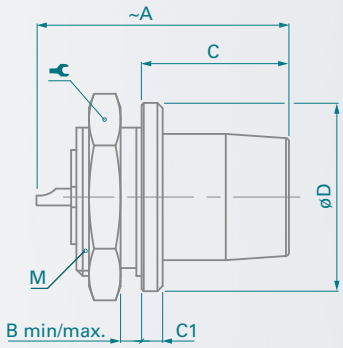
Body Style		SF	SFU	SFE	SFPU	SFPE	Links to Detailed Information
Protection	Unsealed (IP50)	●					Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	●	●	●	
	Hermetic			●		●	
Contacts	Crimp						Electrical & Contacts Specifications Page 6-8
	Solder	●	●	●	●	●	
	PCB						
Housing Color	Natural Chrome	●	●	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	●	●	
Assembly	Front Mounting	●	●	●			Core Series Overview Page 2-1
	Rear Mounting				●	●	
Accessories	Sealing Caps	●	●	●	●	●	Accessories Section 11
	Spacers	●	●	●	●	●	
	Color-Coded Washers	●					
	Insulating Washers	●					
	Grounding Washers	●	●	●			
	Locking Washers	●	●	●	●	●	
	Decorative Nuts				●	●	
Size	102 Series	●	●	●	●	●	Dimensions Page 6-6-1 For more Information Visit: **www.fischerconnectors.com /technical**
	103 Series	●	●	●	●	●	
	1031 Series						
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series						
	107 Series						

Plugs mate with receptacles.

Panel Mounted Plugs

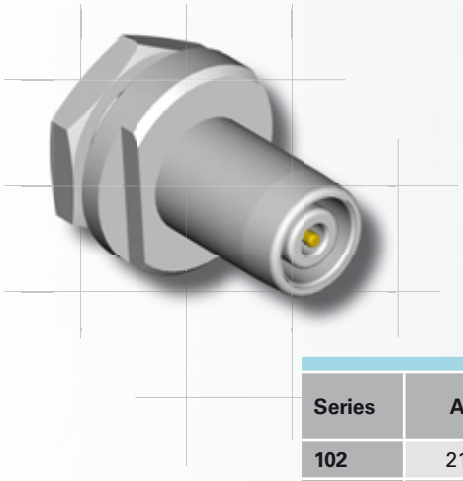
SF Body Style

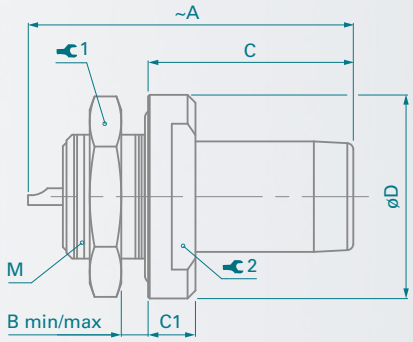




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	20.0	0/4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	0/3.0	12.5	1.5	14	12x1	14	2.5
104	28.0	0/3.0	14.0	2.0	18	15x1	17	4.0
105	30.5	0/5.5	16.8	1.2	22	16x1	19	4.5

SFU / SFE Body Styles



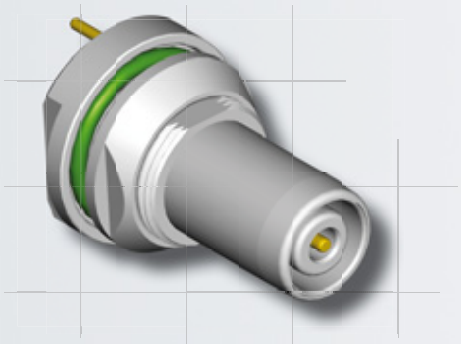


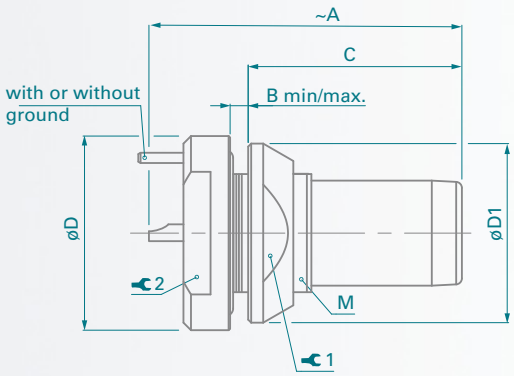
Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	21	0/2.5	13	3	13	9x0.5	11	1.3	9
103	26	0/5.0	14	3	17	12x1	14	2.5	12
104	28	0/7.5	15	3	22	16x1	19	4.5	-
105	32	0/6.0	4	4	27	20x1	25	6.5	-

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

Panel Mounted Plugs

SFPU / SFPE Body Styles

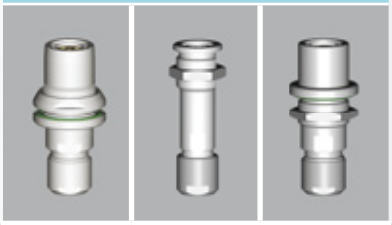




Series	A	B min/max.	C	D	D1	M	1	Torque 1 [Nm]	2
102	26.0	0/2.5	15.4	13	12	9x0.5	10	1.3	9
103	29.5	0/4.0	18.5	17	16	12x1	13	2.5	12
104	33.0	0/6.0	22.0	22	20	16x1	17	4.5	17
105	36.5	0/5.0	25.0	27	25	20x1	22	6.5	19

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

Panel Mounted Cable Receptacles

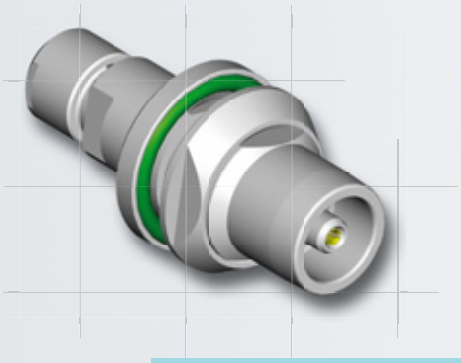


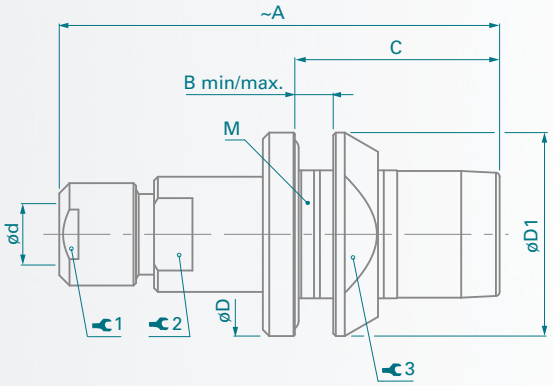
Body Style		DKBE	DK	DKE	Links to Detailed Information
Protection	Unsealed (IP50)		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & Contact Specifications Page 6-8
	Solder	●	●	●	
Housing Color	Natural Chrome	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	
Design	Flush		●		Core Series Overview Page 2-1
	Front Projecting	●		●	
Assembly	Panel Mounted	●	●	●	Core Series Overview Page 2-1
	Front Mounting		●	●	
	Rear Mounting	●			
	Cable Mounted	●	●	●	
	Cable Clamp Sets	●	●	●	Cable Clamp Sets Page 4-11
Accessories	Cable Bend Reliefs	●	●	●	Accessories Section 11
	Sealing Caps	●	●	●	
	Spacers	●	●	●	
	Color-Coded Washers	●	●	●	
	Insulating Washers				
	Grounding washers	●	●	●	
	Locking Washers	●	●	●	
	Decorative Nuts	●			
Size	102 Series	●	●	●	Dimensions Page 6-7-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
	107 Series				

Plugs mate with receptacles.

Panel Mounted Cable Receptacles

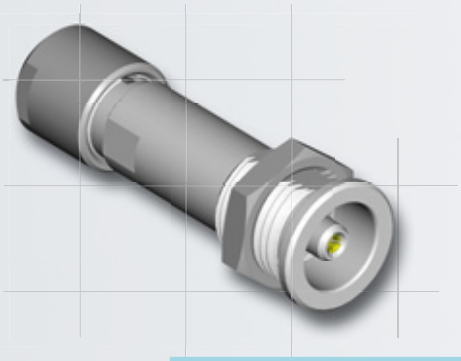
DKBE Body Style

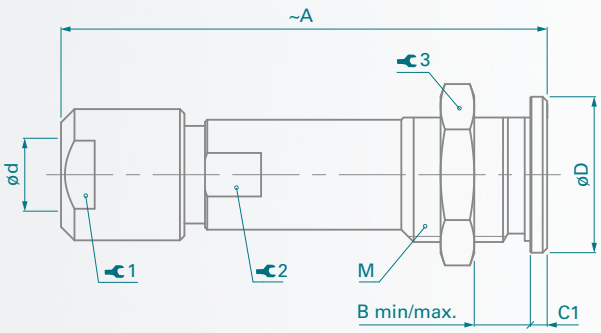




Series	A	B min/max.	C	D	d*max*	D1	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	0/3.5	16.0	16	4.3	16	12x1	7	0.6	7	13	2.5
103	43	0/4.0	19.0	19	6.2	20	15x1	10	1.0	10	17	4.0
104	50	0/5.0	22.5	23	8.7	23	18x1	12	2.0	13	20	6.0
105	60	0/5.0	26.0	28	10.7	27	22x1	15	3.5	16	24	8.0

DK Body Style



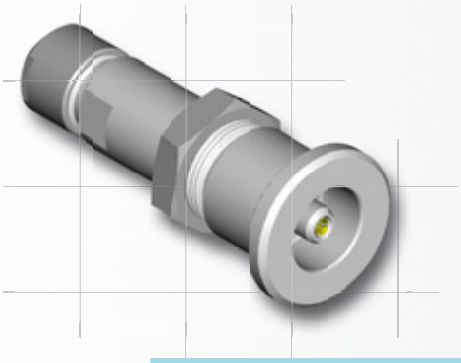


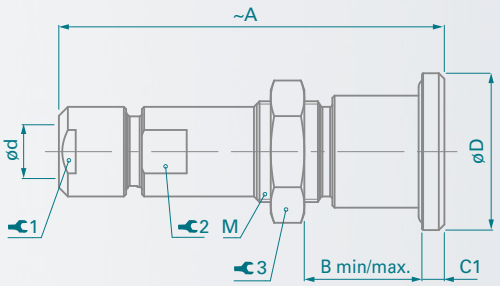
Series	A	B min/max.	C1	D	d*max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	0/9	1.5	11	4.7	9x0.5	7	0.6	-	11	1.3
103	44	0/10	1.5	14	6.7	12x1	10	1.0	9	14	2.5
104	50	0/11	2.0	19	8.7	15x1	12	2.0	12	17	4.0
105	60	0/16	2.0	22	10.7	18x1	15	3.5	14	22	6.0

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

Panel Mounted Cable Receptacles

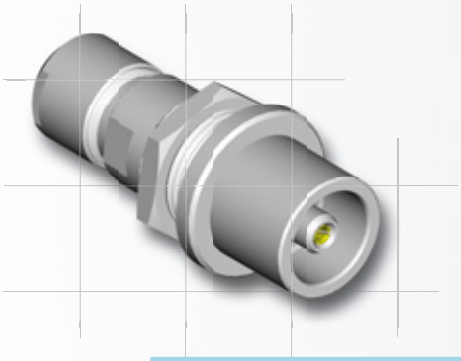
DKE Body Style for 102 and 103 Series

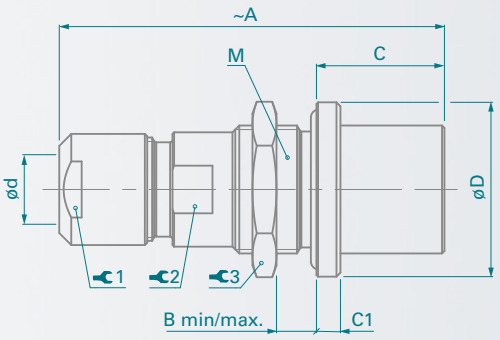




Series	A	B min/max.	C	C1	D	d*max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
102	35	9/12	-	2	14	4.3	9x0.5	7	0.6	7	11	1.3
103	45	9/14	-	3	17	6.2	14x1	10	1.0	10	17	3.0

DKE Body Style for 104 and 105 Series





Series	A	B min/max.	C	C1	D	d*max*	M	1	Torque 1 *[Nm]*	2	3	Torque 3 *[Nm]*
104	50	0/8	16.0	3	22	8.7	16x1	12	2.0	13	19	4.5
105	61	0/9	19.0	4	27	10.7	20x1	15	3.5	16	25	6.5

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

102, 103, 104 and 105 Series

● = Standard ❍ = Option

Type	Pin Layout	Contact Termination		Insulating Material	Cable Group [1]	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Test Voltage [KV] in mated position				Current Rating [2] [A]
									AC rms		DC		
		Solder	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	1 2 3	0.7	0.6	75	1.7	-	2.8	-	7.0
103 A/Z **001**		●		PTFE	3 4 5	2.0	2.0	-	2.2	-	4.2	-	19
103 A/Z **002**		●		PTFE	1 2 6	1.3	1.2	75	3.8	-	5.4	-	12
103 A **026**		●		PTFE	4 5 6	1.6	1.9	50	1.8	-	2.4	-	15
104 A **002**		●		PTFE	6 7	1.6	1.9	75	4.8	-	6.8	-	15
104 A **012**		●		PTFE	4 5 6 7	4.0	2.5	-	2.7	-	4.3	-	22
104 A **060**		●		PTFE	4 5 6 7	2.0	1.9	50	4.5	-	6.5	-	13
105 A/Z **002**		●		PTFE	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 6-9.
[2] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

For Coax, Triax and 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
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	50±2	7 x 0.1	AcCuAg	0.3	0.84	PTFE	1.3	CuAg	1.9	FEP	Habia (UK)
	Triaxal				2. screen and jacket:			2.4	CuAg	3.1	FEP	
	RG-178	50±2	7 x 0.1	AcCuAg	0.3	1.6	PTFE	1.8	CuAg	2.6	FEP	Filotex (F)
	Type Triax				2. screen and jacket:			2.9	CuAg	3.6	FEP	
	SUHNER G 02332	50±2	7 x 0.15	Cu	0.49	1.5	PE	2.0	Cu	2.55	PVC	Suhner (CH)
	Triaxial				2. screen and jacket:			3.0	Cu	4.25	PVC	
12	BELDEN 9222	50±2	7 x 0.32	CuSn	0.93	2.95	PE	3.5	CuSn	4.65	PE	Belden (USA)
	RG-58 Type Triax				2. screen and jacket:			5.2	CuSn	6.1	PVC	
13	ALPHA 9850	75±3	1 x 0.52	AcCu	0.52	3.71	FPE	4.5	Cu	-	PE	Alpha (UK)
	RG-59 Type Triax				2. screen and jacket:				Cu	8.0	PVC	
14	BELDEN 9267	75±3	1 x 0.84	Cu	0.84	3.71	FPE	4.5	Cu	7.4	PE	Belden (USA)
	RG-59 Type Triax				2. screen and jacket:			7.9	Cu	9.2	CSM	

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		

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

Coax Low and High Voltage, Triax & Mixed Coax

1	**Housing Color** Which housing color do you need?	**NATURAL CHROME without Guide Mark**		**BLACK CHROME without Guide Mark**	
2	**Contact Block Material** Which contact block material do you need?	**PTFE**	**PEEK**	**PTFE**	**PEEK**
3	**Contact Type**	**Solder**		**Solder**	
4	**Keying Code** None	-600	-120	-700	-180

Contact Types for Panel Mounted Connectors

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

Design and Accessories

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

Other options are available on request, please contact us.

Examples

Plugs

SV 103 A002 - 600 Ø6.7
Natural chrome housing color with PTFE contact block, solder contacts and cable clamp set (diameter 6.7 mm)

S 104 A060 - 600 Ø3.4-UI
Natural chrome housing color with PTFE contact block, solder contacts and insulating clamp set (diameter 3.4 mm)

Receptacles

DBPLE 102 A002 - 709EGD
Black chrome housing color with PTFE contact block, solder contacts, EPDM interface O-ring, ground tag and decorative slotted nut

DKBE 103 A026 - 600 Ø6.2E
Natural chrome housing color with PTFE contact block, solder contacts, cable clamp set (diameter 6.2 mm) and EPDM interface O-ring

7 Coax High Voltage Connectors

Key Features

- Wide range of body styles and sizes
- Unsealed, sealed or hermetic
- RF signal or power
- 50 and 75 Ohms impedance
- Standard or inverted polarity
- No guide mark standard
- Up to 50kV

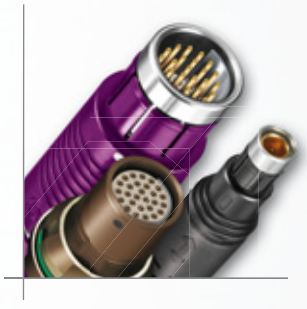
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set is included with connector, see page 4-11
- For details on Options, see page 6-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Coax High Voltage Contacts

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

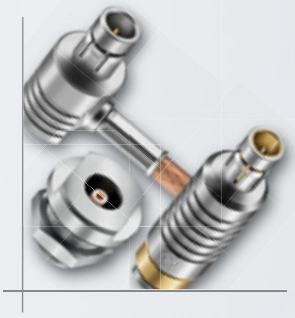
Fischer AluLite™ Series

Plastic Series

Plastic connectors ideal for lightweight applications

Fischer 405 Series
Fischer 4032 Series

Nim-Camac



Coax and Triax Connectors engineered according to Nim-Camac standards

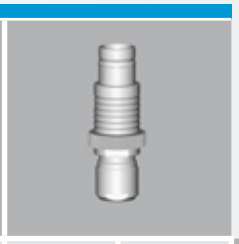
Fischer Nim-Camac 101 Series

Cable Mounted Plugs

Panel Mounted Receptacles

For all Coax High Voltage

Cable Mounted Plugs

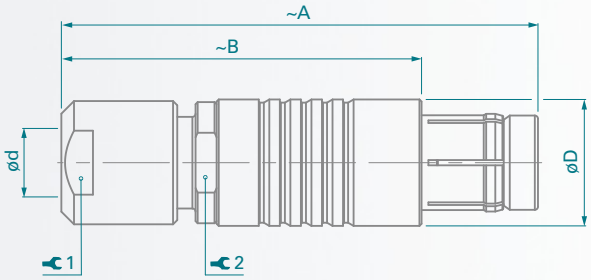



Body Style		S	SE	SV	SVE	Links to Detailed Information
Protection	Unsealed (IP50)	●		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●		●	
Locking System	None					Plug Locking Systems Page 2-7
	Push-Pull	●	●	●	●	
	Emergency Release					
	Lanyard					
	Tamperproof			●	●	
Contacts	Crimp					Electrical & Contact Specifications Page 7-5
	Solder	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	Options Page 6-10
	Black Chrome	●	●			
Design	Shortened Body					Core Series Overview Page 2-1
	Right Angle					
Cabling	Cable Clamp Sets	●	●	●	●	Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable					
	Heat Shrinkable					
Accessories	Cable Bend Reliefs	●	●	●	●	Accessories Section 11
	Protective Sleeves	●	●			
	Sealing Caps	●	●	●	●	
Size	102 Series	●	●	●	●	Dimensions Page 7-3-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	●	
	1031 Series					
	104 Series	●	●	●	●	
	105 Series	●	●	●	●	
	106 Series					
	107 Series	●	●	●	●	

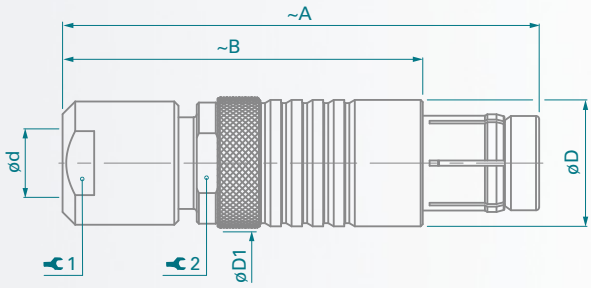
Plugs mate with receptacles.

Cable Mounted Plugs

S/SE and SV/SVE Body Styles



S/SE



SV/SVE

Type	A	B	D	D1	dmax Unsealed	dmax Sealed	1	Torque 1 [Nm]	2
102 A/Z 018	36	26	9	11	4.7	4.3	7	0.6	7
102 A/Z 025	60	46	9	-	5.2	-	Crimping tool and dies [1] TX00.241 & TX00.251		
103 A/Z 023	46	35	12	13	6.7	6.2	10	1.0	10
104 A/Z 010	50	38	15	20	8.7	8.7	12	2.0	13
105 A/Z 004	62	47	18	22	10.7	10.7	15	3.5	16
105 A/Z 005	62	47	18	22	10.7	10.7	15	3.5	16
105 A/Z 049 [4]	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

[1] Cable screen and jacket (e.g. RG-58) are retained by hex-crimp to the plug shell.
[2] For improved safety, the center contact is further recessed than in the S 105 A049.
[3] Two wrenches with an opening of 32 mm are required for SV/SVE 107 series.
[4] For insertion of center contact which has to be assembled after wiring, we recommend tool TP00.000, as shown on page 12-3.

Suitable Coax cables are indicated in the column "Cable Group" in Electrical & Contact specifications. The cable specifications are listed on page 6-9. 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 4-11. 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".

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

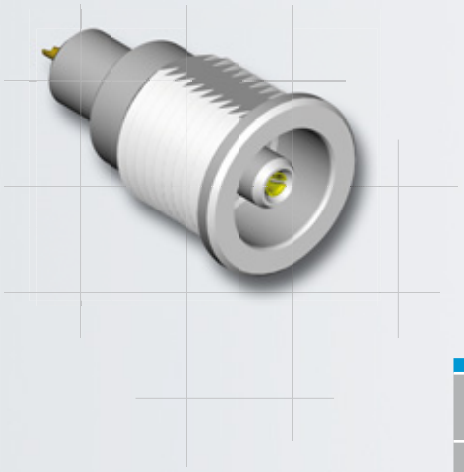
Panel Mounted Receptacles

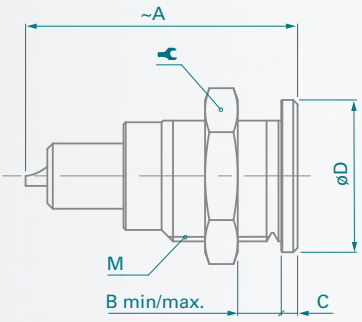
Body Style		D	DEE	Links to Detailed Information
Protection	Unsealed (IP50)	●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	
	Hermetic		●	
Contacts	Crimp			Electrical & Contacts Specifications Page 7-5
	Solder	●	●	
	PCB			
Housing Color	Natural Chrome	●	●	Options Page 6-10
	Black Chrome	●	●	
Design	Right Angle			Core Series Overview Page 2-1
	Flush	●	●	
	Front Projecting			
	Bulkhead Feedthrough			
Assembly	Front Mounting	●	●	Core Series Overview Page 2-1
	Rear Mounting			
Accessories	Sealing Caps	●	●	Accessories Section 11
	Spacers	●	●	
	Color-Coded Washers	●		
	Grounding Washers	●	●	
	Locking Washers	●	●	
	Decorative Nuts			
Size	102 Series	●	●	Dimensions Page 7-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series	●	●	

Plugs mate with receptacles.

Panel Mounted Receptacles

D Body Style





Types	A	B min/max.	C	D	M		Torque [Nm]
102 A/Z 018	24	0/8	1.5	11	9x0.5	11	1.3
102 A/Z 025	45	0/7	2.0	11	9x0.5	11	1.3
103 A/Z 023	27	0/7	1.5	14	12x1	14	2.5
104 A/Z 010	35	0/10	2.5	19	15x1	17	4.0
105 A/Z 004	46	0/15	2.0	22	18x1	22	6.0
105 A/Z 005 [1]	46	0/15	2.0	22	18x1	22	6.0
105 A/Z [2] 049 [1]	63 68	0/13	2.0	22	18x1	22	6.0
105 A 108 [2]	59	0/13	2.0	22	18x1	22	6.0
107 A/Z 003	72	0/18	4.0	40	35x1	TX00.107	16
107 A 004	89	0/18	4.0	40	35x1	TX00.107	16
107 A/Z 017	89	0/18	4.0	40	35x1	TX00.107	16

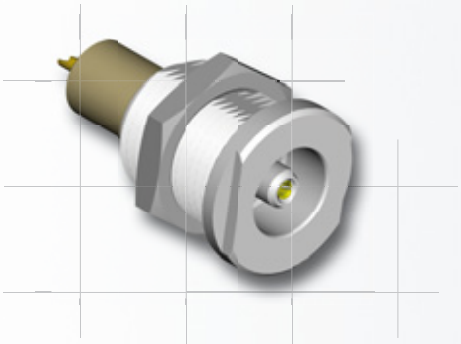
[1] Also available with an optional micro switch.
[2] For insertion of center contact which has to be assembled after wiring we recommend tool TP00.000, as shown on page 12-3.

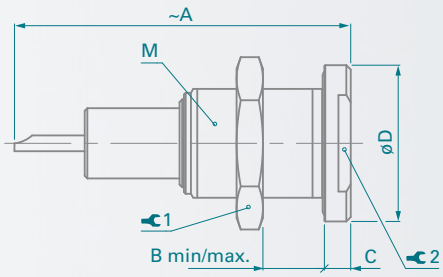
Receptacles of 106 and 107 Series are supplied with slotted nuts.
For nut dimensions see Section 11 Accessories. For wrenches see Section 12 Tooling.

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

Panel Mounted Receptacles

DEE Body Style





Types	A	B min/max.	C	D	M	1	Torque 1 [Nm]	2
102 AZ 018	26	8/12	2	14	9x0.5	11	1.3	11
102 AZ 025	45	0.5/7	2	15	11x0.75	11	1.5	-
103 AZ 023	39 38	0/12	3	18	14x1	17	3.0	14
104 AZ 010	41 40	0/15	4	22	16x1	19	4.5	17
102 AZ 005[1)]	46 50	10.5/18	4	27	20x1	25	6.5	-
105 AZ 049[1)]	72 74	10.5/30	4	27	20x1	25	6.5	-
107 AZ 003	73	19.2/22	5	45	35x1	TX00.107	16	-
107 AZ 017	90 95	19.2/22	5	45	35x1	TX00.107	16	-

[1)] Also available with an optional micro switch.

Receptacles of 106 and 107 series are supplied with slotted nuts.
For nut dimensions see Section 11 Accessories. For wrenches see Section 12 Tooling.

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

102, 103, 104 , 105 and 107 Series

● = Standard ❍ = Option

Type	Pin Layout	Contact Termination		Insulating Material	Cable Group [1]	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Test Voltage [KV] in mated position				Current Rating [2] [A]
									AC rms		DC		
		Solder	Crimp						Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	
102 A Z 018		●	●	PTFE	1 2	0.9	0.8	-	5.0	-	8.0	-	10
102 A Z 025		●	● [3]	PTFE	4	0.9	0.8	50	7.0	-	11	-	10
103 A Z 023		●		PTFE	4 6	1.3	1.2	50	6.0	-	10	-	12
104 A Z 010		●		PTFE	4 5 6 7	2.0	1.9	-	7.0	-	10	-	13
105 A Z 004		●		PTFE	5 7 8	4.0	3.0	40	9.0	-	13	-	32
105 A Z 005 [4)6)]		● ❍		PTFE PEEK	4 6 7	2.0	2.1	75	9.0	-	14	-	20
105 A Z 049 [4)6)]		●		PTFE	4 6 7 8	2.0	2.3	-	11	-	19	-	35
105 A 108 [5)6)]		●		PTFE	4 6 7 8	2.0	2.5	-	14	-	20	-	23
107 A Z 003		●		PTFE	7 8 9	4.0	2.8	75	14	-	25	-	45
107 A 004		●		PTFE	7 8 9	4.0	2.8	75	30	-	50	-	45
107 A Z 017		●		PTFE	7 8 9 10	5.0	5.1	50	30	-	50	-	60

[1] See list of recommended cables on page 6-9.
[2] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.
[3] Plug: Center contact-crimp / Outer contact-crimp ferrule.
Receptacle: Center contact-solder / Outer contact-washer with solder tag.
[4] Receptacles are available with an optional micro switch.
[5] Plug contains additionally recessed contacts.
[6] See Section 11 Tooling for insertion tool of contact.

8 Triax Connectors

Key Features

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

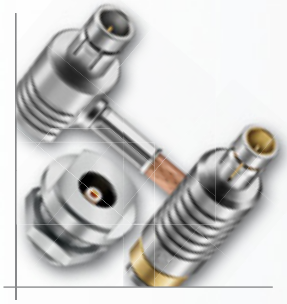
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set should be ordered separately, see page 4-11
- For details on Options, see page 6-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Triax Contacts

Nim-Camac



Coax and Triax Connectors engineered according to Nim-Camac standards:

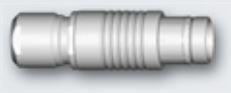
Fischer Nim-Camac 101 Series

SD/HD Broadcast Cameras

Triax connector solutions:

Fischer 1051 Series
Fischer 1052 Series

Cable Mounted Plugs

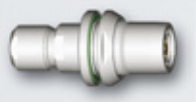


Cable Mounted Receptacles

Panel Mounted Receptacles

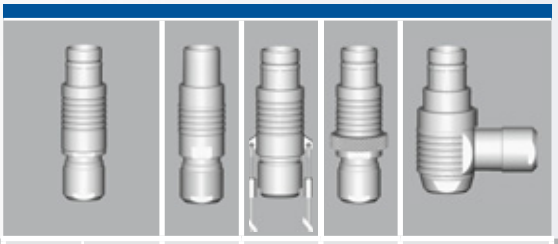
Panel Mounted Plugs

Panel Mounted Cable Receptacles



For all Triax

Cable Mounted Plugs

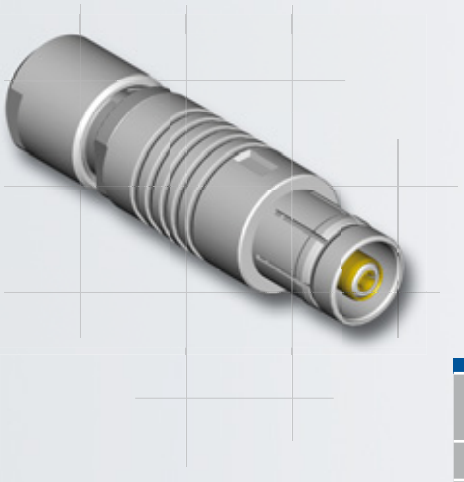


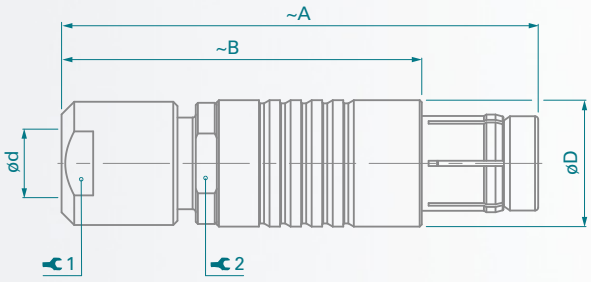
Body Style		S	SC	SOV	SA	SV	WSO	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	●	●	●	●	
Locking System	None			●				Plug Locking Systems Page 2-7
	Push-Pull	●			●	●	●	
	Emergency Release		●					
	Lanyard				●			
	Tamperproof					●		
Contacts	Crimp							Electrical & Contact Specifications Page 8-8
	Solder	●	●	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	●		●	
Design	Shortened Body							Core Series Overview Page 2-1
	Right Angle						●	
Cabling	Cable Clamp Sets	●	●	●	●	●	●	Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable							
	Heat Shrinkable							
Accessories	Cable Bend Reliefs	●	●	●	●	●	●	Accessories Section 11
	Protective Sleeves	●	●	●				
	Sealing Caps	●	●	●	●	●	●	
Size	102 Series	●	●	●	●	●	●	Dimensions Page 8-3-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	●	●	●	
	1031 Series							
	104 Series							
	105 Series							
	106 Series							
	107 Series							

Plugs mate with receptacles.

Cable Mounted Plugs

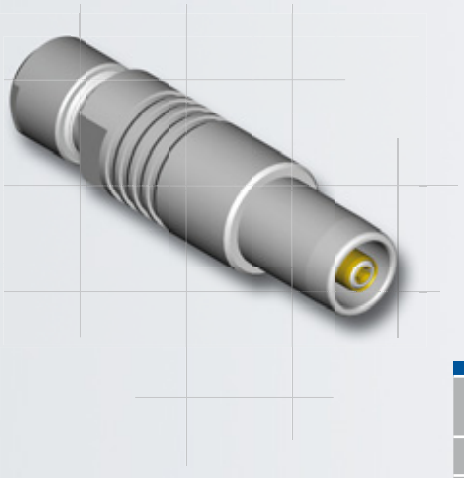
S / SC Body Styles

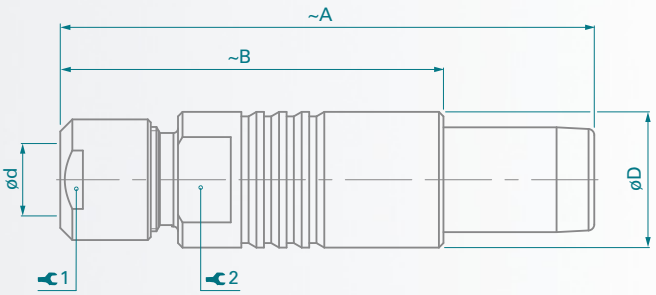




Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

SOV Body Style



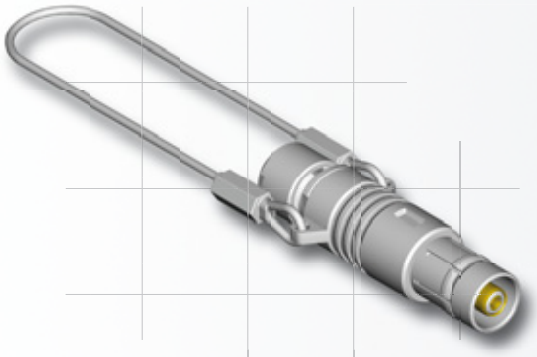


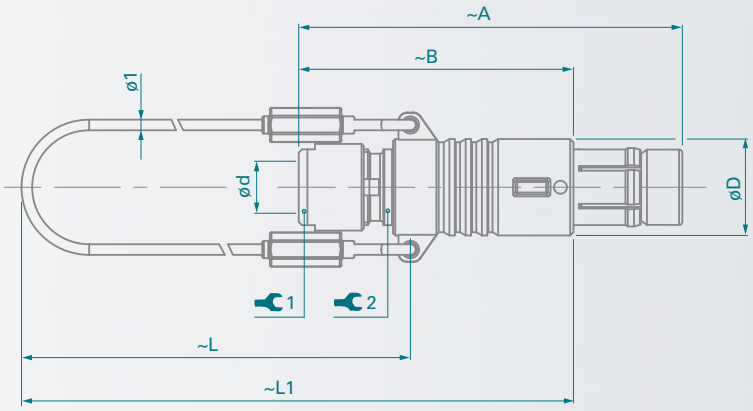
Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

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

Cable Mounted Plugs

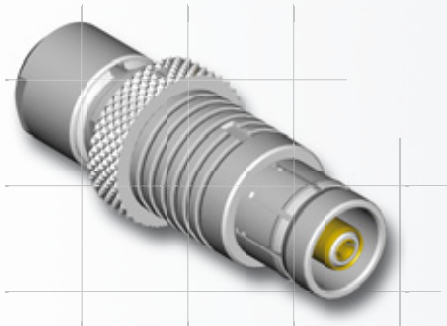
SA Body Style

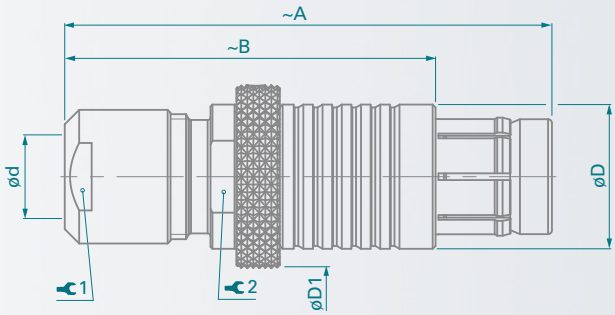




Series	A	B	D	L	L1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	50	65	4.7	4.3	7	0.6	7
103	46	35	12	60	77	6.7	6.2	10	1.0	10

SV Body Style



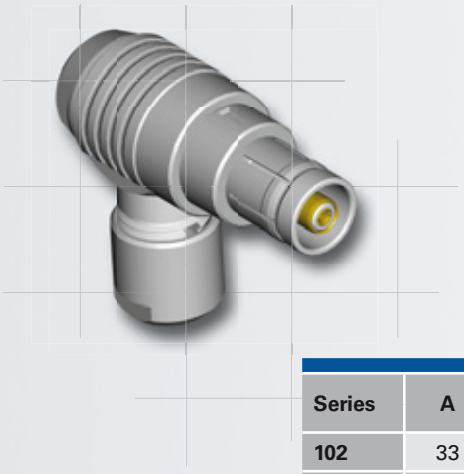


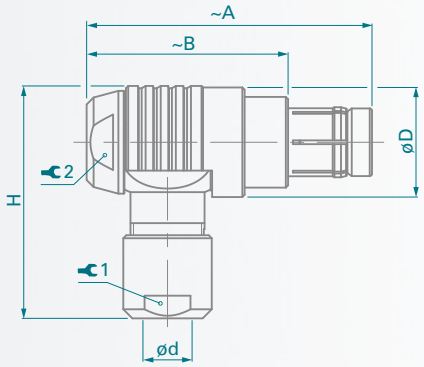
Series	A	B	D	D1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
102	36	26	9	11	4.7	4.3	7	0.6	-
103	46	35	12	13	6.7	6.2	10	1.0	-

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.

Cable Mounted Plugs

WSO Body Style





Series	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

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

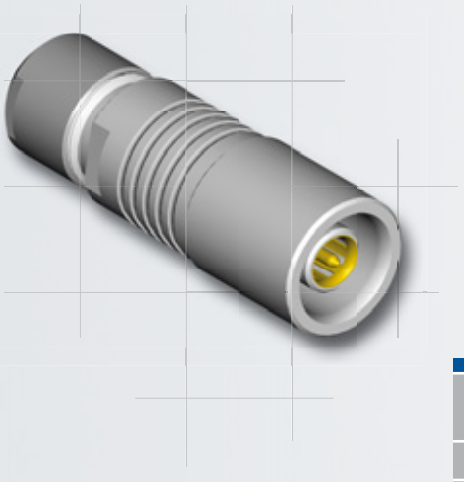
Cable Mounted Receptacles

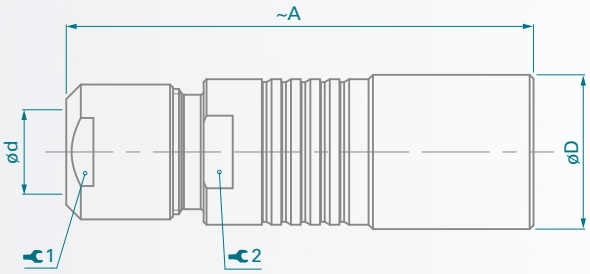
Body Style		K	KE	Links to Detailed Information
Protection	Unsealed (IP50)	●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	
Contacts	Crimp			Electrical & Contact Specifications Page 8-8
	Solder	●	●	
Housing	Natural Chrome	●	●	Options Page 6-10
	Black Chrome	●	●	
	Shortened Body			
Cabling	Cable Clamp Sets	●	●	Cable Clamp Sets Page 4-11 Cable Assembly Section 3
	Overmoldable			
	Heat Shrinkable			
Accessories	Cable Bend Reliefs	●	●	Accessories Section 11
	Protective Sleeves	●	●	
	Sealing Caps	●	●	
Size	102 Series	●	●	Dimensions Section 8-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	
	1031 Series			
	104 Series			
	105 Series			
	106 Series			
	107 Series			

Plugs mate with receptacles.

Cable Mounted Receptacles

K / KE Body Styles





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

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

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.

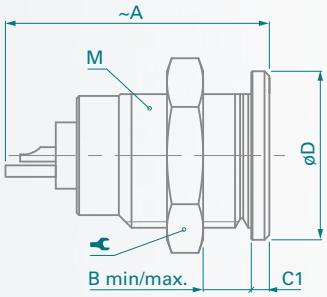
Panel Mounted Receptacles

Body Style		D	DEU	DEE	DB	DBEU	DBEE	DG	Links to Detailed Information
Protection	Unsealed (IP50)	●			●			●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	●		●	●		
	Hermetic			●			●		
Contacts	Crimp								Electrical & Contact Specifications Page 8-8
	Solder	●	●	●	●	●	●	●	
	PCB								
Housing Color	Natural Chrome	●	●	●	●	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	●	●	●	●	
Design	Right Angle								Core Series Overview Page 2-1
	Flush	●	●	●				●	
	Front Projecting				●	●	●	●	
	Bulkhead Feedthrough								
Assembly	Front Mounting	●	●	●	●	●	●	●	Core Series Overview Page 2-1
	Rear Mounting							●	
Accessories	Sealing Caps	●	●	●	●	●	●	●	Accessories Section 11
	Spacers	●	●	●	●	●	●	●	
	Color-Coded Washers	●			●			●	
	Insulating Washers	●	●	●	●	●	●	●	
	Grounding Washers	●	●	●	●	●	●	●	
	Locking Washers	●	●	●	●	●	●	●	
	Decorative Nuts							●	
Size	102 Series	●	●	●	●	●	●	●	Dimensions Page 8-5-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	●	●	●	●	
	1031 Series								
	104 Series								
	105 Series								
	106 Series								
	107 Series								

Plugs mate with receptacles.

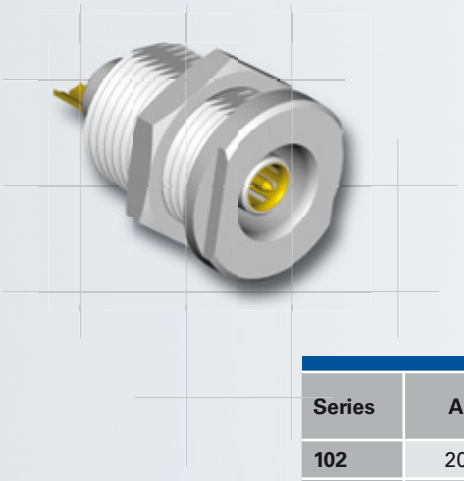
Panel Mounted Receptacles

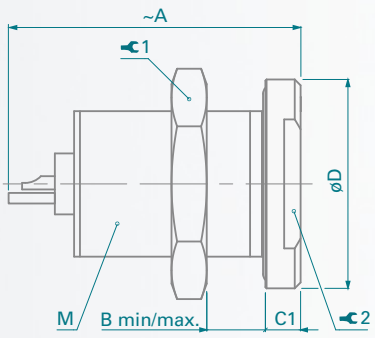
D Body Style



Series	A	B min/max	C1	D	M		Torque [Nm]
102	19	0/9	1.5	11	9x0.5	11	1.3
103	23	0/8	1.5	14	12x1	14	2.5

DEU / DEE Body Styles



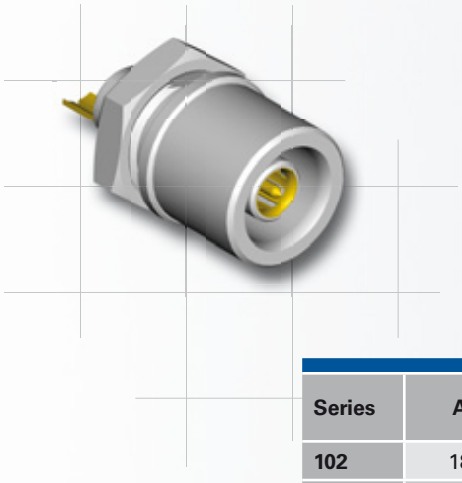


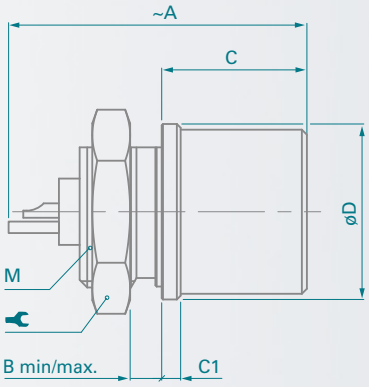
Series	A	B min/max	C1	D	M	1	Torque1 [Nm]	2
102	20	8/10	2.5	14	9x0.5	11	1.3	11
103	23	0/12	3.0	18	14x1	17	3.0	14

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

Panel Mounted Receptacles

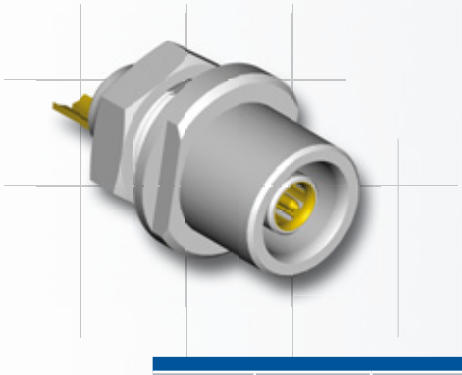
DB Body Style

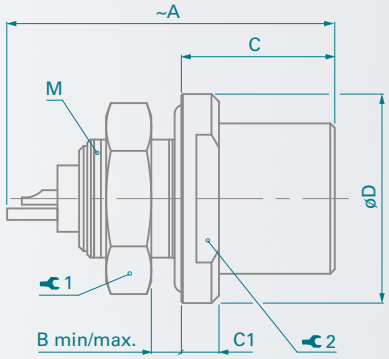




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	18	0/3	11.0	1.0	11	9x0.5	11	1.3
103	21	0/4	11.5	1.5	14	12x1	14	2.5

DBEU / DBEE Body Styles



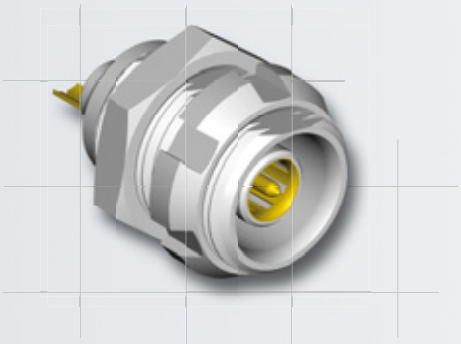


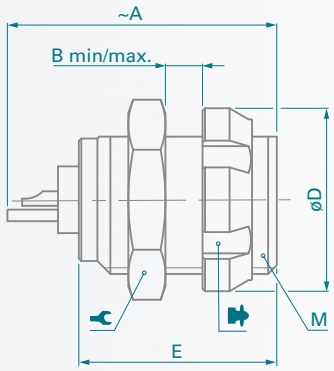
Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	20	0/3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	0/4.0	13.0	3.0	18	14x1	17	3.0	14

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

Panel Mounted Receptacles

DG Body Style





Series	A	B min/max.	D	E	M			Torque [Nm]
102	20	0/6	12	14	9x0.5	11	TC00.000	1.3
103	23	0/7	15	15	12x1	14	TF00.001	2.5

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

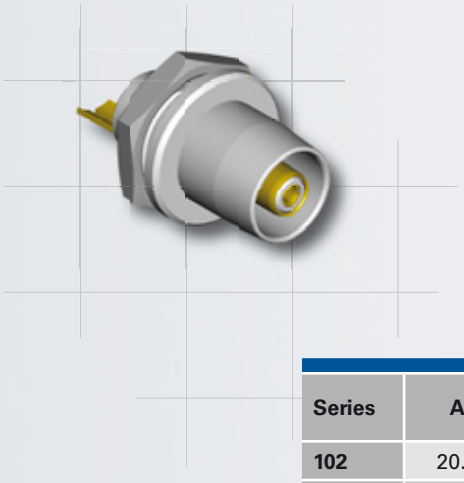
Panel Mounted Plugs

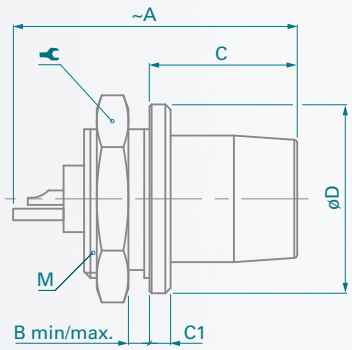
Body Style		SF	SFU	SFE	Links to Detailed Information
Protection	Unsealed (IP50)	●			Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	●	
	Hermetic			●	
Contacts	Crimp				Electrical & Contacts Specifications Page 8-8
	Solder	●	●	●	
	PCB				
Housing Color	Natural Chrome	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	
Assembly	Front Mounting	●	●	●	Core Series Overview Page 2-1
	Rear Mounting				
Accessories	Sealing Caps	●	●	●	Accessories Section 11
	Spacers	●	●	●	
	Color-Coded Washers	●			
	Insulating Washers	●			
	Grounding Washers	●			
	Locking Washers	●			
	Decorative Nuts				
Size	102 Series	●	●	●	Dimensions Page 8-6-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	
	1031 Series				
	104 Series				
	105 Series				
	106 Series				
	107 Series				

Plugs mate with receptacles.

Panel Mounted Plugs

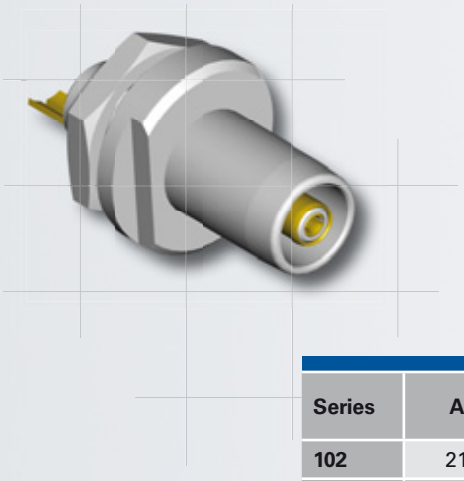
SF Body Style

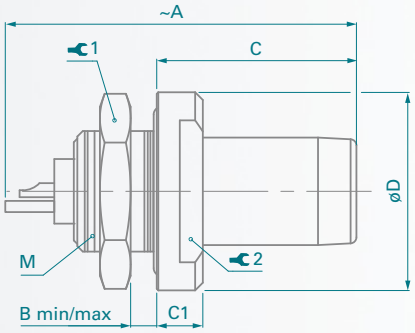




Series	A	B min/max.	C	C1	D	M		Torque [Nm]
102	20.0	0/4.0	11.0	1.0	10	9x0.5	11	1.3
103	23.5	0/3.0	12.5	1.5	14	12x1	14	2.5

SFU / SFE Body Styles



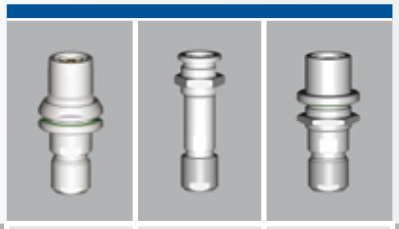


Series	A	B min/max.	C	C1	D	M	1	Torque 1 [Nm]	2
102	21	0/2.5	13	3	13	9x0.5	11	1.3	9
103	26	0/5.0	14	3	17	12x1	14	2.5	12

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

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

Panel Mounted Cable Receptacles

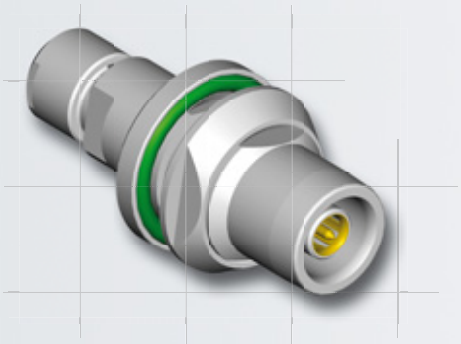


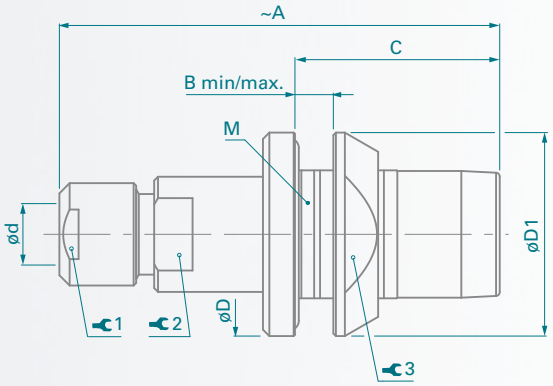
Body Style		DKBE	DK	DKE	Links to Detailed Information
Protection	Unsealed (IP50)		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●		●	
Contacts	Crimp				Electrical & Contacts Specifications Page 8-8
	Solder	●	●	●	
Housing Color	Natural Chrome	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	
Design	Flush		●		Core Series Overview Page 2-1
	Front Projecting	●		●	
Assembly	Panel Mounted	●	●	●	Core Series Overview Page 2-1
	Front Mounting		●	●	
	Rear Mounting	●			
	Cable Mounted	●	●	●	
	Cable Clamp Sets	●	●	●	Cable Clamp Sets Page 4-11
Accessories	Cable Bend Reliefs	●	●	●	Accessories Section 11
	Sealing Caps	●	●	●	
	Spacers	●	●	●	
	Color-Coded Washers	●	●		
	Insulating Washers				
	Grounding Washers	●	●	●	
	Locking Washers	●	●	●	
	Decorative Nuts	●			
Size	102 Series	●	●	●	Dimensions Page 8-7-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series	●	●	●	
	1031 Series				
	104 Series				
	105 Series				
	106 Series				
	107 Series				

Plugs mate with receptacles.

Panel Mounted Cable Receptacles

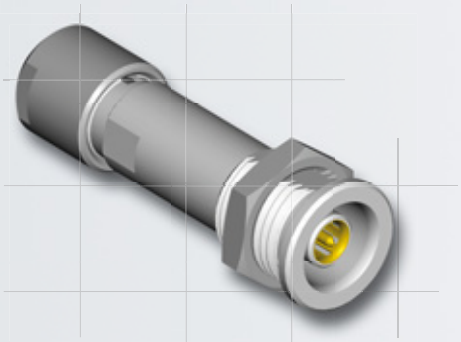
DKBE Body Style

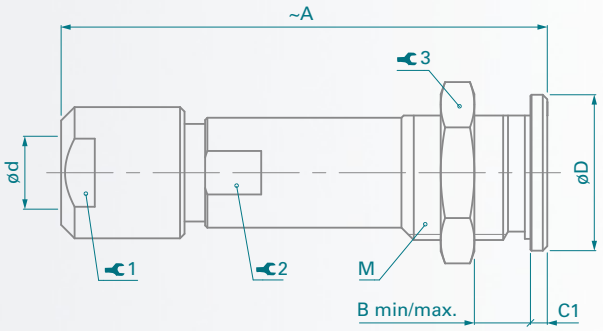




Series	A	B min/max.	C	D	dmax	D1	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	35	0/3.5	16.0	16	4.3	16	12x1	7	0.6	7	13	2.5
103	43	0/4.0	19.0	19	6.2	20	15x1	10	1.0	10	17	4.0

DK Body Style



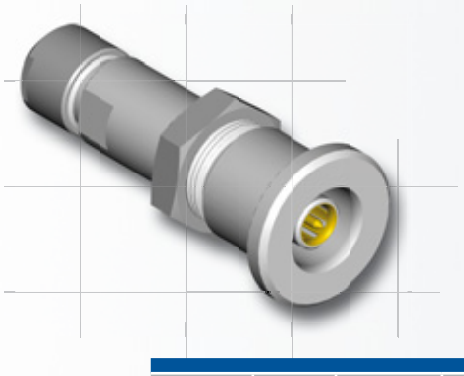


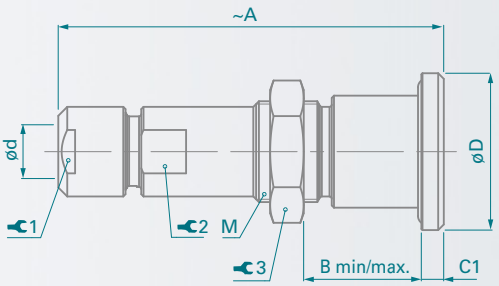
Series	A	B min/max.	C1	D	dmax	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
102	35	0/9	1.5	11	4.7	9x0.5	7	0.6	-	11	1.3
103	44	0/10	1.5	14	6.7	12x1	10	1.0	9	14	2.5

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

Panel Mounted Cable Receptacles

DKE Body Style for 102 and 103 Series





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

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

102 and 103 Series

● = Standard ❍ = Option

Type	Pin Layout	Contact Termination		Insulating Material	Cable Group [1]	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Test Voltage [KV] in mated position				Current Rating [2] [A]
									AC rms		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		●		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
103 A042		● [3]		PTFE	11	0.7	0.6	50	0.8	1.0	1.0	1.5	3.0

[1] See list of recommended cables on page 6-9.

[2] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

[3] Center contact - solder; 1. screen - crimp; 2. screen - clamp.
For crimping of first screen use tool TX00.241 and crimping dies TX00.265 see Section 12 Tooling, page 12-2.

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

9 Mixed High Voltage Connectors

Key Features

- Wide range of body styles and sizes
- Individually insulated high voltage contacts
- Voltage up to 23 kV
- Guide mark standard
- Locking ring for integral safety
- Unsealed

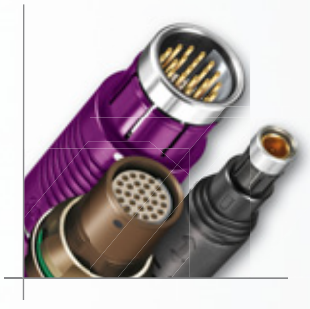
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set is included with connector, see page 5-6
- For details on Options, see page 4-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Mixed Multipole Contacts

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

Fischer AluLite™ Series

Plastic Series

Plastic connectors ideal for lightweight applications

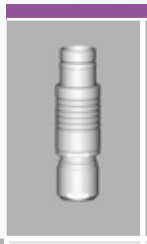
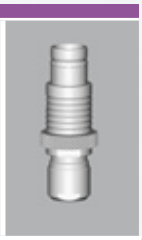
Fischer 405 Series

Cable Mounted Plugs

Panel Mounted Receptacle

For all Mixed High Voltage

Cable Mounted Plugs

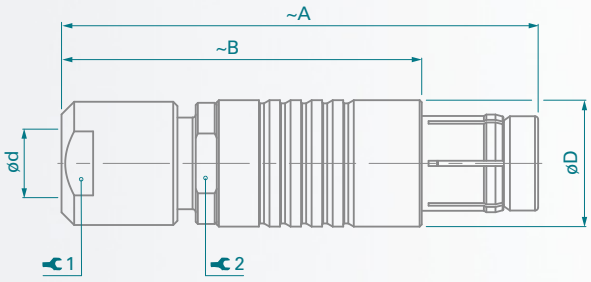



Body Style		S	SV	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	
Locking System	None			Plug Locking Systems Page 2-7
	Push-Pull	●	●	
	Emergency Release			
	Lanyard			
	Tamperproof		●	
Contacts	Crimp			Electrical & Contact Specifications Page 9-5
	Solder	●	●	
Housing Color	Natural Chrome	●	●	Options Page 4-10
	Black Chrome	●		
Design	Shortened Body			Core Series Overview Page 2-1
	Right Angle			
Cabling	Cable Clamp Sets	●	●	Cable Clamp Sets Page 5-6 Cable Assembly Section 3
	Overmoldable			
	Heat Shrinkable			
Accessories	Cable Bend Reliefs	●	●	Accessories Section 11
	Protective Sleeves	●		
	Sealing Caps	●	●	
Size	102 Series			Dimensions Page 9-3-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series			
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series	●	●	
	107 Series			

Plugs mate with receptacles.

Cable Mounted Plugs

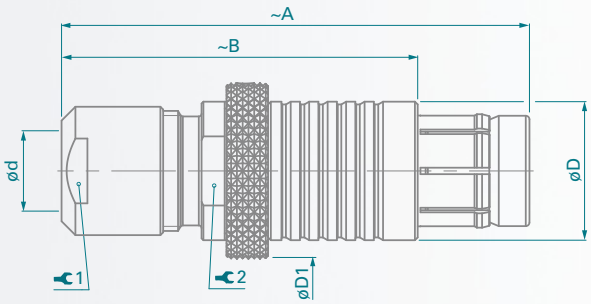
S Body Style



Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
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	-

For insertion of female high voltage contacts which have to be assembled after wiring, we recommend tool TP00.000, shown on page 12-3.

SV Body Style



Series	A	B	D	D1	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
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 page 12-3.

These connectors are supplied with insulating cable clamps sets. The available inner diameters are listed on page 5-6.

The connection of a cable screen and/or a sealed cable entry is not possible with this clamp type.
Some of these types, however, can be delivered with special metal clamps, allowing the clamping of a cable screen.

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

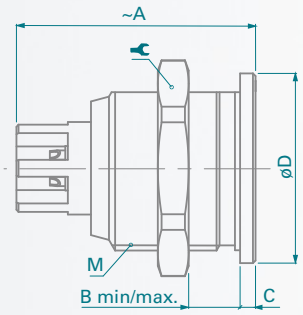
Panel Mounted Receptacle

Body Style		D	Links to Detailed Information
Protection	Unsealed (IP50)	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp		Electrical & Contact Specifications Page 9-5
	Solder	●	
	PCB		
Housing Color	Natural Chrome	●	Options Page 4-10
	Black Chrome	●	
Design	Right Angle		Core Series Overview Page 2-1
	Flush	●	
	Front Projecting		
	Bulkhead Feedthrough		
Assembly	Front Mounting	●	Core Series Overview Page 2-1
	Rear Mounting		
Accessories	Sealing Caps	●	Accessories Section 11
	Spacers	●	
	Color-Coded Washers	●	
	Grounding Washers	●	
	Locking Washers	●	
	Decorative Nuts		
Size	102 Series		Dimensions Page 9-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series		
	1031 Series		
	104 Series	●	
	105 Series	●	
	106 Series	●	
	107 Series		

Plugs mate with receptacles.

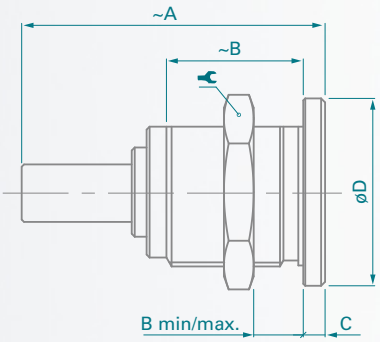
Panel Mounted Receptacles

D Body Style



Types	A	B min/max.	C	D	M		Torque [Nm]
104 A Z 083	31	0/10.5	2.2	19	15x1	17	4.0
105 A 112	34	0/15.0	2.0	22	18x1	22	6.0

D Body Style



Types	A	B min/max.	C	D	M		Torque [Nm]
105 A 020	54	0/15	2	22	18x1	22	6.0
105 A 036	54	0/15	2	22	18x1	22	6.0
105 A 060	58	0/15	2	22	18x1	22	6.0
106 A 014 [1]	49	0/18	3	37	32x1	TX00.106	15

[1] The D 106 A014 is supplied with a slotted nut.
The required hook spanner TX00.106 is shown on page 12-1.
For insertion of male high voltage contacts which have to be assembled after wiring, we recommend tool TP00.001, shown on page 12-3.

105 Series

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

All dimensions shown are in millimeters and are for reference only.
Torque [Nm] are recommended values that may be influenced by the quality of the surface under the nut. Tests have to be made 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:

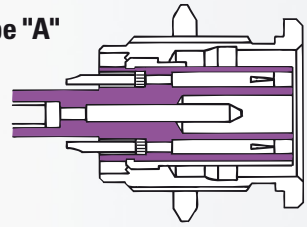
The contacts of the receptacle are recessed to reduce the possibility of electric shock in the unmated position. This version should be used when the voltage is sourced from the receptacle.

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 Voltage connectors, however, it is safer to recess the male contacts. In these cases, the plug type "A" is equipped with female contacts and the receptacle with protected male contacts. This applies to all below connectors except 104 $\frac{A}{Z}$ 083.

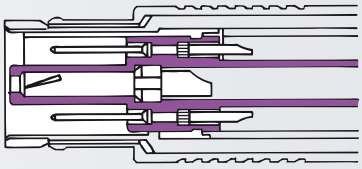
Example: **Receptacles Type "A"**

D105 A036



Plug Type "A"

S105 A036



104, 105 and 106 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts		Contact Termination: Solder	Contact Termination: Crimp	Insulating Material	Contact ø [mm]	Wire Barrel ø [mm]	Test Voltage [KV] in mated position: AC rms: Contact to Body	AC rms: Contact to Contact	DC: Contact to Body	DC: Contact to Contact	Current Rating [1] [A]
104 $\frac{A}{Z}$ 083		3	2 HT	●		PTFE	0.9	0.8	4.0	4.0	6.0	6.0	8.0
			1	●			1.6	1.8	2.2	4.5	3.5	6.5	18
105 A 020 [3]		3	1 HT	●		PTFE	2.0	2.0	6.0	6.0	14	14	20
			2	●			1.3	1.1	1.8	3.8	2.5	5.0	12
105 A 036 [3]		5	1 HT	●		PEEK	2.0	2.0	6.0	6.0	14	14	18
			4	●			1.3	1.1	1.8	2.0	2.5	3.0	12
105 A 060 [3]		8	1 HT	●		PTFE	2.0	2.0	6.0	6.0	14	14	16
			7	●			1.3	1.1	1.8	1.6	3.0	2.8	10
105 A 112 [2]		5	4 HT	●		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11
			1	●			2.0	2.0	2.0	4.5	3.0	7.0	11
106 A 014 [3]		8	2 HT	●		PTFE	2.0	2.4	7.0	15	14	23	16
			6	●			1.3	1.1	2.2	2.6	5.0	4.0	9.0

[1] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.
[2] Contact dia 2.0 is positioned to make contact first and break last.
[3] See Section 11 Tooling for insertion tool of contact dia. 2.0.

10 Mixed Coax Connectors

Key Features

- Wide range of body styles and sizes
- 50 Ohms impedance
- Guide mark standard
- Unsealed version only
- Frequency up to 2 GHz

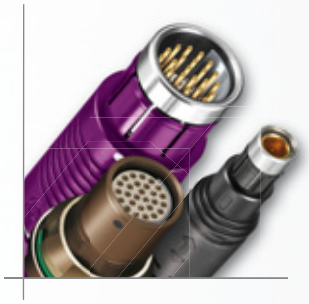
This catalogue covers our standard connector solutions.
For specific requests, hybrids or fiber optic configurations, please contact us.

How to Order our Products ?

- To find your local Fischer Connectors Office see Catalogue back cover or go to **www.fischerconnectors.com/contacts**
- For General Ordering Information, see page 2-3
- Cable Clamp Set is included with connector, see page 5-6
- For details on Options, see page 6-10
- For Accessories, see Section 11
- For Tooling, see Section 12

Other Fischer Connectors Series with Mixed Multipole Contacts

AluLite™ Series



Aluminium connectors ideal for ultralight or portable applications

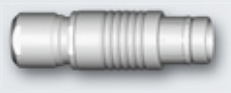
Fischer AluLite™ Series

Plastic Series

Plastic connectors ideal for lightweight applications

Fischer 405 Series

Cable Mounted Plugs

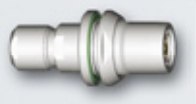


Cable Mounted Receptacles

Panel Mounted Receptacles

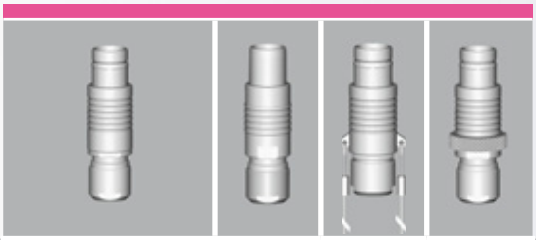
Panel Mounted Plug

Panel Mounted Cable Receptacles



For all Mixed Coax

Cable Mounted Plugs

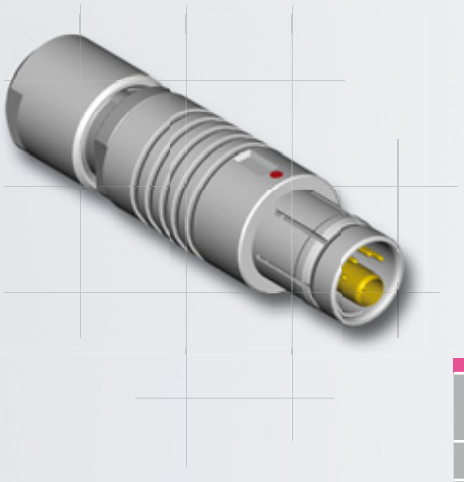


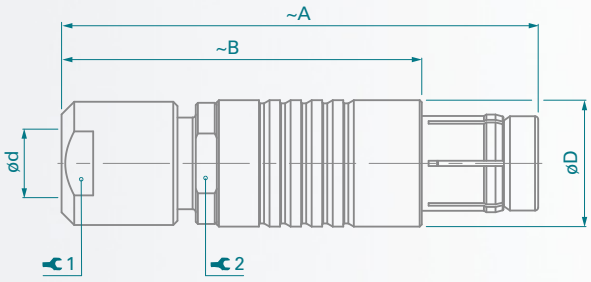
Body Style		S	SC	SOV	SA	SV	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●	●	●	●	●	
Locking System	None			●			Technical Information Plug Locking Systems Page 2-7
	Push-Pull	●			●	●	
	Emergency Release		●				
	Lanyard				●		
	Tamperproof					●	
Contacts	Crimp (Coax)	●	●	●	●	●	Electrical & Contact Specifications Page 10-8
	Solder (Others)	●	●	●	●	●	
Housing Color	Natural Chrome	●	●	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	●		
Design	Shortened Body						Core Series Overview Page 2-1
	Right Angle						
Cabling	Cable Clamp Sets	●	●	●	●	●	Cable Clamp Sets Page 5-6 Cable Assembly Section 3
	Overmoldable						
	Heat Shrinkable						
Accessories	Cable Bend Reliefs	●	●	●	●	●	Accessories Section 11
	Protective Sleeves	●	●	●			
	Sealing Caps	●	●	●	●	●	
Size	102 Series						Dimensions Page 10-3-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series						
	1031 Series						
	104 Series	●	●	●	●	●	
	105 Series	●	●	●	●	●	
	106 Series						
	107 Series						

Plugs mate with receptacles.

Cable Mounted Plugs

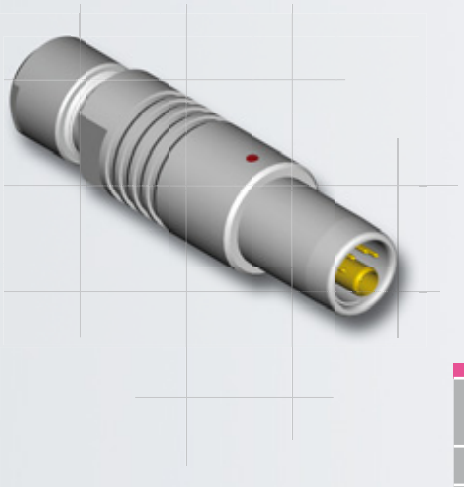
S / SC Body Styles

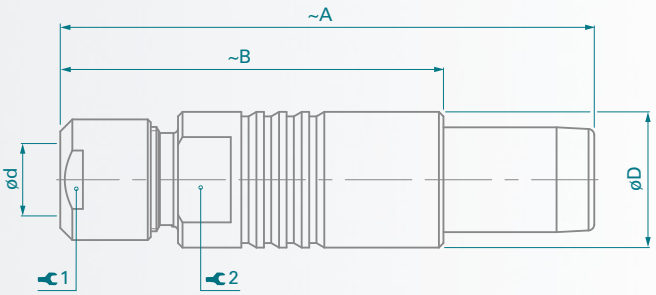




Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

SOV Body Style



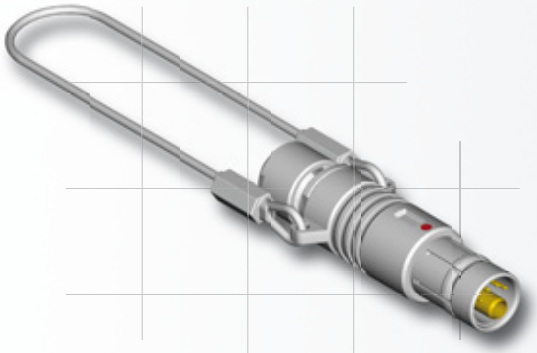


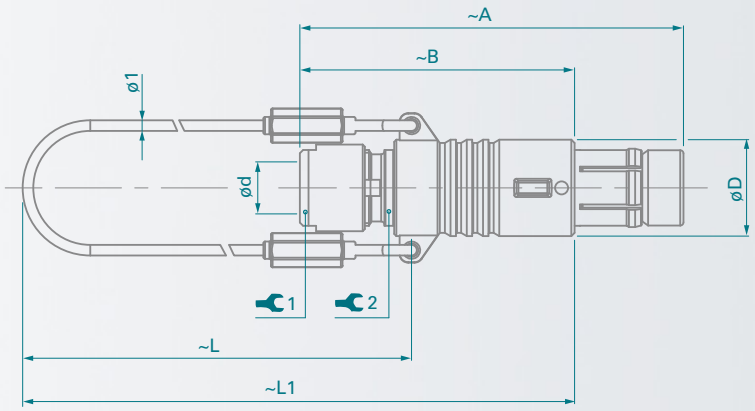
Series	A	B	D	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

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

Cable Mounted Plugs

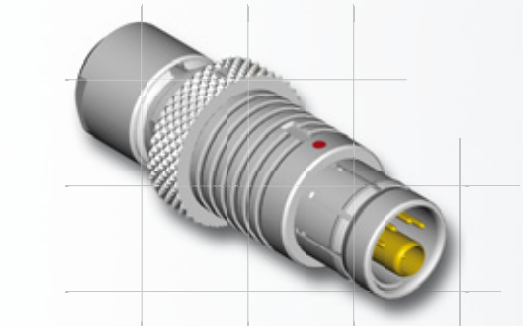
SA Body Style

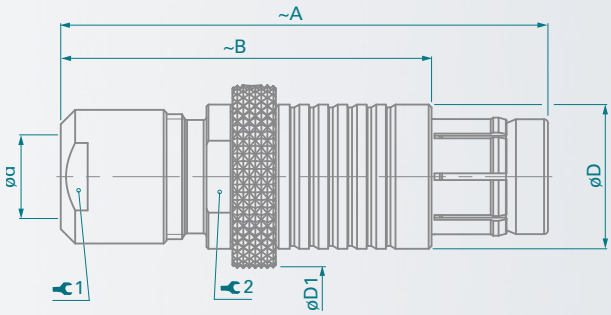




Series	A	B	D	L	L1	d max Unsealed	d max Sealed	1	Torque 1 [Nm]	2
104	50	38	15	65	84	8.7	8.7	12	2.0	13
105	62	47	18	70	94	10.7	10.7	15	3.5	16

SV Body Style





Series	A	B	D	D1	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

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.

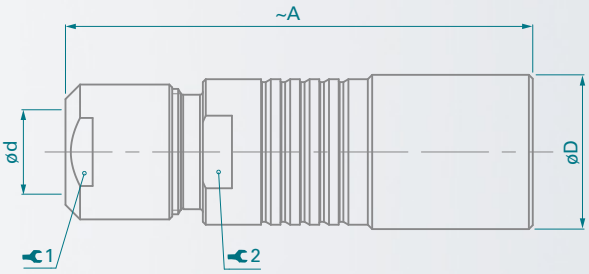
Cable Mounted Receptacles

Body Style		K	KE	Links to Detailed Information
Protection	Unsealed (IP50)	●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		●	
Contacts	Crimp (Coax)	●	●	Electrical & Contact Specifications Page 10-8
	Solder (Others)	●	●	
Housing	Natural Chrome	●	●	Options Page 6-10
	Black Chrome	●	●	
	Shortened Body			
Cabling	Cable Clamp Sets	●	●	Cable Clamp Sets Page 5-6 Cable Assembly Section 3
	Overmoldable			
	Heat Shrinkable			
Accessories	Cable Bend Reliefs	●	●	Accessories Section 11
	Protective Sleeves	●	●	
	Sealing Caps	●	●	
Size	102 Series			Dimensions Page 10-4-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series			
	1031 Series			
	104 Series	●	●	
	105 Series	●	●	
	106 Series			
	107 Series			

Plugs mate with receptacles.

Cable Mounted Receptacles

K / KE Body Styles



Series	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

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

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.

Panel Mounted Receptacles

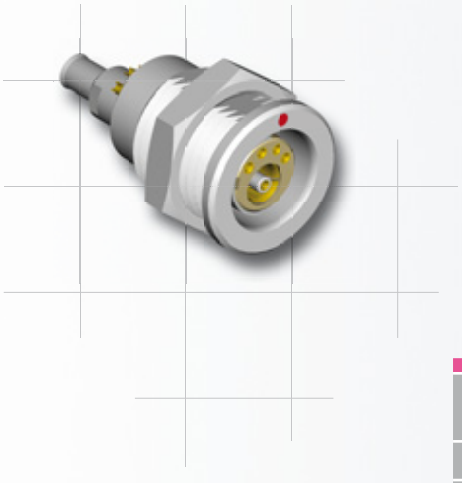


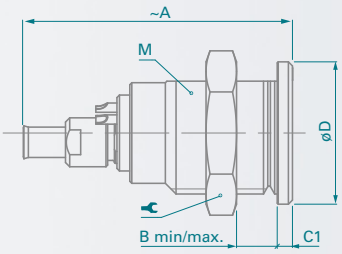
Body Style		D	DB	DG	Links to Detailed Information
Protection	Unsealed (IP50)	●	●	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68				
	Hermetic				
Contacts	Crimp (Coax)	●	●	●	Electrical & Contact Specifications Page 10-8
	Solder (Others)	●	●	●	
	PCB				
Housing Color	Natural Chrome	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	
Design	Right Angle				Core Series Overview Page 2-1
	Flush	●		●	
	Front Projecting		●	●	
	Bulkhead Feedthrough				
Assembly	Front Mounting	●	●	●	Core Series Overview Page 2-1
	Rear Mounting			●	
Accessories	Sealing Caps	●	●	●	Accessories Section 11
	Spacers	●	●	●	
	Color-Coded Washers	●	●	●	
	Grounding Washers	●	●	●	
	Locking Washers	●	●	●	
	Decorative Nuts			●	
Size	102 Series				Dimensions Page 10-5-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
	107 Series				

Plugs mate with receptacles.

Panel Mounted Receptacles

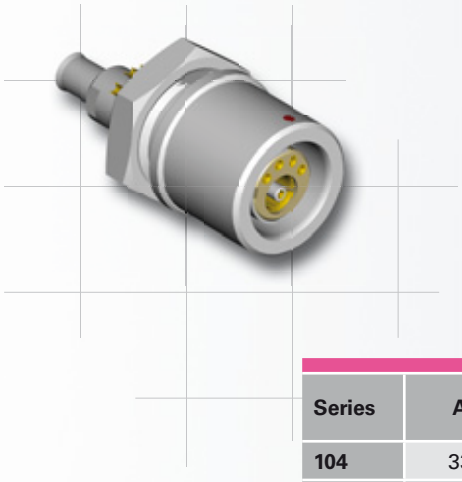
D Body Style

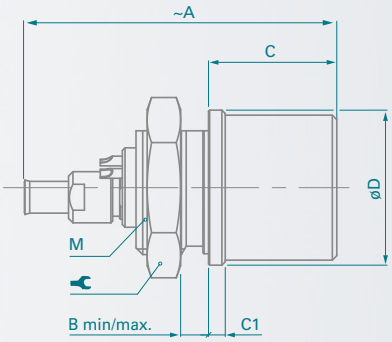




Series	A	B min/max.	C1	D	M		Torque [Nm]
104	33	0/11	2.2	19	15x1	17	4.0
105	38	0/15	2.0	22	18x1	22	6.0

DB Body Style



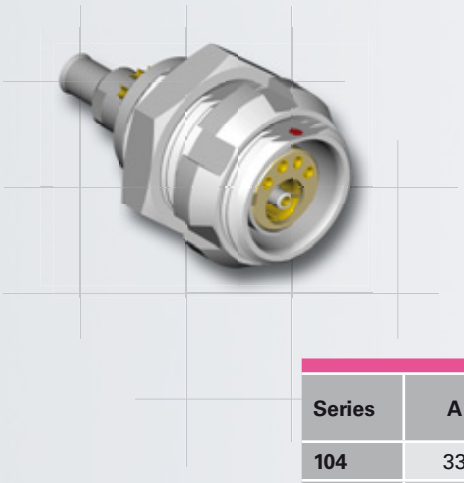


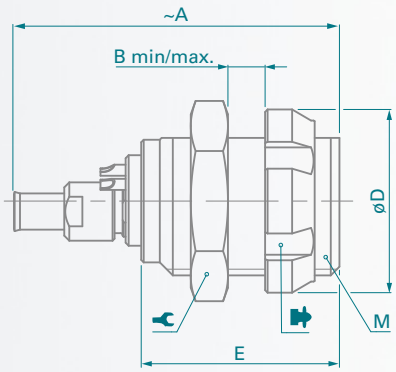
Series	A	B min/max.	C	C1	D	M		Torque [Nm]
104	33	0/3	14.5	2.5	19	16x1	19	4.5
105	38	0/7	19.0	2.0	22	18x1	22	6.0

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

Panel Mounted Receptacles

DG Body Style





Series	A	B min/max.	D	E	M			Torque [Nm]
104	33	0/9	19	18	15x1	17	TK00.000	4.0
105	38	0/15	23	24	18x1	22	TP00.011	6.0

[1] Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.

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

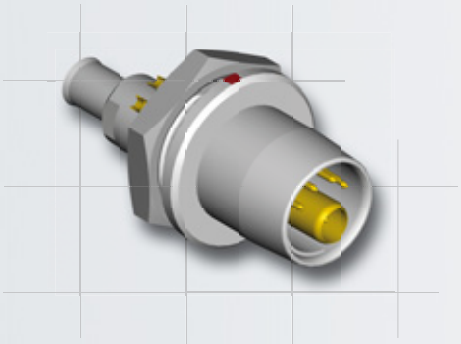
Panel Mounted Plug

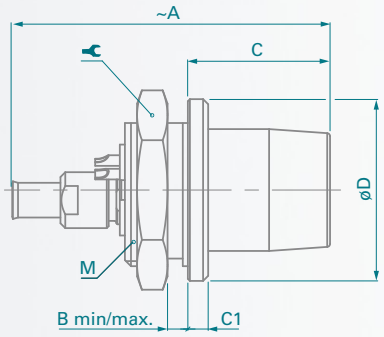
Body Style		SF	Links to Detailed Information
Protection	Unsealed (IP50)	●	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68		
	Hermetic		
Contacts	Crimp (Coax)	●	Electrical & Contact Specifications Page 10-8
	Solder (Others)	●	
	PCB		
Housing Color	Natural Chrome	●	Options Page 6-10
	Black Chrome	●	
Assembly	Front Mounting	●	Core Series Overview Page 2-1
	Rear Mounting		
Accessories	Sealing Caps	●	Accessories Section 11
	Spacers	●	
	Color-Coded Washers	●	
	Insulating Washers	●	
	Grounding Washers	●	
	Locking Washers	●	
	Decorative Nuts		
Size	102 Series		Dimensions Page 10-6-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series		
	1031 Series		
	104 Series	●	
	105 Series	●	
	106 Series		
	107 Series		

Plugs mate with receptacles.

Panel Mounted Plug

SF Body Style





Series	A	B min/max.	C	C1	D	M		Torque [Nm]
104	28	0/3.0	14.0	2.0	18	15x1	17	4.0
105	35	0/5.5	16.8	1.2	22	16x1	19	4.5

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

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

Panel Mounted Cable Receptales

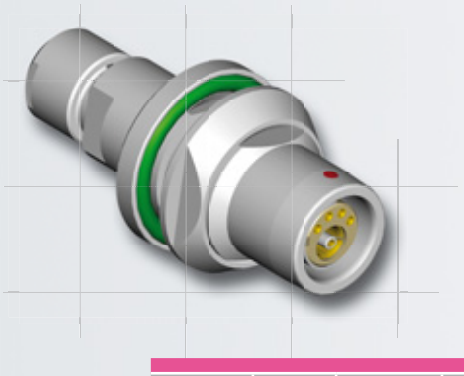


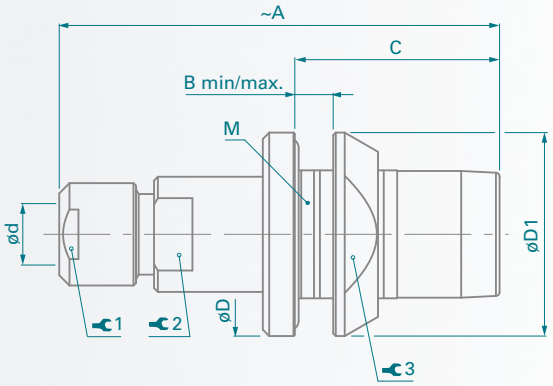
Body Style		DKBE	DK	DKE	Links to Detailed Information
Protection	Unsealed (IP50)		●		Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68	●		●	
Contacts	Crimp (Coax)	●	●	●	Electrical & Contact Specifications Page 10-8
	Solder (Others)	●	●	●	
Housing Color	Natural Chrome	●	●	●	Options Page 6-10
	Black Chrome	●	●	●	
Design	Flush		●		Core Series Overview Page 2-1
	Front Projecting	●		●	
Assembly	Panel Mounted	●	●	●	Core Series Overview Page 2-1
	Front Mounting		●	●	
	Rear Mounting	●			
	Cable Mounted	●	●	●	
	Cable Clamp Sets	●	●	●	Cable Clamp Sets Page 5-6
Accessories	Cable Bend Reliefs	●	●	●	Accessories Section 11
	Sealing Caps	●	●	●	
	Spacers	●	●	●	
	Color-Coded Washers	●	●	●	
	Insulating Washers				
	Grounding Washers	●	●	●	
	Locking Washers	●	●	●	
	Decorative Nuts	●			
Size	102 Series				Dimensions Section 10-7-1 For more Information Visit: **www.fischerconnectors.com/technical**
	103 Series				
	1031 Series				
	104 Series	●	●	●	
	105 Series	●	●	●	
	106 Series				
	107 Series				

Plugs mate with receptacles.

Panel Mounted Cable Receptacles

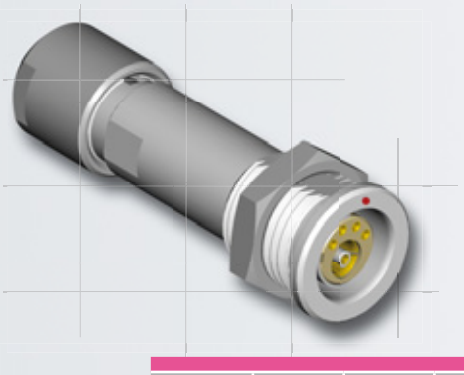
DKBE Body Style

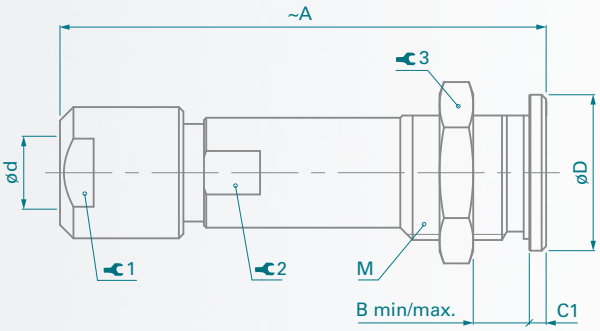




Series	A	B min/max.	C	D	dmax	D1	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
104	50	0/5.0	22.5	23	8.7	23	18x1	12	2.0	13	20	6.0
105	60	0/5.0	26.0	28	10.7	27	22x1	15	3.5	16	24	8.0

DK Body Style



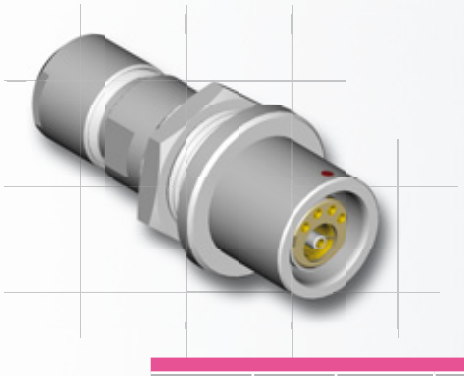


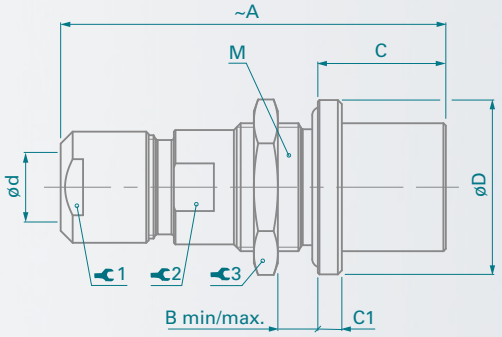
Series	A	B min/max.	C1	D	dmax	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
104	50	0/11	2.0	19	8.7	15x1	12	2.0	12	17	4.0
105	60	0/16	2.0	22	10.7	18x1	15	3.5	14	22	6.0

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

Panel Mounted Cable Receptacles

DKE Body Style for 104 and 105 Series





Series	A	B min/max.	C	C1	D	dmax	M	1	Torque 1 [Nm]	2	3	Torque 3 [Nm]
104	50	0/8	16.0	3	22	8.7	16x1	12	2.0	13	19	4.5
105	61	0/9	19.0	4	27	10.7	20x1	15	3.5	16	25	6.5

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

104 and 105 Series

● = Standard ❍ = Option

Type	Pin Layout	Number of Contacts		Contact Termination: Solder	Contact Termination: Crimp	Insulating Material	Cable Group [1]	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohm]	Test Voltage [KV] in mated position: AC rms: Contact to Body	AC rms: Contact to Contact	DC: Contact to Body [2]	DC: Contact to Contact	Current Rating [3] [A]
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	-	6.0	-	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		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		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		10	Coax		●	PTFE	1	0.7	0.55	50	1.8	-	3.5	-	4.0
			9	●				0.9	0.75	-	1.9	1.5	2.2	2.5	6.0

[1] See list of recommended cables on page 6-9.

[2] Test voltages between contact and body as well as between contact and coaxial outer contact.

[3] Recommended max. operating current per contact at 40°C temperature rise measured according to IEC 60512-3-5b.

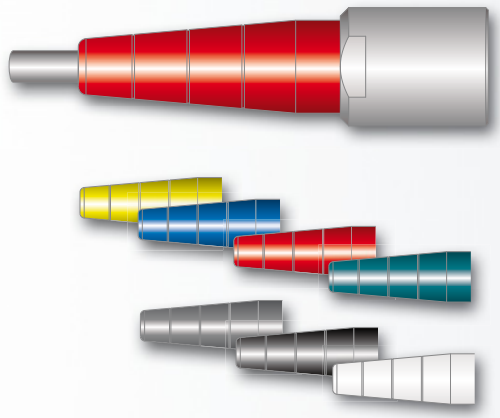
[4] PEEK for main insulator and PTFE for Coax.

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

11 Accessories

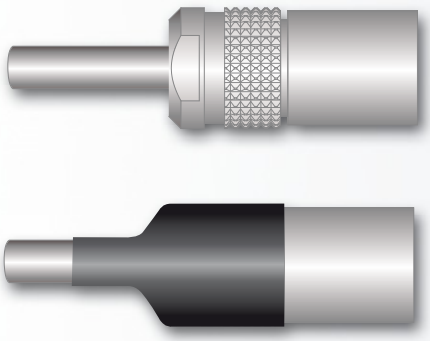
Cable Mounted Plugs and Receptacles

Cable Bend Reliefs for an Increased Protection of your Connections 11-2



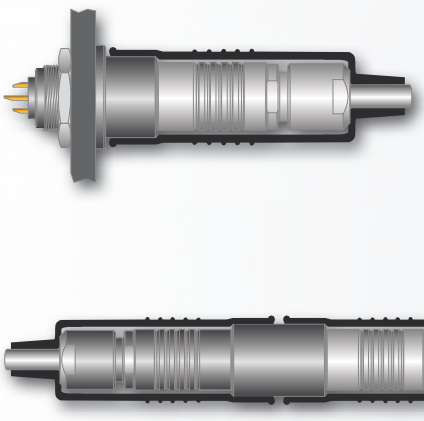
- Suitable for:
  - Cable Mounted Plugs (S/SC, SOV, SA, SV, WSO)
  - Cable Mounted Receptacles (K/KE)
  - Panel Mounted Cable Receptacles (DKBE, DK, DKE)
- Prevent cable torsion and increase protection of connection
- Color coding for easy identification when combined with color washer of panel mounted connector

Knurled Clamp Nuts for Resistant Heat Shrinking 11-2



- Suitable for:
  - Cable Mounted Plugs (S/SC, SOV, SA, SV, WSO)
  - Cable Mounted Receptacles (K/KE)
  - Panel Mounted Cable Receptacles (DKBE, DK, DKE)
- Give a good grip to a shrinkable tube acting as cable bend relief

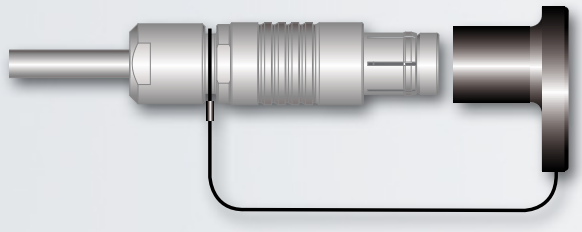
Protective Sleeves for Improved Protection 11-3



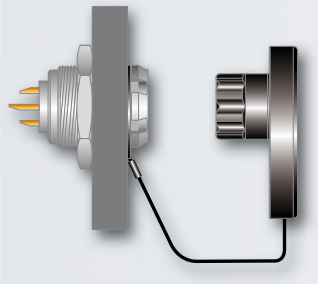
- Suitable for:
  - Cable Mounted Plugs (S/SC, SOV)
  - Cable Mounted Receptacles (K/KE)
- Protect against any foreign matter:
  - Dust, dirt or mud
  - Liquid splash
- Minimize mechanical damage from impact on hard surfaces
- When mated, the front end of the protective sleeve encloses the projecting portion of the receptacle
- Connectors can additionally be protected with sealing caps while unmated

Plugs and Receptacles

Sealing Caps for Protection of Unmated Connectors in the Field 11-4



- Suitable for:
  - Cable Mounted Plugs (S/SC, SOV, SA, SV, SS/SSC, WSO)
  - Cable Mounted Receptacles (K/KE, KS/KSE)

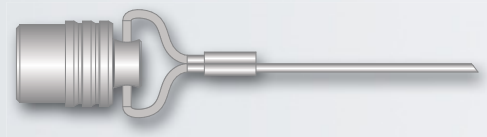


- Suitable for:
  - Panel Mounted Receptacles (D, DEU/E, DBEU/E, DBP, DBPU/E, DBPLU/E, DG/DGP, DBPC, WDE)
  - Panel Mounted Plugs (SF, SFU/E, SFPU/E)
  - Panel Mounted Cable Receptacles (DKBE, DK, DKE)

Soft Caps 11-4

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

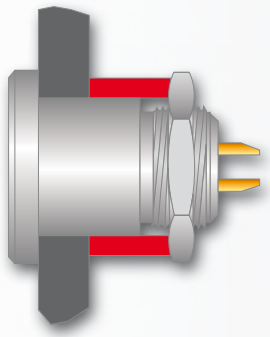
Metal Caps 11-4-4



- Rugged
- Fitted with an o-ring seal
- Protect & seal the mating face of the connector
- IP68
- Easily installed

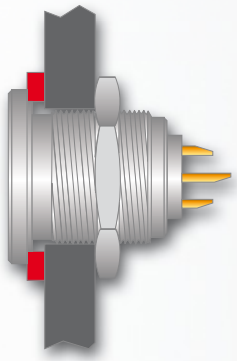
Panel Mounted Plugs and Receptacles

Spacers to Allow Mounting on all Panels 11-5

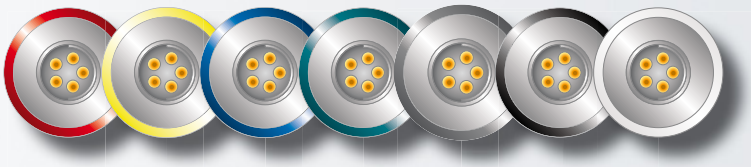


- Suitable for:
  Feedthrough (WDE)
  Panel Mounted Receptacles (DEE, DEU, DKE)
- Permit mounting on panels or bulkheads thinner than the unthreaded section

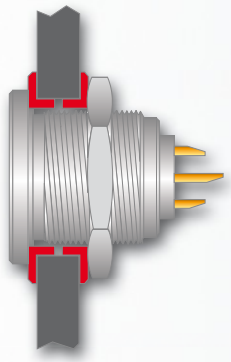
Color Coding Washers for Easy Connector Identification 11-6



- Suitable for:
  Panel Mounted Receptacles (D, DB, DBP, DBPC, DG, DGP, DK)
  Panel Mounted Plug (SF)
- Can be mounted between the connector flange and the panel
- Color coding for easy identification when combined with cable bend relief for cable mounted connectors
- Not suitable for sealed version



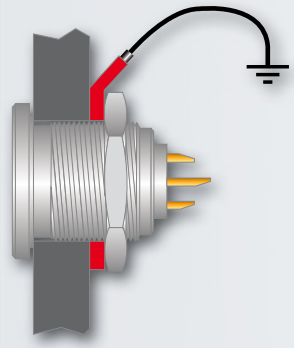
Insulating & Color Coding Washers for Easy Connector Identification and Efficient Insulation 11-6



- Suitable for:
  Panel Mounted Receptacle (D)
- Can be mounted on both sides of the panel cut-out
- Color coding for easy identification when combined with cable bend relief for cable mounted connectors
- Isolate the connector body electrically from the panel
- Not suitable for sealed version

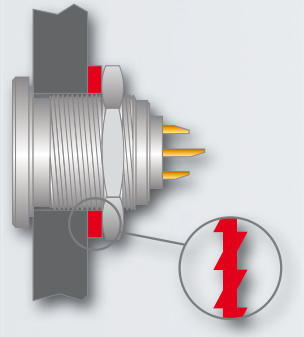
Panel Mounted Plugs and Receptacles

Grounding Washer 11-6-1



- Suitable for Panel Mounted Connectors

Locking Washer 11-6-1



- Suitable for Panel Mounted Connectors

Mounting Nuts for Perfect Connector Grip 11-7

Front

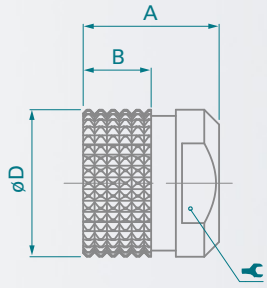
- Decorative slotted nuts supplied for:
  Rear Mounted Panel Receptacles (DBP, DBPC, DBPE, DBPU, DG,DGP)
- Decorative nuts supplied for:
  Panel Mounted Receptacles (DKBE, DBPLU/E, SFPU/E)
  Panel Mounted Plugs (SFPU/E)

Rear

- Hex nuts supplied for:
  Front Mounted Panel Receptacles
  Rear Mounted Panel Receptacles (DG, DGP)
- Slotted nuts supplied for:
  Panel Mounted Connectors for 106 & 107 Series

Dimensions

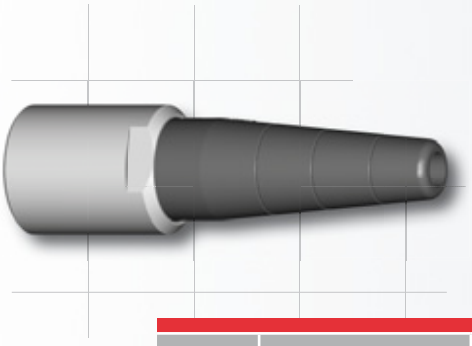
Knurled Clamp Nuts

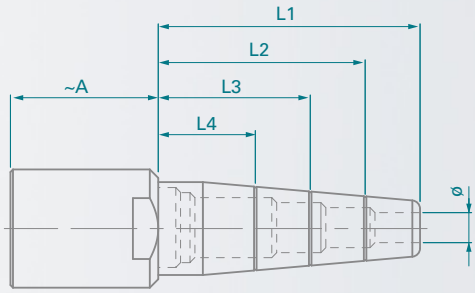


Series	A	B	D		Part Number
102	6	3.0	9	7	102.1869
103	11	5.5	12	10	103.2092
1031	12	5.5	13	12	1031.248
104	11	5.5	15	12	104.2103
105	14	7.5	18	15	105.2626

Material - Nickel and chromium plated brass (ISO CuZn39Pb3)

Cable Bend Reliefs





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

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

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

Material
Clamp nut: Nickel and chromium plated brass (ISO CuZn39Pb3)
Bend relief: TPE (Thermoplastic elastomer)

These cable bend reliefs cannot be assembled with the clamp nuts supplied with the standard connectors.
Therefore, the cable bend reliefs are supplied as sub-assemblies.

Part Numbers

Natural Chrome Connectors

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

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

Black Chrome Connectors

Series[1)]	Cable ø Range	Bend Relief Color			
		White	Black	Green	Blue
102	1.5 - 3.4	-	E4 102.191.2	E4 102.191.3	E4 102.191.4
	3.5 - 4.5	-	E4 102.193.2	E4 102.193.3	E4 102.193.4
103	3.0 - 6.2	E4 103.191.1	E4 103.191.2	E4 103.191.3	E4 103.191.4
1031	3.0 - 6.5	E4 1031.191.1	E4 1031.191.2	E4 1031.191.3	E4 1031.191.4
104	4.0 - 7.5	E4 104.191.1	E4 1041.191.2	E4 104.191.3	E4 104.191.4
105	4.0 - 10.5	E4 105.191.1	E4 105.191.2	E4 105.191.3	E4 105.191.4

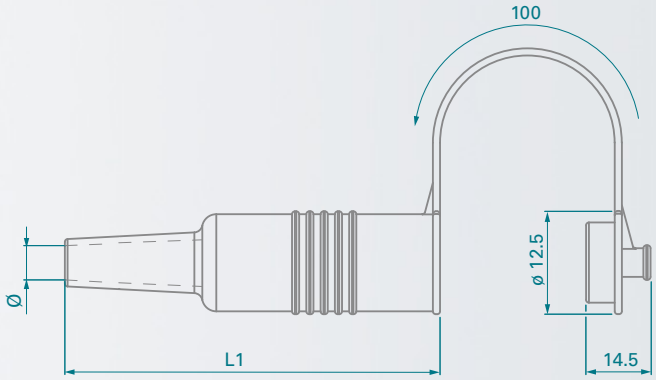
Series[1)]	Cable ø Range	Bend Relief Color		
		Yellow	Red	Grey
102	1.5 - 3.4	E4 102.191.5	E4 102.191.6	E4 102.191.7
	3.5 - 4.5	E4 102.193.5	E4 102.193.6	E4 102.193.7
103	3.0 - 6.2	E4 103.191.5	E4 103.191.6	E4 103.191.7
1031	3.0 - 6.5	E4 1031.191.5	E4 1031.191.6	E4 1031.191.7
104	4.0 - 7.5	E4 104.191.5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

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

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

102 Series

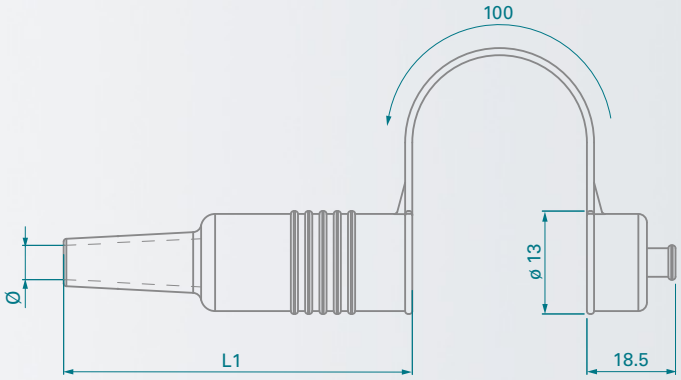
S, SC and SOV



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

Material -TPE (Thermoplastic elastomer)

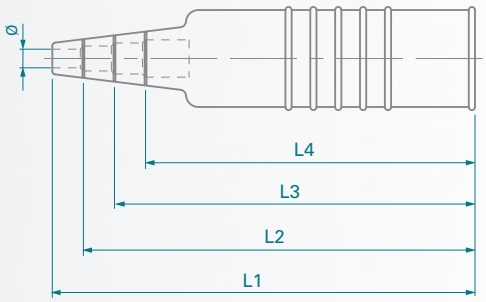
K and KE



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

Material -TPE (Thermoplastic elastomer)

103, 1031, 104, 105, 106 and 107 Series



S, SC and SOV

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

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

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

Material - TPE (Thermoplastic elastomer)

K and KE

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

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

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

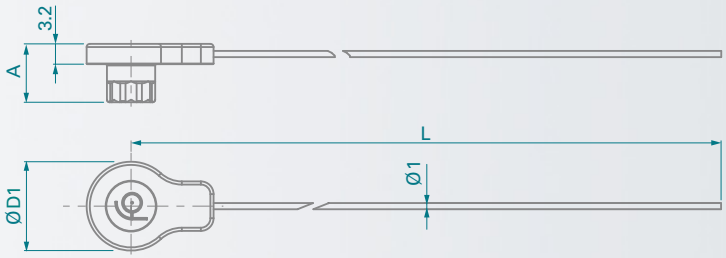
Material - TPE (Thermoplastic elastomer)

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

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

Lanyard with Nylon Thin Cord

For Receptacles



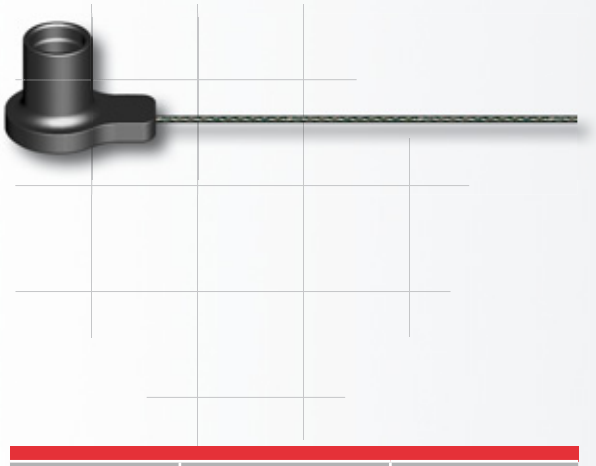
Accessories	Description	Part Number
	Crimp ferrule	300.637
	Crimp lug	300.299
	Heat shrink tube	300.930

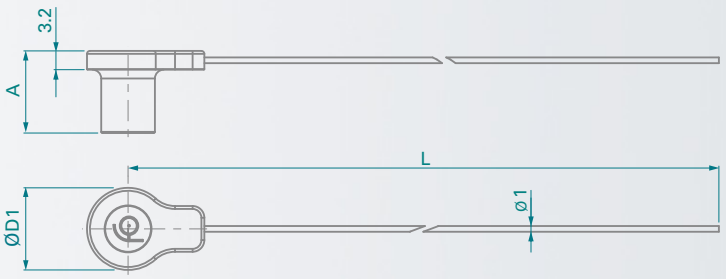
Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.

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

Material
Cap: Santoprene™ TPV 101-80
Cord: Nylon

For Plugs





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

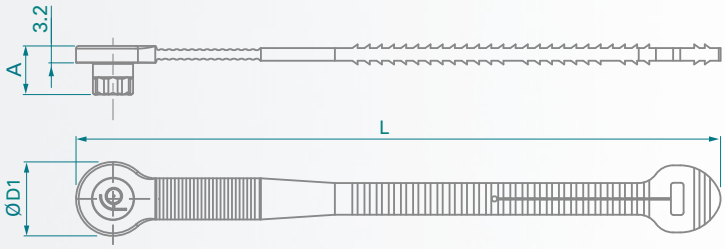
Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.

Series	A	D1	L	Part Number
102	14.0	14	200	102.2180
103	14.7	17	200	103.2405
1031	14.0	18	200	1031.1432
104	16.0	20	200	104.2807
105	19.0	23	200	105.3264

Material
Cap: Santoprene™ TPV 101-80
Cord: Nylon

Single-Piece

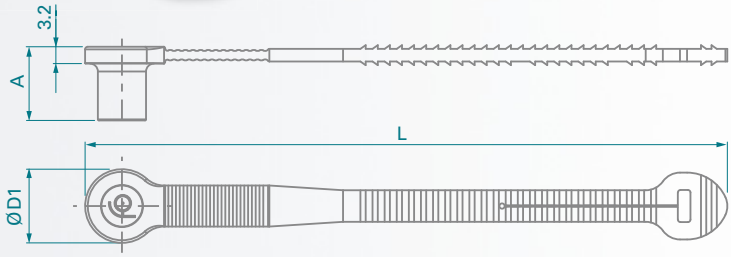
For Receptacles



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

Material - Santoprene™ TPV 101-80

For Plugs



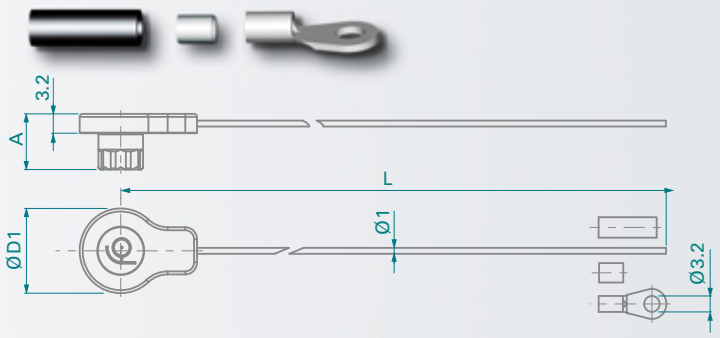
Series	A	D1	L	Part Number
102	14.0	14	122	102.2169
103	14.7	17	147	103.2399
1031	14.0	18	148	1031.1425
104	16.0	20	164	104.2766
105	19.0	23	186	105.3253

Material - Santoprene™ TPV 101-80

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

Lanyard with Stainless Steel Cable

For Receptacles

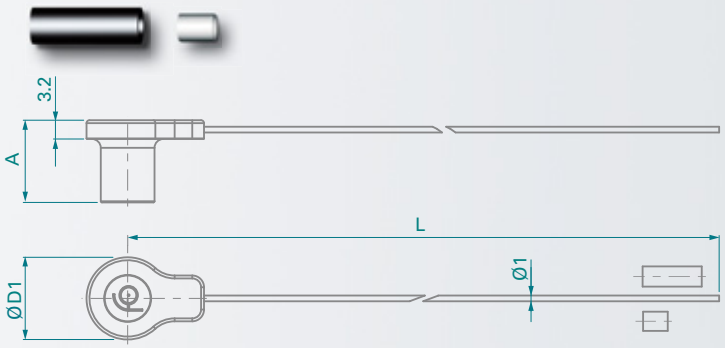


Crimp ferrule (300.922), crimp lug (300.299) and heat shrink tube (300.930) are included.

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

Material
Cap: Santoprene™ TPV 101-80
Cable: Stainless steel with FEP-Teflon® covering

For Plugs



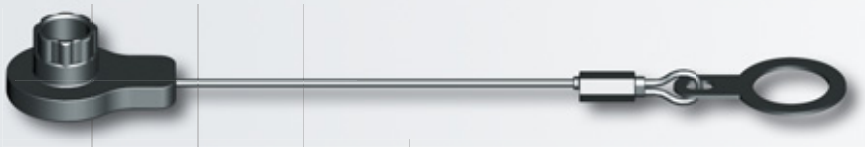
Crimp ferrule (300.922) and heat shrink tube (300.930) are included.

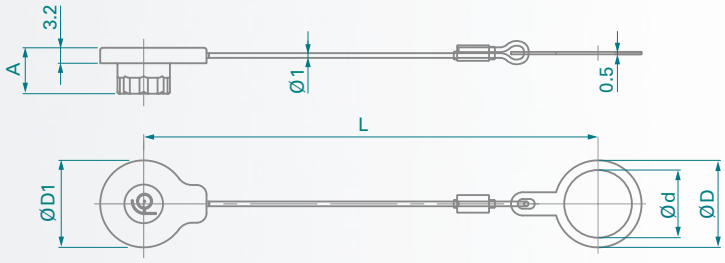
Series	A	D1	L	Part Number
102	14.0	14	200	102.2185
103	14.7	17	200	103.2404
1031	14.0	18	200	1031.1431
104	16.0	20	200	104.2806
105	19.0	23	200	105.3263

Material
Cap: Santoprene™ TPV 101-80
Cable: Stainless steel with FEP-Teflon® covering

Assembled Lanyard with Stainless Steel Cable

For Panel Mounted Receptacles





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

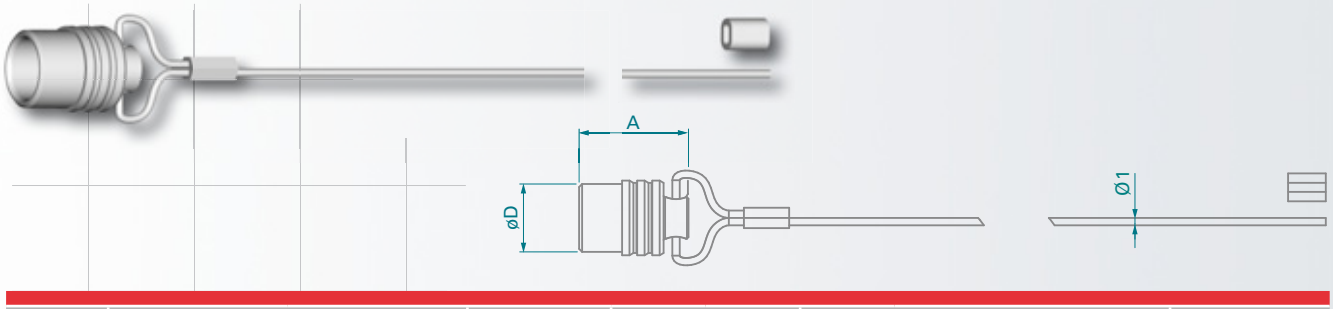
Series	A	D1	L	d	D	Part Number
102	9.2	14	86	9	13	102.2182
	9.2	14	86	10	14	102.2165
103	9.7	17	93	14	18	103.2394
1031	9.5	18	94	14	18	1031.1434
	9.5	18	94	15	20	1031.1420
104	10.0	20	98	16	21	104.2761
105	10.0	23	100	20	25	105.3248

Material
Cap: Santoprene™ TPV 101-80
Cable: Stainless steel with FEP-Teflon® covering
Fixing lug: Black chrome plated brass (ISO CuZn39Pb3)

Caps are intermateable to provide additional dust protection.

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

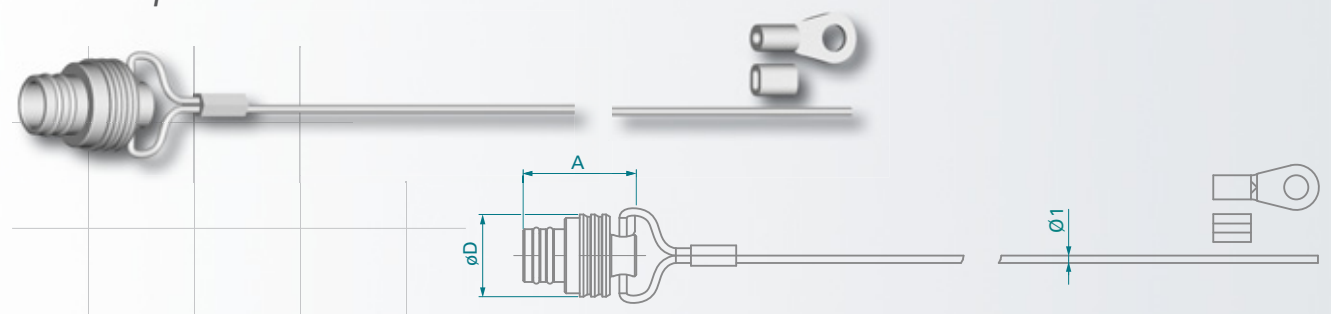
For Plugs



Series	Part number		O-ring Material	Caps		Stainless-Steel Cable		Crimp Ferrule
	Natural Chrome[1]	Black Chrome[2]		A	D	Length	Covering Material	Part Number
102	102.1948	102.1952	FPM - Viton®	14.5	10	100	FEP - Teflon®	300.922
103	103.2274	103.2277		21.0	14	100		
1031	1031.825	1031.827		20.0	15	100		
104	104.715	104.717		21.0	15	150		
105	105.3002	105.3006		29.0	20	150		
106	106.813	106.815		37.0	33	250		
107	107.2312	107.2314		42.0	38	300		

Material - Cap: Natural or Black chrome plated brass (ISO CuZn39Pb3) – Crimp ferrule: Aluminium

For Receptacles

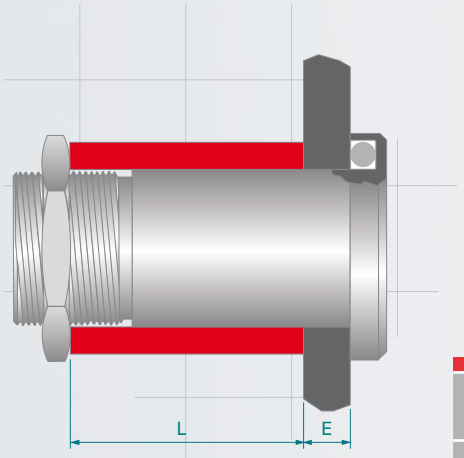


Series	Part number		O-ring Material	Caps		Stainless-Steel Cable		Crimp Ferrule	Crimp Lug
	Natural Chrome[1]	Black Chrome[2]		A	D	Length	Covering Material	Part Number	Part Number
102	102.1947	102.1951	NBR	15.0	11	100	FEP - Teflon®	300.922	300.299
103	103.2273	103.2276		15.0	13	100			
1031	1031.824	1031.826		17.0	15	100			
104	104.714	104.716		17.5	16	150			
105	105.3001	105.3005		21.0	19	150			
106	106.812	106.814		24.0	31	250			
107	107.2311	107.2313		26.0	36	300			

Material - Cap: Natural or Black chrome plated brass (ISO CuZn39Pb3) – Crimp ferrule: Aluminium – Crimp lug: Tin plated copper

These metal caps are fitted with an O-ring seal. They protect and seal the mating face of the plugs and receptacles.
To attach the ferrule or the crimp lug to the stainless-steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws.
See page 12-2 for recommended crimping tool for ferrule.
[1] Assembled with natural plastic covered stainless steel cable.
[2] Assembled with black plastic covered stainless steel cable.

Spacers for WDE

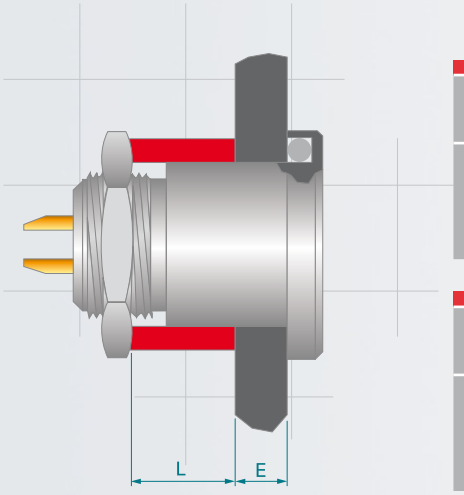


Series	E	L	Part Number
106	0.5 - 8.5	30.0	106.560
	8.0 - 16.0	22.5	106.561
	15.5 - 23.5	15.0	106.562
	23.0 - 31.0	7.5	106.563

Material - Aluminum

Series	E	L	Part Number
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

Spacers for DEE, DEU and DKE[1)]



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

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

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

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

Series	E	L	Part Number
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

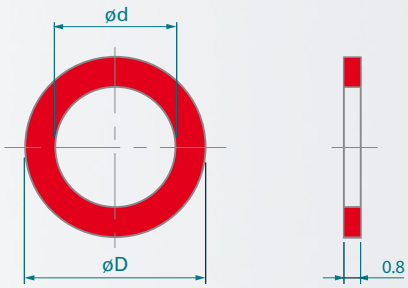
Material - Aluminum

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

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

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

Color Coding Washers for D, DB, DBP, DBPC, DG, DGP, DK and SF

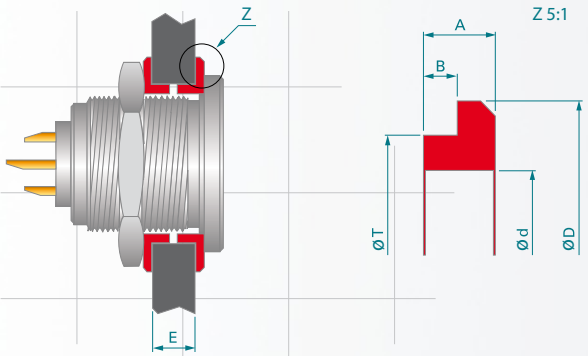


Series	D	d	Color						
			White	Black	Green	Blue	Yellow	Red	Grey
102	14.5	9	102.681	102.682	102.683	102.684	102.685	102.686	102.687
103	18.0	12	103.781	103.782	103.783	103.784	103.785	103.786	103.787
1031	20.0	14	1031.781	1031.782	1031.783	1031.784	1031.785	1031.786	1031.787
104 [1)]	23.0	15	104.981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

[1)] The connector style DB 104 requires an inner diameter d = 16 mm
[2)] The connector style SF 105 requires an inner diameter d = 16 mm

Material - PP (Polypropylene)

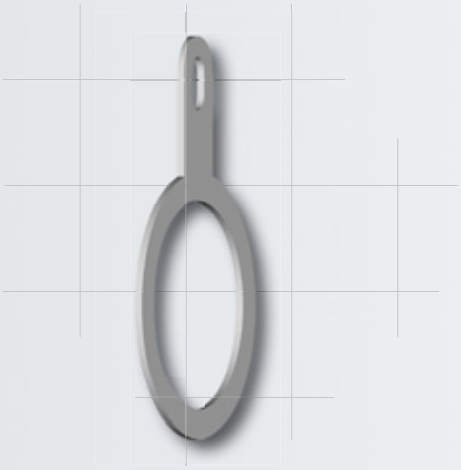
Insulating - Color Coding Washers for D Receptacles

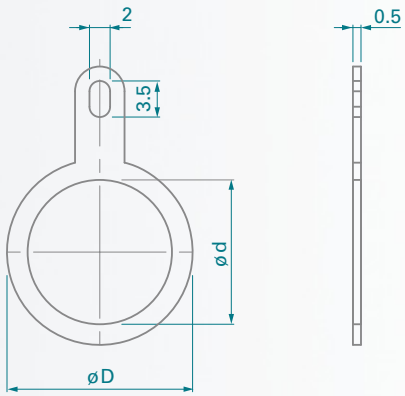


Series	D	d	T	A	B	E min/max	Color						
							White	Black	Green	Blue	Yellow	Red	Grey
102	12	9	10.6	1.5	0.6	1.3 / 6.5	102.791	102.792	102.793	102.794	102.795	102.796	102.797
103	15	12	13.9	2.0	1.0	2.1 / 5.0	103.382	103.383	-	-	-	-	-
104	19	15	17.0	2.0	1.0	2.1 / 8.5	-	104.377	-	-	-	-	-

Material
102 Series: ABS (Acrylonitrile butadiene styrene)
103, 104 Series: POM (Polyoxymethylene) Delrin ®

Grounding Washers for Panel Connectors

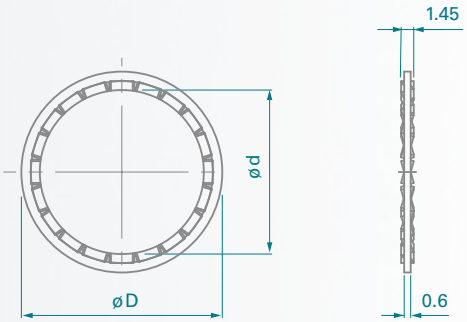




Series	d	D	Part Number
102	9	13	102.680
	10	14	102.679
103	12	16	103.385
1031	14	18	1031.315
104	15	20	104.680
	16	21	104.679
105	18	23	105.680
	20	25	105.679

Material - Copper and tin plated brass (ISO CuZn37)

Locking Washers for Panel Connectors



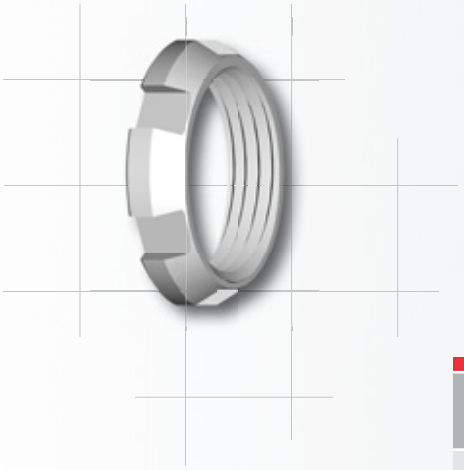
d	D	Part Number
9	12.0	300.874
12	15.0	300.875
14	17.5	300.876
15	18.5	300.877

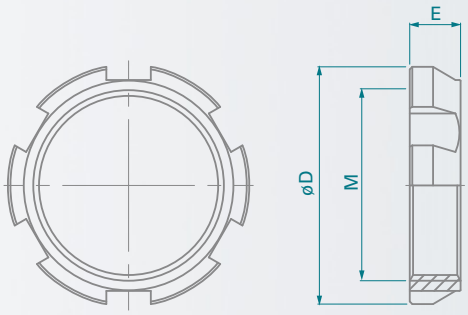
d	D	Part Number
16	20	300.878
18	23	300.879
20	26	300.880
25	33	1052.338

Material - Copper and tin plated brass (ISO CuZn37)

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

Decorative Slotted Nuts for DBP, DBPC, DBPE, DBPU, DG and DGP

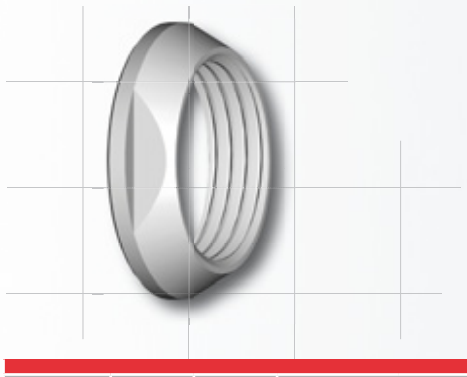


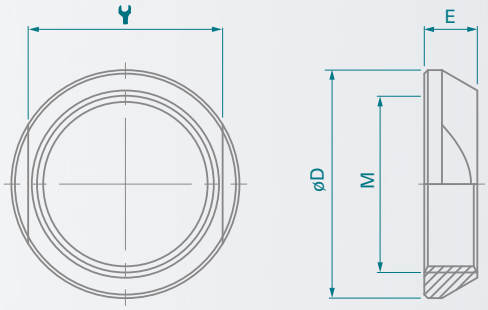


Thread Size	D	E	Part Number		Assembly Tool
			Natural Chrome	Black Chrome	
M 9x0.5	12	3	102.1417	102.1571	TC00.000
M 10x0.5	13	3	102.2207	102.2206	TC00.007
M 12x1	15	4	103.597	103.1993	TF00.001
M 14x1	18	4	1031.541	1031.542	TG00.001
M 15x1	19	4	104.697	104.698	TK00.000
M 16x1	20	4	104.1729	104.1643	TK00.002
M 18x1	23	5	105.1901	105.2084	TP00.011
M 20x1	25	5	105.2018	105.2085	TP00.005

Material - Nickel and chromium plated brass (ISO CuZn39Pb3)

Decorative Nuts for DKBE, DBPLU/E and SFPU/E





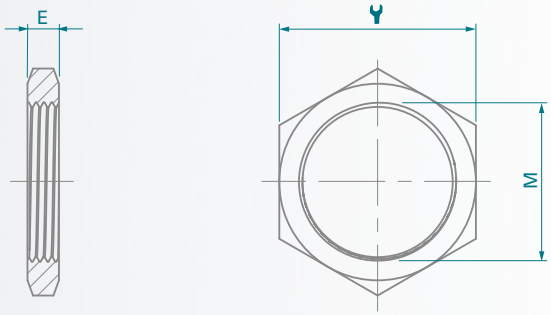
Thread Size	D	E	Part Number		Nut Across Flats
			Natural Chrome	Black Chrome	
M 9x0.5	12	3.0	102.1290	102.1291	10
M 10x0.5	13	3.0	102.2145	102.2146	11
M 12x1	16	3.5	102.1989	102.1990	13
M 14x1	18	4.0	1031.1371	1031.1372	15
M 15x1	20	4.0	103.2294	103.2295	17
M 16x1	20	4.0	1031.1350	1031.1351	17

Thread Size	D	E	Part Number		Nut Across Flats
			Natural Chrome	Black Chrome	
M 18x1	23	4.5	104.2585	104.2586	20
M 20x1	25	4.5	105.3226	105.3227	22
M 22x1	27	4.5	105.3037	105.3038	24
M 34x1	40	5.5	106.1604	106.1605	36
M 38x1	45	6.0	107.2333	107.2334	40

Material - Nickel and chromium plated brass (ISO CuZn39Pb3)

Other receptacle and decorative nut combinations are available on request.

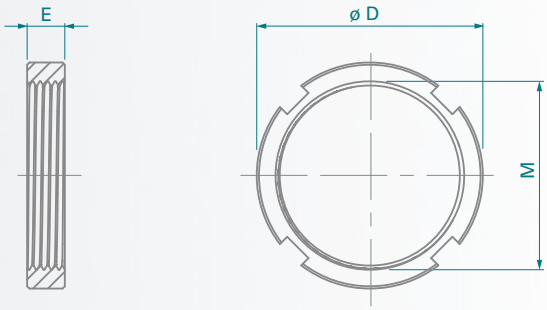
Hex Nuts



Thread Size	E	Part Number	Nut Across Flats	Assembly Tool
M 9 x0.5	3	102.395	11	TX00.011
M 9 x0.5	2	102.1697	11	TX00.011
M 12x1	3	103.395	14	TX00.014
M 14 x1	3	103.580	17	TX00.017
M 15 x1	3	104.392	17	TX00.017
M 16 x1	3	104.595	19	TX00.019
M 18 x1	3	105.257	22	TX00.022
M 20 x1	4	105.724	25	TX00.025

Material - Nickel plated brass (ISO CuZn39Pb3)

Slotted Nuts



Thread Size	D	E	Part Number	Assembly Tool
M 30 x1	36	6	106.395	TX00.106
M 32 x1	38	6	106.397	TX00.106
M 35 x1	40	9	107.395	TX00.107
M 36 x1	42	9	107.397	TX00.107

Material - Nickel plated brass (ISO CuZn39Pb3)

Slotted nuts are supplied with all panel mounted connectors of the 106 and 107 Series.

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

12 Tooling

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°

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

Nutdriver 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

Crimp Tool Ultra Precision for Closed C Crimp Termination

Part Number	Contact dia.	C Crimp tool
TX00.240	0.5	BALMAR 18 - 000 or DANIELS MH - 800
	0.7	
	0.9	
	1.3	
TX00.242	1.6	BUCHANAN 615 708

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

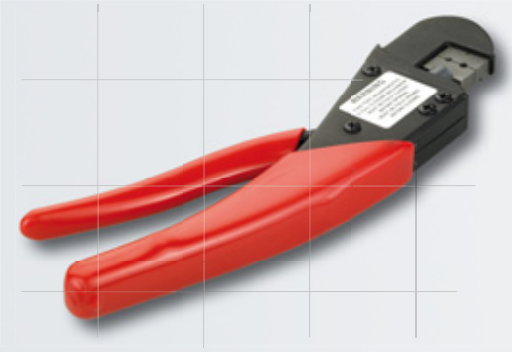
Fischer Positioner

Suitable for Crimp Tool TX00.242

Suitable for Crimp Tool TX00.240

For the choice of Fischer positioner, please refer to page 4-9-3

Crimp Tool for Coaxial Cable

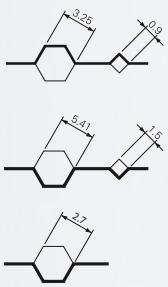


Part Number	Description
TX00.241	ERMA 29020 precision crimp tool without dies for hexagon and square crimping. A light weight tool with handle span of only 130 mm. Weight (without dies): 0.75 kg. For crimping dies not larger than 8.23 mm across flats. Maximum crimping dies: IEC 60803-G; BSI size G.

Standards
MIL-C-22520, Class I, Type 2

Crimping Dies for Precision Crimp Tool

Suitable for Crimp Tool TX00.241

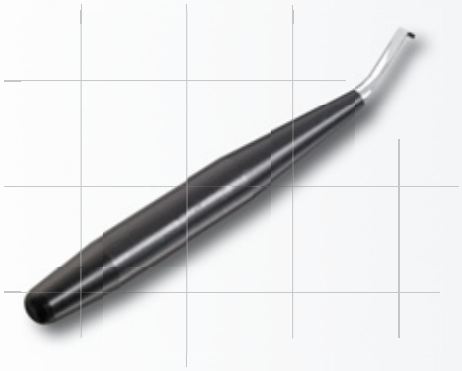


Part Number	Description
TX00.250	Special crimping dies for coaxial cables of cable group 1 (RG-174 etc.). The hexagon corresponds to IEC 60803-B.
TX00.251	Special crimping dies for coaxial cables of cable group 4 (RG-58 etc.). The hexagon corresponds to IEC 60803-D.
TX00.265	Special crimping dies for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

Table of cable groups see page 6-9.

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

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, thereby releasing 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

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. To be used for: - Multipole HV Cable Receptacle 107 A034 - Coax HV Plugs 105 A005 and 105 A108 - Mixed HV Cable Receptacles 105 A020, 105 A036,105 A060 Receptacles 106 A014

Material
Stainless Steel

Length 75 mm – Inside thread M3

Assembly Tool for Female Contacts with Inside Thread

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

Material
Stainless Steel

Length 75 mm – Outside thread M1.7

13 Technical Information

Quality and Environment

Fischer Connectors ISO 9001 and ISO 14001 Certified ISO 9001 ISO 14001

- Fischer Connectors is ISO 9001 certified. Through its longstanding quality management commitment, the company targets excellence.
- Fischer Connectors' environmental management system is ISO 14001 certified. Fischer Connectors is committed to efficiently managing its waste, to preventing contamination and to reducing the environmental impact.
- Fischer Connectors is committed to protecting the health and safety of its employees, customers and visitors. Fischer Connectors complies with the requirements of OHSAS 18001 standard.

RoHS Compliant Connectors RoHS compliant

- All connectors from Fischer are RoHS compliant since July 1st 2006. The European Directive 2002/95/EC calls for the elimination of certain hazardous materials - cadmium, lead, mercury, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenylethers (PBDE) - from electrical and electronic equipment including connectors.

Fischer Connectors REACH Compliant REACH

- Fischer Connectors took all necessary measures to be in conformity with the European Directive REACH (Directive 1917/2006/CE, Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals).
- Fischer Connectors does not manufacture or import chemicals, thus does not need to do any registration or pre-registration. Today, all our business partners gave us sufficient guarantees that the materials and products used in the manufacturing of our connectors are and will be registered according to the REACH Directive.

Sony® Green Partner Qualified SONY green partner

- Fischer Connectors is Sony® Green Partner qualified for several years. This qualification is only granted by Sony® to the business partners who work continuously to maintain and upgrade their environmental management systems. This qualification emphasizes the commitment of Fischer Connectors for the environment.

Norms

Environment, Mechanical and Electrical Norms

- Fischer Connectors' standard products, as well as our products engineered to withstand extreme operational environments, are tested to strict IEC norms comparable to MIL-Specs. Fischer is performing 15 environmental, mechanical and electrical tests for each product according to IEC standards. To view cross-references table comparing IEC testing standards to MIL-Specs see **www.fischerconnectors.com/mil-specs**

- For information on norms valid for our products, visit: **www.fischerconnectors.com/technical** to download technical specifications.

Material and Surface Treatments

Environmental and Mechanical Data

Electrical Data

Sealed and Hermetic Connectors

Metal Parts

The standard Fischer Connectors shells are nickel plated brass with natural (silver) chrome finish. Black chrome finish is available as an option; see Options pages 4-10 and 6-10. 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
Body Shell		Brass	CuZn39Pb3	CW614N UNS C 38500	Chrome over Nickel	SAE-AMS2460
Cable Clamps, Nuts and other Inner Parts		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 Specifications in Section 4 through 10. Ceramics and other dielectrics are available on special order.

Insulator and Sealing	International Synbol	Flammability
Insulator	PEEK - PTFE - PBT	UL 94 V-O
Interface O-rings (Receptacles)	Viton® EPDM	UL 94 V-O UL 94 HB
Sealant Material (Receptacles) - IP68 - Hermetic	Silicon compound Epoxy compound	UL 94 V-O UL 94 HB
Cable Sealing (Plugs) - IP68	TPE-S	UL 94 HB

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

Elastomer Seals

Sealed connectors are fitted with O-rings and cable sealing gaskets. The standard materials are:

- Viton® for O-rings
- TPE (Thermoplastic Elastomers) for cable seals, protective sleeves and strain reliefs.

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 can substitute when required by an application. Not all materials are available in all shapes and sizes so please check with us for details.

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, vapour, brake fluids, detergents, gamma rays
TPE-S, TPE-O (Thermoplastic Elastomer)	Styrene-Ethylene-Butadiene-Styrene	Very resistant, except to aromated and chlorinated hydrocarbons

Performance and Standard

Characteristic	Product Type	Value	Standard
Sealing Performance	Unsealed Connectors (mated)	IP50	IEC 60529
	Plugs (mated) with General Purpose Sealed Clamps[1]	IP68 IP69K[2]	
	Receptacles "U" Body Style	IP68	
	Receptacles "E" Body Style	Hermetic: Tested: $<10^{-8}$ mbar l/sec.	IEC 60068-2-17 Tesk Qk
		IP69K[2]	
Operating Temperature Range	See details on page 13-5	See details on page 13-5	IEC 60512-6-11 i+j IEC 60068-2-14-Nb
Corrosion Resistance		Salt mist, 96 hours, 5% salt solution, 35°C	IEC 60068-2-11 Test Ka MIL-STD-202 Method 101 Condition A
Endurance		10'000 mating cycles	IEC 60512-5-9a EIA-364-09
Vibration		10 to 2000 Hz, 1.5 mm or 15g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity > 1us	MIL-STD-202 Method 204 Condition B
Radiation Resistance[3]	Unsealed Connectors	PEEK: 10^6 Gy(=100M Rads)	
	Sealed Receptacles "E"	Viton® O-Rings 10^5 Gy (=10M Rads)	

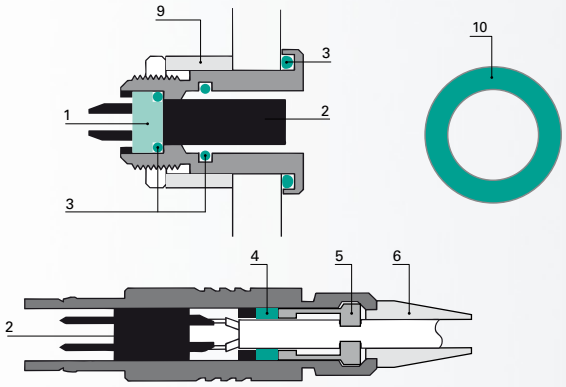
[1] The sealing performance can be affected by the long term quality of the cable.
[2] Protected against the effects of high-pessure liquids. The test requirements for IP69K exist only in DIN 40050-9, the German version of IEC 60529.
[3] For information only. Not tested by Fischer Connectors.

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 on norms valid for our products, visit: **www.fischerconnectors.com/technical** to download technical specifications.

Operating Temperature Range

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. See in below table our recommended operating temperature ranges.



Ref.	Component	Material		Operating Temperatures
1	Sealant	"U" Type		-55°C to +200°C
		"E" Type		-65°C to +150°C
2	Insulator	PEEK		-65°C to +200°C
		PTFE (Teflon®)		-65°C to +160°C
		PBT		-65°C to +135°C
3	Standard O-rings	FPM (Viton®)		-20°C to +200°C [1]
	Interface O-rings (Option)	EPDM		-50°C to +160°C [2]
4	Cable Clamp Seal	TPE		-70°C to +130°C
5	Cable Clamp	Standard	Brass	
		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	Protective Boots	TPE		-60°C to +100°C
8	Sealing Caps	Metallic	Plug: Brass with FPM O-ring	-20°C to +200°C [1]
			Receptacle: Brass with NBR O-ring	-30°C to +110°C [1]
		Plastic	POM with FPM O-ring	-20°C to +100°C [1]
		Soft Caps	TPE	-55°C to +85°C
9	Panel Spacer	Aluminium		
10	Color Coding Washer	PP		-20°C to +60°C

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

0 °C Temperature °C

Performance and Standard

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 mohms 5 mohms 4 mohms 2.5 mohms 2.5 mohms 2.5 mohms 1.5 mohms	IEC 60512-2-2a/b
Insulation Resistance		> 10^{10} ohms	IEC 60512-2-3a, Method C

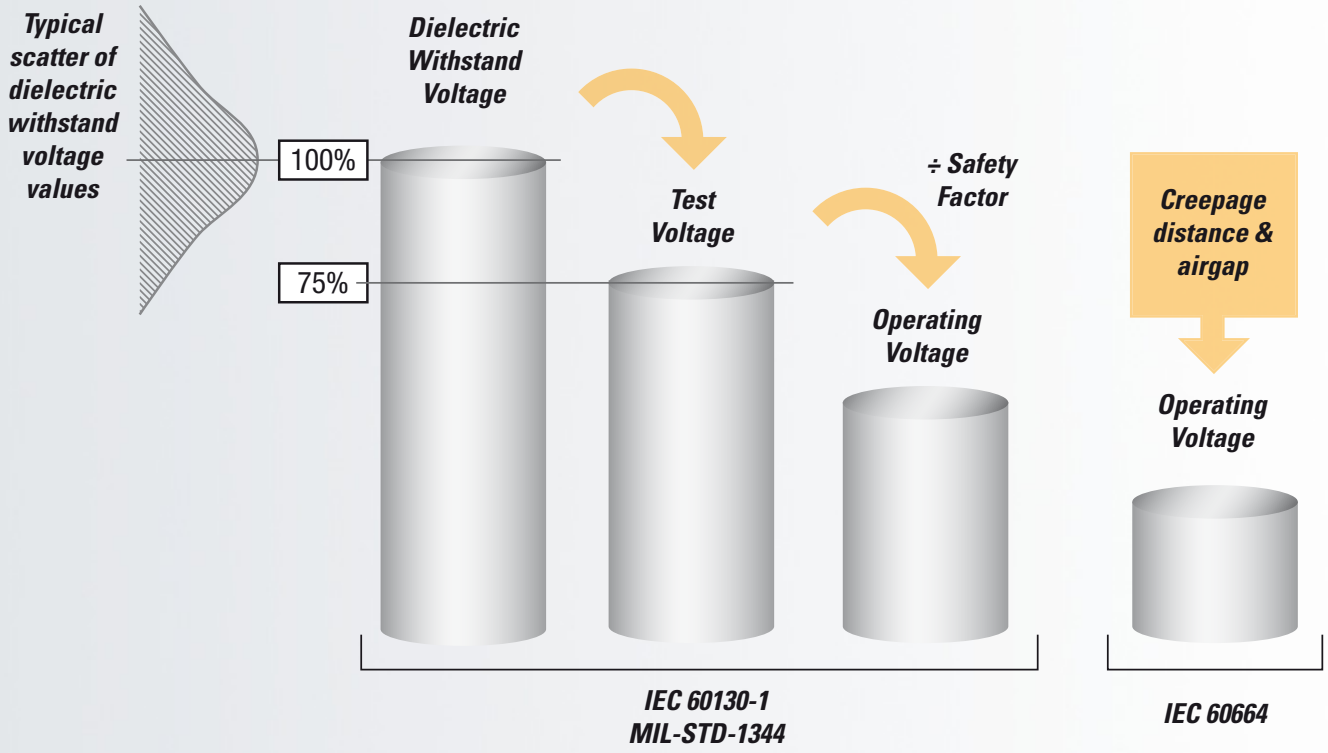
Test Voltage and Operating Voltage

Definitions

Dielectric Withstand Voltage is the breakdown value of the component in a destructive test.

Test Voltage : Voltage level at which the connector is tested during qualification test. This value represents the upper physical limit. It is usually set at 75% of dielectric withstand value.
Fischer Connectors always applies this ratio to get reliable results even when breakdown values exhibit the large scatter typical in high voltage testing.

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. This value depends on connector design and specific operating environment as well as on safety requirements.



Determination of Operating Voltage

General Recommendation for Connectors in Common Applications

IEC 60664: Generic standard recommended for typical electrical devices. It takes into account long term degradation of insulating materials under variable aggressive environmental influences and uses creepage distance as calculation basis for the operating voltage.

Fischer Connectors recommends the use of IEC 60664 in the general multipole connector specifications, unless other more specific standard or regulations are applicable to the design. For example, IEC 60601 provides adequate special guidelines for medical devices.

For cases where the connector "on-time" or duty cycle is low, and there is little exposure to environmental factors, for example scientific instruments or similar equipment, other previous standards such as former IEC 60130-1 can be used. It does not take into consideration either long term environmental effects, or the specific behaviour of different insulator materials and uses test voltage as calculation basis for the operating voltage

Former IEC 60130-1 recommends to set 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 (MIL-STD-1344 method 3001 superseded).

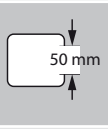
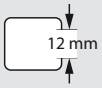
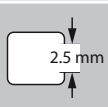
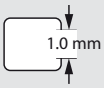
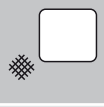
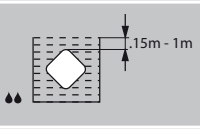
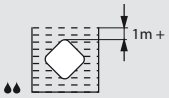
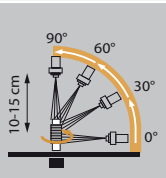
For more details see **www.fischerconnectors.com/technical**

Sealing Standards

The IP classification system (IP rating) 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.
While the first number describes the level of protection from solid objects, the second one relates to protection from moisture.

Example :

IP68 = IP Letter Code ——— IP
1st Digit ——— 6
2nd digit ——— 8

1st Digit	Protection from Solid Objects	2nd Digit	Protection from Moisture
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 tilted up to 15°
3	 Protected against solid objects greater than ø 2.5 mm	3	 Protected against spraying water
4	 Protected against solid objects greater than ø 1.0 mm	4	 Protected against splashing water
5	 Dust protected	5	 Protected against water jets
6	 Dust tight	6	 Protected against heavy seas
Note: EN 60529 does not specify sealing effectiveness against the following: - Mechanical damage of the equipment - Risk of explosions - Certain types of moisture conditions, e.g. those that are produced by condensation - Corrosive vapours - Fungus - Vermin		7	 Protected against immersion effects
		8	 Protected against submersion (See note)
		9K	 IP69K is a definition from German DIN 40050-9. It is an additional sealing level defined to protect an envelope from intense water jets for short duration (Typically for high pressure cleaning).

Environmental tests performed during design and qualification of Fischer Connectors environmentally sealed products are standardized to IP68 at a depth of 2 m and duration of 24 hours.
Fischer Connectors hermetically sealed products achieve IP69K.

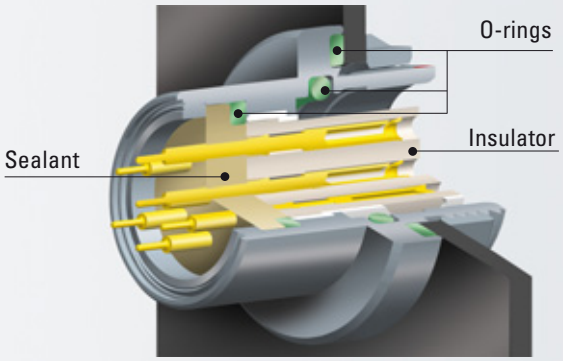
Selecting the right connector for an application is an important and challenging process, even more so when the application involves sealing the connector against various environmental conditions.

Sealing Categories

Fischer Connectors provides solutions for:

- Environmental sealing
- Hermetic sealing
- High pressure

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



Environmental Sealing

Typically for outdoor applications, exposed to rain, dust and other aggressive environments. Exposure is generally limited in time and pressure.

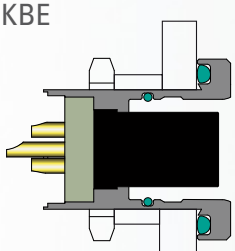
Recommended Fischer Connectors Solutions

Fischer Connectors offers a complete range of environmentally sealed connectors. These products are designed to offer sealing up to IP68.

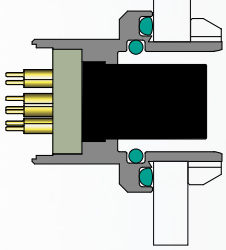
Panel mounted connectors, sealed mated and unmated:

DEU, DBEU, DBPU, DBPLU, WDE, SFU, SFPU, DKE and DKBE

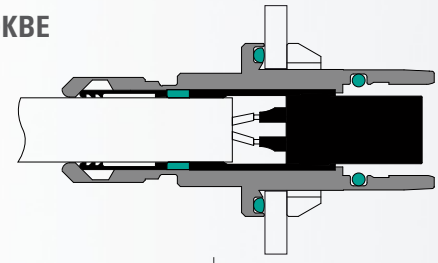
DEU



DBPU



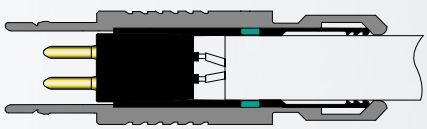
DKBE



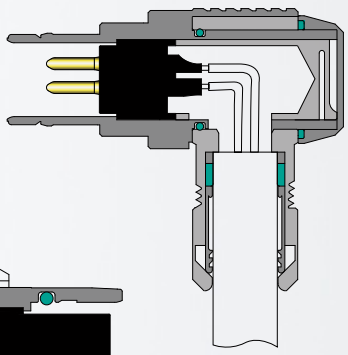
Cable mounted connectors with appropriate sealed clamp sets:

S, SC, SOV, SA, SV, WSO, KE, DKE and DKBE

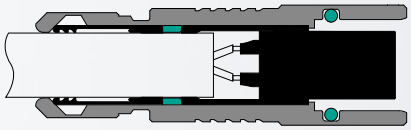
S



WSO



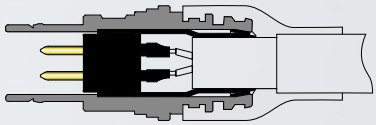
KE



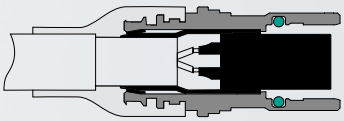
Cable mounted connectors with appropriate cable assembly solution:

SS, SSC and KSE

SS



KSE



Hermetic Sealing

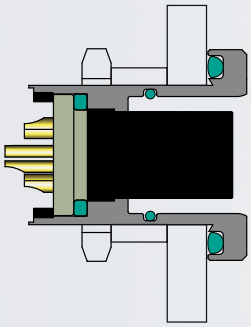
Typically for applications requiring gas tightness like vacuum applications and pressurized vessels, immersed for long period of time or exposed to strong jets.
100% of the hermetic pieces are tested with a leak testing instrument to ensure a leak smaller than 10^{-8} mbar l/s.

Recommended Fischer Connectors Solutions

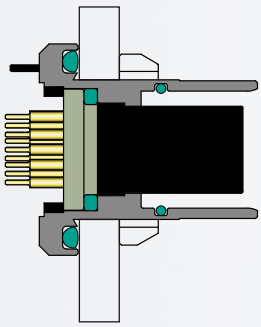
Fischer Connectors offers a complete range of hermetically sealed connectors.
These products undergo a 100% leak test and are designed to offer sealing up to IP69K.

Panel mounted connectors, sealed mated and unmated:
DEE, DBEE, DBPE, DBPLE, WDE, SFE, SFPE.

DEE



DBPLE



High Pressure Sealing

Typically for applications exposed to liquids under high pressure, like deep submarine applications.

Level of sealing required is extreme in order to withstand exposure to high pressure during an extended period of time.

Recommended Fischer Connectors Solutions

Fischer Connectors design centre can assist customers for such special requests.
Customized product developments can be proposed, combining hermeticity with high strength mechanical design.

Limitations

The recommendations provided in this catalogue are given only with the intention of assisting with the choice of a connector with respect to its particular application.
It remains always the responsibility of the equipment manufacturer, and not the connector supplier, to determine the appropriate technical standards, as well as the necessary safety factors for a given application.

Sealing Techniques

The degree of protection needed defines the sealing technique to use.

There are various degrees of sealing protection available for connectors, these can be broadly classified into two groups:

- External sealing, achieved through a protective device such as a flexible boot,
- Internal sealing, utilizing some combination of o-rings or potting material.

External Sealing

Most applications requiring protection against only dust or splashing liquid can use an unsealed connector with a flexible protective boot.
When not in use, an unmated connector can be sealed with a protective cap. Using protective caps and boots is often a cost-effective solution to prevent mud, dirt and other foreign matter from fouling, shorting or otherwise damaging contacts and connector locking mechanisms. In addition, mechanical damage caused by impact on hard surfaces can be minimized by using covers and boots. This is particularly well appreciated in the broadcast industry, where outdoor shooting conditions are very rough.

Caps, for receptacles, and flexible boots, for plugs, represent a cost-effective solution to protect interconnections from environmental conditions.

O-rings, here in green, are an efficient mechanical sealing method.

Internal Sealing

Applications requiring exposure to environmental factors like pressure, vacuum, liquids or steam demand a greater degree of sealing than that provided by covers and boots: the connector needs to be intrinsically sealed.
Elastomer o-rings are one of the most common mechanical gaskets used in connector technology. Designed to be seated in a groove and compressed between two parts – for example between two mating connectors, between a connector and its mounting surface (typically a chassis-panel), or between a cable and its attached connector – o-rings create a seal at the interface.

For the contacts of a panel mounted connector, the sealing technique generally applied exploits potting material, such as epoxy resin, rubber compounds, or for the highest levels of impermeability, glass. Sealing this area of the connector guarantees that no fluid or other contaminant will enter an enclosure through the connector, even when the connector is unmated. These sealing methods can achieve reliable and economical sealing performance for deep water applications or ultra vacuum with leakage rates below 10^{-8} mbar l/s.

Close-up of the rear of a receptacle, in which potting material was injected.

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Security Disclaimer

The values given in this catalogue are measured under standard environmental conditions.
Applications in non-standard environmental conditions may require additional testing and values that may vary from those listed in the catalog.

Some connectors shown herein are intended for use in areas of high frequencies and high voltages.
Suitable safety precautions should be taken to ensure that people do not come into contact with powered conductors during installation and operation.

Every effort has been made to ensure that this catalogue is accurate at the time of printing.
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