Fischer Core Series Catalogue

Connect² Expertise Reliability Innovation

Original high performance push-pull connectors

www.fischerconnectors.com





High Performance Push-Pull Connector and Cable Assembly Solutions

Fischer Connectors is a leading company in the design, manufacturing and distribution of high-performance connectors and cable assembly solutions.

Known for their quality, ruggedness and excellent sealing, our products prove to be reliable in the most demanding environments.

Innovative and flexible, Fischer Connectors is committed to provide customized solutions of uncompromising quality. Primary design and manufacturing facilities are located in Switzerland, with subsidiaries and distributors located worldwide.

Connect² Expertise

We connect not only with customers who build devices, but with the people who use them on a daily basis, to better understand their needs.

- Engineering Expertise
- Supply Chain Expertise
- Market Expertise

Connect² Innovation

Our proven track record in first-to-market, innovative solutions is built on imagination, observation and significant investments in R&D. We help you bring new ideas to market quickly by putting our cutting-edge technology, production tools and experts at your service.

- Technology Innovation
- Product Innovation
- Solutions Innovation

Connect² Reliability

We focus on delivering on time, on cost and on experience connectivity solutions that stand up to the toughest conditions, so you know you can rely on our service and on uncompromising quality in all environments.

- Quality Reliability
- Delivery Reliability
- Response Reliability





Introduction Contents



Introduction	Fischer
General Information	
Cable Assembly	Mill Control
Multipole Low Voltage Connectors	
Multipole High Voltage Connectors	
Coax Low Voltage Connectors	
Coax High Voltage Connectors	
Triax Connectors	
Mixed High Voltage Connectors	
Mixed Coax Connectors	
Accessories	(hill)
Tooling	
Technical Information	
Customer Care and Index	





Complete Customer Solutions

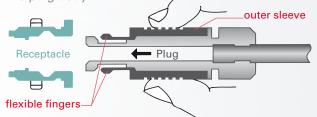
- Leading edge connector technology
 innovative and high performance products
- Cable assembly service standard or custom cabling and cable design assistance
- Standard or customized solutions
 > 10,000 standard items or custom developments
- Specialized technical and sales support assistance through 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

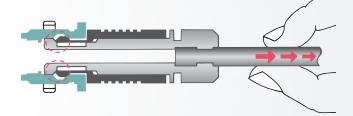
How Does it Work ?

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



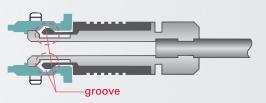
When Cable Pulled

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

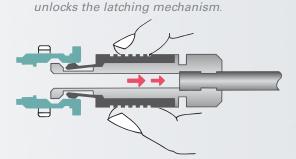


When Mated

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



When Unplugging
 Pulling on the outer sleeve of the plug





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





Introduction Applications

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**



Introduction Product Range



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.com/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:





Access our Technical Library

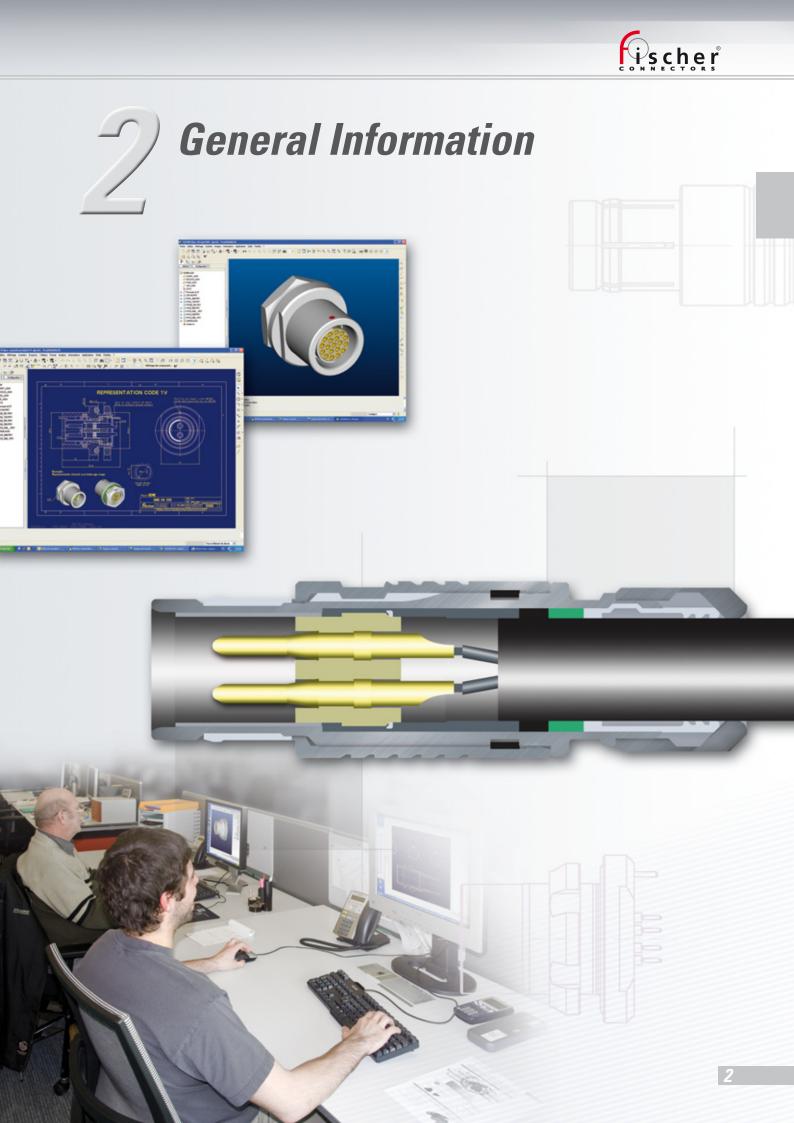
- 3D CAD models
- Technical and dimensional specifications
- Assembly instructions

www.fischerconnectors.com/technical

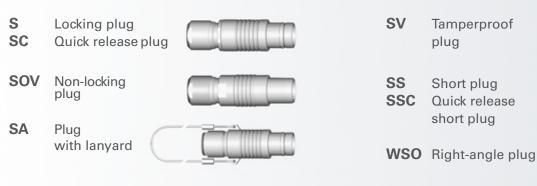
Download our Catalogues www.fischerconnectors.com/catalogues



www.fischerconnectors.com







Cable Mounted Receptacles



Panel Mounted Plugs

Front Mounted

Non-locking

panel plug

IP68 sealed

non-locking panel plug

SF

SFU

- 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





Front Mounted

D	Panel receptacle	DBP	Rear-mounted panel receptacle
DB	Front projecting receptacle	DBPC	Rear-mounted receptacle, right-angle with PCB contacts
DG	Completely threaded receptacle	DGP	Completely threaded receptacle with PCB contacts

Sealed and Hermetic Receptacles

DEU	IP68 sealed
	panel receptacle

I

DEE Hermetic panel receptacle



DBEU IP68 sealed front projecting receptacle



- DBEE Hermetic front projecting receptacle
- Bulkhead Feedthrough
 - WDE Hermetic bulkhead feedthrough for connection of 2 plugs



DBPU	IP68 sealed
	panel receptacle

- DBPE Hermetic panel receptacle
- DBPLU IP68 sealed low profile front projecting receptacle
- DBPLE Hermetic low profile front projecting receptacle





Rear Mounted



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									
art Number E	xamples: For Stainless Steel	Series add «ST-» prefix to part nur	mber										
lug	S	102	А	056									
	S cable mounted plug in size	ze 102 with 7 (multipole) low voltag	ge male contacts and follow	ing options									
leceptacle	D	102	A	056									
	D panel mounted receptacle in size 102 with 7 (multipole) low voltage female contacts and following options												
	▼	▼	▼	▼									
	Cable Mounted Plugs	Series	As Standard Rule										
	_		As Standard Rule	Three-Digit Number Specific for Each									
	S/SC SOV	102	A = Male contacts on plug and Female	Pin Layout									
	SA	103 1031	contacts on receptacle										
	SV	104											
	SS/SSC	105	Z = Female contacts on										
	wso	106 107	plug and Male contacts on receptacle	See Electrical & Contac specifications tables Column "Type"									
	Cable Mounted Receptacles	See page 2-5	See page 4-9-1 for										
	K/KE	Connector Size vs Cable Diameter for details on	details										
	KS/KSE	Series selection.	Exceptions										
			Multipole High Voltage										
	Panel Mounted Cable Receptacles		Mixed High Voltage See page 5-5 and 9-5										
	DK/DKE		for details										
	DKBE												
	Panel Mounted Receptacles												
	D												
	DEU/DEE												
	DB												
	DBEU/DBEE												
	DBP												
	DBPU/DBPE												
	DBPLU/DBPLE	See page 2-1 Range Overview for body styles selection.											
	DG/DGP	To check body styles											
	DBPC	available for each contact configurations see:											
	WDE	Multipole Low Voltage Section 4											
	Panel Mounted Plugs	Multipole High Voltage Section 5											
		Coax Low Voltage Section 6 Coax High Voltage Section 7											
	SF SFU/SFE	Triax Section 8											
	SFPU/SFPE	Mixed High Voltage Section 9 Mixed Coax Section 10											

General Information Part Numbering



		RELATED IT	EMS
Options	Cable Clamp Sets for Cable Mounted Plugs & Receptacles	Accessories	Tooling
130	+	- e antili	-
	EK contact blocks with solder clamp nut without bend relief.	0	T
130	Not applicable as panel mounted		
Natural chrome housing, PEE contacts and keying code 1.	K contact blocks with solder	Example:	
▼	•	102.785	TX00.240
Specific Suffix Corresponding to Selected Options	Below Cable Clamp Sets Should be Ordered Separetly	Protective sleeve	Crimping tool
	Multipole Low Voltage	Cable bend reliefs	Spanners / Wrenches
lousing Color	Triax	Protective sleeves	Crimping tools
latural Chrome	Example:	Soft caps	Tools for crimp
Black Chrome	S 102 A 056 - 130 +	Metal caps Spacers	contacts and high voltage contacts
Contact Block	Clamp set ordering line	Washers	See Section 12
nsulating Material		Mounting nuts	See Section 12
PTFE	E3 102.5/2.0	See Section 11	
ъвт	See page 4-11 for	See Section 11	
PEEK	Cable Clamp Set selection		
Contact Type	Below Cable Cl	amp Sets	
Solder	are Included with	Connector	
Crimp			
РСВ		Multipole High Voltage	
	Coax Low Voltage Coax High Voltage	Mixed High Voltage	
Mechanical Coding of	ooux high voltage	Mixed Coax	
he Contact Block	Shielded (S) or Environ- mental (E) Cable Clamp Set diameter should be added to	Insulating Clamp Set ø (104, 105 and 106 Series) should be added to the connector part num-	
Clamp Nut Type & Color	the connector part number separated by ø.	ber separated by ø and followed by UI (Unshielded Insulated).	
	Examples:	Example:	
Other Options	For Shielded S Clamp Sets		
See page 4-10 for	K 103 A002-600 ø6.2	S 104 A062-130 ø6.6 - UI	
Multipole Low Voltage, High Voltage and Mixed Multipole options	For Environmental E Clamp Sets	See page 5-6 for Insulating Clamp Set selection	
See page 6-10 for Coax	KE 103 A002-600 ø6.2	3515611011	
Low and High Voltage, Triax and Mixed Coax Options	See page 4-11 for S or E Cable Clamp Set selection		



Connector Size Versus Cable Diameter



¹⁾ Pictures represent standard S plug, but values can be extended to all cable mounted plugs, except for SS/SSC body styles. ²⁾ For max cable ø, values in parenthesis are valid for sealed connectors (IP68).

General Information Size Selection



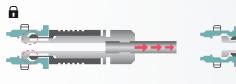
LV = Low Voltage HV = High Voltage

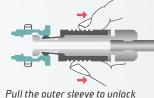
l Hi	Multipo igh Volta	le age	Lo	oax ow tage	Co High V	ax oltage	Tri	ах	Hi	Mixed igh Vo l ta	age	Mixed Coas		Mixed Coax	
Min Cable ø	Max Cable ø	Number of Contacts	Min Cable ø	Max Cable ø	Min Cable ø	Max Cable ø	Min Cable ø	Max Cable ø	Min Cable ø	Max Cable ø	Number of Contacts		Min Cable ø	Max Cable 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									
	e Inform e Sectio		Inform	ore nation ection 6	Mo Inforn See Se	nation	Mo Inforn See Se	nation		e Inform e Sectio				e Inform e Sectior	



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.





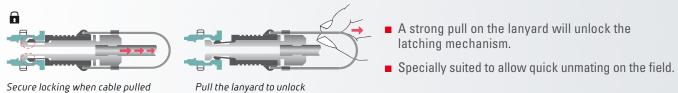
- it provides unparalleled signal integrity.
 - Integrated into the connector housing, it is ideal for compact product design.
 - For more details on Fischer locking expertise, see: www.fischerconnectors.com/push-pull.

Fully secured against accidental disconnection,

Lanyard Plug: SA

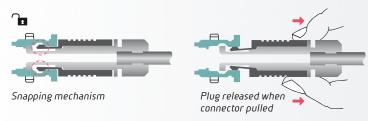
Secure locking when cable pulled

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



Quick Release Plugs: SC - SSC

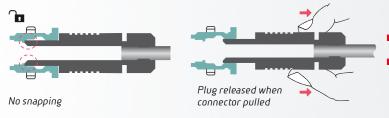
Fischer Quick Release plugs are designed without locking mechanism for emergency release.



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

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

Fischer non-locking plugs are designed without snapping mechanism.



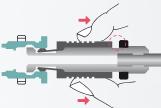
- A soft pull on the cable will release the plug.
- Specially suitable for connections with limited accessibility and/or requiring no locking.

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.





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:





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.











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 developed for disposable equipments

Fischer L.U.C[™] Series

■ Fischer UltiMate™



Rugged, compact, lightweight connectors

Fischer UltiMate[™] Series





Cable Mounted Receptacles

- 11111 D	Body Style Selection (K/KE; KS/KSE)	4-4
	Dimensions	4-4-1

Panel Mounted Receptacles

Body Style Selection	
(D; DEU/E; DB; DBEU/E; DBP; DBPU/E; DBPLU/E; DG/DGP; DBPC; WDE)	4-5
Dimensions	4-5-2
Panel Cut-Outs	4-8

Panel Mounted Plugs



Panel Mounted Cable Receptacles



Body Style Selection (DKBE; DK; DKE)	 4-7
Dimensions	4-7-1
Panel Cut-Outs	4-8

For all Multipole Low Voltage

Electrical & Contact Specifications	4-9
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Accessories	11
Tooling	
Technical Information	13



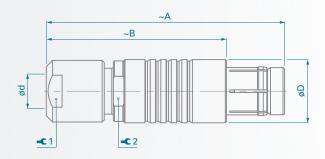
Body	v Style	S	sc	sov	SA	sv	SS	SSC	wso	Links to Detailed Information
Protection	Unsealed (IP50)	•	•	•	•	•	٠	•	•	Sealed and Hermetic
Prote	Sealed up to IP68	•	•	•	•	•	•	•	•	Connectors Page 13-8
E	None			•						
ystei	Push-Pull	•			•	•	•		•	
Locking System	Emergency Release		•					•		Plug Locking Systems Page 2-7
ocki	Lanyard				•					1 age 2-7
	Tamperproof					•				
Contacts	Crimp	•	•	•	•	•	•	•	•	Electrical & Contact
	Solder	•	•	•	•	•	•	•	•	Specifications Page 4-9
Housing Color	Natural Chrome	•	•	•	•	•	•	•	•	Options
Hou Co	Black Chrome	•	•	•	•		•	•	•	Page 4-10
-	Shortened Body						•	•		
Design	Straight						•	•		Core Series Overview Page 2-1
	Right Angle						•	•	•	
D	Cable Clamp Sets	•	•	•	•	•			•	Cable Clamp Sets Page 4-11
Cabling	Overmoldable						•	•		Cable Assembly
Ö	Heat Shrinkable						•	•		Section 3
ries	Cable Bend Reliefs	•	٠	•	•	•			•	
Accessories	Protective Sleeves	•	•	•						Accessories Section 11
Acc	Sealing Caps	٠	•	•	•	•	•	•	•	
	102 Series	•	•	•	•	•	•	•	•	
	103 Series	•	•	•	•	•	•	•	•	Dimensions Page 4-3-1
	1031 Series	•	•	•	•	•	•	•	•	
Size	104 Series	•	•	•	•	•	•	•	•	For more Information Visit:
	105 Series	•	•	•	•	•	•	•	•	www.fischerconnectors.com /technical
	106 Series	•				•				
	107 Series	•				•				

Plugs mate with receptacles.



S / SC Body Styles

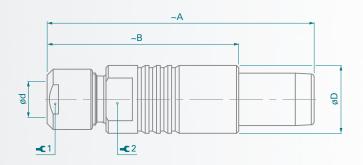




Series	А	В	D	d m Unsealed	<i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
1031	48	38	13	7.2	6.7	12	1.5	11
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16
106	80	55	28	19.2	19.2	22	8.0	-
107	110	85	34	22.7	22.7	32	10.0	32

SOV Body Style



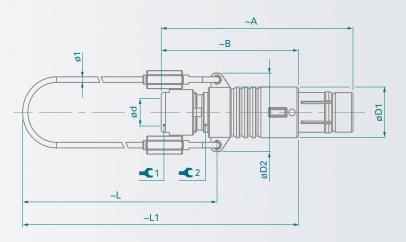


Series	А	В	D	d m Unsealed	l <i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2					
102	36	26	9	4.7	4.3	7	0.6	7					
103	46	35	12	6.7	6.2	10	1.0	10					
1031	48	38	13	7.2	6.7	12	1.5	11					
104	50	38	15	8.7	8.7	12	2.0	13					
105	62	47	18	10.7	10.7	15	3.5	16					
106		Please contact us for additional information											
107		, r	iease co				nation						



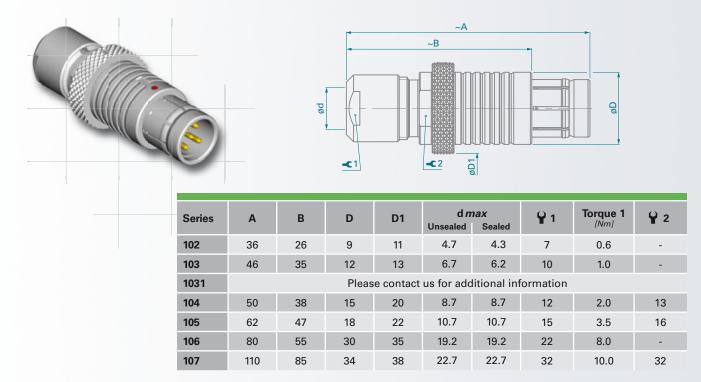
SA Body Style





Series	А	В	D1	D2	L	L1	d <i>m</i> Unsealed	<i>ax</i> Sealed	₽ 1	Torque 1 [Nm]	¥2		
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7		
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10		
1031	48	38	13	18	55	75	7.2	6.7	12	1.5	11		
104	50	38	15	21	65	84	8.7	8.7	12	2.0	13		
105	62	47	18	25	70	94	10.7	10.7	15	3.5	16		
106		Please contact us for additional information											
107				Fleas	se contac	ct us for	additional	mormati	on				

SV Body Style





SS / SSC Body Styles



Cable Assembly: **Overmolding Options**



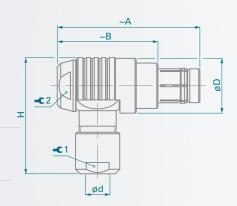
~A	
~B	
	βD

Series	А	В	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		Discos contectus for additional information											
107		Please contact us for additional information											

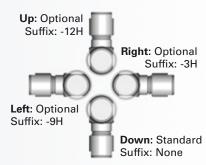
¹⁾ Max. cable diameter below shield.

■ WSO Body Style





Cable Orientations: View from the back



	-		-										
Series	А	В	D	н	d m Unsealed	<i>ax</i> 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	53 38 23 45 10.7 10.7 15 3.5 17 3.5											
106													
107		Please contact us for additional information											

WSO is available for different cable orientations.

When ordering, choose which suffix to use in cable orientations figure. Example: WSO 102 A056 -130 + WSO 102 A056 -130 - 9H

with standard down cable orientation with left cable orientation



Cable Mounted Receptacles

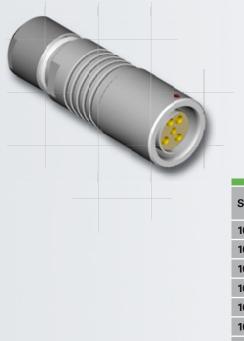
Body	v Style	к	KE	KS	KSE	Links to Detailed Information
Protection	Unsealed (IP50)	•		•		
Prote	Sealed up to IP68		•		•	Sealed and Hermetic Connectors Page 13-8
Contacts	Crimp	•	•	•	•	Electrical & Contact Specifications Page 4-9
Con	Solder	•	•	•	•	Electrical & Contact Specifications rage 4-9
bu	Natural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

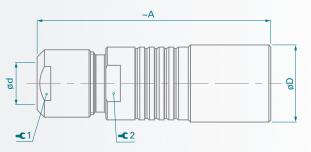
Plugs mate with receptacles.



Cable Mounted Receptacles

K / KE Body Styles





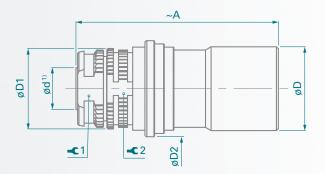
Series	А	D	d n Unsealed	n <i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10
1031	46	13.5	7.2	6.7	12	1.5	11
104	50	16	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16
106	79	33	19.2	19.2	25	8	25
107	105	36	22.7	22.7	32	10	32

KS / KSE Body Styles



Cable Assembly: Overmolding Options





Series	А	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		P	lease con	itact us fo	or additio	nai inforr	nation					

¹⁾ Max. cable diameter below shield.

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.



		÷				ţ]	0
Body	/ Style	D	DEU	DEE	DB	DBEU	DBEE	DBP
ion	Unsealed (IP50)	•			•			•
Protection	Sealed up to IP68		•	٠		•	•	
Pro	Hermetic			•			•	
cts	Crimp	•			•			•
Contacts	Solder	•	•	•	•	•	•	•
ŭ	РСВ	•	•	•	•	•	•	•
Housing Color	Natural Chrome	•	•	•	•	٠	•	•
Hou	Black Chrome	•	•	•	•	٠	•	•
	Right Angle							
Design	Flush	•	•	•				•
De	Front Projecting				•	•	•	
	Bulkhead Feedthrough							
Assembly	Front Mounting	•	•	•	٠	٠	٠	
Asse	Rear Mounting							•
	Sealing Caps	•	•	•	•	•	•	•
s	Spacers	•	•	•	•	•	•	•
sorie	Color-Coded Washers	•			•			•
Accessories	Grounding Washers	•	•	•	•	•	•	•
∢	Locking Washers	٠	•	•	•	•	•	•
	Decorative Nuts							•
	102 Series	٠	•	•	•	•	•	•
	103 Series	•	•	•	•	•	•	•
	1031 Series	•	•	•	•	•	•	•
Size	104 Series	•	•	•	•	•	•	•
	105 Series	•	•	•	•	•	•	•
	106 Series	•		•			•	
	107 Series	•		•			•	
	noto with recented as							

Plugs mate with receptacles.

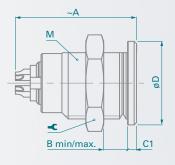


				Ð	0	Ģ	Ð	
DBPU	DBPE	DBPLU	DBPLE	DG	DGP	DBPC	WDE	Links to Detailed Information
				•	•	•		Sealed and Hermetic
•	•	•	•				•	Connectors Page 13-8
				•				Electrical & Contact
•	•	•	•	•	•	•		Specifications Page 4-9
•	•	•	•	•	•	•	•	Options Page 4.10
•	•	•	•	•	•	•		Options Page 4-10
•	•			•	•	•	•	
	•	•	•	•	•	•	•	Core Series Overview Page 2-1
							•	
				•	•		•	Core Series Overview Page 2-1
•	•	•	•	•	•	•		
•	•	•	•	•	•	•	•	
				•	•	•		Accessories Section 11
•	•	•	•	•	•	•		
•	•	•	•	•	•	•		
•	•	•	•	•	•	•	•	Dimensions Page 4-5-2
•	•	•	•	•	•	•		Dimensions rage 4-5-2
•	•	•	•	•	•		•	For more Information Visit: www.fischerconnectors.com
•	•	•	•	•	•		•	/technical
	•						•	

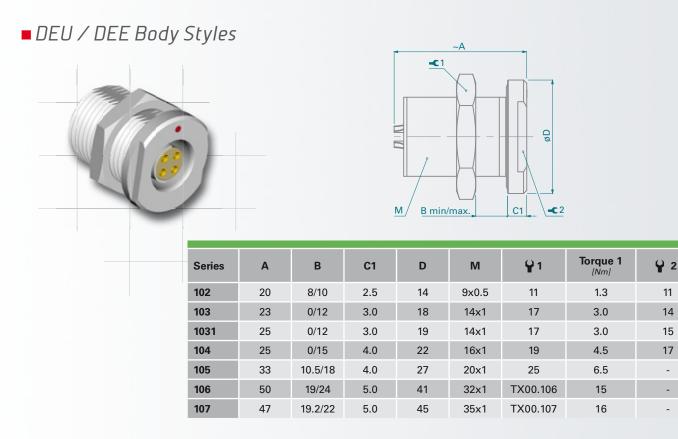


D Body Style





Series	А	В	C1	D	Μ	Ŷ	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

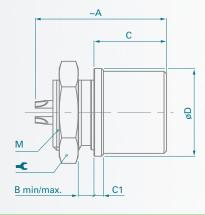


<u>4-5-2</u>



DB Body Style

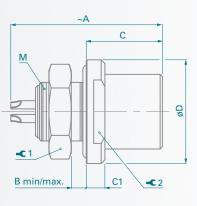




Series	А	B min/max.	С	C1	D	М	Ŷ	Torque [Nm]		
102	18	0/3	11.0	1.0	11	9x0.5	11	1.3		
103	21	21 0/4 11.5 1.5 14 12x1 14 2.5								
1031	Please contact us for additional information									
104	26	26 0/3 14.5 2.5 19 16x1 19 4.5								
105	33 0/7 19.0 2.0 22 18x1 22 6.0									
106										
107	Please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

DBEU / DBEE Body Styles



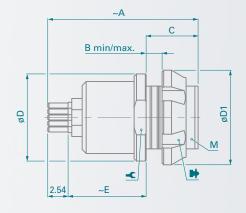


Series	А	B min/max.	С	C1	D	М	¥1	Torque 1 [Nm]	¥ 2
102	20	0/3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	0/4.0	13.0	3.0	18	14x1	17	3.0	14
1031	24	0/4.0	12.0	3.0	19	14x1	17	3.0	15
104	30	0/3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	0/5.0	19.0	4.0	27	18x1	22	6.0	22
106	50	0/6.5	25.5	7.0	40	32x1	TX00.106	15	-
107	47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



DBP Body Style



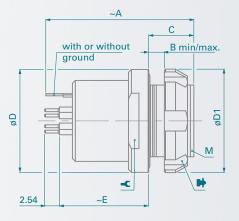


Series	Α	B min/max.	С	D	D1	E	М	Ŷ	1)	Torque [Nm]
102	20	0/3.5	6.5	11	12	10.0	9x0.5	10	TC00.000	1.3
103	23	0/4.0	8.0	14	15	12.0	12x1	-	TF00.001	2.5
1031	23	0/3.0	7.0	16	18	13.0	14x1	-	TG00.001	3.0
104	26	0/5.0	9.0	19	19	11.5	15x1	-	TK00.000	4.0
105	30	0/12.0	17.0	22	23	10.0	18x1	-	TP00.011	6.0
106				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

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

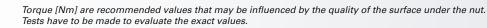
DBPU / DBPE Body Styles





Series	Α	B min/max.	С	D	D1	E	М	Ŷ	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	18.0	20x1	-	TP00.005	6.5
106										
107	Please contact us for additional information									

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

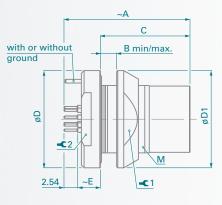




Panel Mounted Receptacles

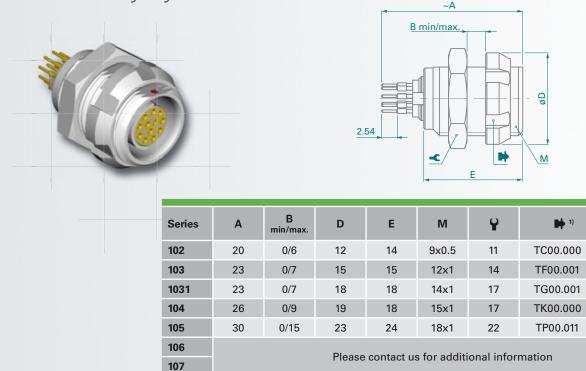
DBPLU / DBPLE Body Styles





Series	А	B min/max.	С	D	D1	E	М	¥ 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	5.0	16x1	17	4.5	17	
105	31	0/7.0	22.5	27	25	5.5	20x1	22	6.5	22	
106											
107	Please contact us for additional information										

DG / DGP Body Styles



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

Torque

[Nm]

1.3

2.5

3.0

4.0

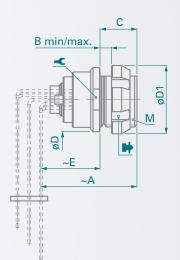
6.0



Panel Mounted Receptacles

DBPC Body Style

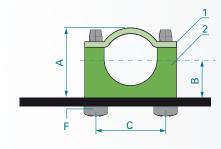


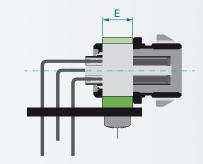


Series	А	В	С	D	D1	E ¹⁾	М	Ŷ	2)	Torque [Nm]
102	20.0	0/3.5	6.5	11	12	13	9x0.5	10	TC00.000	1.3
103	22.0	0/4.0	8.0	14	15	13	12x1	-	TF00.001	2.5
1031	21.5	0/3.0	7.0	16	18	14	14x1	-	TG00.001	3.0

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	А	В	С	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

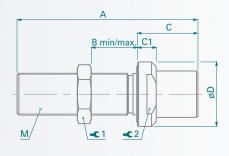
2 - PBT



Panel Mounted Receptacles

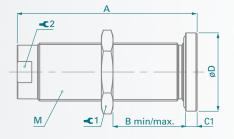
WDE Body Style for 102, 103 and 104 Series





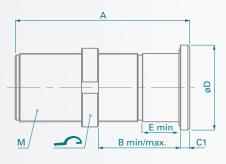
WDE Body Style for 105 Series





■ WDE Body Style for 106 and 107 Series ¹⁾





Series	А	B min/max	С	C1	D	E min	М	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		
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	-		

Feedthroughs of series 106 and 107 are supplied with slotted nuts. For nuts dimensions see Section 11 Accessories.
 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.



Panel Mounted Plugs

		₿	Ę		Į.		
Body	/ Style	SF	SFU	SFE	SFPU	SFPE	Links to Detailed Information
ion	Unsealed (IP50)	•					
Protection	Sealed up to IP68		•	•	•	•	Sealed and Hermetic Connectors Page 13-8
Pro	Hermetic			•		•	
cts	Crimp	•					
Contacts	Solder	•	•	•	•	•	Electrical & Contacts Specifications Page 4-9
	PCB	•	•	•	•	•	
Housing Color	Natural Chrome	•	•	•	•	•	Options Page 4-10
Hot	Black Chrome	•	•	٠	•	•	Options rage 4-10
Assembly	Front Mounting	•	•	•			Core Series Overview
Asse	Rear Mounting				•	•	Page 2-1
	Sealing Caps	•	•	•	•	•	
	Spacers	•	•	•	•	•	
Accessories	Color-Coded Washers	•					. ·
cesse	Insulating Washers	•					Accessories Section 11
Ace	Grounding Washers	•	•	•			
	Locking Washers	•	•	•	•	•	
	Decorative Nuts				•	•	
	102 Series	•	•	•	•	•	
	103 Series	•	•	•	•	•	Dimensions Page 4-6-1
۵	1031 Series	•	•	•	•	•	
Size	104 Series	•	•	•	•	•	For more Information Visit:
	105 Series	•	•	•	•	•	www.fischerconnectors.com /technical
	106 Series	•					/technical
	107 Series	•					

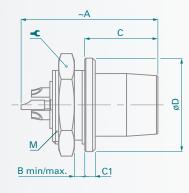
Plugs mate with receptacles.



Panel Mounted Plugs

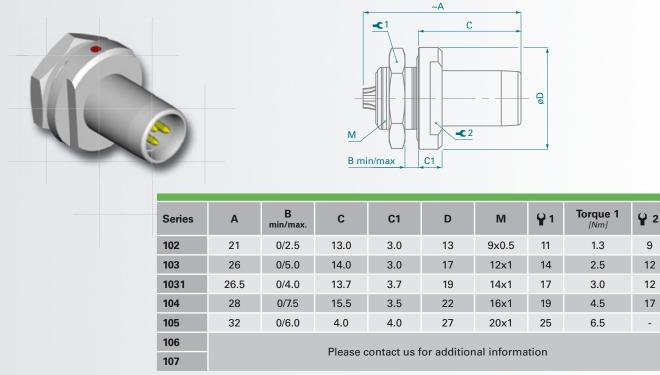
SF Body Style





Series	А	B min/max.	С	C1	D	М	Ŷ	Torque [Nm]
102	20.0	0/3.5	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

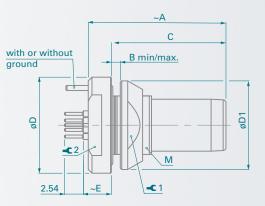




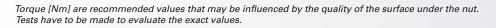
Panel Mounted Plugs

SFPU / SFPE Body Styles





Series	А	B min/max.	С	D	D1	E	М	¥ 1	Torque 1 [Nm]	¥ 2	
102	18.5	0/2.5	15.4	13	12	3.8	9x0.5	10	1.3	10	
103	22.0	0/4.0	18.5	17	16	4.5	12x1	13	2.5	12	
1031	21.5	0/4.0	18.0	19	18	4.5	14x1	15	3.0	15	
104	25.5	0/6.0	22.0	22	20	4.2	16x1	17	4.5	17	
105	29.0	0/5.0	25.0	27	25	5.0	20x1	22	6.5	19	
106											
107	Please contact us for additional information										





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
Con	Solder	•	٠	•	Electrical & contacts opecifications rage 4-5
Housing Color	Natural Chrome	•	•	•	Options Page 4-10
Hou Co	Black Chrome	•	•	•	Options Fage 4-10
Design	Flush		•		Core Series Overview Page 2-1
De	Front Projecting	•		•	Core Series Overview Page 2-1
~	Panel Mounted	•	•	•	
Assembly	Front Mounting		•	•	Core Series Overview Page 2-1
Asse	Rear Mounting	•			
	Cable Clamp Sets	•	•	•	Cable Clamp Sets Page 4-11
	Cable Bend Reliefs	•	•	•	
	Sealing Caps	•	•	•	
es	Spacers	•	•	•	
Accessories	Color-Coded Washers	•	•		Accessories Section 11
Acces	Insulating Washers				Accessories Section 11
4	Grounding Washers	•	•	•	
	Locking Washers	•	•	•	
	Decorative Nuts	•			
	102 Series	•	•	•	
	103 Series	•	•	•	
	1031 Series	•			Dimensions Page 4-7-1
Size	104 Series	٠	•	•	For more Information Visit:
	105 Series	•	•	•	www.fischerconnectors.com/technical
	106 Series	•	•	٠	
	107 Series	•	•	•	

Plugs mate with receptacles.

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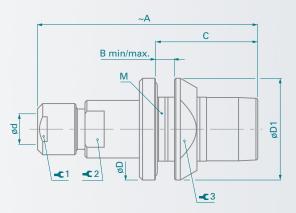
C1



Panel Mounted Cable Receptacles

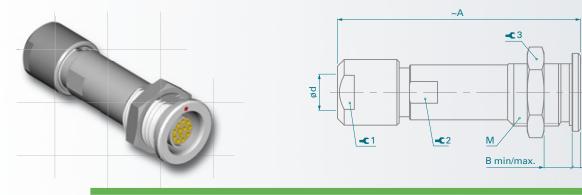
DKBE Body Style





Series	Α	B min/max.	С	D	d max	D1	М	¥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

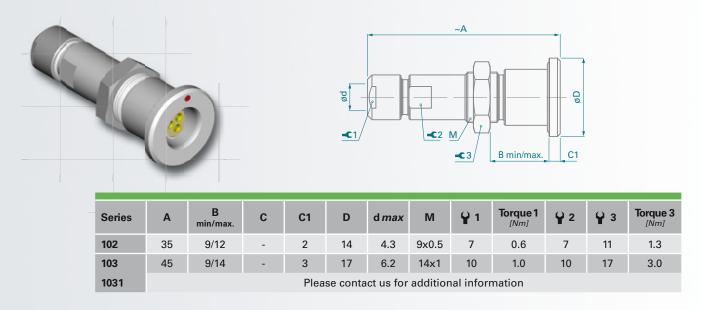


Series	А	B min/max.	C1	D	d <i>max</i>	М	¥ 1	Torque 1 [Nm]	¥ 2	¥ 3	Torque 3 [Nm]
102	35	0/9	1.5	11	4.7	9x0.5	7	0.6	-	11	1.3
103	44	0/10	1.5	14	6.7	12x1	10	1.0	9	14	2.5
1031		Please contact us for additional information									
104	50	0/11	2.0	19	8.7	15x1	12	2.0	12	17	4.0
105	60	0/16	2.0	22	10.7	18x1	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

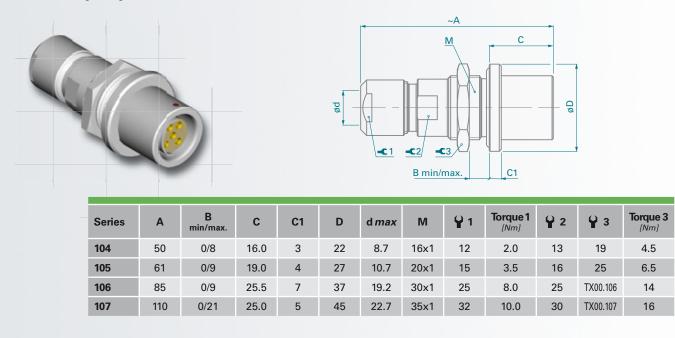


Panel Mounted Cable Receptacles

DKE Body Style for 102, 103 and 1031 Series



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

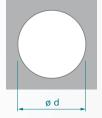




Panel Cut-Outs

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 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			
ST-107	-	36.2	-	36.2	-	36.2	-	-	-	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

¹⁾ Coax High Voltage DEE 102 AZ 025: ø11.1 (See 7-4-2)

4-8



Contents

A/Z Polarity	 For all Body Styles (except WDE) For WDE Body Style 	4-9-1 4-9-1
Contact Types	 Solder Contacts PCB Contacts Crimp Contacts, Tooling 	4-9-2 4-9-2 4-9-3

For Multipole Low Voltage Connectors



 Contact Configurations Wire Size Test & Rated Voltages Current Rating 	
■ 102 Series	4-9-4
■ 103 Series	4-9-5
= 1031 Series	4-9-5
■ 104 Series	4-9-6
■ 105 Series	4-9-8
= 106 Series	4-9-10
107 Series	



A/Z Polarity

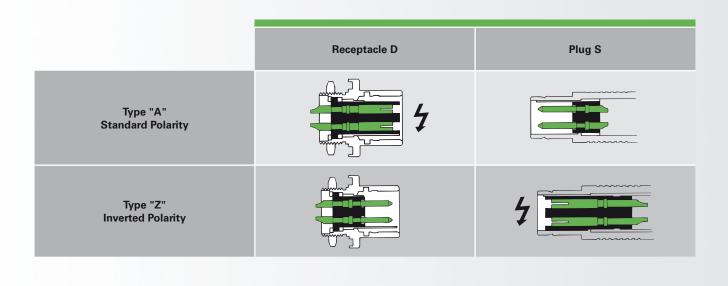
To protect users from contact with dangerous voltages, most Fischer connectors exist in two versions:

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.



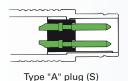
Important: An "A" type connector can never be mated with a "Z" type connector.

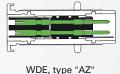
A plug "S" has the same housing in type "A" as in type "Z", but type "A" comes with unprotected contacts while type "Z" is equipped with touch-protected contacts. In most cases these are female contacts which are recessed in the insulator.

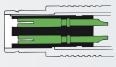
For the exceptions, see High Voltage Connectors page 5-5 and Mixed High Voltage page 9-5

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)

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.

Series	Polarity					Contact Dia	meter (mm))			
		0	.5	0	.7	0	.9	1	.3	1	.6
		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 To Part Nu		TX0	0.240	TX0	0.240	TX0	0.240	TX0	0.240	TX0	0.242

Tooling for Crimp Contacts

See Section 12Tooling, Page 12-2 for description of Crimping Tool and Positioner.



				onta				Wire	Size ²⁾		s t Volt n mateo				
			Ier	minat	lion					AC	rms	D	С	s [V]	
Type	Pin Layout	Number of Contacts	Solder	Crimp ⁶⁾	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s [V]	Current Rating ³⁾ [A]
102 A 051		2	•	● ⁷⁾	•	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.3	1.7	1.8	2.4	≤ 250	9.2
102 A 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 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 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 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 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.

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

⁶⁾ Plug with crimp contacts must be used with unshielded clamps only. See page 4-11-2.

⁷⁾ Only available for A polarity plugs.



● = Standard ○ = Option

103 and 1031 Series

			1												
				onta				Wire	Size ²⁾			age ⁵⁾ I positio			
			Ier	minat	ion					AC	rms	D	С	s [V]	
Type	Pin Layout	Number of Contacts	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s ///	Current Rating ³⁾ [A]
103 ^A 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 052 Z		3	•		•	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.5	1.8	2.0	≤ 250	12
103 A 053 Z		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 056 Z		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 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 058 Z		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 062 Z		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 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.

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



															u 0-0	
					onta				Wire	Size ²⁾		est Volt				
				Ieri	ninat	ion					AC	rms	C	C	[V] S	
Type	Pin Layout	Number of Contacts	-	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s [V]	Current Rating ³⁾ [A]
404 A 454				•		•	PEEK		max ø1.86mm							
104 ^A 051 Z		2		0		0	PTFE	1.6	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 / ₇ 087			2				РВТ	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.5	10	2.2	0.5	400	28
¹⁰⁴ Z		4	2	•		•	РВТ	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	2.0	1.6	2.8	2.5	≤ 400	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 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 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.

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



														51	anda	ra 0=0	ption
I					-	onta				Wire	Size ²⁾		st Volt n mateo				
				<i>(</i> 0	leri	minat	lon					AC	rms	D	C	s [V]	
	Type	Pin Layout		Number of Contacts	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s /v/	Current Rating ³⁾ [A]
1	04 Z 066			8	•	•	•	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.5	1.5	2.5	2.5	≤ 320	6.2
1	04 ^A 055		9	1				PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.4	2.2	3.8	3.6	≤ 250	12
	Z 000		5	8				TLLK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.4	1.5	2.0	2.4	≤ 200	6.0
1	04 Z 056			11	•	•	•	PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.83mm min ø0.48mm AWG22-26	1.4	1.5	2.1	2.2	≤ 250	5.8
1	04 Z 086			16	•	•	•	PEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.62mm min ø0.38mm AWG24-28	1.0	1.5	1.6	2.2	≤ 200	4.0
1	04 <mark>A 092</mark>			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
1	04 A 124 ⁵⁾		2	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.

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

• = Standard \bigcirc = Option



• = Standard \bigcirc = Option

105 Series

					onta				Wire	Size ²⁾		st Volt n matec				
			0	Ter	minat	tion					AC	rms	D	С	s [V]	
Type	Pin Layout	Nitted of Contracto		Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s /v/	Current Rating ³⁾ [A]
105 ^A 051			2				PEEK	2.0	max ø2.03mm	_	2.5	3.0	4.0	4.0	≤ 630	26
Z			2				TEEK	2.0	AWG13 [1] AWG14 [7/22]		2.5	5.0	4.0	4.0	≤ 030	20
105 ^A 087		2	2	•			PEEK	3.0	max ø3.13mm AWG9 [1] AWG10 [105/30]	-	1.2	1.6	2.3	3.0	≤ 400	30
105 ^A 052		3	3	•			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	2.0	2.5	3.0	3.5	≤ 400	23
105 ^A 053		۷	1	•			PEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	1.8	1.8	2.6	2.6	≤ 320	20
105 Å 05 4 ⁵⁾			1				DEEV	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0		25
105 ^A 054 ⁵) Z		7	6	•			PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0	≤ 320	7.0
105 ^A 067		8	3	•			PEEK PTFE	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.7	2.0	2.5	2.8	≤ 320	10
105 4 424		0	2				DEEK	2.3	max ø2.48mm AWG11 [1] AWG12 [7/20]	-	1.2	2.2	1.8	3.2	250	18.5
105 A 124		8	6	•			PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.2	1.2	1.8	1.8	≤ 250	7.5
105 Å 101 ⁵⁾			1				DEEK	2.0	max ø2.03mm AWG13 [1] AWG14 [7/22]	-	3.0	2.0	4.0	3.0		25
105 T 101	105 ^A _Z 101 ⁵⁾ 9	9	8	•		•	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.8	1.5	2.5	2.0	≤ 320	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.

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



Multipole Low Voltage Electrical & Contact Specifications

• = Standard \bigcirc = Option

105 Series

														anaa	ra O=C	puon
				_	onta				Wire	Size ²⁾		t Volt mateo				
			<i>(</i>)	Ierr	minat	tion					AC	rms	D	С	s [V]	
Туре	Pin Layout		Number of Contacts	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Solder Contacts ¹⁾	Crimp Contacts	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s ///	Current Rating ³⁾ [A]
105 ^A 062		1	0	•	•	•	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 069 Z		1	2	•		•	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	1.4	1.5	1.8	2.0	≤ 250	8.0
105 ^A 104 ⁵⁾ Z		13	3	•		•	PEEK	1.3	max ø1.18mm AWG17 [1] AWG18 [16/30]	-	2.5	1.5	3.8	2.2	≤ 320	14
Z Z		15	10			•	TEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.3	1.5	1.8	2.2	\$ 320	1.0
105 A 127 7)		13	3				PEEK	1.3	-	max ø1.18mm min ø0.58mm AWG18-24	3.0	2.8	4.8	3.9	≤ 320	14
1007(12)		10	10		Ū		TEEK	0.7	-	max ø0.62mm min ø0.38mm AWG24-28	3.1	1.1	4.7	1.9	3 020	1.0
105 ^A 058 Z		1	5	•	•	•	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 110 ⁶⁾ Z		16	4	•		•	PEEK	1.6	max ø1.86mm AWG13 [1] AWG14 [7/22]	-	1.6	1.3	2.8	2.1	≤ 250	14
Z		10	12				TEEK	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.0	1.2	1.5	2.0	3 2 3 0	1.0
105 ^A _Z 038		1	8	•	•	•	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 093		2	24	•		•	РВТ	0.7	max ø0.79mm AWG21 [1] AWG22 [7/30]	-	1.2	1.5	1.5	2.0	≤ 250	3.5
105 ^A 102		2	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.

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

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



• = Standard \bigcirc = Option

106 Series

					_	_				_	_				
				onta				Wire	Size ²⁾		st Volt n mateo				
			Ter	minat	tion					AC	rms	D	С	5 [V]	
Type	Pin Layout	Number of Contacts	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Male Solder Contacts ¹⁾	Female Solder Contacts ¹⁾	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s [V]	Current Rating ³⁾ [A]
Δ ε)			•			PTFE		max ø2.13mm	max ø2.28mm						
106 ^A Z 003 ⁵)		3	0			PEEK	2.3	AWG12 [1] AWG14 [7/22]	AWG12 [1] AWG14 [105/34]	3.5	5.0	6.0	6.5	≤ 1000	26
∧ 5)6)			•			PTFE		max ø2.08mm	max ø2.03mm						
106 ^A Z 007 ⁵⁾⁶⁾		7	0			PEEK	2.0	AWG12 [1] AWG14 [7/22]	AWG13 [1] AWG14 [7/22]	2.5	3.0	4.5	4.5	≤ 800	20
Δ			•			PTFE		max ø2.08mm	max ø2.03mm						
106 ^A 019 Z		8	0			PEEK	2.0	AWG12 [1] AWG14 [7/22]	AWG13 [1] AWG14 [7/22]	2.2	2.2	4.0	3.0	≤ 630	19
A			•			PTFE		max ø2.08mm	max ø2.03mm						
106 ^A 015 Z		12	0			PEEK	2.0	AWG12 [1] AWG14 [7/22]	AWG13 [1] AWG14 [7/22]	1.8	2.2	2.5	3.0	≤ 500	16
Δ			•			PTFE		max ø1.18mm	max ø1.23mm						
106 A 018 Z		17	0			PEEK	1.3	AWG17 [1] AWG18 [16/30]	AWG17 [1] AWG18 [16/30]	1.8	2.2	2.5	3.0	≤ 500	8.0
Α			•			PTFE		max ø1.18mm	max ø1.18mm						
106 ^A 017 Z		24	0			PEEK	1.3	AWG17 [1] AWG18 [16/30]	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.

¹Measured with S plug and D receptacle. Please contact us for rating for WDE bulkhead feedthroughs.

<u>ischer</u>

• = Standard \bigcirc = Option

107 Series

													= 31	anuai		ption
					onta				Wire	size ²⁾		t Volt mateo				
				Ier	minat	lion					AC	rms	D	С	s [V]	
Type	Pin Layout		Number of Contacts	Solder	Crimp	PCB	Insulating Material	Contact ø [mm]	Male Solder Contacts ¹⁾	Female Solder Contacts ¹⁾	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Rated Voltage ⁴⁾ r.m.s [V]	Current Rating $^{3)}$ [A]
•									max ø2.93mm	max ø2.28mm						
107 ^A Z 013		4	4	•			PTFE	2.3	AWG9 [1] AWG10 [37/26]	AWG12 [1] AWG14 [105/34]	6.5	7.0	10	11	≤ 1000	26
٨				•			PTFE		max ø2.93mm	max ø2.28mm						
107 ^A 018 Z		(6	0			PEEK	2.3	AWG9 [1] AWG10 [37/26]	AWG12 [1] AWG14 [105/34]	4.5	4.5	6.0	6.0	≤ 800	25
٨				•			PTFE		max ø2.08mm	max ø2.03mm						
107 A 015 Z		1	9	0			PEEK	2.0	AWG12 [1] AWG14 [7/22]	AWG13 [1] AWG14 [7/22]	2.0	2.5	2.5	3.2	≤ 500	13
Δ				•			PTFE		max ø1.18mm	max ø1.18mm						
107 ^A 051 Z		2	27	0			PEEK	1.3	AWG17 [1] AWG18 [16/30]	AWG17 [1] AWG18 [16/30]	2.0	2.0	3.0	3.2	≤ 400	7.5
Δ				•			PTFE		max ø1.18mm	max ø1.18mm						
107 ^A 052 Z		4	0	0			PEEK	1.3	AWG17 [1] AWG18 [16/30]	AWG17 [1] AWG18 [16/30]	1.8	1.5	2.5	2.0	≤ 320	6.5
107 ^A ₇ 023		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
2		55		0			PEEK	0.9	max ø0.79mm AWG21 [1] AWG22 [7/30]	max ø0.88mm AWG20 [1] AWG22 [19/34]	1.7	1.5	2.5	2.1	≤ 400	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⁾ Measured with S plug and D receptacle. Please contact us for rating for WDE bulkhead feedthroughs.

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Options Part Numbering

Multipole Low Voltage, High Voltage and Mixed High Voltage Connectors
4-10-3





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.

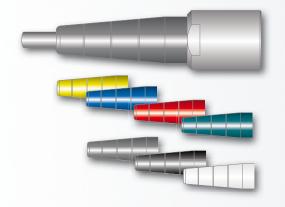
Washers for Panel Connectors.

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.

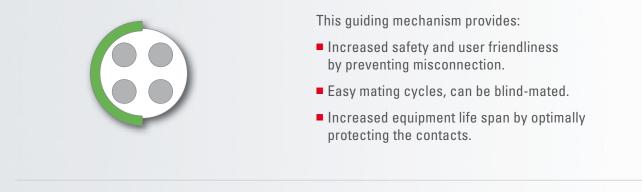
For detailed information on cable bend reliefs and washers, see Section 11 Accessories.



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.



Keying Codes Options

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

	Receptacle	Plug
Code 1		
Code 2		
Code 3		

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



Multipole Low Voltage, High Voltage & Mixed Connectors

1	1 Housing Color Which housing color do you need?				NATURAL CH	IROME with Re	d Guide Mark	
2	2 Contact Block Material Which contact block material do you need?		PTFE	PI	вт	PE	EK	
3	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?	COUEI		-60	-80	-100	-130 ²⁾	-150
		Code 2		-2060	-2080	-2100	-230	-250
	Code			-3060	-3080	-3100	-330	-350

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

²⁾Without coating for Stainless Steel Series

Cable Bend Relief

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

Applicable for	Last Digit	Description	
	0	Clamp nut without bend relief	
	1	Clamp nut with white bend relief	
Cable Mounted Plugs	2	Clamp nut with black bend relief	
& Receptacles using	3	Clamp nut with green bend relief	
Cable Clamp Sets	4	Clamp nut with blue bend relief	
Except SS/SSC-KS/KSE	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:	0	Standard: solder contacts
D-DEU/E-DB-DBEU/E- SF-SFU/E	9	With PCB (Printed Circuit Board) contacts instead of solder contacts
Rear Mounted:	0	Standard: PCB (Printed Circuit Board) contacts
DBP-DBPU/E-DBPLU/E- SFPU/E	9	With solder contacts instead of PCB (Printed Circuit Board) contacts

Design and Accessories

Applicable for	Extensions	Description
Receptacles	Ν	Nickel plated body with bright finish
	Е	EPDM interface O-ring
	G	Ground tag if solder contact or Ground pin if PCB contact
	В	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	PI	3T	PE	EK	
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

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Dimensions WSO Body Style

102	103,	1031,	104 and 105 Series	4-11-	.9
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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.

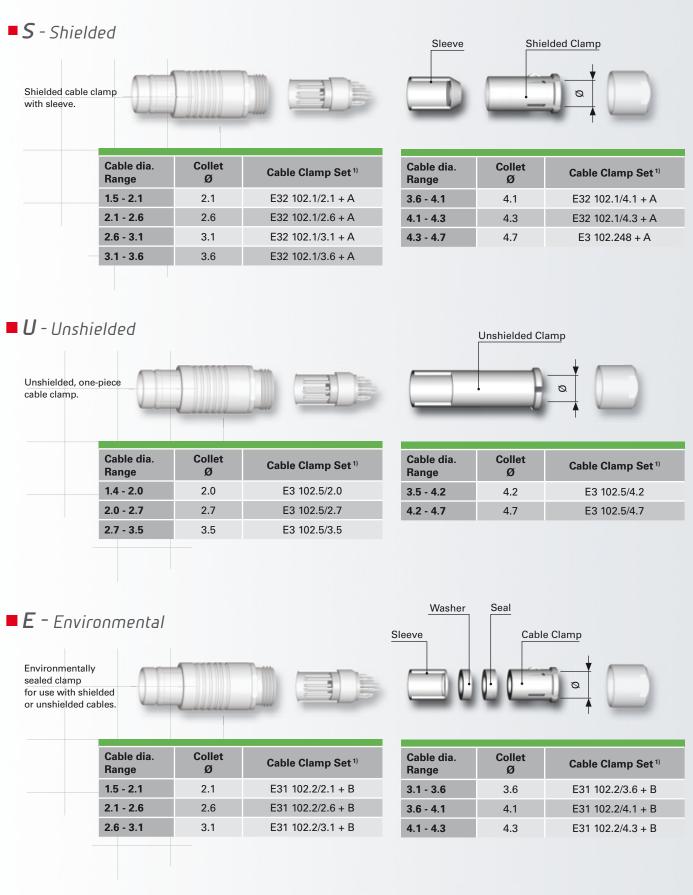
Cable Clamp Set	•	terface between the nector to be sealed?	Do you need the connector to be terminated to the cable shield?	
	Unsealed	Sealed	Unshielded	Shielded
S - Shielded	•			•
U - Unshielded	•		•	
E - Environmental		•	•	•

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

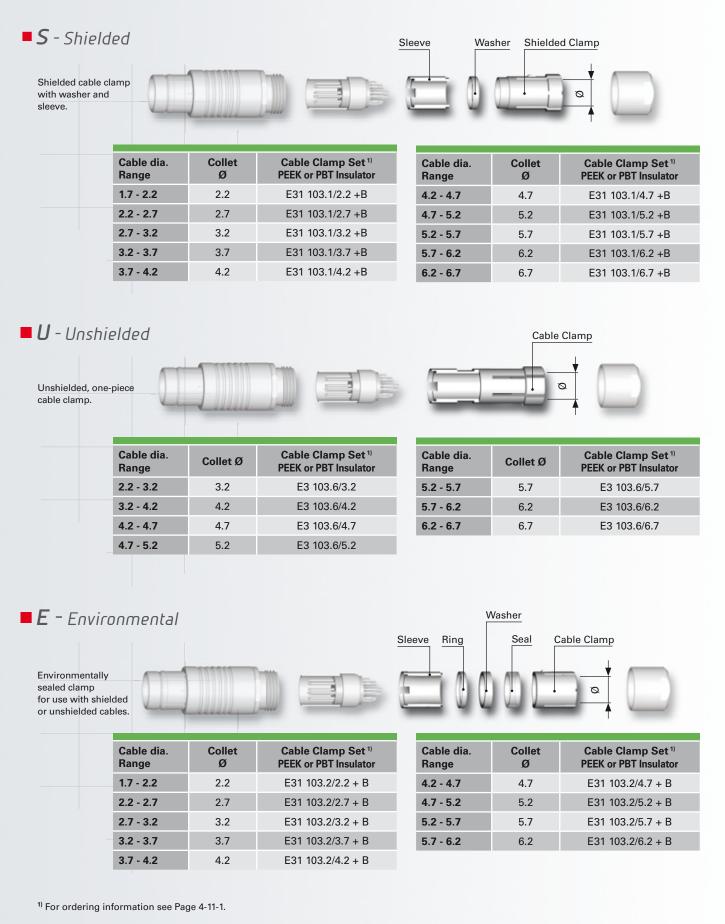
Below Cable Clamp Sets Sh	ould be Ordered Separately	Below Cable Clamp Sets	are Included with Connector
Multipole Low Voltage Triax		Coax Low Voltage Coax High Volta	
S 102 A056-130 +		Shielded (S) or Environmental (E) Cable Clamp Set diameter should be added to the connector part number separated by ø.	
Examples Connector ordering line		Examples For S - Shielded Clamp Sets	
S 102 A056-130 +		K 103 A002-600 ø6.2	
Clamp Set ordering line		For E - Environmental Clamp Sets	
E3 102.5/2.0		KE 103 A	002-600 ø6.2
See following pages for Cable Clamp Set selection.		See following pages for S	or E Cable Clamp Set selection.



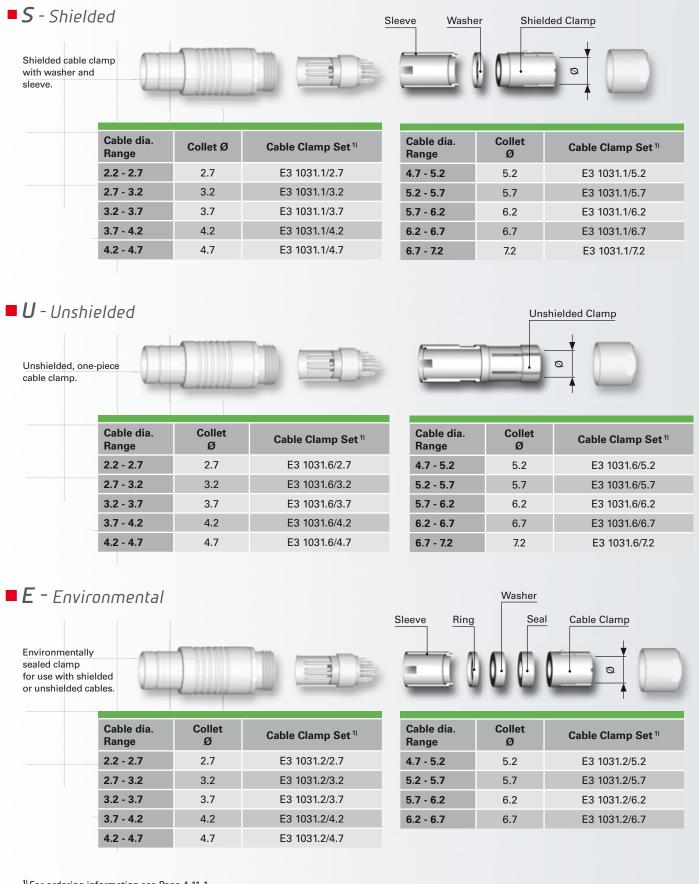


¹⁾ For ordering information see Page 4-11-1.



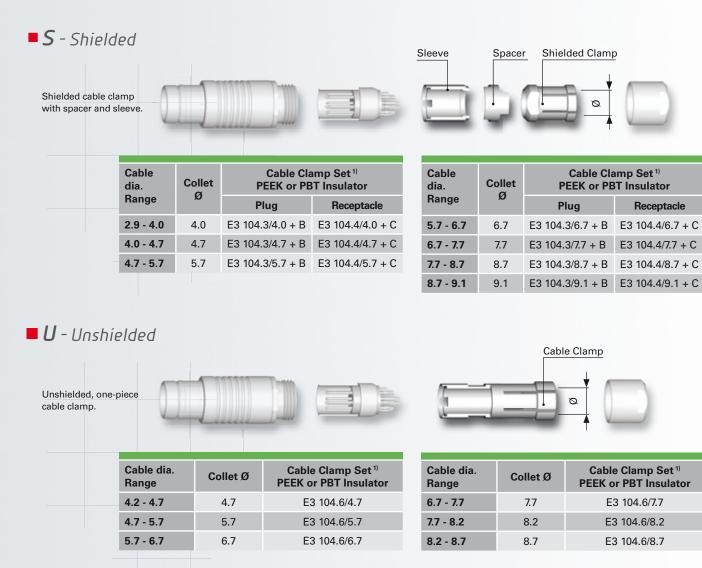






¹⁾ For ordering information see Page 4-11-1.



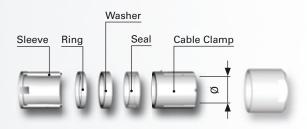


E - Environmental

Environmentally sealed clamp for use with shielded or unshielded cables.



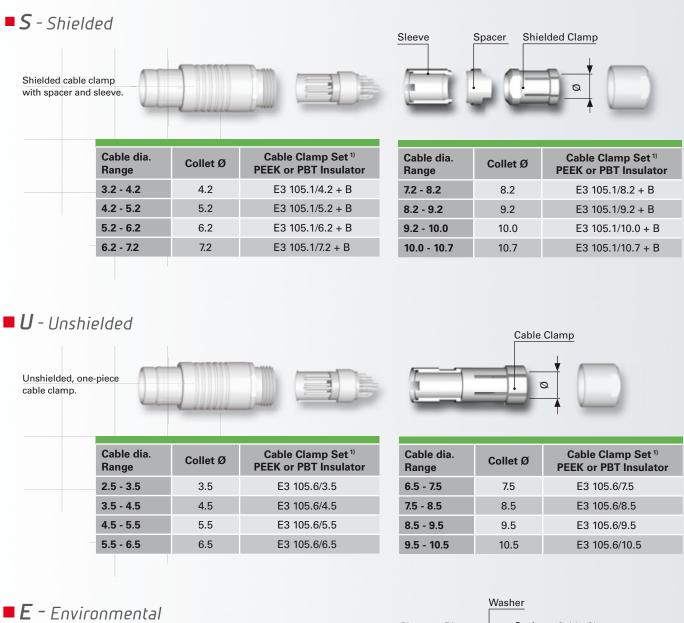
Cable dia.	Collet	Cable Cla PEEK or PB	
Range	Ø	Plug	Receptacle
2.9 - 4.0	4.0	E3 104.2/4.0 + B	E3 104.2/4.0 + C
4.0 - 4.7	4.7	E3 104.2/4.7 + B	E3 104.2/4.7 + C
4.7 - 5.7	5.7	E3 104.2/5.7 + B	E3 104.2/5.7 + C



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

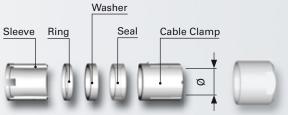




Environmentally sealed clamp for use with shielded or unshielded cables.



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

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

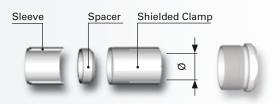


S - Shielded

Shielded cable clamp with spacer and sleeve.



Cable dia. Range	Collet	Cable Clamp Set ¹⁾ PTFE Insulator		
	Ø	Standard	DKBE Long Housings	
4.2 - 5.2	5.2	E3 106.1/5.2	E3 106.3/5.2	
5.2 - 6.2	6.2	E3 106.1/6.2	E3 106.3/6.2	
6.2 - 7.2	7.2	E3 106.1/7.2	E3 106.3/7.2	
7.2 - 8.2	8.2	E3 106.1/8.2	E3 106.3/8.2	
8.2 - 9.2	9.2	E3 106.1/9.2	E3 106.3/9.2	
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	Cable Clamp Set ¹⁾ PTFE Insulator		
	Ø	Standard	DKBE Long Housings	
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	

Shielded cable clamps with washers and sleeves.

E - Environmental



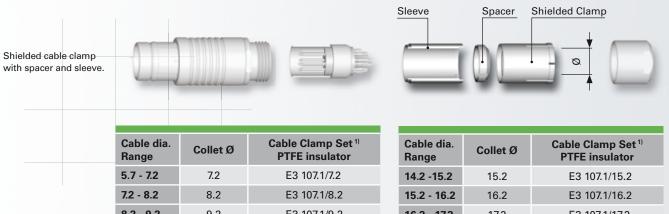
Cable dia. Range	Collet	Cable Clamp Set ¹⁾ PTFE Insulator		
	Ø	Standard	DKBE Long Housings	
4.2 - 5.2	5.2	E3 106.2/5.2	E3 106.4/5.2	
5.2 - 6.2	6.2	E3 106.2/6.2	E3 106.4/6.2	
6.2 - 7.2	7.2	E3 106.2/7.2	E3 106.4/7.2	
7.2 - 8.2	8.2	E3 106.2/8.2	E3 106.4/8.2	
8.2 - 9.2	9.2	E3 106.2/9.2	E3 106.4/9.2	
9.2 - 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	Cable Clamp Set ¹⁾ PTFE Insulator	
	Ø	Standard	DKBE Long Housings
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

¹⁾ For ordering information see Page 4-11-1.



S - Shielded



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



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)

Ring Cable Clamp



Series	Cable dia. Range	Clamp Ø	Cable Clamp Set ¹⁾			
	nalige	~	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. Banga	Clamp Ø	Cable Cla	Imp Set ¹⁾
	Range	<i>D</i>	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











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



5-3

5-3-1

Cable Mounted Plugs



Panel Mounted Receptacle



Body Style Selection (D)	5-4
Dimensions	5-4-1
Panel Cut-Outs	4-8

For all Multipole High Voltage

Electrical & Contact Specifications	5-5
Options	4-10
Insulating Clamp Sets	5-6
Cable Assembly	
Accessories	
Tooling	
Technical Information	



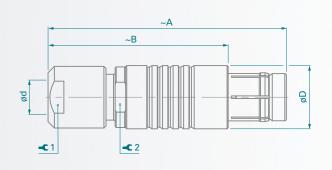
Body	Style	S	SA	sv	Links to Detailed Information			
Protection	Unsealed (IP50)	•	•	•	Seeled and Harmatic Connectors Days 12.9			
Prote	Sealed up to IP68	•	•	٠	Sealed and Hermetic Connectors Page 13-8			
E	None							
Locking System	Push-Pull	•	•	٠				
	Emergency Release				Plug Locking Systems Page 2-7			
	Lanyard		•					
_	Tamperproof			•				
Contacts	Crimp				Electrical & Contact			
Con	Solder	•	•	•	Specifications Page 5-5			
Housing Color	Natural Chrome	•	•	•	Options Page 4-10			
чо	Black Chrome	•	•					
Design	Shortened Body							
Des	Right Angle				Core Series Overview Page 2-1			
0	Cable Clamp Sets	٠	٠	•	Insulating Clamp Sets Page 5-6			
Cabling	Overmoldable							
ö	Heat Shrinkable				Cable Assembly Section 3			
ies	Cable Bend Reliefs	•	•	•				
Accessories	Protective Sleeves	•			Accessories Section 11			
Acce	Sealing Caps	•	•	•				
	102 Series							
	103 Series				Dimensions Page 5-3-1			
	1031 Series							
Size	104 Series	٠	•	٠	For more Information Visit:			
	105 Series	•	•	•	www.fischerconnectors.com			
	106 Series	•		•	/technical			
	107 Series	٠		•				

Plugs mate with receptacles.

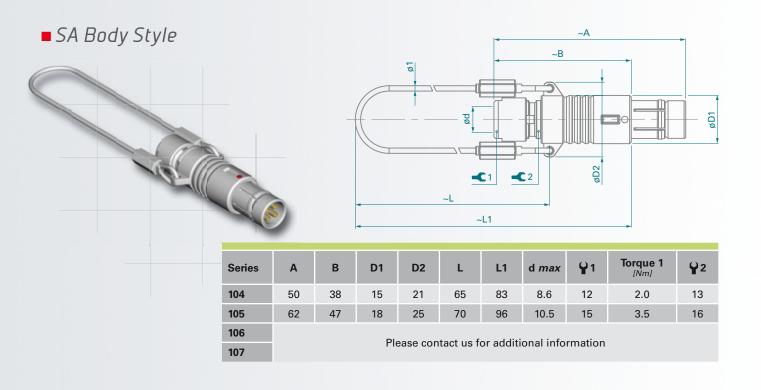


S Body Style





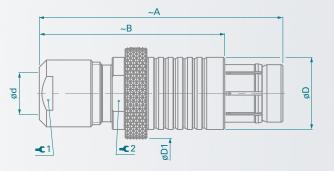
Series	А	В	D	d <i>max</i>	¥ 1	Torque 1 [Nm]	¥ 2
104	50	38	15	8.6	12	2.0	13
105	62	47	18	10.5	15	3.5	16
106	80	55	30	18.5	22	8.0	-
107	110	85	34	22.7	32	10.0	32





SV Body Style





Series	А	В	D	D1	d <i>max</i>	¥ 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

Multipole High Voltage Body Style Selection



Panel Mounted Receptacle

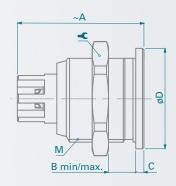
		Ð					
Body	Body Style		Links to Detailed Information				
ion	Unsealed (IP50)	•					
Protection	Sealed up to IP68	1)	Sealed and Hermetic Connectors Page 13-8				
P	Hermetic	1)					
cts	Crimp						
Contacts	Solder	•	Electrical & Contacts Specifications Page 5-5				
	РСВ						
Housing Color	Natural Chrome	•	Options Page 4-10				
Hou Co	Black Chrome	•	Options Fage 4-10				
	Right Angle						
Design	Flush	•	Core Series Overview Page 2-1				
Des	Front Projecting		Core Series Overview Page 2-1				
	Bulkhead Feedthrough						
Assembly	Front Mounting	•	Core Series Overview Page 2-1				
Asse	Rear Mounting						
	Sealing Caps	•					
S	Spacers	•					
essories	Color-Coded Washers	•	Accessories Section 11				
Acce	Grounding Washers	•					
	Locking Washers	•					
	Decorative Nuts						
	102 Series						
	103 Series		Dimension Page 5-4-1				
O	1031 Series						
Size	104 Series	•	For more Information Visit: www.fischerconnectors.com/technical				
	105 Series	•					
	106 Series	•					
	107 Series	•					

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



D Body Style





Series	А	B min/max.	C1	D	М	Ŷ	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.

A / Z Polarity

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

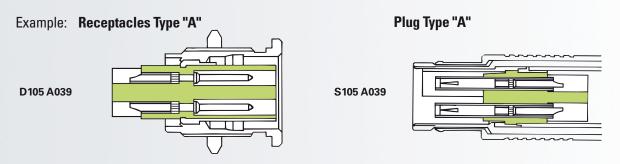
Type "A" Standard Polarity:

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.



104, 105, 106 and 107 Series

	Contact					Test Voltage ⁴⁾ [kV] in mated position						
		ú	Termi	nation				AC	rms	D	с	
Type	Pin Layout	Number of Contacts	Solder	Crimp	Insulating Material	Contact ø [mm]	Wire Barrel ø [mm]	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Current Rating ¹⁾ [A]
104 ^A 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	6.0	8.0	14
105 ^A 039		5	•		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11
106 ^A 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.

⁴⁾ Measured with S plug and D receptacle.

• = Standard \bigcirc = Option





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.



Insulating Cable Clamp Set is Included with Connector										
Multipole High Voltage	Mixed High Voltage	Mixed Coax								
Insulating Clamp Set \emptyset should be added to the connector part number separated by \emptyset (Select the collet \emptyset according to the cable clamping range) and followed by - UI (Unshielded Insulated).										
Example										
S 104 A062-130 ø 6.6 - U	I.									

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	Seri
104	104 ^A Z 062	104 <mark>A</mark> 083	104 A 078	104
			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		105
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			





DEC0 2000



Coax Low Voltage Introduction

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

Coax Low Voltage Contents



Cable Mounted Plugs



Body Style Selection (S/SC; SOV; SA; SV; WSO)	6-3
Dimensions	6-3-1

Cable Mounted Receptacles

n	Body Style Selection (K/KE)	6-4
9	Dimensions	6-4-1

Panel Mounted Receptacles



Body Style Selection (D; DEU/E; DB; DBEU/E; DBP; DBPU/E; DBPLU/E; DG; WDE)	6-5
Dimensions	6-5-2
Panel Cut-Outs	4-8

Panel Mounted Plugs

Body Style Selection (SF; SFU/E; SFPU/E)	6-6
Dimensions	6-6-1
Panel Cut-Outs	4-8

Panel Mounted Cable Receptacles



Body Style Selection (DKBE; DK; DKE)	6-7
Dimensions	6-7-1
Panel Cut-Outs	4-8

For all Coax Low Voltage

 Electrical & Contact Specifications Cable Groups for Coax, Triax and Mixed Coax Contacts Options 						
Cable Clamp Sets	6-10					
Cable Assembly	3					
Accessories	11					
Tooling	12					
Technical Information	13					



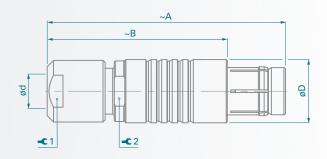
Bod	y Style	S	sc	SOV	SA	SV	wso	Links to Detailed Information				
Protection	Unsealed (IP50)	•	•	•	•	•	•	Sealed and Hermetic				
Prote	Sealed up to IP68	•	•	•	•	•	•	Connectors Page 13-8				
E	None			•								
yste	Push-Pull	•			•	•	•					
Locking System	Emergency Release		•					Plug Locking Systems Page 2-7				
-ocki	Lanyard				•			1 490 2 7				
	Tamperproof	_				•						
Contacts	Crimp							Electrical & Contact				
Cor	Solder	•	•	•	•	•	•	Specifications Page 6-8				
Housing Color	Natural Chrome	•	•	•	•	•	•	Options				
Hou Co	Black Chrome	•	•	•	•		•	Page 6-10				
Design	Shortened Body											
Des	Right Angle						•	Core Series Overview Page 2-1				
a	Cable Clamp Sets	•	•	•	•	•	•	Cable Clamp Sets Page 4-11				
Cabling	Overmoldable							See Cable Assembly				
Ü	Heat Shrinkable							Section 3				
ries	Cable Bend Reliefs	•	•	•	•	•	•					
Accessories	Protective Sleeves	•	•	•				Accessories Section 11				
Acc	Sealing Caps	•	•	•	•	•	•					
	102 Series	•	•	•	•	•	•					
	103 Series	•	•	•	•	•	•	Dimensions Page 6-3-1				
	1031 Series							Dimensional age 0-3-1				
Size	104 Series	•	•	•	•	•	•	For more Information Visit:				
	105 Series	•	•	•	•	•	٠	www.fischerconnectors.com				
	106 Series							/technical				
	107 Series											

Plugs mate with receptacles.



S / SC Body Styles

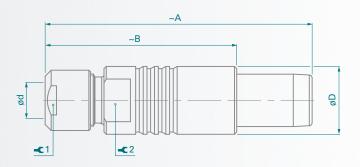




Series	А	В	D	d max Unsealed Sealed		¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.7	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

SOV Body Style



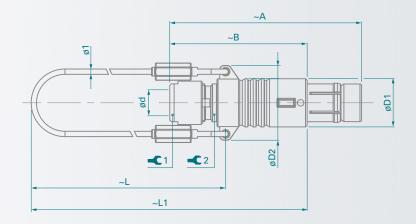


Series	А	В	D	d <i>n</i> Unsealed	1 <i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16



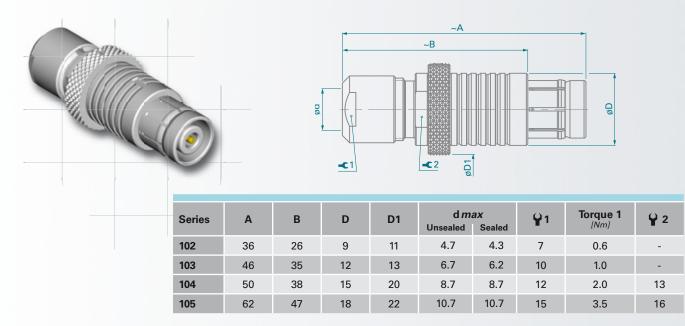
SA Body Style

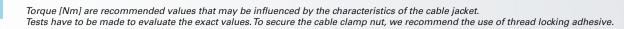




Series	А	В	D1	D2	L	L1	d <i>max</i> Unsealed Sealed						¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7				
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10				
104	50	38	15	21	65	84	8.7	8.7	12	2.0	13				
105	62	47	18	25	70	94	10.7	10.7	15	3.5	16				

SV Body Style





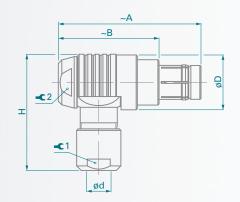
Coax Low Voltage Dimensions



Cable Mounted Plugs

WSO Body Style

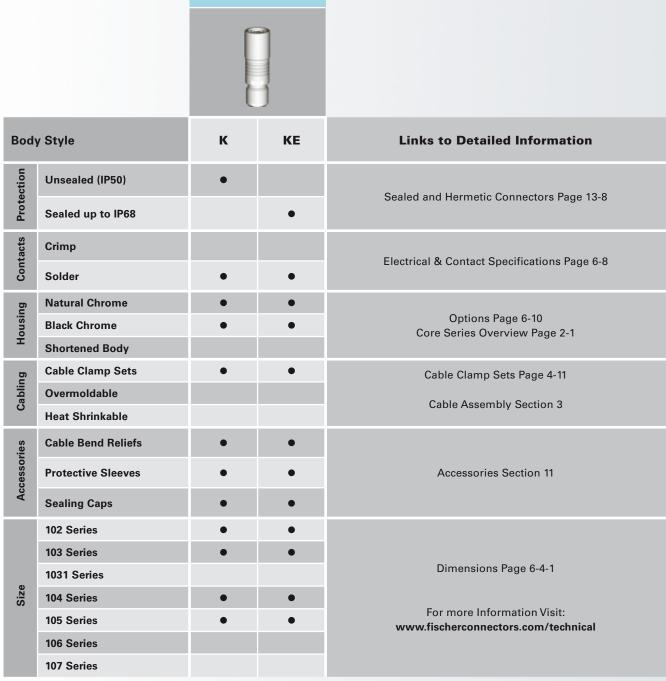




Series	А	в	D	н	d <i>max</i>		Q 1	Torque 1	¥ 2	Torque 2
Selles	A	D	5		Unsealed	Sealed	• •	[Nm]	• 2	[Nm]
102	33	23	12	25	4.7	4.3	7	0.6	8	1.0
103	38	27	15	31	6.7	6.2	10	1.0	11	1.3
104	45	32	19	37	8.7	8.7	12	2.0	14	2.5
105	53	38	23	45	10.7	10.7	15	3.5	17	3.5



Cable Mounted Receptacles

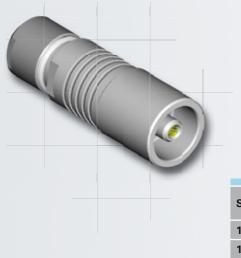


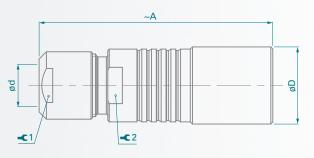
Plugs mate with receptacles.



Cable Mounted Receptacles

K / KE Body Styles





Series	А	D	d <i>max</i> Unsealed 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
104	50	16	8.7	8.7	12	2.0	13
105	60	19	10.7	10.7	15	3.5	16



		f				ţ	1	9
Body	y Style	D	DEU	DEE	DB	DBEU	DBEE	DBP
uo	Unsealed (IP50)	•			•			•
Protection	Sealed up to IP68		•	•		٠	٠	
Pro	Hermetic			•			•	
ts	Crimp							
Contacts	Solder	٠	•	•	•	٠	•	•
ပိ	РСВ							
Housing Color	Natural Chrome	•	•	•	•	•	•	•
Hou Co	Black Chrome	•	•	•	•	•	•	•
	Right Angle							
Design	Flush	•	•	•				•
De	Front Projecting				•	•	•	
	Bulkhead Feedthrough							
Assembly	Front Mounting	•	•	•	•	•	•	
Asse	Rear Mounting							٠
	Sealing Caps	•	•	•	•	•	•	•
es	Spacers	•	•	•	•	•	•	•
ssori	Color-Coded Washers	•			•			•
Accessories	Grounding Washers	•	•	•	•	•	•	•
4	Locking Washers	•	•	•	•	•	•	•
	Decorative Nuts							•
	102 Series	•	•	•	•	•	•	•
	103 Series	•	•	•	•	•	•	•
۵	1031 Series							
Size	104 Series	•	•	•	•	•	•	•
	105 Series	•	•	•	•	•	•	•
	106 Series							
	107 Series							

Plugs mate with receptacles.



		Ę		Ð	ł	
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

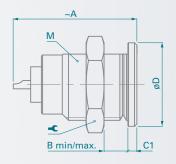


Coax Low Voltage Dimensions

Panel Mounted Receptacles

D Body Style



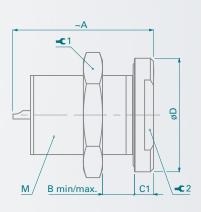


Series	А	B min/max.	C1	D	М	Ŷ	Torque 1 [Nm]
102	19	0/9	1.5	11	9x0.5	11	1.3
103	23	0/8	1.5	14	12x1	14	2.5
104	25	0/11	2.2	19	15x1	17	4.0
105	32	0/15	2.0	22	18x1	22	6.0

DEU / DEE Body Styles



6-5-2



Series	А	B min/max.	C1	D	М	¥ 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	-

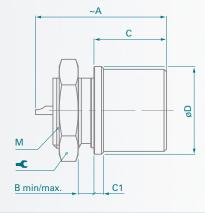
Coax Low Voltage Dimensions



Panel Mounted Receptacles

DB Body Style

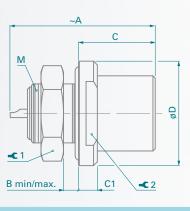




Series	А	B min/max.	с	C1	D	М	Ŷ	Torque [Nm]
102	18	0/3	11.0	1.0	11	9x0.5	11	1.3
103	21	0/4	11.5	1.5	14	12x1	14	2.5
104	26	0/3	14.5	2.5	19	16x1	19	4.5
105	33	0/7	19.0	2.0	22	18x1	22	6.0

DBEU / DBEE Body Styles



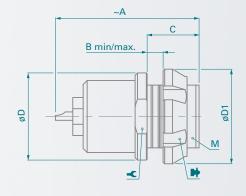


Series	А	B min/max.	С	C1	D	М	¥ 1	Torque 1 [Nm]	¥ 2
102	20	0/3.5	10.2	2.5	14	9x0.5	11	1.3	11
103	23	0/4.0	13.0	3.0	18	14x1	17	3.0	14
104	30	0/3.5	16.0	4.0	22	16x1	19	4.5	17
105	32	0/5.0	19.0	4.0	27	18x1	22	6.0	22



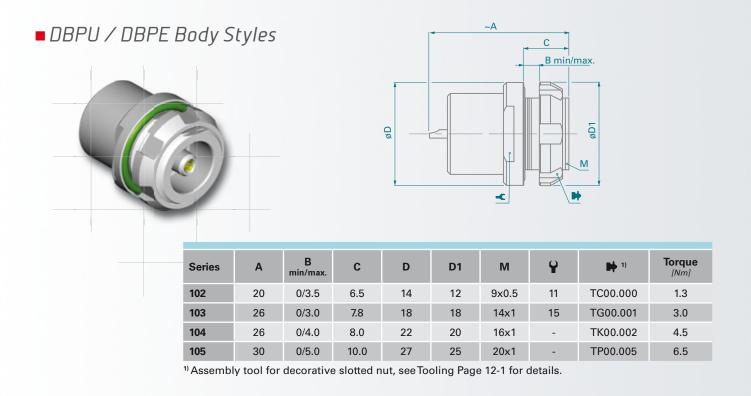
DBP Body Style





Series	А	B min/max.	С	D	D1	М	Ŷ	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.

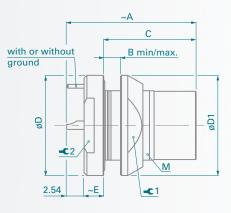


Torque [Nm] are recommended values that may be influenced by the quality of the surface under the nut. Tests have to be made to evaluate the exact values.



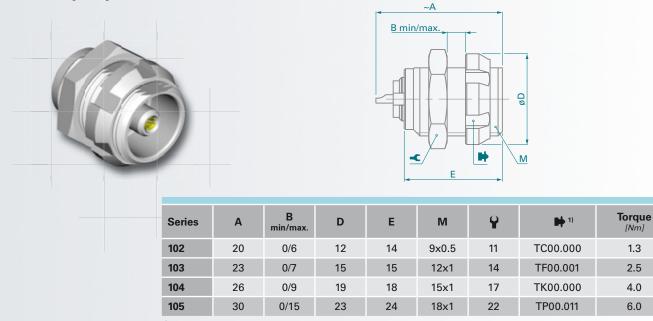
DBPLU / DBPLE Body Styles





Series	А	B min/max.	С	D	D1	М	¥ 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

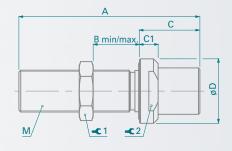


¹⁾ Assembly tool for decorative slotted nut, see Tooling Page 12-1 for details.



WDE Body Style for 102, 103 and 104 Series

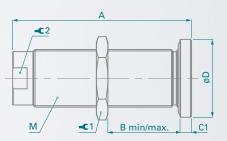




Series	А	B min/max	с	C1	D	М	¥ 1	Torque 1 [Nm]	¥ 2
102	39	0/23	13	4	14	9x0.5	11	1.3	11
103	40	0/23	14	4	17	12x1	14	2.5	14
104	40	0/21	16	4	22	15x1	17	4.0	17

■ WDE Body Style for 105 Series





Series	А	B min/max	С	C1	D	М	¥ 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.

Coax Low Voltage Body Style Selection



Panel Mounted Plugs

		8	Į		1		
Body	/ Style	SF	SFU	SFE	SFPU	SFPE	Links to Detailed Information
uo	Unsealed (IP50)	•					
Protection	Sealed up to IP68		•	•	•	•	Sealed and Hermetic Connectors Page 13-8
Pre	Hermetic			•		•	Ŭ
its	Crimp						
Contacts	Solder	•	•	•	•	•	Electrical & Contacts Specifications Page 6-8
	РСВ						
Housing Color	Natural Chrome	•	•	•	•	•	Options Page 6-10
Hot	Black Chrome	•	•	•	•	•	Options 1 age 0-10
Assembly	Front Mounting	•	•	•			Core Series Overview Page 2-1
Asse	Rear Mounting				•	•	
	Sealing Caps	•	•	•	•	•	
	Spacers	•	•	•	•	•	
ories	Color-Coded Washers	•					Accessories Section 11
Accessories	Insulating Washers	•					
Ac	Grounding Washers	•	•	•			
	Locking Washers	•	•	•	•	•	
	Decorative Nuts				•	•	
	102 Series	•	•	•	•	•	
	103 Series	•	•	•	•	•	
	1031 Series						Dimensions Page 6-6-1
Size	104 Series	•	•	•	•	•	For more Information Visit: www.fischerconnectors.com
	105 Series	•	•	•	•	•	/technical
	106 Series						
	107 Series						

Plugs mate with receptacles.



¥ 2

9 12

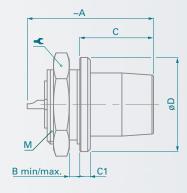
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Panel Mounted Plugs

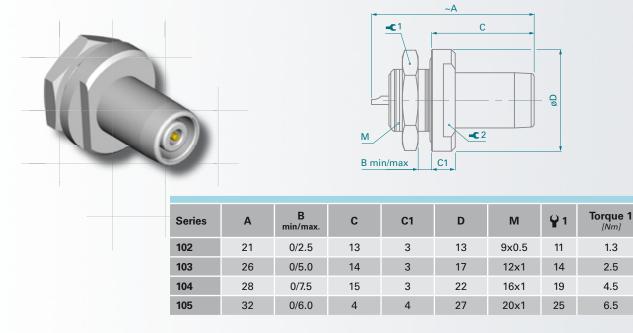
SF Body Style





Series	А	B min/max.	С	C1	D	М	Ŷ	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

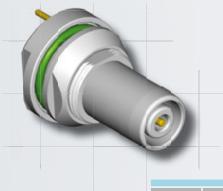
SFU / SFE Body Styles

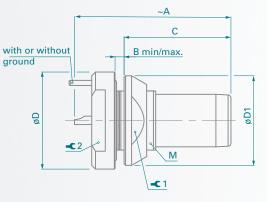




Panel Mounted Plugs

SFPU / SFPE Body Styles





Series	А	B min/max.	с	D	D1	М	¥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



Panel Mounted Cable Receptacles

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

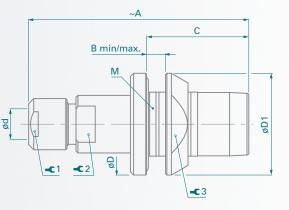
Plugs mate with receptacles.



Panel Mounted Cable Receptacles

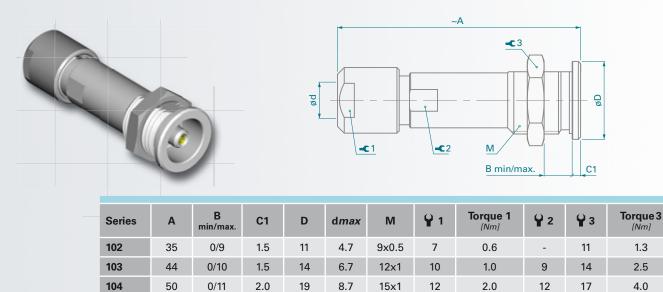
DKBE Body Style





-	Series	А	B min/max.	с	D	d <i>max</i>	D1	М	¥ 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



60

0/16

2.0

22

10.7

18x1

15

3.5

22

14

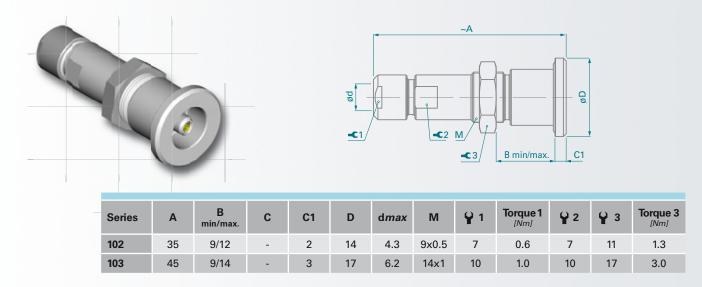
6.0

105

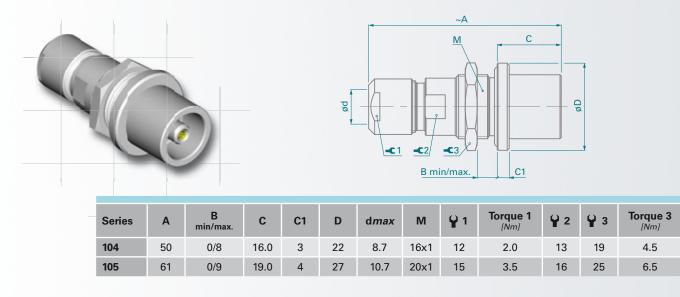


Panel Mounted Cable Receptacles

DKE Body Style for 102 and 103 Series



DKE Body Style for 104 and 105 Series





102, 103, 104 and 105 Series

		Con								Test Volt	age³⁾ [kV] position		
		Termiı	nation						AC	rms	D	С	
Type	Pin Layout	Solder	Crimp	Insulating Material	Cable Group ¹⁾	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Current Rating ² [A]
102 A 001		٠		PTFE	1 3 5	1.6	1.2	-	1.8	-	2.5	-	14
102 ^A 002 Z		٠		PTFE	1 2 3	0.9	0.8	50	3.0	-	5.0	-	10
102 A 017	$\textcircled{\bullet}$	٠		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	$\textcircled{\textcircled{0}}$	•		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 002		•		PTFE	5 6 7 8	3.0	2.8	50	4.8	-	7.0	-	30
105 ^A 090	\bigcirc	•		PTFE	6 7	1.3	1.2	75	6.4	-	11	-	13

• = Standard \bigcirc = Option

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



For Coax, Triax and Mixed Coax Connectors

Gr.	Designation	Impedance	Cente	er Conduct	tor	Die	lectric	Cable	e Screen	Cable	Jacket	IEC Publication
No	US MIL-C-17	ohms	Constr	uction	ø [mm]	ø [mm]	Material	ø [mm]	Material	ø [mm]	Material	or Manufacturer
0	RG-178B/U RG-196A/U	50±2 50±2	7 x 0.1 7 x 0.1	AcCuAg AcCuAg	0.3 0.3	0.84 0.84	PTFE PTFE	1.3 1.3	CuAg CuAg	1.8 2.0	FEP PTFE	50-1-1 50-1-2
1	RG-174A/U RG-174/U RG-178B/U RG-188A/U RG-196A/U RG-316/U RG-179B/U LiYCY 1 x 0.14 mm ² LifYCY 1 x 0.04 mm ²	50±2 50±2 50±2 50±2 50±2 75±3 1) 2)	$7 \times 0.167 \times 0.167 \times 0.17 \times 0.187 \times 0.17 \times 0.187 \times 0.118 \times 0.120 \times 0.05$	AcCu AcCuAg AcCuAg AcCuAg AcCuAg AcCuAg AcCuAg CuSn CuSn	$\begin{array}{c} 0.48\\ 0.48\\ 0.3\\ 0.54\\ 0.3\\ 0.54\\ 0.3\\ 0.5\\ 0.4\\ \end{array}$	1.5 1.5 0.84 1.5 0.84 1.5 1.5 1.1 0.8	PE PE PTFE PTFE PTFE PTFE PVC PVC	2.0 2.0 1.3 2.0 1.3 2.0 2.0 1.6 1.3	CuSn CuAg CuAg CuAg CuAg CuAg CuAg CuSn CuSn	2.8 2.6 1.8 2.6 2.0 2.5 2.6 2.4 1.6	PVC PVC FEP FEP PTFE FEP FEP PVC PVC	50-2-1 50-1-1 50-2-3 50-1-2 50-2-2 75-2-1
2	RG-180B/U BELDEN 8218	95±5 75±3	7 x 0.1 7 x 0.14	AcCuAg AcCu	0.3 0.43	2.6 2.54	PTFE PE	3.1 3.0	CuAg CuSn	3.6 3.81	FEP PVC	Belden(USA)
3	RG-122/U LiYCY 1 x 0.25 mm ² LiYCY 1 x 0.38 mm ²	50±2 1) 2)	27 x 0.13 14 x 0.15 19 x 0.16	CuSn CuSn CuSn	0.8 0.66 0.8	2.5 1.3 1.4	PE PVC PVC	3.2 1.8 2.0	CuSn CuSn CuSn	4.1 2.6 2.9	PVC PVC PVC	
4	RG-58C/U RG-141A/U RG-142B/U RG-303/U RG-400/U	50±2 50±2 50±2 50±2 50±2 50±2	19 x 0.18 1 x 0.95 1 x 0.95 1 x 0.95 19 x 0.2	CuSn AcCuAg AcCuAg AcCuAg CuAg	0.9 0.95 0.95 0.95 1.0	2.95 2.95 2.95 2.95 2.95 2.95	PE PTFE PTFE PTFE PTFE	3.6 3.6 4.3 3.6 4.3	CuSn CuAg 2x CuAg CuAg 2x CuAg	5.0 4.8 5.0 4.3 5.0	PVC PTFE FEP FEP FEP	50-3-1 50-3-7
5	LiYCY 1 x 0.50 mm ² LiYCY 1 x 0.75 mm ² LifYCY 1 x 0.50 mm ² LifYCY 1 x 0.75 mm ²	1) 1) 2) 2)	16 x 0.2 24 x 0.2 256 x 0.05 384 x 0.05	CuSn CuSn CuSn CuSn	0.95 1.2 1.0 1.2	1.8 2.0 2.0 2.2	PVC PVC PVC PVC	2.4 2.6 2.6 2.8	CuSn CuSn CuSn CuSn	3.1 3.2 3.2 3.6	PVC PVC PVC PVC	
6	RG-59B/U RG-223/U RG-302/U	75±3 50±2 75±3	1 x 0.6 1 x 0.89 1 x 0.64	AcCu CuAg AcCuAg	0.6 0.89 0.64	3.7 2.95 3.7	PE PE PTFE	4.5 4.2 4.4	Cu 2x CuAg CuAg	6.1 5.4 5.1	PVC PVC FEP	50-3-5 75-4-6
7	RG-212/U RG-222/U SUHNER G 05232 RG-6A/U	50±2 50±2 50±2 75±3	1 x 1.35 1 x 1.37 7 x 0.5 1 x 0.73	CuAg CrNi Cu AcCu	1.35 1.37 1.5 0.73	4.7 4.7 4.8 4.7	PE PE PE PE	6.2 6.2 5.6 6.2	2x CuAg 2x CuAg Cu CuAg	8.5 8.5 7.4 8.5	PVC PVC PVC PVC	Suhner (CH)
8	RG-115A/U RG-165/U RG-213/U RG-11A/U	50±2 50±2 50±2 75±3	7 x 0.75 7 x 0.82 7 x 0.75 7 x 0.4	CuAg CuAg Cu CuSn	2.25 2.46 2.25 1.2	6.5 7.25 7.25 7.25 7.25	PTFE PTFE PE PTFE	8.0 8.0 8.2 8.2	2 x CuAg CuAg Cu Cu Cu	10.5 10.4 10.3 10.3	PTFE PTFE PVC PVC	50-7-8 50-7-1 75-7-1
9	RG-214/U RG-217/U RG-280/U RG-12A/U RG-34B/U	50±2 50±2 50±2 75±3 75±3	7 x 0.75 1 x 2.7 1 x 2.9 RG-11A/U 7 x 0.62		2.25 2.7 2.9 I with zin 1.86		PE PE PTFE steel braid PE	8.7 11.2 9.8 11.8 12.4	2 x CuAg 2 x Cu 2 x CuAg FeZn Cu	10.8 13.8 12.2 14.0 16.0	PVC PVC PVC PVC PVC	
10	RG-177/U RG-218/U RG-164/U	50±2 50±2 75±3	1 x 5.0 1 x 5.0 1 x 2.65	Cu Cu Cu	5.0 5.0 2.65	17.3 17.3 17.3	PE PE PE	18.8 18.6 18.6	2x CuAg Cu Cu	22.7 22.1 22.1	PVC PVC PVC	50-17-1 75-17-1
11	RG-403/U Triaxal RG-178 Type Triax SUHNER G 02332 Triaxial	50±2 50±2 50±2	7 x 0.1 7 x 0.1 7 x 0.15	AcCuAg AcCuAg Cu	0.3 2. scr 0.49	0.84 een and 1.6 een and 1.5 een and	PTFE jacket: PE	1.3 2.4 1.8 2.9 2.0 3.0	CuAg CuAg CuAg CuAg Cu Cu	1.9 3.1 2.6 3.6 2.55 4.25	FEP FEP FEP FEP PVC PVC	Habia (UK) Filotex (F) Suhner (CH)
12	BELDEN 9222 RG-58 Type Triax	50±2	7 x 0.32	CuSn	0.93 2. scr	2.95 een and	PE jacket:	3.5 5.2	CuSn CuSn	4.65 6.1	PE PVC	Belden (USA)

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. Leaend

Cu	Plain copper wire
CuAg	Silver plated copper wire
CuSn	Tin plated copper wire
StCu	Copper-clad steel wire
StCuAg	Copper-clad steel wire, silver plated

6-9

- FEP Fluorethylenepropylene FPE Foam polyethylene
- CSM Hypalon ® (DuPont)
- PE Polyethylene
- PTFE Polytetrafluorethylene PVC
 - Polyvinyl chloride



Coax Low and High Voltage, Triax & Mixed Coax

1	Housing Color Which housing color do you need?		CHROME 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	So	lder	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
	Ν	Nickel plated body with bright finish
	E	EPDM interface O-ring
Receptacles	G	Ground tag
nooptuoloo	В	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











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





Body Style Selection (S/SE; SV/SVE)	7-3
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Panel Mounted Receptacles



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For all Coax High Voltage

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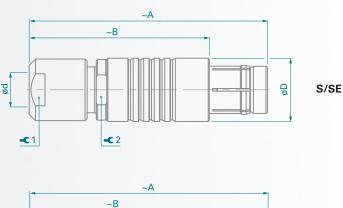


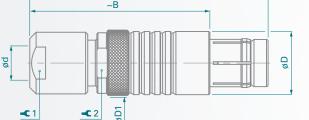
Body Style		S	SE	sv	SVE	Links to Detailed Information
Protection	Unsealed (IP50)	•		•		Sealed and Hermetic Connectors Page 13-8
Prote	Sealed up to IP68		•		•	Sealed and Hermetic Connectors rage 15-6
E	None					
/ster	Push-Pull	•	•	•	•	
ng S	Emergency Release					Plug Locking Systems Page 2-7
Locking System	Lanyard					
	Tamperproof			•	•	
Contacts	Crimp					Electrical & Contact
	Solder	•	•	•	•	Specifications Page 7-5
Housing Color	Natural Chrome	•	•	•	•	Options Page 6-10
Hoi	Black Chrome	•	•			
Design	Shortened Body					Care Series Overview Bare 2.1
Des	Right Angle					Core Series Overview Page 2-1
ß	Cable Clamp Sets	•	•	•	•	Cable Clamp Sets Page 4-11
Cabling	Overmoldable					Cable Assembly Section 3
0	Heat Shrinkable					
ries	Cable Bend Reliefs	•	•	٠	•	
Accessories	Protective Sleeves	•	•			Accessories Section 11
Act	Sealing Caps	•	•	•	•	
	102 Series	•	•	•	•	
	103 Series	•	•	•	•	
	1031 Series					Dimensions Page 7-3-1
Size	104 Series	•	•	•	•	
	105 Series	•	•	•	•	For more Information Visit: www.fischerconnectors.com/technical
	106 Series					
	107 Series	•	•	•	•	



S/SE and SV/SVE Body Styles







SV/SVE

Туре	А	в	D	D1		d <i>max</i>		Torque 1	₽ 2
					Unsealed	Sealed	¥ 1		_
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 2 023	46	35	12	13	6.7	6.2	10	1.0	10
104 A 010	50	38	15	20	8.7	8.7	12	2.0	13
105 ^A 2 004	62	47	18	22	10.7	10.7	15	3.5	16
105 ^A 2 005	62	47	18	22	10.7	10.7	15	3.5	16
105 A Z ⁴⁾ 049	90	60	18	22	10.7	10.7	15	3.5	16
105 A 108 ²⁾	100	60	18	-	10.7	-	15	3.5	16
107 ^A 2 003	110	85	34	38	22.7	-	32	10	32
107 A 004	137	112	34	38	22.7	-	30	10	32
107 A 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.

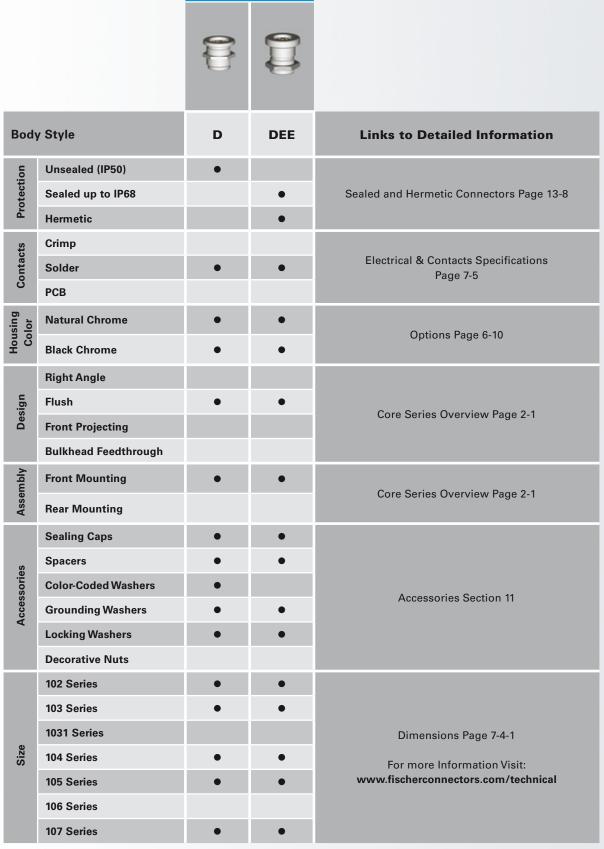
Suitable Coax cables are indicated in the column "Cable Group" in Electrical & Contact specifications. The cable specifications are listed on page 6-9. If required, we will supply adapter sleeves which must be placed over the cable dielectric during assembly in order to guarantee proper performance.

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".

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

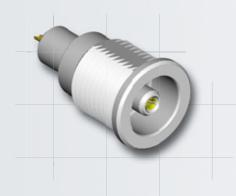
Tests have to be made to evaluate the exact values. To secure the cable clamp nut, we recommend the use of thread locking adhesive.

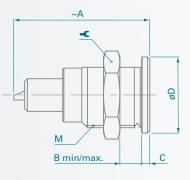






D Body Style





Types	А	В	С	D	М	Ŷ	Torque
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		min/max.		_			[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 ^{A²⁾} 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

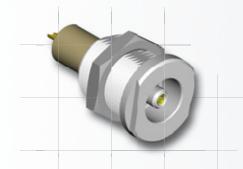
¹⁾Also available with an optional micro switch.

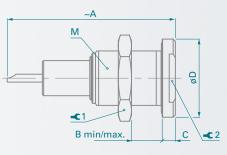
²⁾For insertion of center contact which has to be assembled after wiring we recommend tool TP00.000, as shown on page 12-3.

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



DEE Body Style





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

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

²⁾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.

7-4-2



102, 103, 104 , 105 and 107 Series

											• = 3ta		= Option
			Contact Termination							Test Volt	a ge⁷⁾ [kV] I position		
		Termi	nation						AC rms		DC		
Type	Pin Layout	Solder	Crimp	Insulating Material	Cable Group ¹⁾	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Current Rating ² [A]
102 ^A 018		٠	٠	PTFE	1 2	0.9	0.8	-	5.0	-	8.0	-	10
102 ^A 025		٠	• ³⁾	PTFE	4	0.9	0.8	50	7.0	-	11	-	10
103 ^A _Z 023	$\textcircled{\textcircled{0}}$	•		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 004	0	•		PTFE	5 7 8	4.0	3.0	40	9.0	-	13	-	32
105 ^A Z 005 ⁴⁾⁶⁾	\bigcirc	•		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

• = Standard \bigcirc = Option

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 12 Tooling for insertion tool of contact.

 $^{\eta}$ Measured with S plug and D receptacle.









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?

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- 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

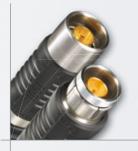
Nim-Camac



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

Triax	
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A	Body Style Selection (K/KE)	8-4
U	Dimensions	8-4-1

Panel Mounted Receptacles



Body Style Selection (D; DEU/E; DB; DBEU/E; DG;)	8-5
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Panel Mounted Plugs

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Panel Mounted Cable Receptacles



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For all Triax

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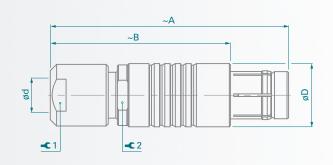


Body	y Style	S	SC	sov	SA	SV	wso	Links to Detailed Information			
Protection	Unsealed (IP50)	•	•	•	•	•	•	Sealed and Hermetic Connectors			
Prote	Sealed up to IP68	•	•	•	•	•	•	Page 13-8			
E	None			•							
Syste	Push-Pull	•			•	•	•				
ing 9	Emergency Release		•					Plug Locking Systems Page 2-7			
Locking System	Lanyard				•						
	Tamperproof					•					
Contacts	Crimp							Electrical & Contact			
Con	Solder	•	•	•	•	•	•	Specifications Page 8-8			
Housing Color	Natural Chrome	•	•	•	•	•	•	Options Page 6-10			
Hot	Black Chrome	•	•	•	•		•				
Design	Shortened Body										
Des	Right Angle						•	Core Series Overview Page 2-1			
0	Cable Clamp Sets	•	•	•	•	•	•	Cable Clamp Sets Page 4-11			
Cabling	Overmoldable										
ö	Heat Shrinkable							Cable Assembly Section 3			
ies	Cable Bend Reliefs	•	•	•	•	•	•				
Accessories	Protective Sleeves	•	•	•				Accessories Section 11			
Acc	Sealing Caps	•	•	•	•	•	•				
	102 Series	•	٠	•	•	•	•				
	103 Series	•	•	•	•	•	•				
	1031 Series							Dimensions Page 8-3-1			
Size	104 Series										
	105 Series							For more Information Visit: www.fischerconnectors.com/technical			
	106 Series										
	107 Series										



S / SC Body Styles

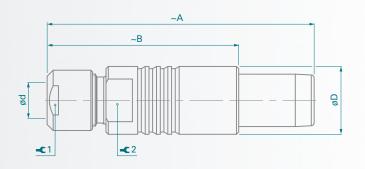




Series	А	В	D	d <i>m</i> Unsealed	a <i>x</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10

SOV Body Style



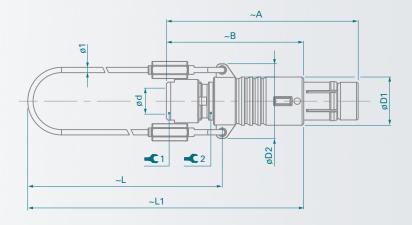


Series	А	В	D	d m Unsealed	ax Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	4.7	4.3	7	0.6	7
103	46	35	12	6.7	6.2	10	1.0	10



SA Body Style

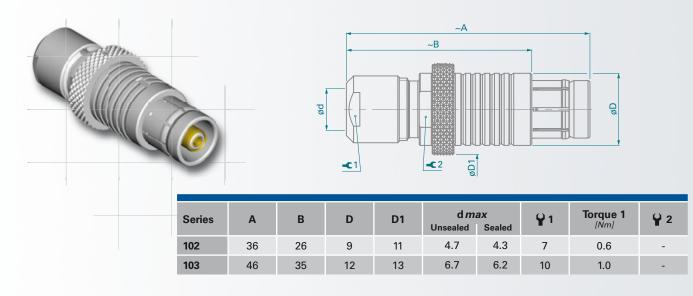




Series	А	В	D1	D2	L	L1	d <i>m</i> Unsealed	<i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	36	26	9	14	50	65	4.7	4.3	7	0.6	7
103	46	35	12	17	60	77	6.7	6.2	10	1.0	10

SV Body Style

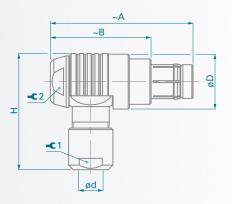
8-3-2





WSO Body Style





Series	Δ	в	D	Н	d m	nax.	Ω1	Torque 1	U 2	Torque 2
Ochico	~	5	5	••	Unsealed	Sealed	Τ'	[Nm]	Υ-	[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



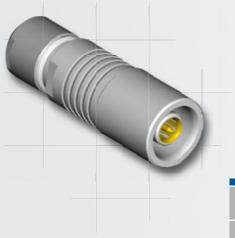
Cable Mounted Receptacles

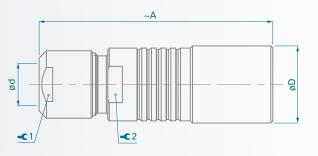
Style	к	KE	Links to Detailed Information
Unsealed (IP50)	•		Seeled and Harmetic Connectors Page 12.9
Sealed up to IP68		•	Sealed and Hermetic Connectors Page 13-8
Crimp			Electrical & Contact Specifications Page 8-8
Solder	•	•	
Natural Chrome	•	•	
Black Chrome	•	•	Options Page 6-10
Shortened Body			
Cable Clamp Sets	•	•	Cable Clamp Sets Page 4-11
Overmoldable			Cable Assembly Section 3
Heat Shrinkable			
Cable Bend Reliefs	•	•	
Protective Sleeves	•	•	Accessories Section 11
Sealing Caps	•	•	
102 Series	•	•	
103 Series	•	•	
1031 Series			Dimensions Section 8-4-1
104 Series			For more Information Visit:
105 Series			www.fischerconnectors.com/technical
106 Series			
107 Series			
	Unsealed (IP50) Sealed up to IP68 Crimp Solder Natural Chrome Black Chrome Black Chrome Shortened Body Cable Clamp Sets Cable Clamp Sets Overmoldable Cable Bend Reliefs Cable Bend Reliefs Cable Bend Reliefs Sealing Caps 102 Series 103 Series 103 Series 103 Series 104 Series 105 Series	Unsealed (IP50).Sealed up to IP68.Crimp.Solder.Solder.Natural Chrome.Black Chrome.Shortened Body.Cable Clamp Sets.Overmoldable.Heat Shrinkable.Sealing Caps.102 Series.103 Series.104 Series.105 Series.106 Series.	Unsealed (IP50)•Sealed up to IP68•Crimp·Solder·Natural Chrome•Black Chrome·Shortened Body·Cable Clamp Sets•Overmoldable·Heat Shrinkable·Cable Bend Reliefs•Sealing Caps·102 Series·103 Series·104 Series·105 Series·106 Series·Iof Series <td< td=""></td<>

fyscher

Cable Mounted Receptacles

K / KE Body Styles





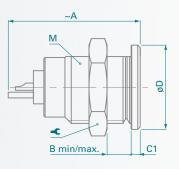
Series	А	D	d m Unsealed	a <i>x</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
102	35	10	4.7	4.3	7	0.6	7
103	43	13	6.7	6.2	10	1.0	10

		Ð				Ę		Ð	
Body	/ Style	D	DEU	DEE	DB	DBEU	DBEE	DG	Links to Detailed Information
ion	Unsealed (IP50)	•			•			•	
Protection	Sealed up to IP68		•	•		•	•		Sealed and Hermetic Connectors Page 13-8
Ţ.	Hermetic			•			•		
cts	Crimp								
Contacts	Solder	•	•	•	•	•	•	•	Electrical & Contact Specifications Page 8-8
	РСВ								
Housing Color	Natural Chrome	•	•	•	•	•	•	•	Options Page 6-10
Hot	Black Chrome	•	•	•	•	•	•	•	Options rage 0-10
	Right Angle								
Design	Flush	•	•	•				•	Core Series Overview
De	Front Projecting				•	•	•	•	Page 2-1
	Bulkhead Feedthrough								
Assembly	Front Mounting	•	•	•	•	•	•	•	Core Series Overview
Ass	Rear Mounting							•	Page 2-1
	Sealing Caps	•	•	•	•	•	•	•	
	Spacers	•	•	•	•	•	•	•	
ssories	Color-Coded Washers	•			•			•	
cesso	Insulating Washers	•	•	•	•	•	•	•	Accessories Section 11
Acce	Grounding Washers	•	•	•	•	•	•	•	
	Locking Washers	•	•	•	•	•	•	•	
	Decorative Nuts							•	
	102 Series	•	•	•	•	•	•	•	
	103 Series	•	•	•	•	•	•	•	
	1031 Series								Dimensions Page 8-5-1
Size	104 Series								For more Information Visit:
	105 Series								www.fischerconnectors.com/ technical
	106 Series								
	107 Series								
DI	nate with recentacies								



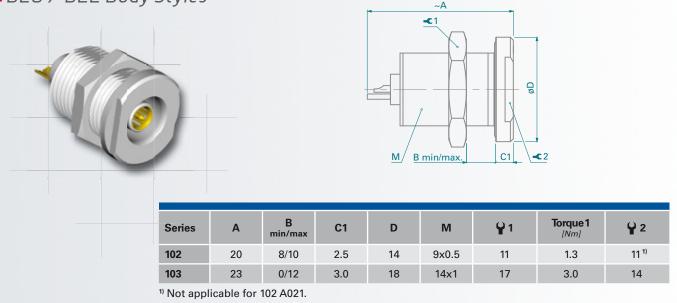
D Body Style





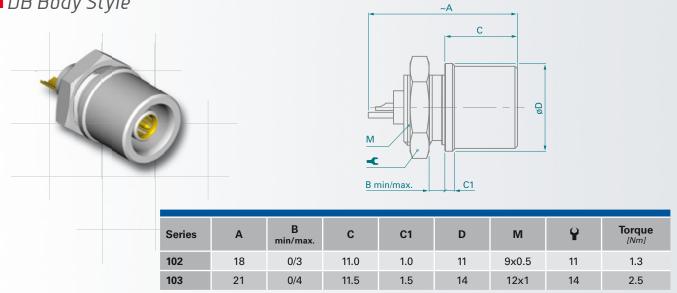
Series	А	B min/max	C1	D	Μ	Ŷ	Torque [Nm]
102	19	0/9	1.5	11	9x0.5	11	1.3
103	23	0/8	1.5	14	12x1	14	2.5

DEU / DEE Body Styles





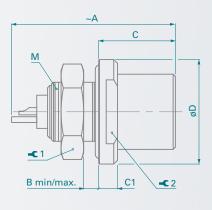
DB Body Style



DBEU / DBEE Body Styles



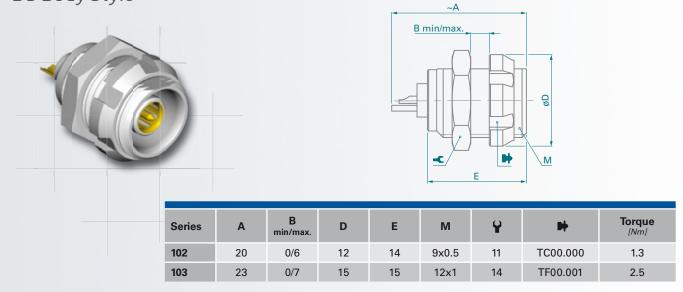
8-5-2



Series	А	B min/max.	С	C1	D	М	¥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



DG Body Style





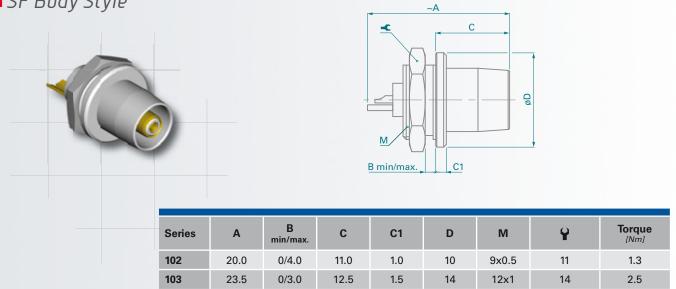
Panel Mounted Plugs

		₿	ļ		
Body	v Style	SF	SFU	SFE	Links to Detailed Information
noi	Unsealed (IP50)	•			
Protection	Sealed up to IP68		٠	•	Sealed and Hermetic Connectors Page 13-8
Pre	Hermetic			•	
its	Crimp				
Contacts	Solder	•	•	•	Electrical & Contacts Specifications Page 8-8
Ŭ	РСВ				, i i i i i i i i i i i i i i i i i i i
Housing Color	Natural Chrome	•	•	•	
Hou Co	Black Chrome	•	•	•	Options Page 6-10
nbly	Front Mounting	•	•	•	
Assembly	Rear Mounting				Core Series Overview Page 2-1
	Sealing Caps	•	•	•	
	Spacers	•	٠	•	
ries	Color-Coded Washers	•			
Accessories	Insulating Washers	•			Accessories Section 11
Ace	Grounding Washers	•			
	Locking Washers	•			
	Decorative Nuts				
	102 Series	•	•	•	
	103 Series	•	•	•	
	1031 Series				Dimensions Page 8-6-1
Size	104 Series				For more Information Visit:
	105 Series				www.fischerconnectors.com/technical
	106 Series				
	107 Series				

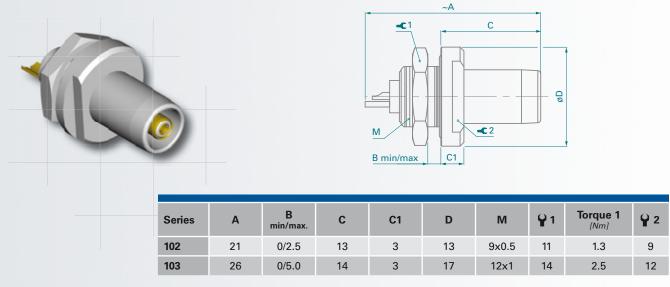


Panel Mounted Plugs

SF Body Style



SFU / SFE Body Styles





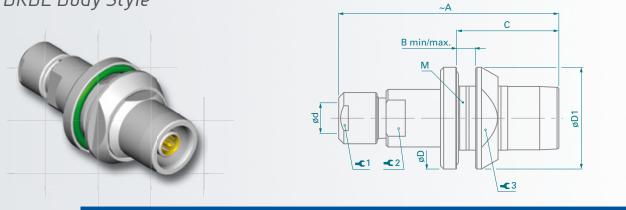
Panel Mounted Cable Receptacles

Body	/ Style	DKBE	DK	DKE	Links to Detailed Information		
Protection	Unsealed (IP50) Sealed up to IP68	•	•	•	Sealed and Hermetic Connectors Page 13-8		
Contacts	Crimp	-		-	Electrical & Contacts Specifications		
Cont	Solder	٠	•	•	Page 8-8		
Housing Color	Natural Chrome	•	•	•	Options Page 6-10		
Hot	Black Chrome	•	•	•			
Design	Flush		•		Core Series Overview Page 2-1		
De	Front Projecting	•		•			
	Panel Mounted	•	•	•			
bly	Front Mounting		•	•	Core Series Overview Page 2-1		
Assembly	Rear Mounting	•			Core Series Overview rage 2-1		
As	Cable Mounted	•	•	•			
	Cable Clamp Sets	•	•	•	Cable Clamp Sets Page 4-11		
	Cable Bend Reliefs	•	•	•			
	Sealing Caps	•	•	•			
s	Spacers	٠	•	•			
ssories	Color-Coded Washers	•	•		Accessories Section 11		
Acces	Insulating Washers						
٩	Grounding Washers	•	•	•			
	Locking Washers	•	•	•			
	Decorative Nuts	•					
	102 Series	•	•	•			
	103 Series	•	•	•			
	1031 Series				Dimensions Page 8-7-1		
Size	104 Series				For more Information Visit:		
	105 Series				www.fischerconnectors.com/technical		
	106 Series						
	107 Series						
Divers	nate with recentacles						



Panel Mounted Cable Receptacles

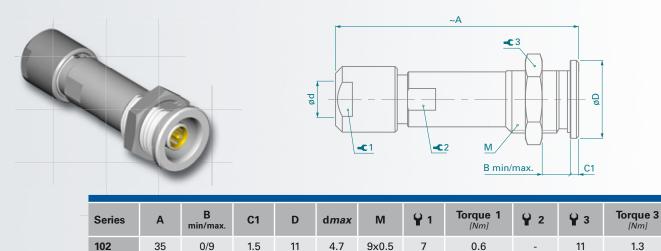
DKBE Body Style



Series	А	B min/max.	С	D	d <i>max</i>	D1	М	¥ 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

103



44

0/10

1.5

14

6.7

12x1

10

1.0

9

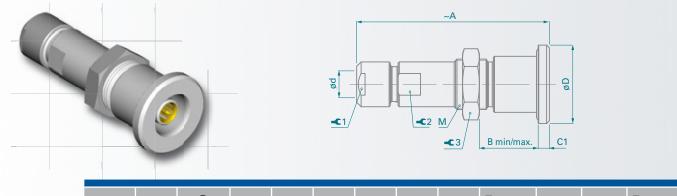
14

2.5



Panel Mounted Cable Receptacles

DKE Body Style for 102 and 103 Series



Series	Α	B min/max.	С	C1	D	d <i>max</i>	М	¥ 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





• = Standard \bigcirc = Option

102 and 103 Series

							·						option
			tact							Test Volt	t age ⁴⁾ [kV] I position		
		Termination							AC rms		D	C	
Type	Pin Layout	Solder	Crimp	Insulating Material	Cable Group ¹⁾	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohms]	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Current Rating ² /A/
102 A014		•		PTFE PEEK	11	0.9	0.8	-	1.1	1.2	1.5	1.7	10
102 A021 ⁵⁾		•		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 12Tooling, page 12-2.

⁴⁾ Measured with S plug and D receptacle. Please contact us for ratings for WSO right-angle plugs.

⁵⁾ Inverted polarity: female contact on plug/male contact on receptacle.







Mixed High Voltage Connectors

2





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





Body Style Selection (S; SV)	9-3
Dimensions	9-3-1

Panel Mounted Receptacle



Body Style Selection (D)	9-4
Dimensions	9-4-1
Panel Cut-Outs	4-8

For all Mixed High Voltage

Electical & Contact Specifications	9-5
Options	4-10
Insulating Clamp Sets	5-6
Cable Assembly	3
Accessories	
Tooling	
Technical Information	

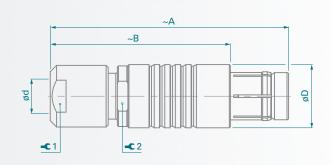


Body Style		S	sv	Links to Detailed Information
Protection	Unsealed (IP50)	•	•	Sealed and Hermetic Connectors Page 13-8
	Sealed up to IP68			
Locking System	None			Plug Locking Systems Page 2-7
	Push-Pull	•	•	
	Emergency Release			
	Lanyard			
	Tamperproof		•	
Contacts	Crimp			Electrical & Contact Specifications 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
	Overmoldable			Cable Assembly Section 3
	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	٠	٠	
	106 Series	•	•	
	107 Series			



S Body Style



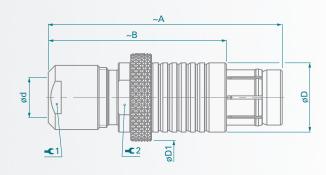


Series	А	в	D	d <i>n</i>	nax	Q 1	O 1 Torque 1		
Jelles	~	В	D	Unsealed	Sealed	T	[Nm]	¥ 2	
104	50	38	15	8.7	8.7	12	2.0	13	
105	62	47	18	10.7	10.7	15	3.5	16	
106	80	55	28	19.2	19.2	22	8.0	-	

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





Carias	٨	в	D	D1	d <i>n</i>	nax	01	Torque 1	¥ 2
Series	Α	D	U	וט	Unsealed	Sealed	Υ.	[N m]	¥ 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

		P	
Body	/ Style	D	Links to Detailed Information
Protection	Unsealed (IP50) Sealed up to IP68 Hermetic	•	Sealed and Hermetic Connectors Page 13-8
Contacts	Crimp Solder PCB	•	Electrical & Contact Specifications Page 9-5
Housing Color	Natural Chrome Black Chrome	•	Options Page 4-10
Design	Right Angle Flush Front Projecting Bulkhead Feedthrough	•	Core Series Overview Page 2-1
Assembly	Front Mounting Rear Mounting	•	Core Series Overview Page 2-1
Accessories	Sealing Caps Spacers Color-Coded Washers Grounding Washers Locking Washers Decorative Nuts	• • •	Accessories Section 11
Size	102 Series103 Series1031 Series104 Series105 Series106 Series107 Series	•	Dimensions Page 9-4-1 For more Information Visit: www.fischerconnectors.com/technical

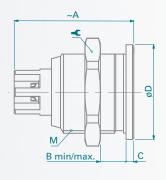
Plugs mate with receptacles.



Panel Mounted Receptacles

D Body Style

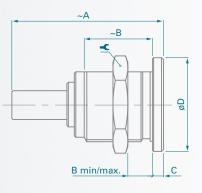




Types	А	B min/max.	С	D	Μ	Ŷ	Torque [Nm]
104 ^A _Z 083	31	0/10.5	2.2	19	15x1	17	4.0
105 A 112	34	0/15.0	2.0	22	18x1	22	6.0

D Body Style





Types	А	B min/max.	С	D	М	Ŷ	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.



• = Standard \bigcirc = Option

A / Z Polarity

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

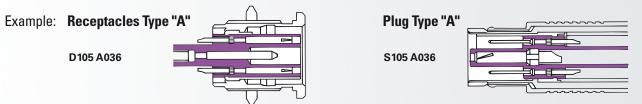
Type "A" Standard Polarity:

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 and 105 A 112.



104, 105 and 106 Series

					tact						age⁶⁾ [k position			
			ي ع		nation	_			AC	rms	D	С	~	
Type	Pin Layout	Number of Contacts		Solder	Crimp	Insulating Material	Contact ø [mm]	Wire Barrel ø [mm]	Contact to Body	Contact to Contact	Contact to Body	Contact to Contact	Current Rating [¶] [A]	
104 ^A Z 083 ⁵⁾		3	2 HT	•		PTFE	0.9	0.8	4.0	4.0	6.0	6.0	8.0	
¹⁰⁴ Z		3	1	•		PIFE	1.6	1.8	2.2	4.5	3.5	6.5	18	
405 A 000 ³⁾			1 HT	•		DTEE	2.0	2.0	6.0	6.0	14	14	20	
105 A 020 ³⁾		3	2	•		PTFE	1.3	1.1	1.8	3.8	2.5	5.0	12	
407 A 000 ³⁾			_	1 HT	•		DEEK	2.0	2.0	6.0	6.0	14	14	18
105 A 036 ³⁾		5	4	•		PEEK	1.3	1.1	1.8	2.0	2.5	3.0	12	
20 - 1 0 0 0 ³			1 HT	•			2.0	2.0	6.0	6.0	14	14	16	
105 A 060 ³⁾		8	7	•		PTFE	1.3	1.1	1.8	1.6	3.0	2.8	10	
105 A 112 ⁴⁾		F	4 HT	•		PTFE	1.3	1.2	4.5	4.5	7.0	7.0	11	
105 A 112		5	1	•		FIFE	2.0	2.0	2.0	4.5	3.0	7.0	11	
400 A 04 c ³			2 HT	•		PTFE	2.0	2.4	7.0	15	14	23	16	
106 A 014 ³⁾		8	6 •	•		FIFE	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 12 Tooling for insertion tool of contact dia. 2.0.

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

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

⁶⁾ Measured with S plug and D receptacle.







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



η.	Body Style Selection (S/SC; SOV; SA; SV)	10-3
4	Dimensions	10-3-1

Cable Mounted Receptacles

Body Style Selection (K/KE)	10-4
Dimensions	10-4-1

Panel Mounted Receptacles



Body Style Selection (D; DB; DG)	10-5
Dimensions	10-5-1
Panel Cut-Outs	4-8

Panel Mounted Plug

Body Style Selection (SF)	10-6
Dimensions	10-6-1
Panel Cut-Outs	4-8

Panel Mounted Cable Receptacles



Body Style Selection (DKBE; DK; DKE)	10-7
Dimensions	10-7-1
Panel Cut-Outs	4-8

For all Mixed Coax

Electrical & Contact Specifications	10-8
Cable Groups for Coax, Triax and Mixed Coax Connectors	6-9
Options	6-10
Insulating Clamp Sets	5-6
Cable Assembly	3
Accessories	11
Tooling	12
Technical Information	13



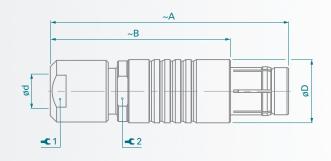
					SOV SA SV					
Body	Body Style		SC	SOV	SA	sv	Links to Detailed Information			
ction	Unsealed (IP50)	•	•	•	•	•	Sealed and Hermetic Connectors			
Protection	Sealed up to IP68	•	•	•	٠	•	Page 13-8			
_	None			•						
/sten	Push-Pull	•			•	•				
ng Sy	Emergency Release		•				Technical Information Plug Locking Systems Page 2-7			
Locking System	Lanyard				•		They Locking Systems Tage 2-7			
	Tamperproof					•				
Contacts	Crimp (Coax)	•	•	•	•	•	Electrical & Contact			
Con	Solder (Others)	Others) • • • • •	Specifications Page 10-8							
Housing Color	Natural Chrome	٠	٠	٠	•	•	Options Page 6-10			
Hou	Black Chrome	•	•	•	•		Options rage of to			
Design	Shortened Body						Care Sarias Overniew Bare 2.1			
De	Right Angle						Core Series Overview Page 2-1			
ß	Cable Clamp Sets	•	•	•	•	•	Cable Clamp Sets Page 5-6			
Cabling	Overmoldable						Cable Assembly Section 3			
0	Heat Shrinkable									
ories	Cable Bend Reliefs	•	•	•	•	•				
Accessories	Protective Sleeves	•	•	•			Accessories Section 11			
Aci	Sealing Caps	•	•	•	•	•				
	102 Series									
	103 Series									
an a	1031 Series						Dimensions Page 10-3-1			
Size	104 Series	•	•	•	•	•	For more Information Visit:			
	105 Series	•	•	•	•	•	www.fischerconnectors.com/technical			
	106 Series									
	107 Series									

Plugs mate with receptacles.



S / SC Body Styles

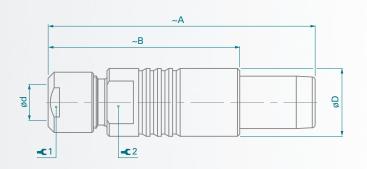




Series	А	В	D		d max Unsealed Sealed		Torque 1	¥ 2
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16

SOV Body Style





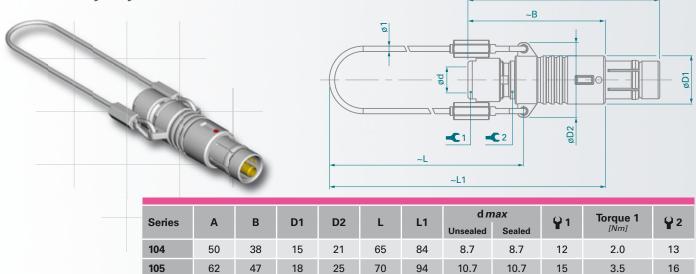
Series	А	В	D	d m Unsealed	n <i>ax</i> Sealed	¥ 1	Torque 1 [Nm]	¥ 2
104	50	38	15	8.7	8.7	12	2.0	13
105	62	47	18	10.7	10.7	15	3.5	16



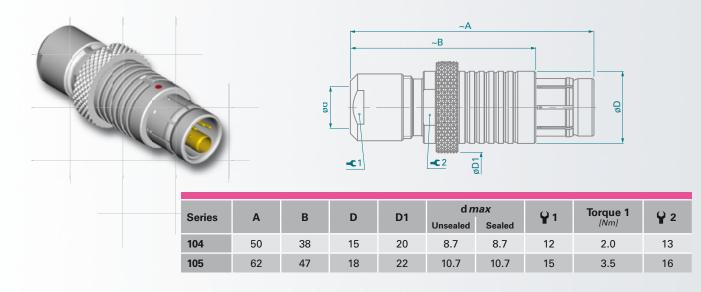
~A

Cable Mounted Plugs

SA Body Style



SV Body Style



Mixed Coax Body Style Selection



Cable Mounted Receptacles

Body	/ Style	к	KE	Links to Detailed Information		
Protection	Unsealed (IP50)	•		Cooled and Users die Comparison Bana 12.0		
Prote	Sealed up to IP68		•	Sealed and Hermetic Connectors Page 13-8		
Contacts	Crimp (Coax)	•	•	Electrical & Contact Specifications Page 10-8		
Con	Solder (Others)	•	•			
ß	Natural Chrome	•	•			
Housing	Black Chrome	Chrome • •	Options Page 6-10			
-	Shortened Body					
D	Cable Clamp Sets	•	•	Cable Clamp Sets Page 5-6		
Cabling	Overmoldable			Cable Assembly Section 3		
	Heat Shrinkable					
ries	Cable Bend Reliefs	•	•			
Accessories	Protective Sleeves	٠	•	Accessories Section 11		
Ac	Sealing Caps	٠	•			
	102 Series					
	103 Series					
	1031 Series			Dimensions Page 10-4-1		
Size	104 Series	•	•	For more Information Visit:		
	105 Series	•	•	www.fischerconnectors.com/technical		
	106 Series					
	107 Series					
Plugs	mate with receptacles.					

Plugs mate with receptacles.

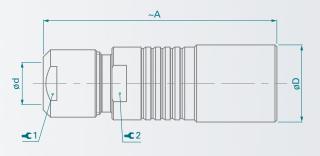


10-4-1

Cable Mounted Receptacles

K / KE Body Styles





Series	٨	D	d <i>m</i>	nax	Q 1	Torque 1	¥ 2
Selles	A	D	Unsealed	Sealed	T'	[Nm]	T 2
104	50	16	8.7	8.7	12	2.5	13
105	60	19	10.7	10.7	15	3.5	16

Mixed Coax Body Style Selection



Panel Mounted Receptacles

				Ð	
Body	y Style	D	DB	DG	Links to Detailed Information
Protection	Unsealed (IP50) Sealed up to IP68 Hermetic	•	•	•	Sealed and Hermetic Connectors Page 13-8
Contacts	Crimp (Coax) Solder (Others) PCB	•	•	•	Electrical & Contact Specifications Page 10-8
Housing Color	Natural Chrome Black Chrome	•	•	•	Options Page 6-10
Design	Right Angle Flush Front Projecting Bulkhead Feedthrough	•	•	•	Core Series Overview Page 2-1
Assembly	Front Mounting Rear Mounting	•	•	•	Core Series Overview Page 2-1
Accessories	Sealing Caps Spacers Color-Coded Washers Grounding Washers Locking Washers Decorative Nuts	• • • • • •	• • • •	• • • •	Accessories Section 11
Size	102 Series103 Series1031 Series104 Series105 Series106 Series107 Series	•	•	•	Dimensions Page 10-5-1 For more Information Visit: www.fischerconnectors.com/technical

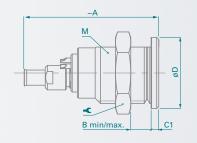
Plugs mate with receptacles.



Panel Mounted Receptacles

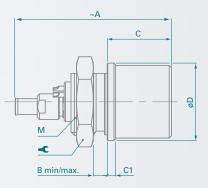
D Body Style





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





Series	А	B min/max.	С	C1	D	М	Ŷ	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





Panel Mounted Receptacles

DG Body Style

The second secon					B	min/max.			
	Series	А	B min/max.	D	E	М	Ŷ	1)	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.



Panel Mounted Plug

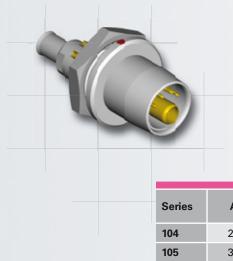
		ļ	
Body	y Style	SF	Links to Detailed Information
tion	Unsealed (IP50)	•	
Protection	Sealed up to IP68		Sealed and Hermetic Connectors Page 13-8
₽.	Hermetic		
ts	Crimp (Coax)	•	
Contacts	Solder (Others)	older (Others)	Electrical & Contact Specifications Page 10-8
0	РСВ		
Housing Color	Natural Chrome	•	Options Page 6-10
Hou Co	Black Chrome	•	Options Fage 0-10
Assembly	Front Mounting	•	Core Series Overview Page 2-1
Asse	Rear Mounting		
	Sealing Caps	•	
	Spacers	•	
ries	Color-Coded Washers	•	
Accessories	Insulating Washers	٠	Accessories Section 11
Ac	Grounding Washers	•	
	Locking Washers	•	
	Decorative Nuts		
	102 Series		
	103 Series		
	1031 Series		Dimensions Page 10-6-1
Size	104 Series	•	For more Information Visit:
	105 Series	•	www.fischerconnectors.com/technical
	106 Series		
	107 Series		
Divers	mate with receptacles.		

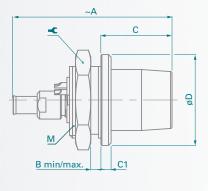
Plugs mate with receptacles.



Panel Mounted Plug

SF Body Style





Series	А	B min/max.	С	C1	D	М	Ŷ	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



Panel Mounted Cable Receptales

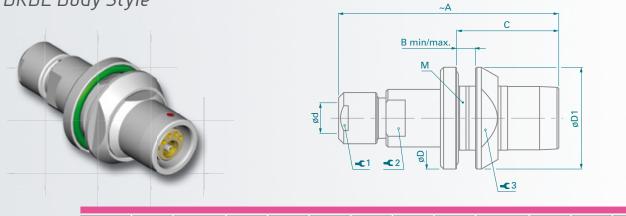
Body	/ Style	DKBE	DK	DKE	Links to Detailed Information		
ction	Unsealed (IP50)		•				
Protection	Sealed up to IP68	•		•	Sealed and Hermetic Connectors Page 13-8		
Contacts	Crimp (Coax)	•	•	•			
Cont	Solder (Others)	•	•	•	Electrical & Contact Specifications Page 10-8		
Housing Color	Natural Chrome	•	•	•	Options Page 6-10		
Hot	Black Chrome	•	•	•			
Design	Flush		•		Core Series Overview Page 2-1		
De	Front Projecting	•		•	Core Series Overview Fage 2-1		
	Panel Mounted	•	•	•			
bly	Front Mounting		•	•	Core Series Overview Page 2.1		
Assembly	Rear Mounting	•			Core Series Overview Page 2-1		
As	Cable Mounted	•	•	•			
	Cable Clamp Sets	•	•	•	Cable Clamp Sets Page 5-6		
	Cable Bend Reliefs	•	•	•			
	Sealing Caps	•	•	•			
S	Spacers	•	•	•			
Accessories	Color-Coded Washers	•	•	•			
cces	Insulating Washers				Accessories Section 11		
A	Grounding Washers	•	•	•			
	Locking Washers	•	•	•			
	Decorative Nuts	•					
	102 Series						
	103 Series						
	1031 Series				Dimensions Section 10-7-1		
Size	104 Series	•	•	•	For more Information Visit:		
	105 Series	•	•	•	www.fischerconnectors.com/technical		
	106 Series						
	107 Series						

Plugs mate with receptacles.



Panel Mounted Cable Receptacles

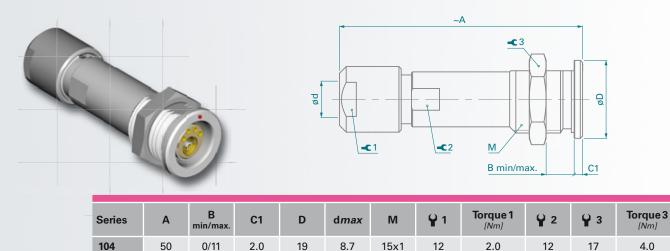
DKBE Body Style



Series	Α	B min/max.	С	D	d <i>max</i>	D1	М	¥ 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

105



60

0/16

2.0

22

10.7

18x1

15

3.5

14

22

6.0



105

61

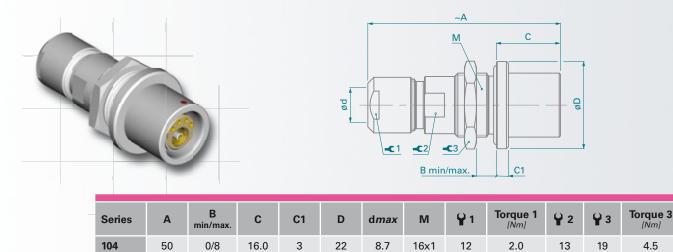
0/9

19.0

4

Panel Mounted Cable Receptacles

DKE Body Style for 104 and 105 Series



27

20x1

15

10.7

3.5

25

16

6.5





104 and 105 Series

															option
					Contact Termination						Test Voltage ⁵⁾ [kV] in mated position AC rms DC				
			(0								AC	rms	D	С	
Type	Pin Layout		Number of Contacts	Solder	Crimp	Insulating Material	Cable Group ¹⁾	Contact ø [mm]	Wire Barrel ø [mm]	Impedance [ohm]	Contact to Body	Contact to Contact	Contact to Body ²⁾	Contact to Contact	Current Rating ³⁾ (A)
			Coax		•	0		0.7	0.6	50	1.8	-	3.0	-	4.0
104 A 078	\bigcirc	2	1	•		PEEK ⁴⁾	1	0.9	0.8	-	0.8	-	6.0	-	9.0
		_	Coax		•			0.7	0.6	50	1.8	-	3.0	-	4.0
104 A 093		5	4	•		PTFE	1	0.7	0.6	-	0.8	1.0	1.0	1.4	4.0
405 4 054			Coax		•	DTEE		1.3	1.0	50	4.5	-	6.0	-	12.0
105 A 074		2	1	•		PTFE	4	1.3	1.1	-	1.6	-	2.0	-	12.0
		_	Coax		•	0755		1.3	1.0	50	4.5	-	6.0	-	12.0
105 A 089		5	4	•		PTFE	4	0.9	0.75	-	1.5	2.0	2.3	2.8	7.0
		40	Coax		•			0.7	0.55	50	1.8	-	3.5	-	4.0
105 A 095		10	9	•		PTFE	1	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.

⁵⁾ Measured with S plug and D receptacle.



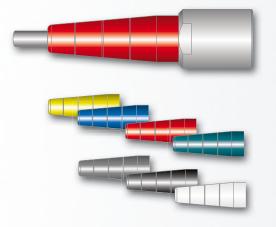




<u></u> scher

Cable Mounted Plugs and Receptacles

Cable Bend Reliefs for an Increased Protection of your Connections11-2

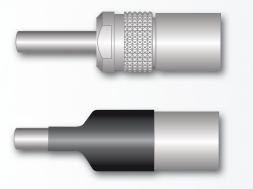


Suitable for:

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



Suitable for:

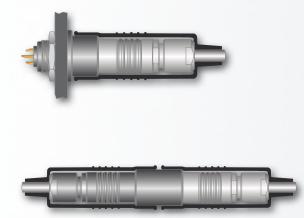
Cable Mounted Plugs (S/SC, SOV, SA, SV, WSO) Cable Mounted Receptacles (K/KE) Panel Mounted Cable Receptacles (DKBE, DK, DKE)

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

Protective Sleeves for Improved Protection

11-3

11-2



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 Unmate	ed Connectors in the Field	
	 Suitable for: Cable Mounted Plugs (S/SC, SOV, SA, SV, SS/ Cable Mounted Receptacles (K/KE, KS/KSE) 	SSC, WSO)
	 Suitable for: Panel Mounted Receptacles (D, DEU/E, DB, DBP, DBPU/E, DBPLU/E, DG/DGP, DBPC, WDI Panel Mounted Plugs (SF, SFU/E, SFPU/E) Panel Mounted Cable Receptacles (DKBE, D 	E)
Soft Caps		11-4
T	 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 	



11-5

11-6

Panel Mounted Plugs and Receptacles

Spacers to Allow Mounting on all Panels



Color Coding Washers for Easy Connector Identification



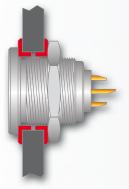
Suitable for:

Panel Mounted Receptacles (D, DB, DBP, DBPC, DG, DGP, DK) Panel Mounted Plug (SF)

- Can be mounted between the connector flange and the panel
- Color coding for easy identification when combined with cable bend relief for cable mounted connectors
- Not suitable for sealed version



Insulating & Color Coding Washers for Easy Connector Identification and _____11-6 Efficient Insulation



Suitable for:

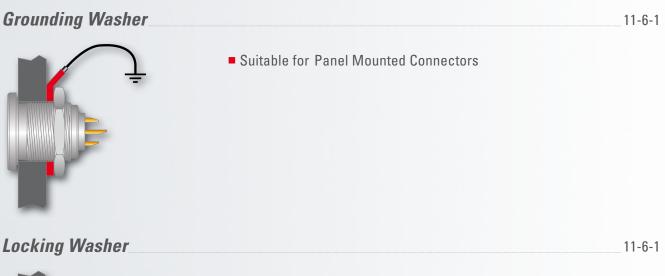
Panel Mounted Receptacle (D)

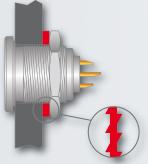
- Can be mounted on both sides of the panel cut-out
- Color coding for easy identification when combined with cable bend relief for cable mounted connectors
- Isolate the connector body electrically from the panel
- Not suitable for sealed version



11-7

Panel Mounted Plugs and Receptacles





Suitable for Panel Mounted Connectors

Mounting Nuts for Perfect Connector Grip

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) 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

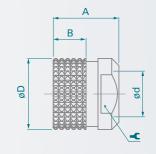


Accessories Knurled Clamp Nuts & Cable Bend Reliefs

Dimensions

Knurled Clamp Nuts





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

Material - Nickel and chromium plated brass (ISO CuZn39Pb3)

6.0 - 7.5

4.0 - 5.0

5.5 - 6.5

L3 = 18

L1 = 37

L2 = 31

21

Cable Bend Reliefs L1 L2 L3 -A L4 Series 1) Α Series 1) Cable ø Range Cable ø Range Length Length Α 104 102 L1 = 214.0 - 5.0 1.5 - 3.4 L1 = 3110 18 3.5 - 4.5 L1 = 21 5.0 - 6.5 L2 = 25

1031	1031 3.0 - 4.0 L1 = 26 7.0 - 8.5 L3 = 24										
	4.0 - 5.0 L2 = 21 18 8.5 - 10.5 L4 = 18										
5.0 - 6.5 L3 = 16											
¹⁾ For the 1	¹⁾ For the 102 Series cable band reliefs are designed specifically for a given cable & range										

17

105

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

103

3.0 - 4.0

4.0 - 5.0

5.0 - 6.2

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.

L1 = 26

L2 = 21

L3 = 16



Part Numbers

Natural Chrome Connectors

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

0 . 1	Cable ø Range	Bend Relief Color					
Series ¹⁾		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 g Pango	Bend Relief Color						
Series "	Cable ø Range	White	Black	Green	Blue			
102	1.5 - 3.4	-	E4 102.191.2	E4 102.191.3	E4 102.191.4			
	3.5 - 4.5	-	E4 102.193.2	E4 102.193.3	E4 102.193.4			
103	3.0 - 6.2	E4 103.191.1	E4 103.191.2	E4 103.191.3	E4 103.191.4			
1031	3.0 - 6.5	E4 1031.191.1	E4 1031.191.2	E4 1031.191.3	E4 1031.191.4			
104	4.0 - 7.5	E4 104.191.1	E4 104.191.2	E4 104.191.3	E4 104.191.4			
105	4.0 - 10.5	E4 105.191.1	E4 105.191.2	E4 105.191.3	E4 105.191.4			

Series ¹⁾	Cable ø Range	Bend Relief Color					
Series"		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.



102 Series



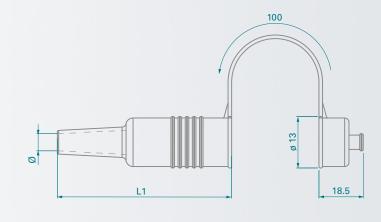
L1 14.5					900 5:21 g 14.5
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Series	Cable Ø Range	L1	Part Number
102	1.8 - 4.5	56	102.785

Material - TPE (Thermoplastic elastomer)

K and KE





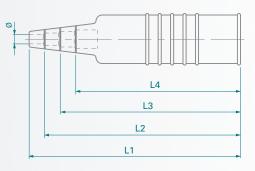
Series	Cable Ø Range	L1	Part Number
102	1.8 - 4.5	47	102.786

Material - TPE (Thermoplastic elastomer)



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





■ S, SC and SOV

Series	Cable Ø Range	Length	Part Number	Series	Cable Ø Range	Length	Part Number	Series	Cable Ø Range	Length	Part Number
103	3.0 - 4.1	L1 = 68		104	4.0 - 5.1	L1 = 83		106	6.0 - 10.4	L1 = 123	
	4.2 - 5.1	L2 = 63	103.861		5.2 - 6.1	L2 = 76	104.861		10.5 - 13.4	L2 = 112	106.226
	5.2 - 6.1	L3 = 58	103.001		6.2 - 7.1	L3 = 70	104.001		13.5 - 16.4	L3 = 102	
	6.2 - 6.5	L4 = 53			7.2 - 8.5	L4 = 63			16.5 - 19.0	L4 = 92	
1031	3.0 - 4.1	L1 = 69		105	3.5 - 5.6	L1 = 104		107	7.0 - 10.4	L1 = 170	
	4.2 - 5.1	L2 = 64	1021 055		5.7 - 7.6	L2 = 96	105 1545		10.5 - 13.4	L2 = 160	107.808
	5.2 - 6.1	L3 = 59	1031.855		7.7 - 8.6	L3 = 88	105.1545		13.5 - 16.4	L3 = 150	
	6.2 - 6.5	L4 = 54			8.7 - 10.5	L4 = 80			16.5 - 19.4	L4 = 140	
Material -	TPE (Therr	noplastic e	lastomer)						19.5 - 22.5	L4 = 130	

K and KE

Series	Cable Ø Range	Length	Part Number	Series	Cable Ø Range	Length	Part Number	Series	Cable Ø Range	Length	Part Number
103	3.0 - 4.1	L1 = 60		104	4.0 - 5.1	L1 = 68		106	6.0 - 10.4	L1 = 110	
	4.2 - 5.1	L2 = 55	102.000	03.886 5.2 - 6.1 6.2 - 7.1 7.2 - 8.5	5.2 - 6.1	L2 = 61	104.000		10.5 - 13.4	L2 = 99	106.405
	5.2 - 6.1	L3 = 50	103.886		6.2 - 7.1	L3 = 55	104.862		13.5 - 16.4	L3 = 89	
	6.2 - 6.5	L4 = 45			7.2 - 8.5	L4 = 48			16.5 - 19.0	L4 = 79	
1031	3.0 - 4.1	L1 = 61		105	3.5 - 5.6	L1 = 88		107	7.0 - 10.4	L1 = 146	
	4.2 - 5.1	L2 = 56	1021.060		5.7 - 7.6	L2 = 80	105 1546		10.5 - 13.4	L2 = 136	107.809
	5.2 - 6.1	L3 = 51	1031.860		7.7 - 8.6	L3 = 72	105.1546		13.5 - 16.4	L3 = 126	
	6.2 - 6.5	L4 = 46		l l l l l l l l l l l l l l l l l l l	8.7 - 10.5	L4 = 64			16.5 - 19.4	L4 = 116	
Material -	TPE (Therr	noplastic (elastomer)						19.5 - 22.5	L5 = 106	

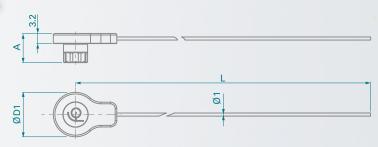
These protective sleeves for straight cable plugs and cable receptacles have grooved cable bend reliefs which can be shortened according to cable diameters. The lengths of the protections and the corresponding cable diameters are listed above.



Lanyard with Nylon Thin Cord

For Receptacles





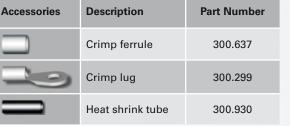
Accessories	Description	Part Number
	Crimp ferrule	300.637
20	Crimp lug	300.299
	Heat shrink tube	300.930

Series	А	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				

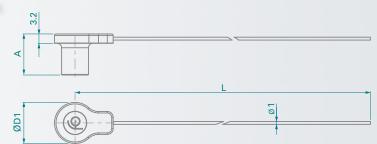
Crimp ferrule, crimp lug and heat shrink tube have to be ordered separately.

For Plugs





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



Series	А	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

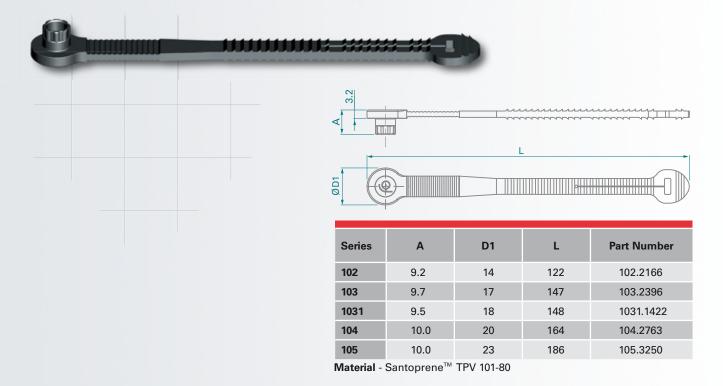
Cap: Santoprene[™]TPV 101-80

Cord: Nylon

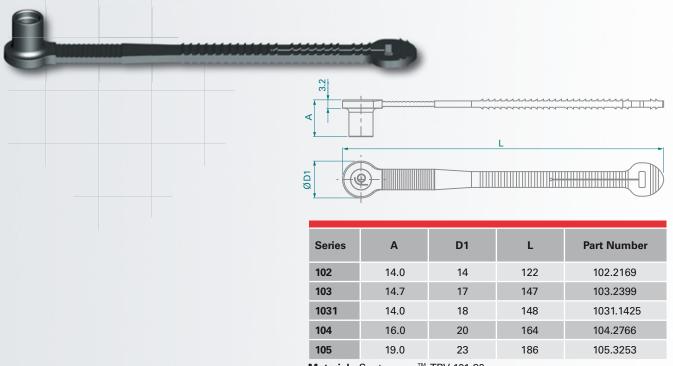


Single-Piece

For Receptacles



For Plugs



Material - Santoprene[™] TPV 101-80

Lanyard with Stainless Steel Cable

For Receptacles



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

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Series	А	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

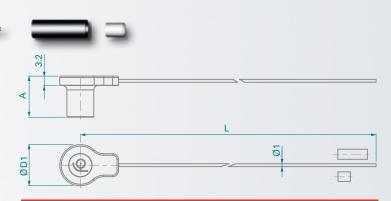
Material

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	А	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

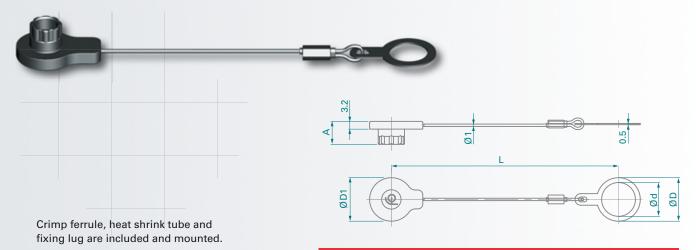
Material

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



Assembled Lanyard with Stainless Steel Cable

For Panel Mounted Receptacles



Series	А	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 CuZn37)



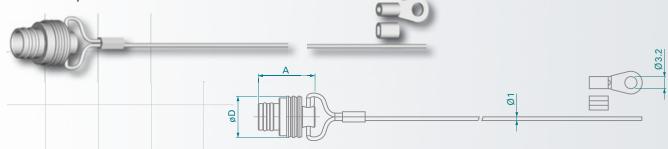
Caps are intermateable to provide additional dust protection.



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



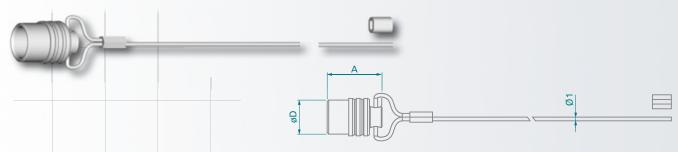
For Recepatcles



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

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

For Plugs



	Part n	umber	0	Caps		S	Crimp Ferrule	
Series	Natural Chrome ¹⁾	Black Chrome ²⁾	O-ring Material	А	D	Length	Covering Material	Part Number
102	102.1948	102.1952		14.5	10	100		
103	103.2274	103.2277		21.0	14	100	FEP - Teflon®	300.922
1031	1031.825	1031.827		20.0	15	100		
104	104.715	104.717	FPM - Viton®	21.0	15	150		
105	105.3002	105.3006		29.0	20	150		
106	106.813	106.815		37.0	33	250		
107	107.2312	107.2314		42.0	38	300		

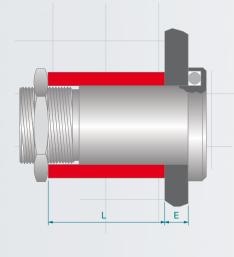
Material - Cap: Natural or Black chrome plated brass (ISO CuZn39Pb3) - Crimp ferrule: Aluminium

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

Material - Aluminum

Е	L	Part Number
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
	2.0 - 5.5 5.0 - 8.5 8.0 - 11.5 11.0 - 14.5 14.0 - 17.5	2.0 - 5.5 18.5 5.0 - 8.5 15.5 8.0 - 11.5 12.5 11.0 - 14.5 9.5 14.0 - 17.5 6.5

■ Spacers for DEE, DEU and DKE[®]

		E	

Series	Е	L	Part Number
102	0.5 - 3.0	8.5	102.550
	2.5 - 5.5	6.0	102.551
	5.0 - 8.0	3.5	102.552
Series	E	L	Part Number
104	0.5 - 3.0	8.5	104.550
	2.5 - 5.5	6.0	104.551
	5.0 - 8.0	3.5	104.552
Series	E	L	Part Number
106	0.5 - 5.5	19.0	106.550
	5.0 - 10.0	14.5	106.551
	9.5 - 14.5	10.0	106.552
	14.0 - 19.0	5.5	106.553

Material - Aluminum

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

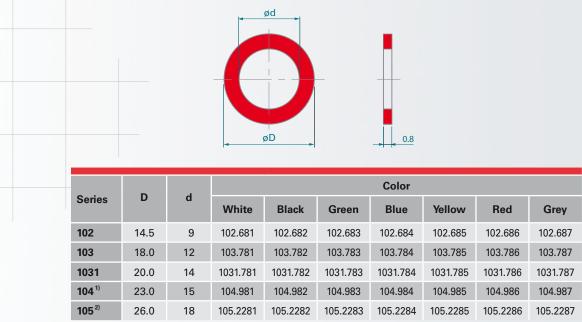
Series	E	L	Part Number
103	0.5 - 3.0	8.5	103.550
1031	2.5 - 5.5	6.0	103.551
	5.0 - 8.0	3.5	103.552

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

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



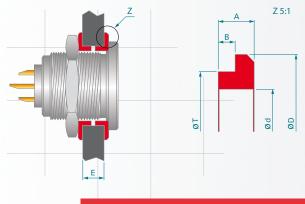
Color Coding Washers for D, DB, DBP, DBPC, DG, DGP, DK and SF



 $^{1)}$ 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	Ŧ	٨	в	Е	Color										
Series	D	u	u	u			AD	A	D	min/max	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	-	-	-	-	-				

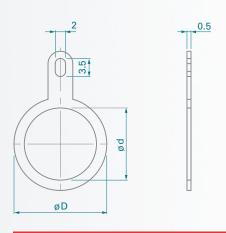
Material

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



Grounding Washers for Panel Connectors



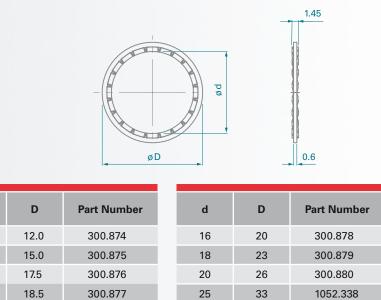


Series	d	D	Part Number
102	9	13	102.680
	10	14	102.679
103	12	16	103.385
1031	14	18	1031.315
104	15	20	104.680
	16	21	104.679
105	18	23	105.680
	20	25	105.679

Material - Copper and tin plated brass (ISO CuZn37)

Locking Washers for Panel Connectors





Material - Copper and tin plated brass (ISO CuZn37)

d

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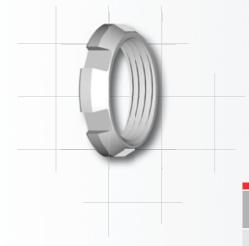
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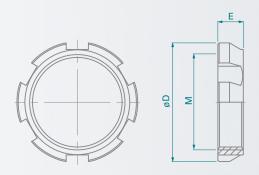
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15



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



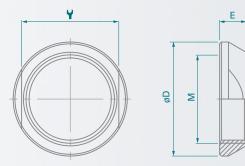


Thread	D	Е	Part N	umber	Assembly
Size	D	Natural Chrome Black Chrome		Black Chrome	Tool 📫
M 9x0.5	12	3	102.1417	102.1571	TC00.000
M 10x0.5	13	3	102.2207	102.2206	TC00.007
M 12x1	15	4	103.597	103.1993	TF00.001
M 14x1	18	4	1031.541	1031.542	TG00.001
M 15x1	19	4	104.697	104.698	TK00.000
M 16x1	20	4	104.1729	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		Part Number Nut 🖌 Thread			Part Number		Nut 🖌				
Size	D	E	Natural Chrome	Black Chrome	Across Flats	Size	D	E	Natural Chrome	Black Chrome	Across Flats
M 9x0.5	12	3.0	102.1290	102.1291	10	M 18x1	23	4.5	104.2585	104.2586	20
M 10x0.5	13	3.0	102.2145	102.2146	11	M 20x1	25	4.5	105.3226	105.3227	22
M 12x1	16	3.5	102.1989	102.1990	13	M 22x1	27	4.5	105.3037	105.3038	24
M 14x1	18	4.0	1031.1371	1031.1372	15	M 34x1	40	5.5	106.1604	106.1605	36
M 15x1	20	4.0	103.2294	103.2295	17	M 38x1	45	6.0	107.2333	107.2334	40
M 16x1	20	4.0	1031.1350	1031.1351	17						

Material - Nickel and chromium plated brass (ISO CuZn39Pb3)

Other receptacle and decorative nut combinations are available on request.

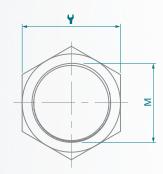
Accessories Mounting Nuts



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





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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.









■ Double-End Open Spanners Extra Thin ♀



Open-End Spanners Extra Thin ¥



Hook Spanners for Side Slotted Nuts -



Nutdriver with T-Handle and Hex Drive for Decorative Slotted Nuts



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°

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°

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

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
	0.5	
TX00.240	0.7	BALMAR 18 - 000
1700.240	0.9	or DANIELS MH - 800
	1.3	
TX00.242	1.6	ASTROTOOL 615708

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

Standards

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

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

Fischer Positioner



Suitable for Crimp Tool TX00.242

Suitable for CrimpTool TX00.240

Crimp Tool for Coaxial Cable



Part Number	Description
TX00.241	The crimp tool for coaxial cable features a system of interchangeable dies (see below) that accommodate coaxial connectors and contacts used by Fischer Connectors. This tool is 28.9cm in length and weights approximately 0.60 kg.

Crimping Dies for Precision Crimp Tool



Suitable for CrimpToolTX00.241

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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.



Contact Insertion Tool



Contact Extraction Tool



Assembly Tool for Male Contacts with Outside Thread



Assembly Tool for Female Contacts with Inside Thread



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

Material

Handle: Black POM (Delrin®) Tool Steel, chrome plated Fork:

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

Material Sleeve: Slide:

Housing and Plunger: Black POM (Delrin®) Stainless Steel Tool Steel

Part Number		Description
TP00.001	termination to a To be used for:	contacts which are inserted only after a wire ¹⁾ . Cable Receptacle 107 A034 Plugs 105 A005 and 105 A108 Cable Receptacles 105 A020, 105 A036,105 A060 Receptacles 106 A014

Material

Stainless Steel: Length 75 mm - Inside thread M3

Part Number	Description				
TP00.000	after terminati To be used for				

Material

Stainless Steel: Length 75 mm - Outside thread M1.7

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





Technical Information









Quality, Environment and Safety

Fischer Connectors ISO 9001, ISO 13485, ISO 14001 and OHSAS 18001 Certified

- ISO 9001 ISO 13485 ISO 14001 OHSAS 18001
- 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 is certified with the requirements of OHSAS 18001 standard.

RoHS Compliant Connectors RCHS

 All connectors from Fischer are RoHS compliant since 1 July 2006 (Exemption 6^(b) and 6^(c)) The European Directives 2002/95/EC and 2011/6S/EU call 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 1907/2006/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.
- As the identification of a substance as Substance of Very High Concern (SVHC) and its inclusion in the Candidate List is an ongoing process, Fischer Connectors is reviewing the Candidate List regulary to continuously ensure its REACH conformity.

Sony[®] Green Partner Qualified Sony

 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

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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 Clan and other	· · ·	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	MIL-DTL-45204D	
	Female, Male (crimp)	Bronze	CuSn4Zn4Pb4	CW456K ASTM B 139, UNS C 54400	over Nickel	Type 1 + ASTM B488	

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 - IP68 (Receptacles) - Hermetic	Silicon compound Epoxy compound	UL 94 V-O UL 94 HB	
Cable Sealing - IP68 (Plugs)	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	
	Unsealed Connectors (mated)	IP50		
Sealing Performance	Plugs (mated) with General Purpose Sealed Clamps ¹⁾	IP68 IP69	IEC 60529	
	Receptacles "U" Body Style	IP68		
	Receptacles "E" Body Style	Hermetic: Tested: <10 ⁻⁸ mbar I/sec. IP69	IEC 60068-2-17 Test Qk Method 3, Alternative b	
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 ²⁾	Unsealed Connectors	PEEK: 10 ⁷ Gy(=1000M 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⁾ 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.

	9	2		7_			
2				8			
Ref.	Component	Material				(Operating Temperatures
1	Sealant	"U" Type					-55°C to +200°C
	Sediant	"Е" Туре					-65°C to +150°C
		PEEK					-65°C to +200°C
2	Insulator	PTFE (Teflon	®)				-65°C to +160°C
		РВТ					-65°C to +135°C
3	Standard O-rings	FPM (Viton [®])			-20°C to +200°C ¹⁾		-20°C to +200°C ¹⁾
3	Interface O-rings (Option)	EPDM					-50°C to +160°C ²⁾
4	Cable Clamp Seal	TPE					-70°C to +130°C
_		Standard	Brass				
5	Cable Clamp	High Voltage Connectors	РОМ				-40°C to +100°C
6	Cable	TPE					-60°C to +100°C
0	Strain Relief	VMQ - Silico	ne Rubber				-60°C to +180°C
7	Protective Boots	TPE					-60°C to +100°C
		Metallic	Plug: Brass with FPM O-ring				-20°C to +200°C ¹⁾
8	Cooling Cono		Receptacle: Brass with NBR O-ring				-30°C to +110°C ¹⁾
Ū	Sealing Caps	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
	mum mating tempe						

²⁾ Minimum mating temperature: -20°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	5.0 mΩ 5.0 mΩ 4.0 mΩ 2.5 mΩ 2.5 mΩ 2.5 mΩ 1.5 mΩ	IEC 60512-2-2a/b
Insulation Resistance		> 10 ¹⁰ Ω	IEC 60512-3-1-3a Method C

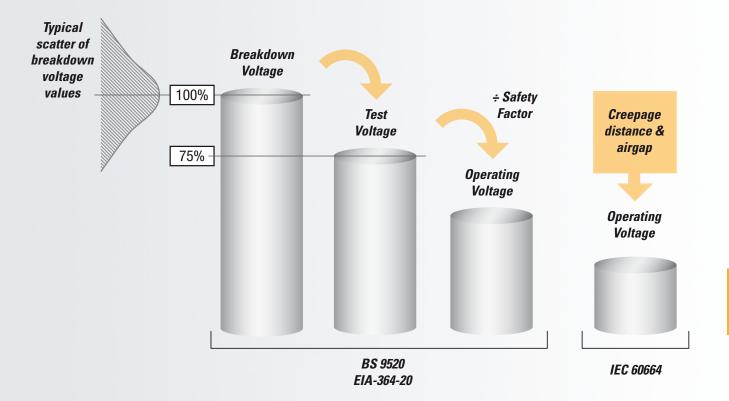
Test Voltage and Operating Voltage

Definitions

Breakdown Voltage: Characteristic that defines the maximum voltage difference but can be applied before the occurance of a disruptive discharge between mutually insulated portions of a connector or between insulated portions and ground.

Test Voltage (or withstanding 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 breakdown 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 standards such as BS 9520 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

BS9520 recommends to set the operating voltage at

- 0.33 x test voltage for 500V < test voltage < 3kV</p>
- 0.66 x test voltage for test voltage $\ge 3kV$

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

For more details see www.fischerconnectors.com/technical



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 12 mm greater than 12 mm	2	Protected against dripping water when tilted up to 15°
3	2.5 mm 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
the follow - Mechar - Risk of	lical damage of the equipment explosions	7	Protected against immersion effects
produce			<pre>Protected against submersion (See note)</pre>
		9	^{90°} ^{60°} ¹ P69 is an additional sealing level define 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 IP69.





0-rings

Insulator

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.

evels and lutions.

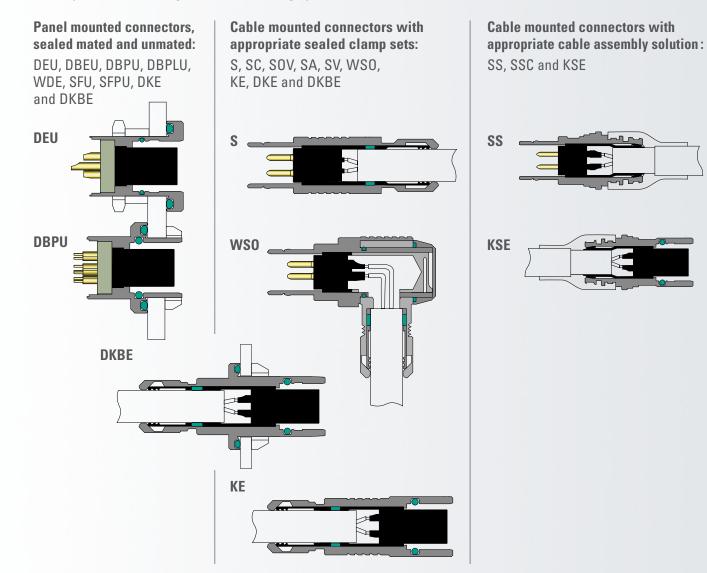
Sealant

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.





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.

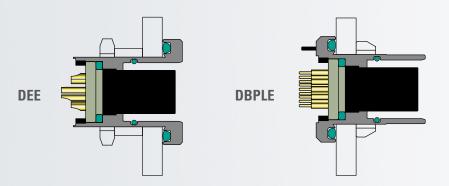
100% of the hermetic pieces are tested with a leak testing instrument to ensure a leak smaller than 10⁻⁸ mbar l/s.

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.



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.

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.

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.



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



Warranty

A limited warranty applies to Fischer Connectors SA products. Except for obligations assumed by Fischer Connectors SA under warranty, Fischer Connectors SA, its subsidiaries, and agents, will not be liable for any loss, damage, cost of repairs, incidental or consequential damages of any kind, whether or not based upon express or implied warranty, contract, negligence, or strict liability arising in connection with the design, manufacture, sale, use, or repair of the products.

Fischer Connectors SA warrants that each product sold is in accordance with Fischer specifications, drawings, samples, or data in effect on the date of receipt of the order and that each unit is free from defects in material and workmanship.

Fischer's liability under this warranty is limited to the repair or replacement of any unit which proves to be defective in material or workmanship under normal use or service within one year from date of shipment, provided the unit is returned at purchaser's expense to seller's shipping point. No material is accepted for analysis, replacement or repair without the written agreement of Fischer Connectors SA, or its subsidiaries or agents.

This warranty is in lieu of all other warranties, expressed or implied.

All of the information included in this catalog, including any other illustrations and documentation which may be provided by Fischer Connectors SA, is believed to be accurate at the time of printing. It is recommended, however, that users should independently evaluate the suitability of each product for their intended application. Fischer Connectors SA makes no warranties as to the accuracy or completeness of the information, and disclaims any liability regarding its use.

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. Fischer Connectors reserves the right to make any modification to its products without notice and without obligation to replace or manufacture obsolete items.

Fischer

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