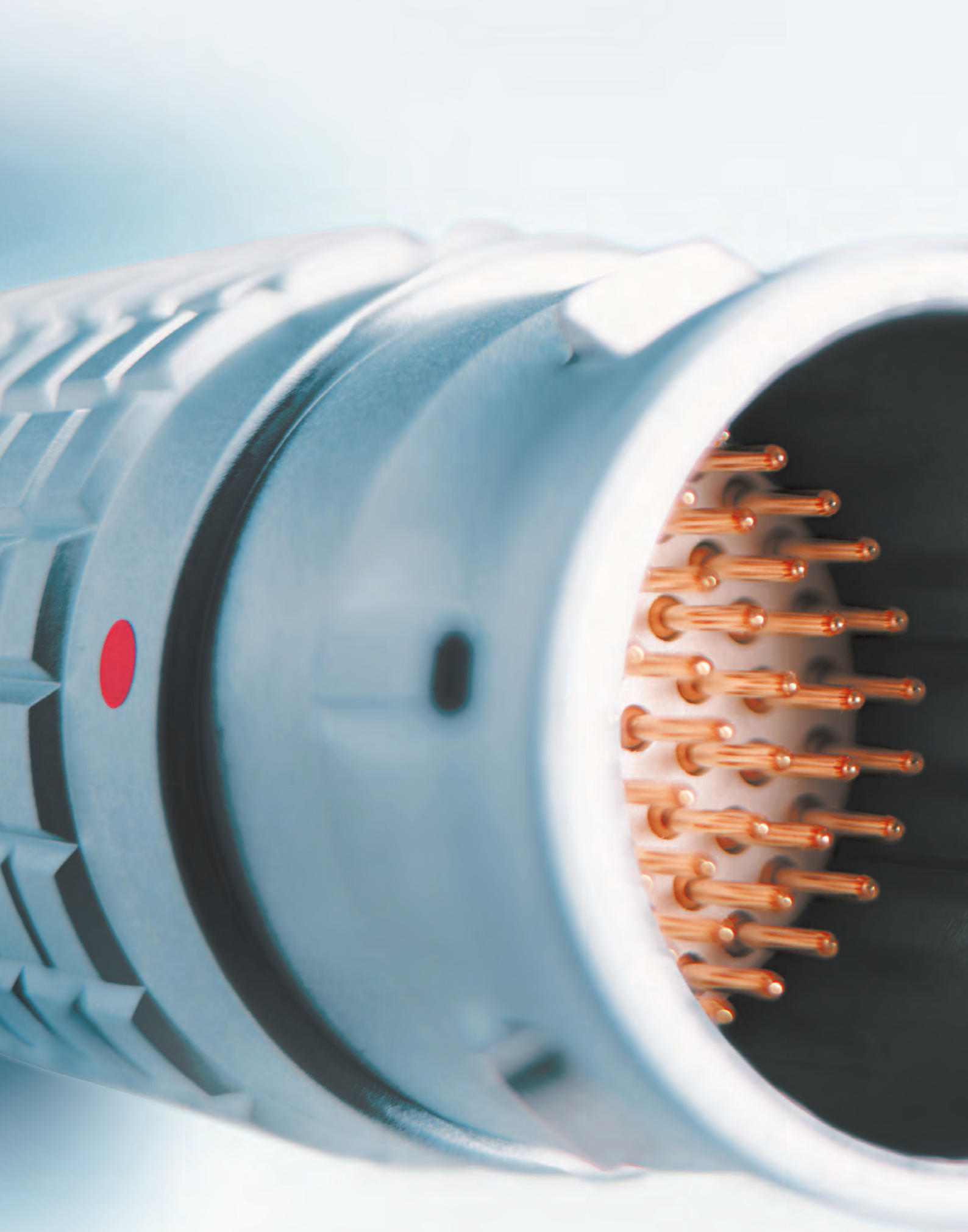


UNIPOLE & MULTIPOLE CONNECTORS





LEMO unipole and multipole connectors

This catalogue gives the complete description of LEMO unipole and multipole type connectors. The LEMO manufacturing programme has been extended to almost 40 series divided into 7 product families with specific mating and environmental characteristics. Each series includes a wide variety of plug, socket, coupler and bridge plug models, available in contact configurations adapted to all round cables, including up to 106 conductors, and a maximum diameter of 30 mm. Watertight and vacuumtight models are also available. Since LEMO connectors are perfectly screened and designed to guarantee very low resistance to shell electrical continuity, they are particularly adapted to applications where electromagnetic compatibility (EMC) is important.

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Precision modular connectors to suit your application

Since its creation in Switzerland in 1946 the LEMO Group has been recognized as a global leader of circular Push-Pull connectors and connector solutions. Today LEMO and its affiliated companies, REDEL and COELVER, are active in more than 80 countries with the help of over 40 subsidiaries and distributors.

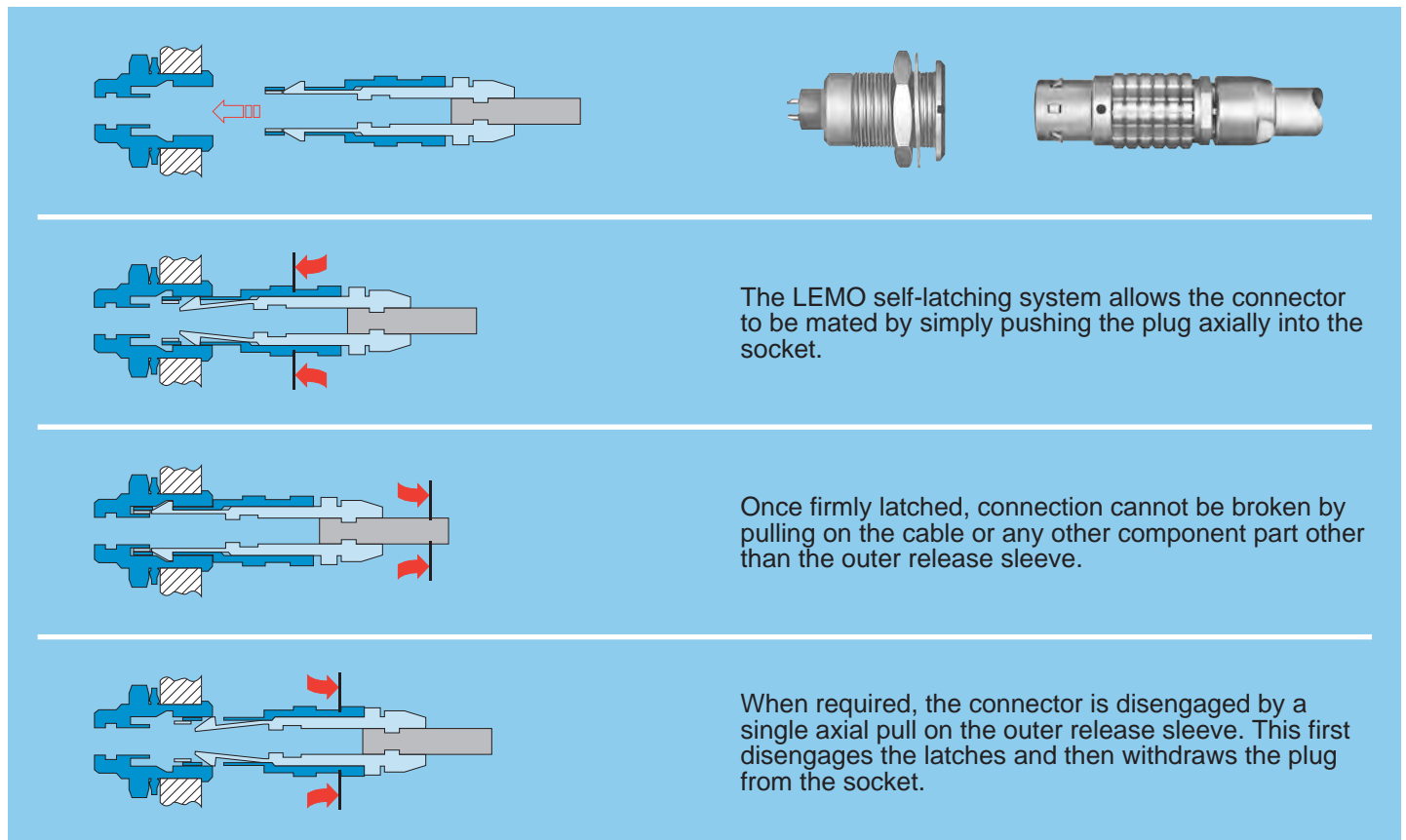
Over 50'000 connectors

The modular design of the LEMO range provides over 50'000 connectors from miniature \varnothing 3 mm to \varnothing 50 mm, capable of handling cable diameters up to 30 mm and for up to 106 contacts.

This vast portfolio enables you to select the ideal connector configuration to suit almost any specific requirement in most markets, including medical devices, test and measurement instruments, machinery, audio video broadcast, telecommunications and military.

LEMO's Push-Pull Self-Latching Connection System



This self-latching system is renowned worldwide for its easy and quick mating and unmating features. It provides absolute security against vibration, shock or pull on the cable, and facilitates operation in a very limited space.



UL Recognition

LEMO connectors are recognized by the Underwriters Laboratories (UL). The approval of the complete system (LEMO connector, cable and your equipment) will be easier because LEMO connectors are approved.

CE marking

CE marking  means that the appliance or equipment bearing it complies with the protection requirements of one or several European safety directives. CE marking  applies to complete products or equipment, **but not to electromechanical components, such as connectors.**

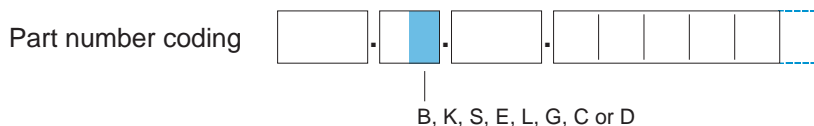
RoHS

LEMO connector specifications exceed the requirements of the RoHS directives (2002/95/EC) of the European Parliament and the latest amendments. This directive specifies the restrictions of the use of hazardous substances in electrical and electronic equipment marketed in Europe. LEMO guarantees that its connectors are free of mercury, cadmium, lead, hexavalent chromium and polybromide biphenyl (PBB), polybromide diphenyl ether (PBDE), or DecaBDE.

3 steps to select the right connector

● Step 1: Select connector series

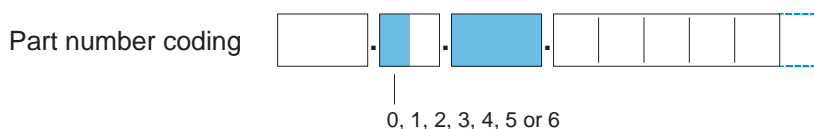
Select the appropriate LEMO connector series according to the environmental parameters that will affect your device or cable such as indoor, outdoor, temperature range, ingress protection of the mated connector and of your device. Use the table shown on page 4.



● Step 2: Select connector size

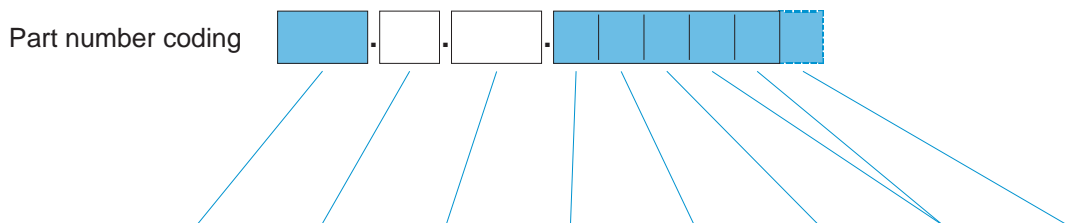
Use the section (mm²) or the AWG of your cable wire to select the optimal contact diameter (values vary between solder, crimp or print contact), see page 7.

Use this optimal contact diameter to determine the right connector size as well as the insert configuration, see page 6.



● Step 3: Complete the part number

Now that you know the series, as well as the insulator configuration, complete the part numbering system with the help of the following table.



	Model	Series	Insert configuration	Housing material	Insulator material	Contact	Collet	Variant
B Series (indoor, keyed)	12	12	45	50	50	50	52	54
K Series (outdoor, keyed)	34	34	45	50	50	50	53	54
S Series (indoor, stepped insert)	58	58	91	99	99	99	102	107
E Series (outdoor, stepped insert)	76	76	91	99	99	99	105	107
L Series (outdoor, keyed, stepped insert)	86	86	92	99	99	99	106	107
G Series (indoor, keyed)	111	111	112	112	110	113	113	113
C Series (indoor, stepped insert)	117	117	120	120	116	120	121	121
D Series (indoor, 4 concentric contacts)	125	125	127	127	124	127	127	128

Note: Figures in the above table refer to the catalogue pages.

Step 1: Select Connector Series

LEMO unipole and multipole connectors

The standard keyed Series (B, 00, G)

The characteristic feature of these connector series is a keying system which allows higher contact density and prevents all errors in alignment. The various keying alternatives prevent unwanted cross mating of otherwise similar connectors. It is also possible to use crimp contacts to reduce cable assembly time. These connector series, include the 0B to 5B range as well as the 00 multipole and 2G (shortened version of the 2B series), some vacuumtight models are also available.

The watertight keyed Series (K, L)

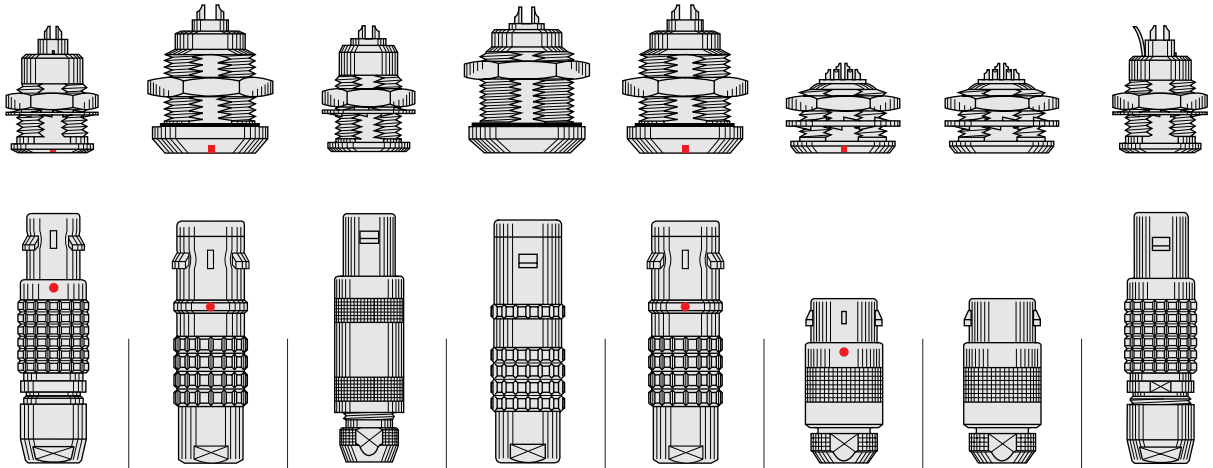
These series are watertight when mated and assembled to an appropriate cable. They include the 0K to 5K series, available in the same types as the 0B to 5B series, and the 0L to 2L series with keying and hermaphroditic insulator.

The standard Series (S, 00, C, D)

The characteristic feature of these connector series is the hermaphroditic insulator in the multipole version. They include principally the 0S and 6S series, as well as the 00 unipole series, the 2C (shortened version) and the 1D quadrax type (with 4 concentric contacts).

The watertight Series (E)

These series are watertight when mated and assembled to an appropriate cable. They include the 0E to 6E series and are available in the same types as the S series.



Series	00 multipole B	K	00 unipole S	E	L	G	C	D
Environment	indoor	outdoor or harsh env.	indoor	outdoor or harsh environment		indoor		
Ingress ¹⁾ protection	IP50	IP66 to IP68	IP50	IP66 to IP68		IP50		
Ingress ²⁾ protection	IP50 to IP68 vacuumtight	IP66 to IP68 vacuumtight	IP50 to IP68 vacuumtight	IP66 to IP68 vacuumtight		IP50	IP50 to IP68 vacuumtight	IP50
Temperature range	- 55 to 250°C	- 55 to 200°C	- 55 to 250°C	- 55 to 200°C		- 55 to 250°C		- 40 to 120°C
Latching	Push-Pull self-latching							
Shell sizes	7 metal and 4 plastic	6 metal	7 metal and 5 plastic	6 metal		3 metal	4 metal	1 metal
Insulator type	Multipole		Unipole or multipole hermaphroditic		Multipole hermaphroditic	Multipole	Multipole hermaphroditic	Quadrax
Contact type	Solder, crimp or print		Solder or print		Solder, crimp or print	Solder or print		Solder
Features	13 keyways	9 keyways	Stepped insert		Stepped insert	1 keyway	Stepped insert	4 concentric contacts
Page	9 to 31	32 to 44	55 to 73	74 to 83	84 to 90	109 to 115	116 to 122	123 to 128

Note:

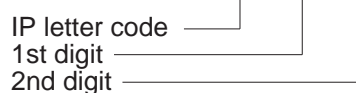
¹⁾ Mated connector. See ingress protection code page 5.

²⁾ Your device. For selection of connectors for watertight and vacuumtight devices, see page 5.

Definition of Ingress Protection (IP code)

IEC 60529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e. tools, dust, fingers) and moisture. This classification system utilizes the letters «IP» (Ingress Protection) followed by two digits.

Example: IP 50 = IP 5 0



Degrees of protection - First digit

The first digit of the IP code indicates the degree to which persons are protected against contact with moving parts and the degree that equipment is protected against solid foreign bodies intruding into an enclosure.

Code	First digit description
0	No special protection
1	Protection from a large part of the body such as hand or from solid objects greater than 50 mm in diameter
2	Protection against objects not greater than 80 mm in length and 12 mm in diameter
3	Protection from entry by tools, wires, etc., with a diameter or thickness greater than 2.5 mm
4	Protection from entry by solid objects with a diameter or thickness greater than 1.0 mm
5	Protection from the amount of dust that would interfere with the operation of the equipment
6	Dust-tight
7	–
8	–

Degrees of protection - Second digit

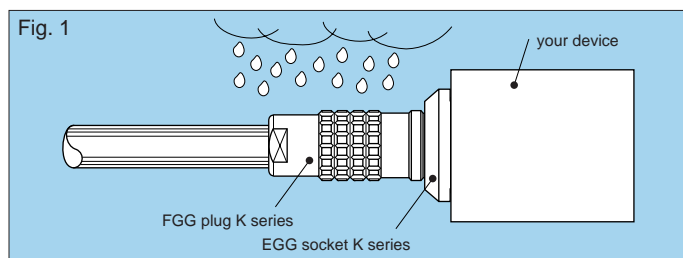
The second digit indicates the degree of protection of the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.)

Code	Second digit description
0	No special protection
1	Protection from vertically dripping water
2	Protection from dripping water when tilted up to 15°
3	Protection from sprayed water
4	Protection from splashed water
5	Protection from water projected from a nozzle
6	Protection against heavy seas, or powerful jets of water
7	Protection against temporary immersion
8	Protection against complete continuous submersion in water

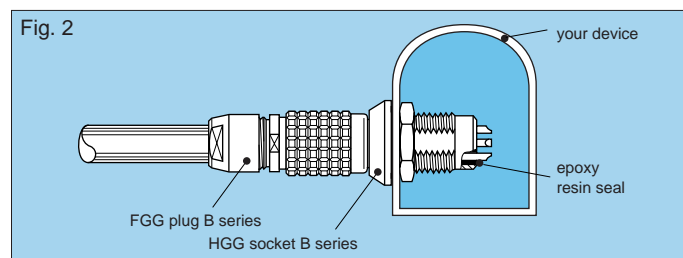
Selection of connectors for watertight or vacuumtight devices

LEMO B and S series are rated IP50 only when mated. LEMO E, K and L series are rated IP66 (and over) only when mated. If a device must be watertight or vacuumtight when the connectors are unmated, it is important to select a watertight or vacuumtight socket. You can consider the following two situations:

A) Figure 1 shows a typical outdoor device. To ensure this device retains IP66 or above when connectors are unmated, it is important to choose a watertight socket from B, S, E, K or L series.



B) Figure 2 shows a device which is subjected to pressure difference such as a near vacuum or pressurized gas and must exhibit no leakage. To ensure the device maintains its sealing, the socket is additionally tested for helium leakage (according to MIL 1344A).



Check temperature range (see section on pages 26, 41, 72, 82 and 89).

Step 2: Select Connector Size

Select the right connector size and insert configuration

To be able to select the right connector size (0 to 6), it is important to define the contact diameter (\varnothing A). Find out the available contact diameter (\varnothing A) of the LEMO connector depending on the number of contacts required and depending on the rating required (see pages 45 to 49 and 91 to 98).

The following table shows the contact diameter (\varnothing A), or the solder pot diameter (\varnothing C) for the 1D series.

	Number of contacts	Insert configuration	Series																	
			00	0B-0K	1B-1K	2B-2K	3B-3K	4B-4K	5B-5K	00	0S-0E-0L ¹⁾	1S-1E-1L ¹⁾	2S-2E-2L ¹⁾	3S-3E	4S-4E	5S-5E	6S-6E	2G	2C	1D (\varnothing C)
Unipole	1	113							1.3											
	1	116								1.6										
	1	120									2.0									
	1	130									3.0	3.0								
	1	140										4.0	4.0	4.0						
	1	160											6.0	6.0						
	1	112													12.0					
Multipole	2	302	0.5	0.9	1.3	2.0	3.0	6.0		0.9	1.3	1.6	2.0	4.0	6.0				1.6	
	3	303	0.5	0.9	1.3	1.6	2.0			0.7	0.9	1.3	2.0	3.0	6.0/4.0	6.0			1.3	
	4	304	0.5	0.7	0.9	1.3	2.0	3.0	4.0		0.7	0.9	1.3	2.0	3.0	4.0	8.0		1.3	0.6
	5	305		0.7	0.9	1.3	1.6				0.9/0.7	1.3	2.0/1.3	3.0/2.0	4.0/3.0					
	6	306		0.5	0.7	1.3	1.6	2.0			0.7	1.3	1.3	2.0	3.0				1.3	
	7	307		0.5	0.7	1.3	1.6	2.0				1.3/0.9	1.3	2.0/1.3						
	8	308			0.7	0.9	1.3					0.9	1.3	1.3	3.0				0.7	
	9	309		0.5			1.3/2.0							1.3						
	10	310			0.5	0.9	1.3	1.6	3.0				0.9	1.3	1.3	2.0			0.7	
	12	312				0.7	0.9	1.3						0.9	1.3	2.0	4.0/5.0		0.7	
	13	313												0.9	1.3					
	14	314			0.5	0.7	0.9		2.0					0.9	1.3	3.0/2.0			0.7	
	16	316			0.5	0.7	0.9	0.9	2.0					0.9	0.9	2.0	3.0			
	18	318				0.7	0.9							0.9	0.9	3.0/1.6	4.0	0.7		
	19	319				0.7														
	20	320					0.7	0.9	1.6						0.9	1.6	3.0			
	22	322					0.7								0.9	3.0/1.6				
	24	324					0.7	0.9							0.9	1.6	3.0			
	26	326				0.5	0.7													
	30	330					0.7	0.9	1.3							1.3	2.0			
	32	332				0.5											2.0			
	36	336														1.3	2.0 ²⁾			
	40	340						0.7	1.3							1.3	2.0			
	44	344														1.3				
	48	348					0.7	1.3								1.3	2.0			
	50	350							0.9											
	54	354							0.9											
	60	360															1.6			
62	362															1.6				
64	364						0.9									1.3				
72	372															1.3				
106	106															0.9				

Note: ¹⁾ L series not available in unipole version. ²⁾ 2.0 is for 6S series, for 6E the values are 1.3 and 5.0.

Verify the fitting to your wire

Verify if the selected contact diameter ($\varnothing A$) of the LEMO connector fits to your cable wire diameter (AWG number or max. available section).

Contact type	Contact			Conductor						$F_r^{1)}$ (N)	Note
	$\varnothing A$ (mm)	$\varnothing C$ (mm)	Form per fig.	Solid		Stranded					
				AWG max.	Section max. (mm ²)	AWG		Section (mm ²)			
min.	max.	min.	max.								
<p>Solder</p>	0.5 ²⁾	0.40 ²⁾	–	28	0.09	–	30	–	0.05	–	
	0.5	0.45	–	28	0.09	–	28	–	0.09	–	
	0.7 ³⁾	0.60 ³⁾	–	24	0.25	–	26	–	0.14	–	
	0.7	0.80	–	22	0.34	–	22 ⁴⁾	–	0.34	–	
	0.9	0.80	–	22	0.34	–	22 ⁴⁾	–	0.34	–	
	1.3	1.00	–	20	0.50	–	20 ⁴⁾	–	0.50	–	
	1.6	1.40	–	16	1.00	–	18	–	1.00	–	●
	2.0	1.80	–	14	1.50	–	16	–	1.50	–	
	3.0	2.70	–	10	4.00	–	12	–	4.00	–	
	4.0	3.70	–	10	6.00	–	10	–	6.00	–	
	5.0	5.20	–	–	–	–	8	–	10.00	–	
	6.0	5.20	–	–	–	–	8	–	10.00	–	
8.0	7.00	–	–	–	–	4	–	21.00	–		
12.0	11.50	–	–	–	–	0	–	50.00	–		
<p>Crimp</p> <p>fig. 1</p> <p>fig. 2</p>	0.5 ⁵⁾	0.45	1	–	–	32	28	0.035	0.09	12	●
	0.7	0.80	1	–	–	26	22 ⁴⁾	0.140	0.34	22	●
		0.45	2	–	–	32	28	0.035	0.09		○
	0.9	1.10	1	–	–	24	20	0.250	0.50	30	●
		0.80	2	–	–	26	22 ⁴⁾	0.140	0.34		○
		0.45	2	–	–	32	28	0.035	0.09		○
	1.3	1.40	1	–	–	20	18	0.500	1.00	40	●
		1.10	2	–	–	24	20	0.250	0.50		○
		0.80	2	–	–	26	22 ⁴⁾	0.140	0.34		○
	1.6	1.90	1	–	–	18	14 ⁴⁾	1.000	1.50	50	●
		1.40	2	–	–	22	18	0.340	1.00		○
	2.0	2.40	1	–	–	16	12 ⁴⁾	1.500	2.50	65	●
		1.90	2	–	–	18	14	1.000	1.50		○
	3.0	2.90	1	–	–	14	10 ⁴⁾	2.500	4.00	75	●
	4.0	4.00	1	–	–	12	10	4.000	6.00	90	●
	<p>Print</p>	L dimensions and C are detailed in the section on PCB drilling pattern. See page 156 and 159.									●
<p>Print (elbow)</p>		L dimensions and C are detailed in the section on PCB drilling pattern. See page 157 and 160.									●

Note:

- 1) contact retention force in the insulator (according to IEC 60512-8 test 15 a).
- 2) for 00 multipole series.
- 3) for S, E, 2C, 2G and 1D series.
- 4) for a given AWG, the diameter of some stranded conductor designs is larger than the solder cup diameter. Make sure that the maximum conductor diameter is smaller than $\varnothing C$.
- 5) for 00 multipole series or for 0B and 1B series with male contacts.

Verify the fitting to your cable

Verify if the selected connector size fits to your cable diameter.

Series	Cable diameter range (mm)			
	Collet		Collet for fitting a bend relief	
	min.	max.	min.	max.
00 ¹⁾	1.1	3.4	1.1	3.4
0B	1.5	5.5	1.5	5.0
1B	2.2	7.5	2.2	7.0
2B	1.5	9.7	1.5	9.0
3B	4.1	11.7	4.1	11.0
4B	5.1	16.0	5.1	15.0
5B	9.6	25.0	9.6	15.5
0K	1.0	5.0	1.0	5.0
1K	1.3	8.5 ³⁾	1.3	8.5
2K	1.3	10.5 ³⁾	1.3	10.5
3K	2.6	15.0 ³⁾	2.6	15.0
4K	4.6	23.5 ³⁾	4.6	15.0
5K	9.6	23.5	–	–

Series	Cable diameter range (mm)			
	Collet		Collet for fitting a bend relief	
	min.	max.	min.	max.
00 ²⁾	1.1	4.1	1.1	4.1
0S	1.3	6.7	1.3	6.1
1S	1.3	8.5	1.3	8.0
2S	1.3	10.5	1.3	10.0
3S	2.5	13.0	2.5	13.0
4S	4.1	22.0	4.1	13.0
5S	6.1	30.0	–	–
6S	11.1	30.0	–	–
0E	1.0	5.0	1.0	5.0
1E	1.3	8.5 ³⁾	1.3	8.5
2E	1.3	10.5 ³⁾	1.3	10.5
3E	2.6	15.0 ³⁾	2.6	15.0
4E	4.6	23.5 ³⁾	4.6	15.0
5E	9.6	23.5	–	–
6E	13.0	30.0	–	–
0L	1.0	5.0	1.0	5.0
1L	1.3	8.5 ³⁾	1.3	8.5
2L	1.3	10.5 ³⁾	1.3	10.5

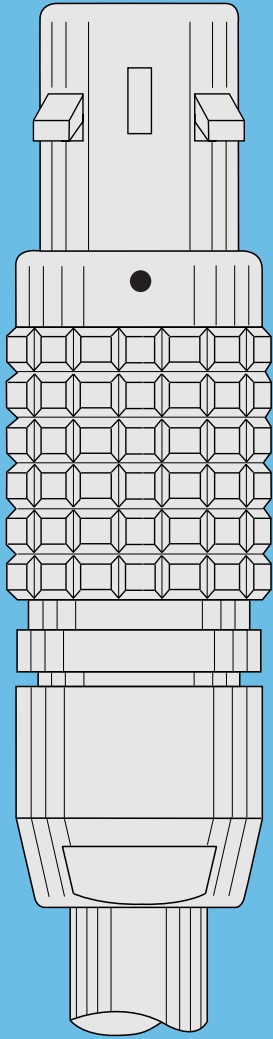
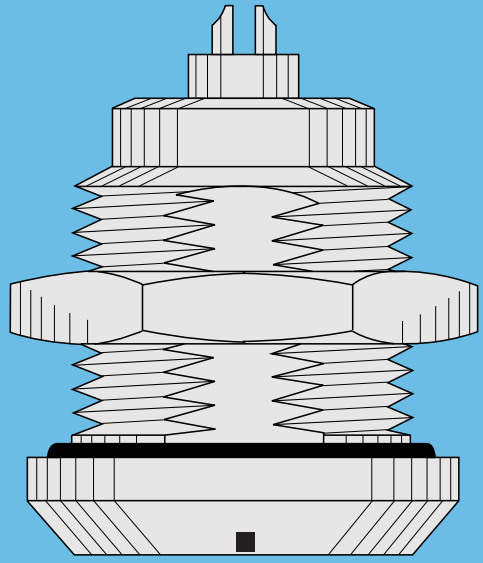
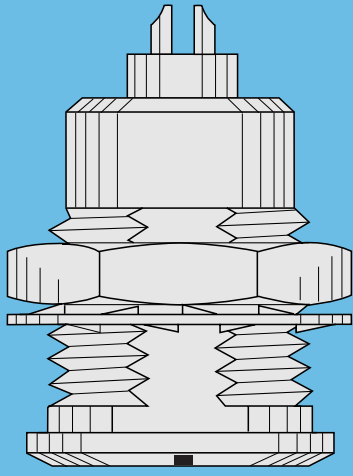
Series	Cable diameter range (mm)			
	Collet		Collet for fitting a bend relief	
	min.	max.	min.	max.
2C	2.2	8.1	2.2	8.1
2G	4.5	7.9	4.5	7.9
1D	3.1	7.5	3.1	7.0

Note:

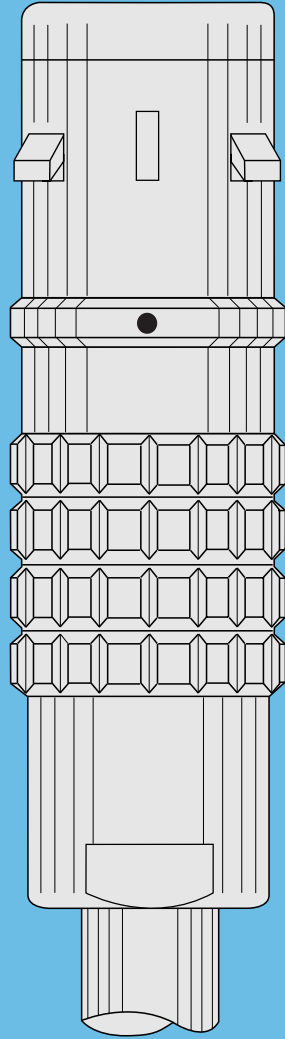
¹⁾ for multipole only.

²⁾ for unipole only.

³⁾ for these series the maximum cable diameter require models with oversized cable collet (type K).



B SERIES



K SERIES (watertight)

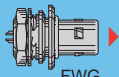
B Series

B series connectors provide the following main features:

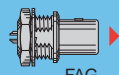
- security of the Push-Pull self-latching system
- solder, crimp or print contacts (straight or elbow)
- multiple key options to avoid cross mating of similar connectors
- 360° screening for full EMC shielding.
- multipole types 2 to 64 contacts
- high packing density for space savings
- keying system («G» key standard) for connector alignment

Metal housing models (page 12)

Fixed plugs

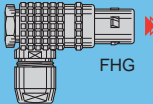


FWG

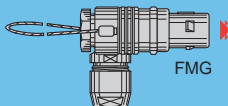


FAG

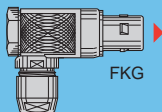
Elbow plugs



FHG

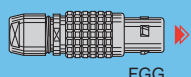


FMG

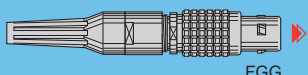


FKG

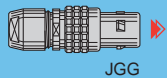
Straight plugs



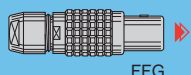
FGG



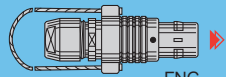
FGG



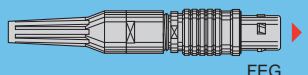
JGG



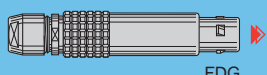
FFG



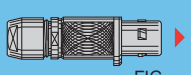
FNG



FEG



FDG



FIG

Fixed sockets



EGG



ENG



EKG



ESG



EHG



EJG



EEG



EFG



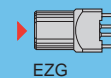
ECG



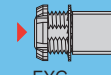
ECG



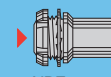
ECG



EZG

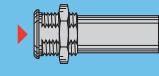


EYG



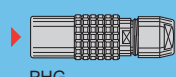
XPF

Fixed coupler

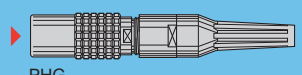


R..

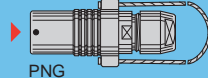
Free sockets



PHG

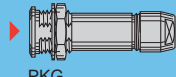


PHG

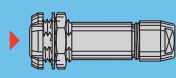


PNG

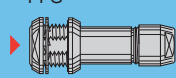
Fixed sockets



PKG



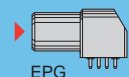
PFG



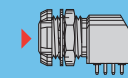
PEG

Elbow socket models (page 22)

Elbow sockets



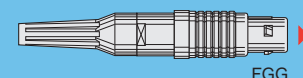
EPG



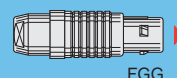
XBG, EXG

Plastic housing models (page 24)

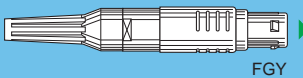
Straight plugs



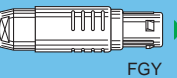
FGG



FGG

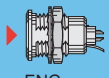


FGY

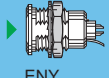


FGY

Fixed sockets



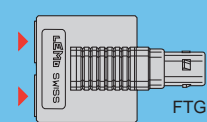
ENG



ENY

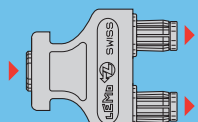
Bridge models (page 29)

Plug with two parallel sockets



FTG

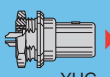
Bridge plugs



CFF, CRG

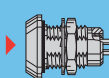
Watertight or vacuumtight models (page 26)

Fixed plug

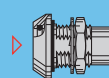


YHG

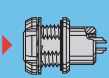
Fixed sockets



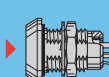
HGG



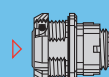
HHG



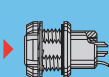
HEG



HNG

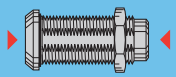


HCG



HMG

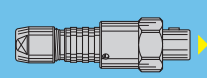
Fixed coupler



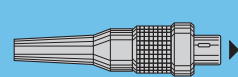
S..

Threaded-latching models (page 30)

Straight plugs

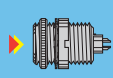


FVG

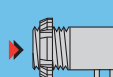


FVB

Fixed socket



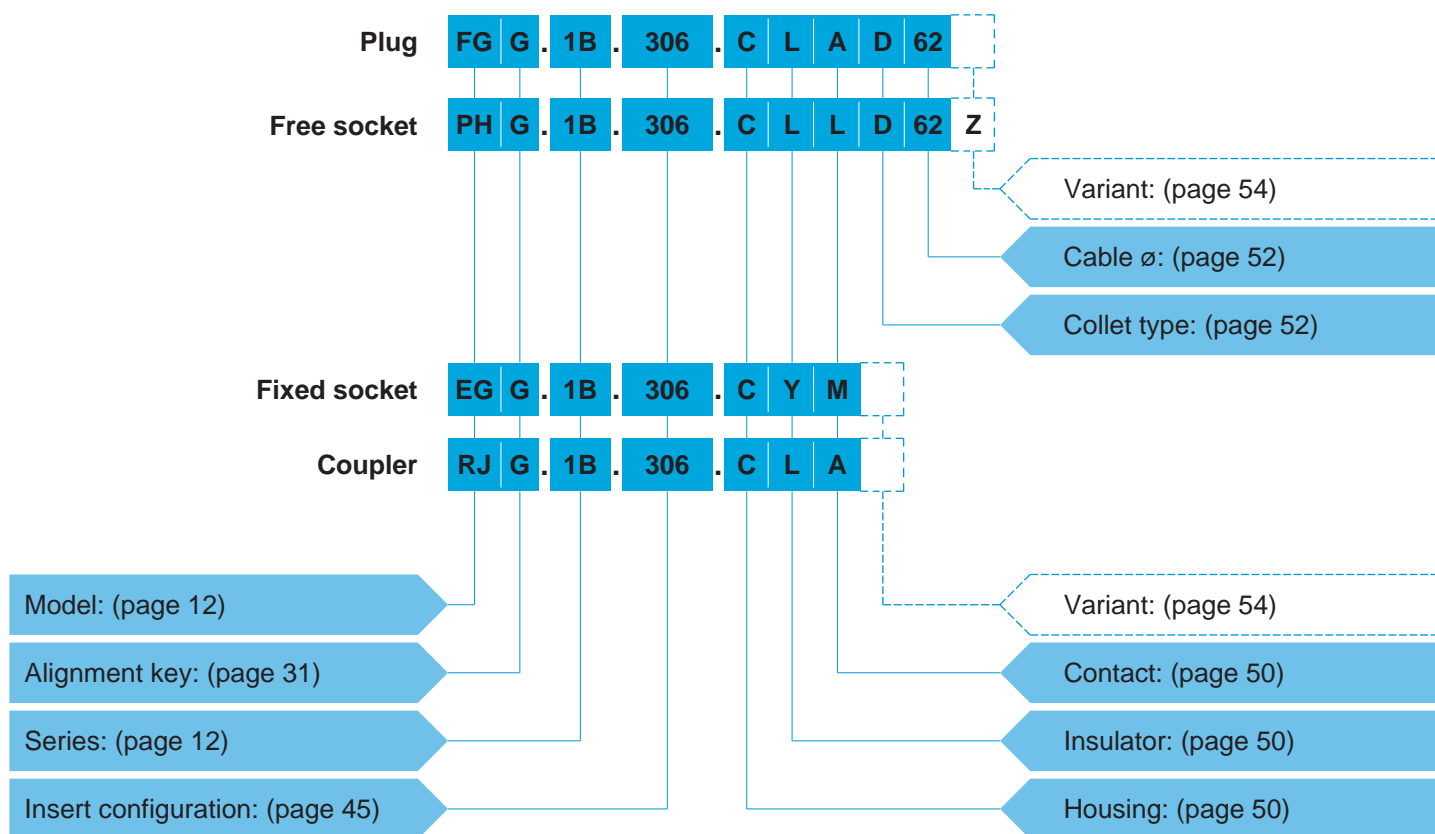
ESG



XRB

Elbow socket

Part Numbering System



Part Number Example

Straight plug with cable collet:

FGG.1B.306.CLAD62 = straight plug with key (G) and cable collet, 1B series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, D type collet for 6.0 mm diameter cable.

Free socket:

PHG.1B.306.CLLD62Z = free socket with key (G) and cable collet, 1B series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, female solder contacts, D type collet for 6.0 mm diameter cable and nut for fitting a bend relief.

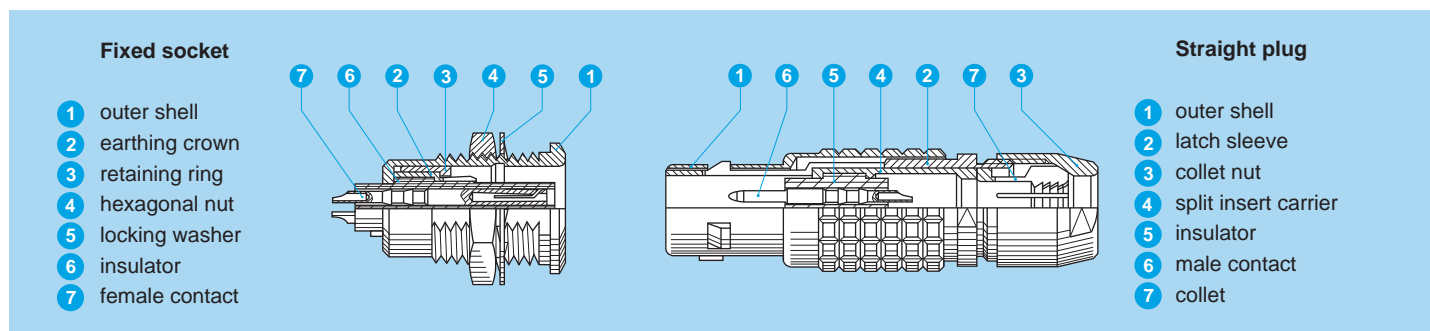
Fixed socket:

EGG.1B.306.CYM = fixed socket, nut fixing, with key (G), 1B series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK extended insulator, female crimp contacts.

Fixed coupler:

RJG.1B.306.CLA = straight fixed coupler with keys (J) at the flange end and key (G) at the other end, 1B series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, male-female contacts.

Part Section Showing Internal Components



Metal housing models

Technical Characteristics

Mechanical and Climatical

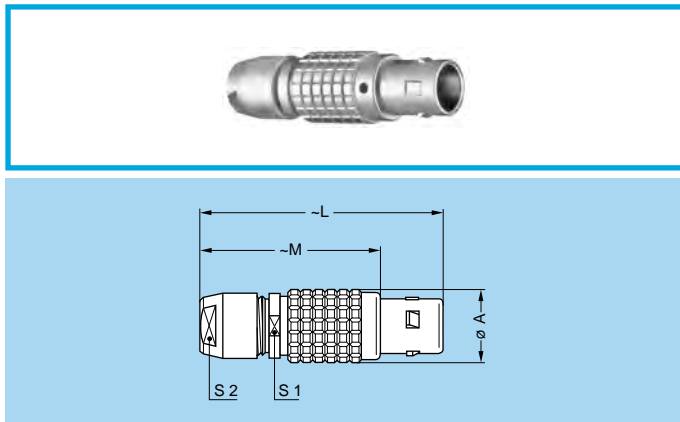
Characteristics	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range	-55° C, +250° C	
Resistance to vibration	10-2000 Hz, 15 g	IEC 60512-4 test 6d
Shock resistance	100 g, 6 ms	IEC 60512-4 test 6c
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Protection index (mated)	IP50	IEC 60529
Climatical category	55/175/21	IEC 60068-1

Electrical

Characteristics	Value	Standard
Shielding efficiency	at 10 MHz	> 75 dB
	at 1 GHz	> 40 dB
		IEC 60169-1-3
		IEC 60169-1-3

Note:

the various tests have been carried out with FGG and EGG connector pairs, with chrome-plated brass shell and PEEK insulator. Detailed electrical characteristics, as well as materials and treatment are presented in the chapter Technical Characteristics on page 171.



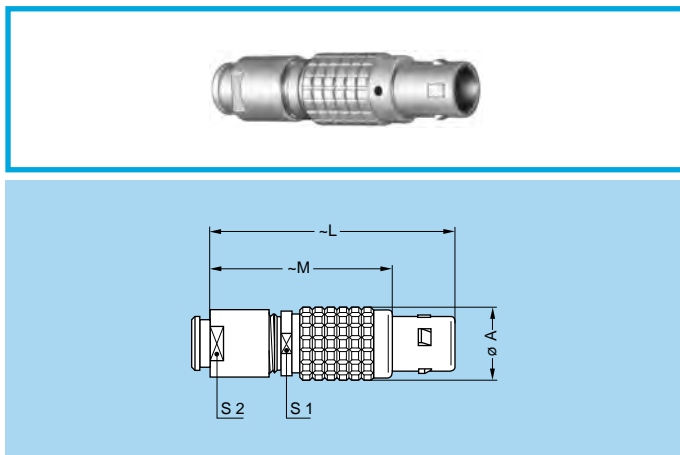
FGG Straight plug, key (G) or keys (A...M and R), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FGG	00 ¹⁾	6.4	28.5	20.5	5.5	5
FGG	0B	9.5	36.0	26.0	8.0	7
FGG	1B	12.0	43.0	32.0	10.0	9
FGG	2B	15.0	50.0	38.0	13.0	12
FGG	3B	18.0	58.0	43.0	15.0	14
FGG	4B	25.0	75.0	57.0	21.0	20
FGG	5B	35.0	103.0	78.0	31.0	30

M1

Cable assembly (page 161)

Note: ¹⁾ the surface design of the 00 series is different.



FGG Straight plug, key (G) or keys (A...M), cable collet and nut for fitting a bend relief ²⁾

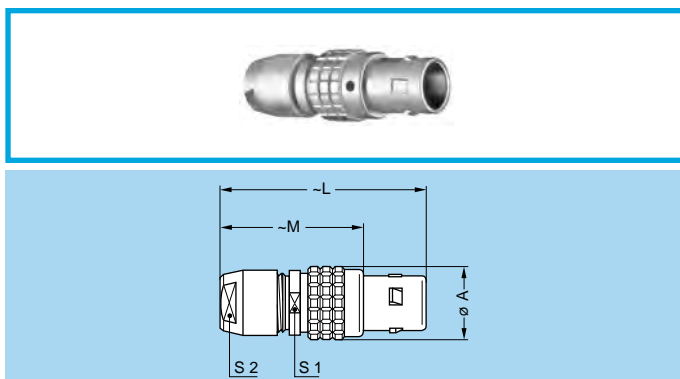
Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FGG	00 ¹⁾	6.4	28.7	20.7	5.5	6
FGG	0B	9.5	35.0	25.0	8.0	7
FGG	1B	12.0	42.0	31.0	10.0	9
FGG	2B	15.0	49.0	37.0	13.0	12
FGG	3B	18.0	56.5	41.5	15.0	15
FGG	4B	25.0	71.0	53.0	21.0	20

M1

Cable assembly (page 161)

Note: ¹⁾ the surface design of the 00 series is different.
²⁾ to order, add a «Z» at the end of the reference.

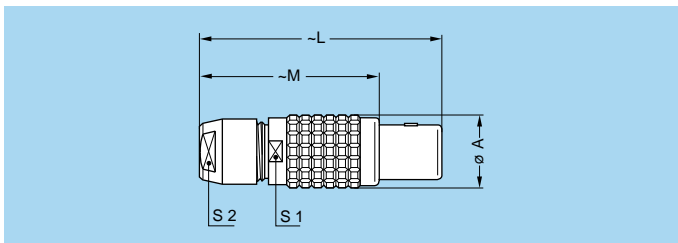
The bend relief must be ordered separately (see page 141).



JGG Straight plug, short version, key (G), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
JGG	0B	9.5	32.0	22.0	8.0	7

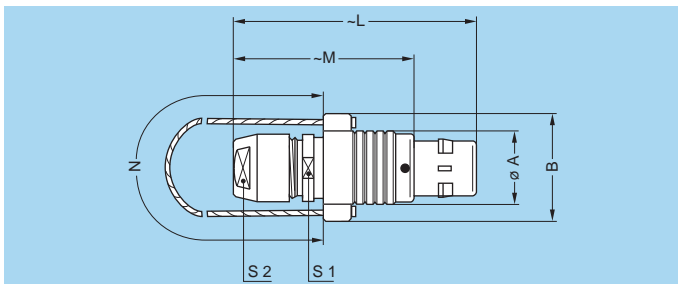
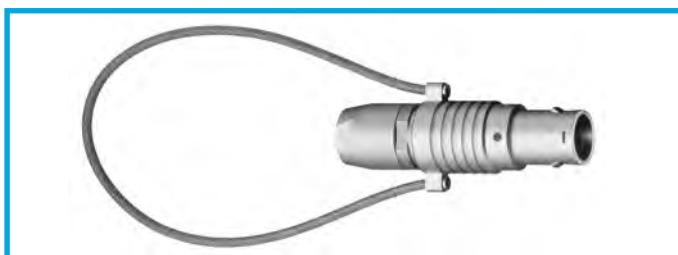
M4 Cable assembly (page 161)



FFG Straight plug, non-latching, key (G) or keys (A...M), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FFG	0B	9.5	36	26	8	7
FFG	1B	12.0	43	32	10	9
FFG	2B	15.0	50	38	13	12
FFG	3B	18.0	58	43	15	14
FFG	4B	25.0	75	57	21	20

M1 Cable assembly (page 161)

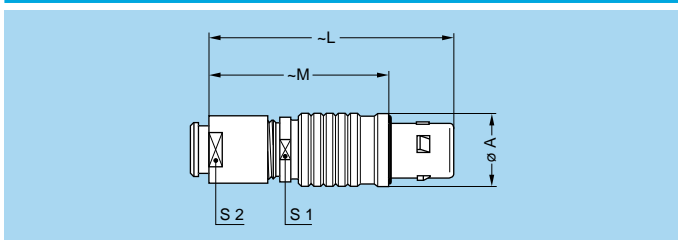
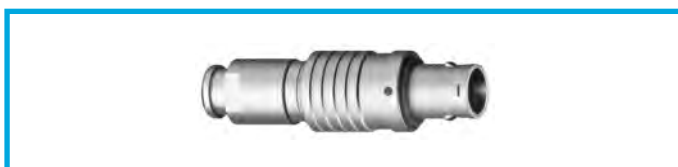


FNG Straight plug, key (G) or keys (A...M and R), cable collet and lanyard release

Reference		Dimensions (mm)						
Model	Series	A	B	L	M	N	S1	S2
FNG	0B	9.5	15.5	36.0	26.0	140	8	7
FNG	1B	12.0	18.0	43.0	32.0	140	10	9
FNG	2B	15.0	21.0	49.0	37.0	160	13	12
FNG	3B	18.0	25.0	58.0	43.0	190	15	14
FNG	4B	25.0	32.0	75.0	57.0	230	21	20
FNG	5B	35.0	42.0	103.0	78.0	300	31	30

M1 Cable assembly (page 161)

Note: cable material: stainless steel with Polyamide sheath.

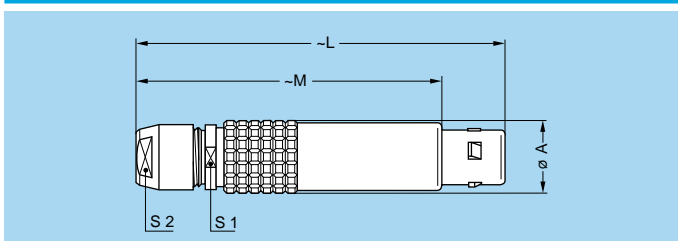
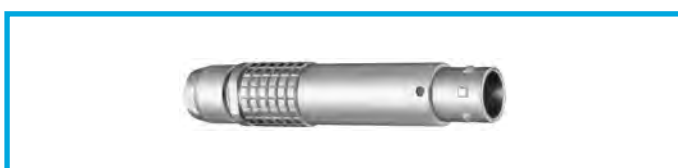


FEG Straight plug, key (G) or keys (A...L), cable collet, front seal and nut for fitting a bend relief ¹⁾ (IP 54 protection index when mated)

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FEG	0B	11.0	35.0	25.0	8	7
FEG	1B	13.5	42.0	33.0	10	9
FEG	2B	16.5	48.0	36.0	13	12
FEG	3B	19.0	56.5	41.5	15	15

M1 Cable assembly (page 161)

Note: ¹⁾ to order, add a «Z» at the end of the reference. The bend relief must be ordered separately (see page 141).



FDG Straight plug, long version, key (G) or keys (A...L), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FDG	1B	12	68	57	10	9
FDG	2B	15	79	67	13	12

M2 Cable assembly (page 162)

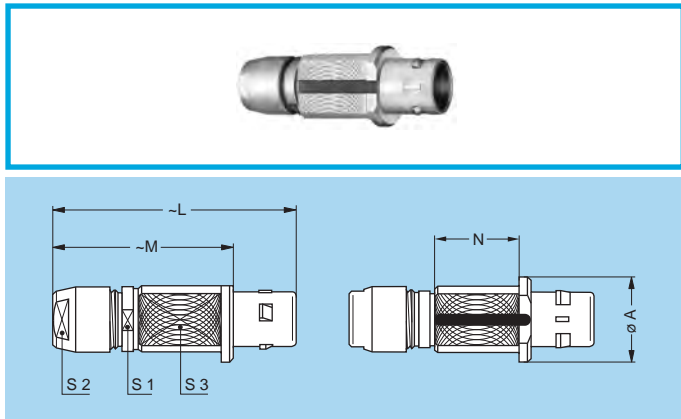
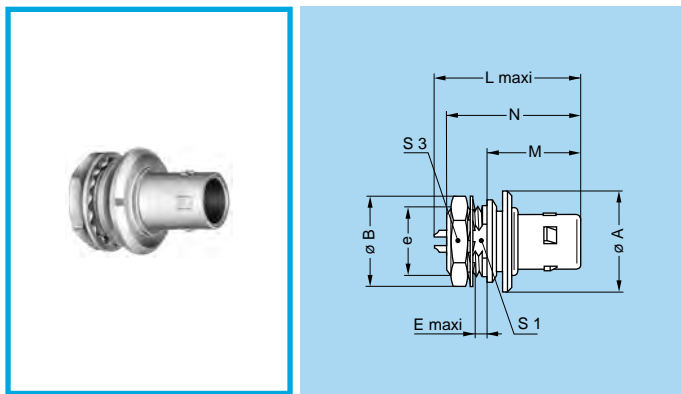


FIG Straight plug for remote handling, key (G) or keys (A...L and R), special alignment mark, knurled handling surface, cable collet

Reference		Dimensions (mm)						
Model	Series	A	L	M	N	S1	S2	S3
FIG	2B	20	49	37	17.5	13	12	15
FIG	3B	22	58	43	21.5	15	14	18
FIG	4B	30	75	57	28.5	21	20	25
FIG	5B	40	103	78	41.0	31	30	35

M1 Cable assembly (page 161)

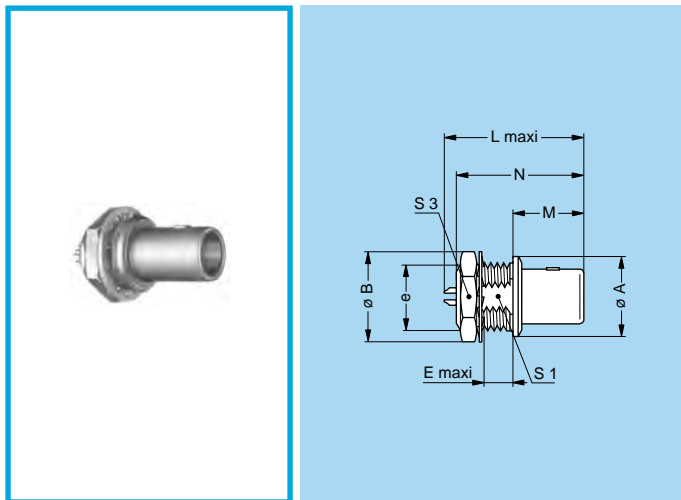


FWG Fixed plug, nut fixing, key (G) or keys (A...L)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
FWG	0B	14.0	12.4	M9x0.6	1.8	22.5	14.5	19.5	8.2	11
FWG	1B	18.0	15.8	M12x1.0	2.9	24.9	17.0	24.8	10.5	14
FWG	2B	19.5	19.2	M15x1.0	4.1	28.6	18.0	27.3	13.5	17
FWG	3B	25.0	25.0	M18x1.0	4.2	32.1	23.0	31.5	16.5	22

P9 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts

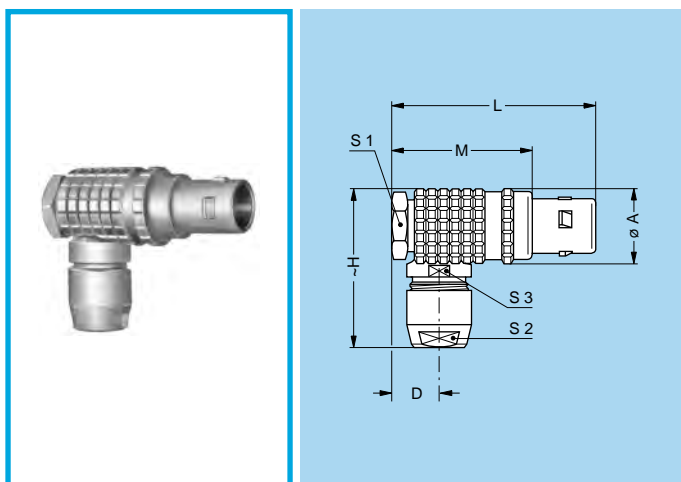


FAG Fixed plug, non-latching, nut fixing, key (G) or keys (A...M and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
FAG	00	8	10.2	M7x0.5	2.9	18.1	9.0	15.0	6.3	9
FAG	0B	10	12.4	M9x0.6	4.2	20.8	11.5	18.9	8.2	11
FAG	1B	14	15.8	M12x1.0	5.4	25.2	12.5	21.6	10.5	14
FAG	2B	18	19.2	M15x1.0	6.0	28.7	13.8	23.9	13.5	17
FAG	3B	22	25.0	M18x1.0	5.8	32.1	17.0	30.2	16.5	22
FAG	4B	29	34.0	M25x1.0	6.8	37.1	20.5	34.7	23.5	30
FAG	5B	40	40.0	M35x1.0	6.8	47.1	28.0	42.8	33.5	-

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts. The 5B series is delivered without locking washer or tapered washer and with a round nut.

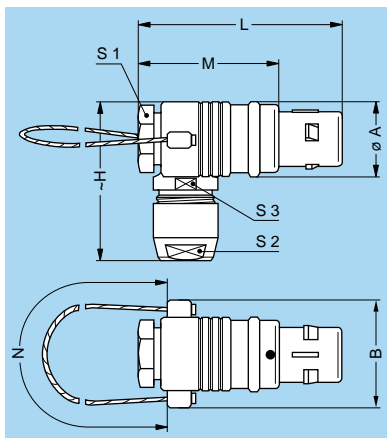


FHG Elbow (90°) plug, key (G) or keys (A...M and R), cable collet

Reference		Dimensions (mm)							
Model	Series	A	D	H	L	M	S1	S2	S3
FHG	00 ¹⁾	7.7	5.2	18.0	24.5	16.5	7	5	5.5
FHG	0B	11.0	6.5	26.0	30.0	21.6	10	7	8.0
FHG	1B	13.5	8.0	30.5	36.0	25.0	11	9	10.0
FHG	2B	16.5	9.0	34.0	41.5	29.5	14	12	13.0
FHG	3B	19.0	10.0	37.0	50.0	35.0	17	14	15.0
FHG	4B	26.0	15.0	52.0	67.0	49.0	22	20	21.0
FHG	5B	36.0	21.0	74.0	90.0	65.0	32	30	31.0

M3 Cable assembly (page 161)

Note: ¹⁾ the surface design of the 00 series is different.

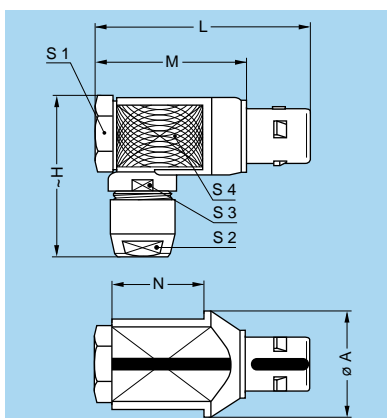


FMG Elbow (90°) plug, key (G) or keys (A...M), cable collet and lanyard release, long key ¹⁾

Reference		Dimensions (mm)								
Model	Series	A	B	H	L	M	N	S1	S2	S3
FMG	0B	11	17	26	31.6	21.6	140	10	7	8
FMG	3B	19	26	39	50.0	35.0	190	17	14	15

M3 Cable assembly (page 161)

Note: ¹⁾ long key: only in 0B series and with key (G).
Cable material: stainless steel with Polyamide sheath.

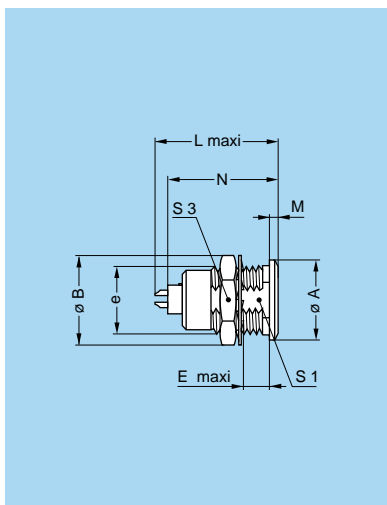


FKG Elbow (90°) plug for remote handling, key (G) or keys (A...L), special alignment mark, knurled handling surface, cable collet

Reference		Dimensions (mm)									
Model	Series	A	H	L	M	N	S1	S2	S3	S4	
FKG	3B	25	37.0	50.0	35.0	21.0	17	14	15	21	
FKG	4B	32	52.0	67.0	49.0	28.5	22	20	21	26	
FKG	5B	46	74.2	89.5	64.5	40.0	32	30	31	38	

M3 Cable assembly (page 161)

Note: dimension D is the same as for the FHG model.

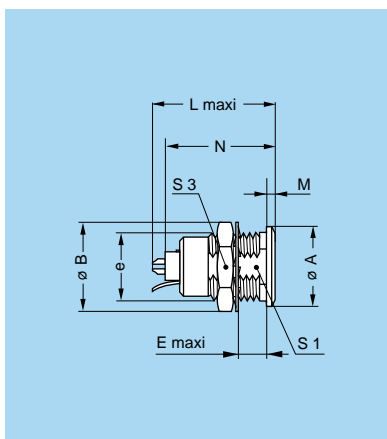


EGG Fixed socket, nut fixing, key (G) or keys (A...M and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
EGG	00	8	10.2	M7x0.5	6.0	15.5	1.0	13.7	6.3	9
EGG	0B	10	12.4	M9x0.6	7.0	20.7	1.2	19.1	8.2	11
EGG	1B	14	15.8	M12x1.0	7.5	23.0	1.5	21.1	10.5	14
EGG	2B	18	19.2	M15x1.0	8.5	26.7	1.8	24.6	13.5	17
EGG	3B	22	25.0	M18x1.0	11.5	30.7	2.0	28.1	16.5	22
EGG	4B	28	34.0	M25x1.0	12.0	35.7	2.5	34.1	23.5	30
EGG	5B	40	40.0	M35x1.0	11.0	43.5	3.0	39.6	33.5	-

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts.
The 5B series is delivered with a tapered washer and a round nut.

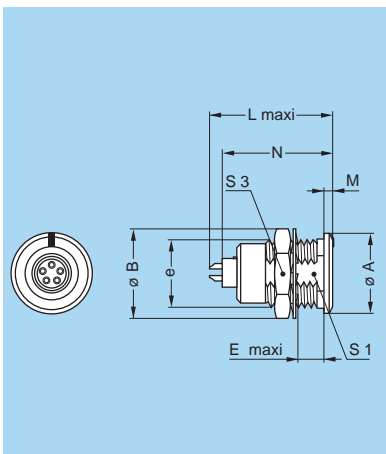


ENG Fixed socket with earthing tag, nut fixing, key (G) or keys (A...M)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
ENG	0B	10	12.4	M9x0.6	7.0	20.7	1.2	19.1	8.2	11
ENG	1B ²⁾	14	15.8	M12x1.0	7.5	23.0	1.5	21.1	10.5	14
ENG	2B	18	19.2	M15x1.0	8.5	26.7	1.8	24.6	13.5	17
ENG	3B	22	25.0	M18x1.0	11.5	30.7	2.0	28.1	16.5	22
ENG	4B	28	34.0	M25x1.0	12.0	35.7	2.5	34.1	23.5	30

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts.
²⁾ for the 1B series the earthing tag is on the same side of the key.

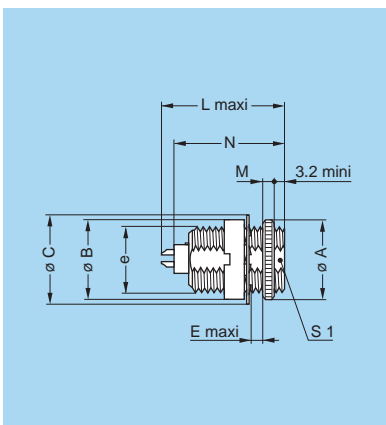


EKG Fixed socket, nut fixing, key (G) or keys (A...L and R), special alignment mark on the front

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
EKG	2B	18	19.2	M15x1.0	8.5	26.7	1.8	24.6	13.5	17
EKG	3B	22	25.0	M18x1.0	11.5	30.7	2.0	28.1	16.5	22
EKG	4B	28	34.0	M25x1.0	12.0	35.7	2.5	34.1	23.5	30
EKG	5B	40	40.0	M35x1.0	11.0	43.5	3.0	39.6	33.5	–

P1 Panel cut-out (page 152)

Note: 1) maximum length with crimp contacts.
The 5B series is delivered with a tapered washer and a round nut.



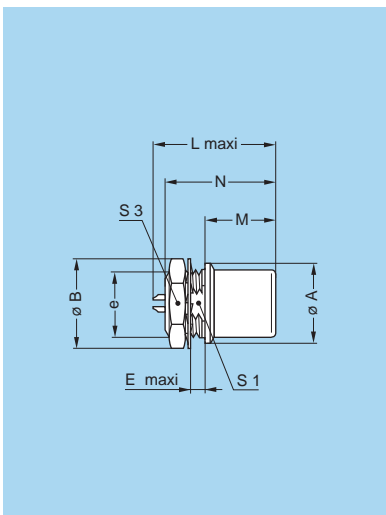
ESG Fixed socket with two round nuts, key (G) or keys (A...L), long threaded shell (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	C	e	E	L	M	N ¹⁾	S1
ESG	00	9	9	9.5	M7x0.5	3.2	15.5	2	13.7	–
ESG	1B	14	14	16.0	M12x1.0	8.0	23.0	2	21.1	10.5

P1 Panel cut-out 1B series (page 152)

P2 Panel cut-out 00 series (page 152)

Note: 1) maximum length with crimp contacts.

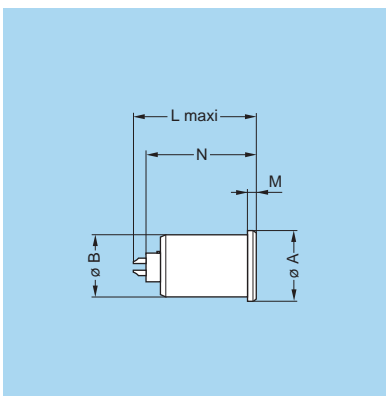


EHG Fixed socket, nut fixing, key (G) or keys (A...M and R), and protruding shell

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
EHG	00	8.0	10.2	M7x0.5	2.0	15.5	8.5	13.7	6.3	9
EHG	0B	10.0	12.4	M9x0.6	2.0	19.5	12.5	19.1	8.2	11
EHG	1B	14.0	15.8	M12x1.0	4.0	21.7	12.0	21.1	10.5	14
EHG	2B	18.0	19.2	M15x1.0	5.1	22.7	12.5	24.6	13.5	17
EHG	3B	22.0	25.0	M18x1.0	7.1	30.7	13.5	30.3	16.5	22
EHG	5B	40.0	40.0	M35x1.0	2.5	43.5	28.0	38.5	33.5	–

P1 Panel cut-out (page 152)

Note: 1) maximum length with crimp contacts.
The 5B series is delivered without locking washer or tapered washer and with a round nut.

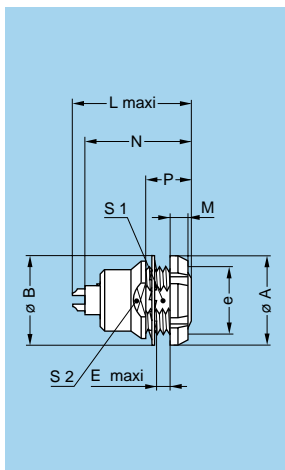


EJJ Fixed socket, press or adhesive fit, key (G) or keys (A...M)

Reference		Dimensions (mm)				
Model	Series	A	B	L	M	N ¹⁾
EJJ	0B	9.2	8.35	20.7	1.5	19.1
EJJ	1B	12.5	11.20	23.0	1.5	21.1
EJJ	2B	16.5	14.00	26.7	1.5	24.6

P5 Panel cut-out (page 152)

Note: 1) maximum length with crimp contacts.

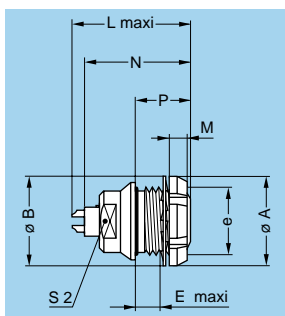


EEG Fixed socket, nut fixing, key (G) or keys (A...M and R) (back panel mounting)

Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N ¹⁾	P	S1	S2
EEG	00	10	9.5	M7x0.5	2.3	15.5	2.5	13.7	6.0	6.3	7.5
EEG	0B	12	12.5	M9x0.6	2.4	20.7	2.5	19.1	6.3	8.2	9.0
EEG	1B	16	16.0	M12x1.0	6.5	23.0	3.5	21.1	11.0	10.5	13.0
EEG	2B	20	20.0	M15x1.0	3.0	26.7	3.5	24.6	9.0	13.5	15.0
EEG	3B	24	25.0	M18x1.0	5.0	30.7	4.5	28.1	12.0	16.5	20.0
EEG	5B	41	40.0	M35x1.0	13.5	43.5	5.0	39.6	19.5	33.5	38.0

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts. The 3B and 5B series are delivered with a conical nut. The 5B series is delivered without locking washer or tapered washer.

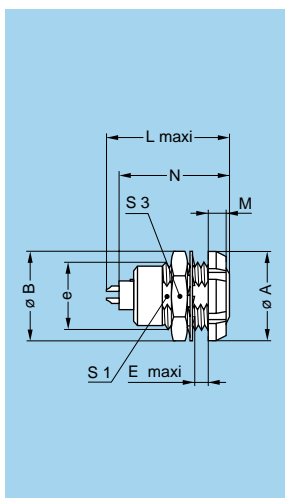


EFG Fixed socket, nut fixing, key (G) or keys (A...M), with two flats on the shell and O-ring (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	P	S2
EFG	0B	12	12.5	M9x0.6	5.5	20.7	2.5	19.1	9	8

P2 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts.

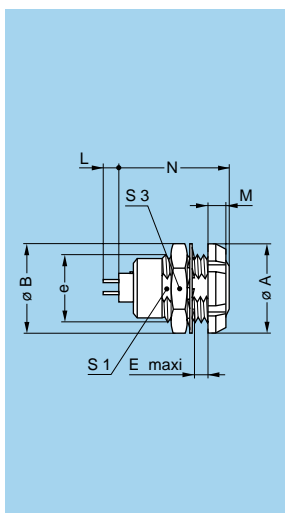


ECG Fixed socket with two nuts, key (G) or keys (A...M and R) (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
ECG	00	10	10.2	M7x0.5	4.3	13.7	2.5	13.7	6.3	9
ECG	0B	12	12.4	M9x0.6	5.5	20.7	2.5	19.1	8.2	11
ECG	1B	16	15.8	M12x1.0	6.0	23.0	3.5	21.1	10.5	14
ECG	2B	20	19.2	M15x1.0	6.5	26.7	3.5	24.6	13.5	17
ECG	3B	24	25.0	M18x1.0	9.0	30.7	4.5	28.1	16.5	22
ECG	4B	30	34.0	M25x1.0	10.0	35.7	4.5	32.6	23.5	30
ECG	5B	41	40.0	M35x1.0	9.0	43.5	5.0	39.6	33.5	—

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts. The 3B, 4B and 5B series are delivered with a conical nut. The 5B series is delivered with a tapered washer and a round nut.



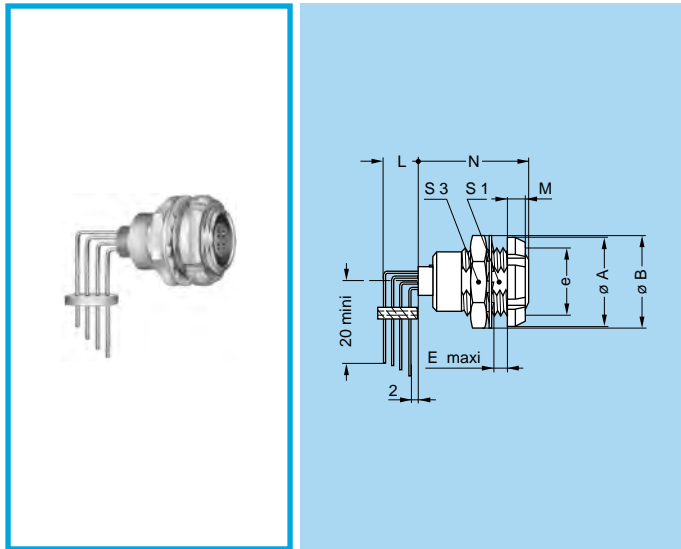
ECG Fixed socket with two nuts, key (G) or keys (A...F and R) and straight contact for printed circuit (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	M	N	S1	S3	
ECG	00	10	10.2	M7x0.5	4.3	2.5	13.7	6.3	9	
ECG	0B	12	12.4	M9x0.6	5.5	2.5	16.4	8.2	11	
ECG	1B	16	15.8	M12x1.0	6.0	3.5	19.8	10.5	14	
ECG	2B	20	19.2	M15x1.0	6.5	3.5	21.8	13.5	17	
ECG	3B	24	25.0	M18x1.0	9.0	4.5	25.8	16.5	22	
ECG	4B	30	34.0	M25x1.0	10.0	4.5	29.8	23.5	30	
ECG	5B	41	40.0	M35x1.0	9.0	5.0	36.8	33.5	—	

P1 Panel cut-out (page 152)

P15 PCB drilling pattern (page 154)

Note: this contact type is available for E● socket models fitted with female contacts. Length «L» depends on the number of contacts, see table on page 156. The 5B series is delivered with a tapered washer and a round nut. The 3B, 4B and 5B series are delivered with a conical nut.



ECG Fixed socket with two nuts, key (G) or keys (A...F) with elbow (90°) contact for printed circuit (back panel mounting)

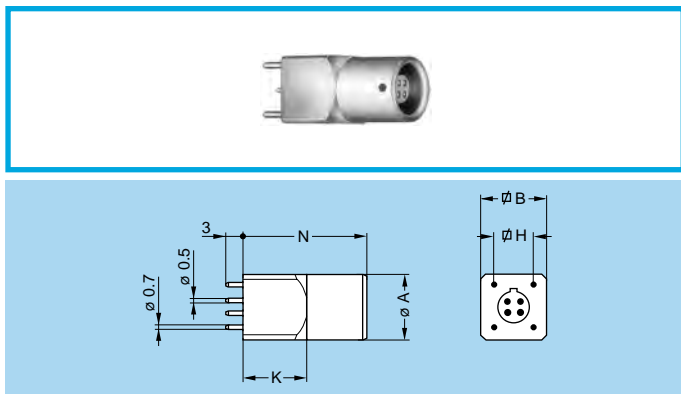
Reference		Dimensions (mm)							
Model	Series	A	B	e	E	M	N _{max}	S1	S3
ECG	0B	12	12.4	M9x0.6	2.4	2.5	18.3	8.2	11
ECG	1B	16	15.8	M12x1.0	6.0	3.5	20.3	10.5	14
ECG	2B	20	19.2	M15x1.0	6.5	3.5	22.3	13.5	17
ECG	3B	24	25.0	M18x1.0	9.0	4.5	25.8	16.5	22

P1 Panel cut-out (page 152)

P17 PCB drilling pattern (page 157)

Note: this female contact type is available for all back panel mounting socket models. Length «L» depends on the number of contacts, see PCB drilling pattern on page 157.

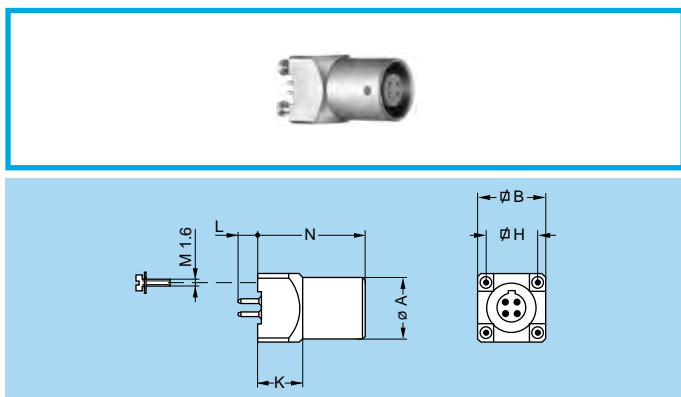
For male contacts, sockets are available upon request, with J, K or L keys. The 3B series is delivered with a conical nut.



EZG Straight socket for printed circuit, key (G) or keys (A, B)

Reference		Dimensions (mm)				
Model	Series	A	B	H	K	N
EZG	00	6.8	7	5.08	7	14

P15 + **P16** PCB drilling pattern (pages 154 and 156)



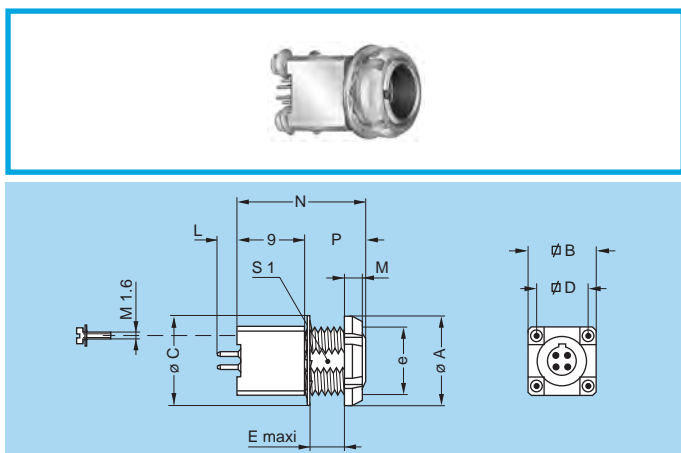
EZG Straight socket for printed circuit, key (G) or keys (A...F)

Reference		Dimensions (mm)				
Model	Series	A	B	H	K	N
EZG	0B	9	10	7.62	8	15.0
EZG	1B	11	12	7.62	8	19.0
EZG	2B	14	15	10.16	9	22.5

P15 + **P16** PCB drilling pattern (pages 154 and 156)

Note:

Length «L» depends on the number of contacts, see table on page 156.



EYG Fixed socket for printed circuit, nut fixing, key (G) or keys (A...F) (back panel mounting)

Reference		Dimensions (mm)									
Model	Series	A	B	C	D	e	E	M	N	P	S1
EYG	0B	12	10	12.5	7.62	M9x0.6	2.6	2.5	15.0	6.0	8.2
EYG	1B	14	12	16.0	7.62	M11x0.5	5.0	3.5	19.0	10.0	—
EYG	2B	20	15	19.5	10.16	M15x1.0	7.5	3.5	22.5	13.5	13.5

P1 Panel cut-out 0B and 2B series (page 152)

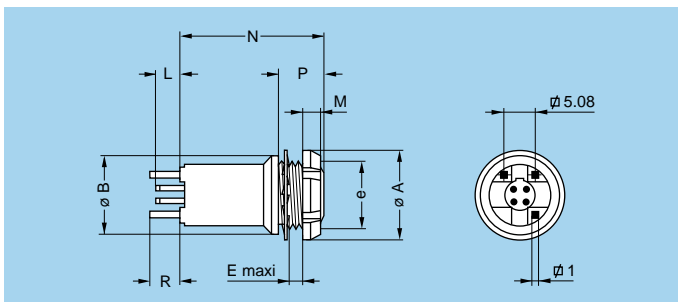
P10 Panel cut-out 1B series (page 152)

P15 + **P16** PCB drilling pattern (pages 154 and 156)

Note: Length «L» depends on the number of contacts, see page 156.



XPF Fixed socket, nut fixing, long shell, keys (F) for printed circuit (back panel mounting)



Reference		Dimensions (mm)							
Model	Series	A	B	e	E	M	N	P	R
XPF	0B	12	11	M9x0.6	1.5	2.5	19	5	4

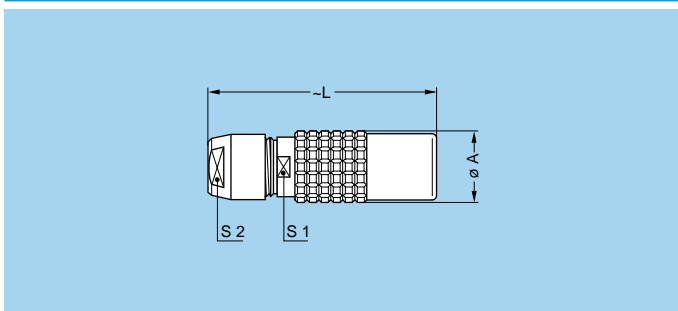
P2 Panel cut-out (page 152)

P15 + **P16** PCB drilling pattern (pages 154 and 156)

Note: Length «L» depends on the number of contacts, see table on page 156.



PHG Free socket, key (G) or keys (A...M and R), cable collet



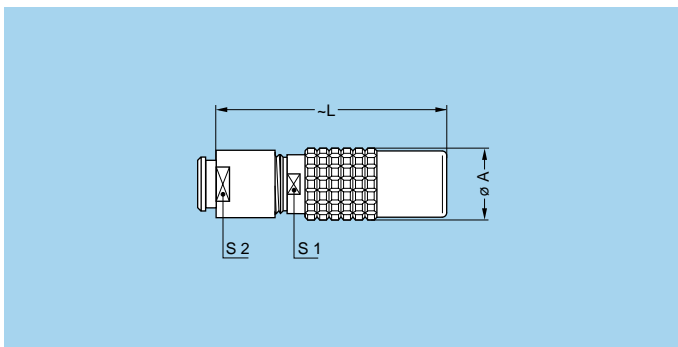
Reference		Dimensions (mm)			
Model	Series	A	L	S1	S2
PHG	00 ¹⁾	6.8	26.0	5.5	5
PHG	0B	9.5	35.5	8.0	7
PHG	1B	12.5	40.5	10.0	9
PHG	2B	16.5	47.0	13.0	12
PHG	3B	19.0	56.0	15.0	14
PHG	4B	26.0	73.0	21.0	20
PHG	5B	36.0	99.0	31.0	30

M1 Cable assembly (page 161)

Note: ¹⁾ the surface design of the 00 series is different.



PHG Free socket, key (G) or keys (A...M), cable collet and nut for fitting a bend relief ²⁾

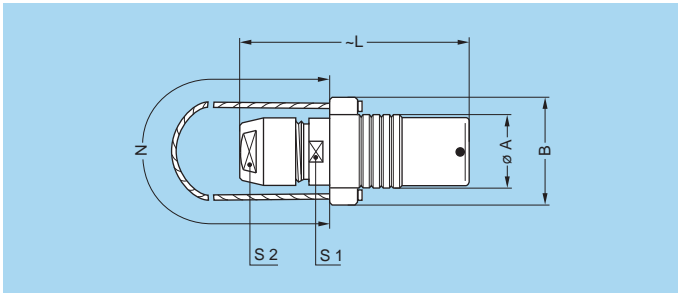
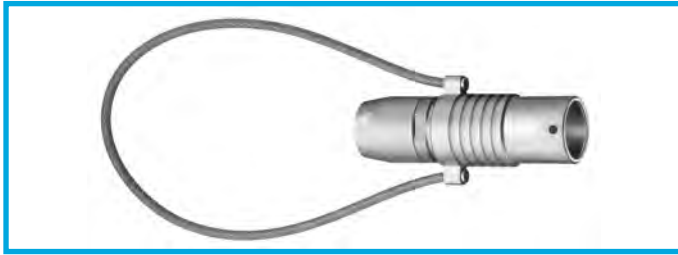


Reference		Dimensions (mm)			
Model	Series	A	L	S1	S2
PHG	00 ¹⁾	6.8	34.0	5.5	6
PHG	0B	9.5	34.5	8.0	7
PHG	1B	12.5	39.5	10.0	9
PHG	2B	16.5	46.0	13.0	12
PHG	3B	19.0	54.5	15.0	15
PHG	4B	26.0	69.0	21.0	20

M1 Cable assembly (page 161)

Note: ¹⁾ the surface design of the 00 series is different.
²⁾ to order, add a «Z» at the end of the reference.

The bend relief must be ordered separately (see page 141).

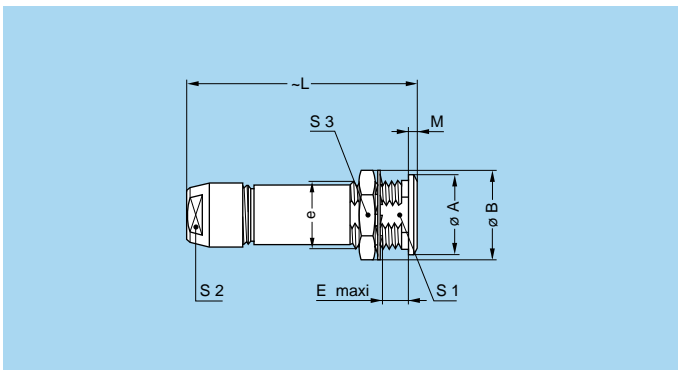


PNG Free socket, nut fixing, key (G) or keys (A...L and R), cable collet with lanyard release

Reference		Dimensions (mm)					
Model	Series	A	B	L	N	S1	S2
PNG	1B	12.4	18.4	40.5	140	10	9
PNG	2B	16.5	22.5	47.0	160	13	12
PNG	3B	19.0	26.0	56.0	190	15	14
PNG	4B	26.0	33.0	73.0	230	21	20
PNG	5B	36.0	43.0	99.0	300	31	30

M1 Cable assembly (page 161)

Note: cable material: stainless steel with Polyamide sheath



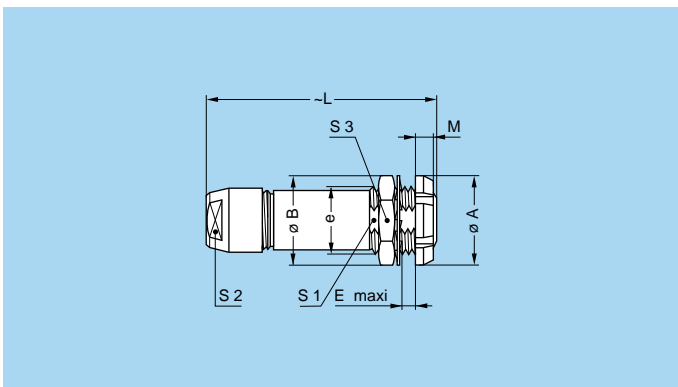
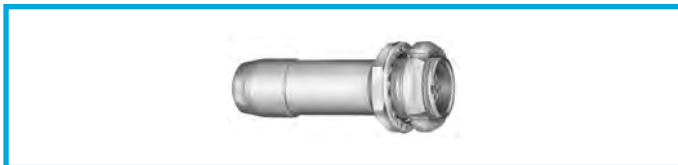
PKG Fixed socket, nut fixing, key (G) or keys (A...M and R), cable collet

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	S1	S2	S3
PKG	00	8	10.2	M7x0.5	6.5	26.0	1.0	6.3	5	9
PKG	0B	10	12.4	M9x0.6	7.0	35.5	1.2	8.2	7	11
PKG	1B	14	15.8	M12x1.0	7.5	40.5	1.5	10.5	9	14
PKG	2B	18	19.2	M15x1.0	8.5	47.0	1.8	13.5	12	17
PKG	3B	22	25.0	M18x1.0	11.5	56.0	2.0	16.5	14	22
PKG	4B	28	34.0	M25x1.0	12.0	73.0	2.5	23.5	20	30
PKG	5B	40	40.0	M35x1.0	11.0	99.0	3.0	33.5	30	-

P1 Panel cut-out (page 152)

M1 Cable assembly (page 161)

Note: the 5B series is delivered with a tapered washer and a round nut.



PFG Fixed socket, with two nuts, key (G) or keys (A...M and R), cable collet (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	S1	S2	S3
PFG	00	10	10.2	M7x0.5	5.3	26.0	2.5	6.3	5	9
PFG	0B	12	12.4	M9x0.6	5.0	35.5	2.5	8.2	7	11
PFG	1B	16	15.8	M12x1.0	5.0	40.5	3.5	10.5	9	14
PFG	2B	20	19.2	M15x1.0	6.5	47.0	3.5	13.5	12	17
PFG	3B	24	25.0	M18x1.0	9.0	56.0	4.5	16.5	14	22
PFG	4B	30	34.0	M25x1.0	11.0	73.0	4.5	23.5	20	30
PFG	5B	41	40.0	M35x1.0	10.0	99.0	5.0	33.5	30	-

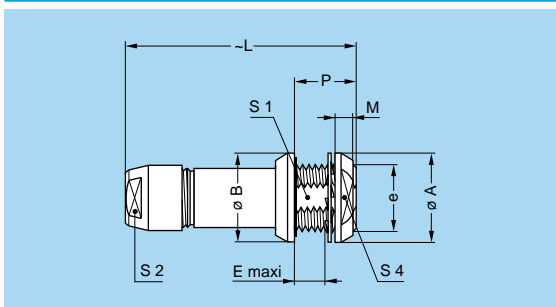
P1 Panel cut-out (page 152)

M1 Cable assembly (page 161)

Note: the 3B, 4B and 5B series are delivered with a conical nut. The 5B series is delivered with a tapered washer and a round nut.



PEG Fixed socket, nut fixing, key (G) or keys (A...L), cable collet (back panel mounting)



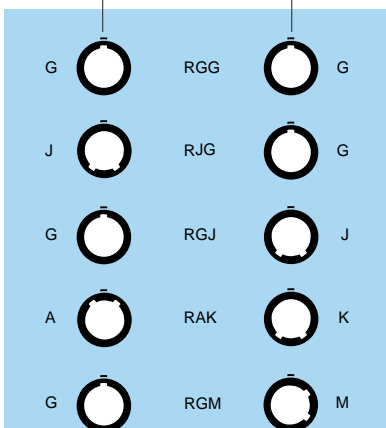
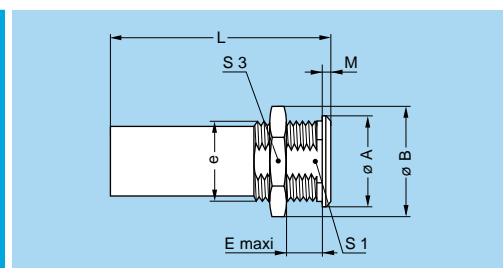
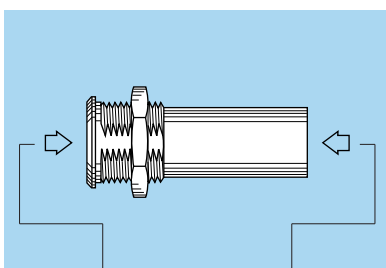
Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	S1	S2	S4	P
PEG	3B	24	25	M18x1.0	5.0	56	4.5	16.5	14	20	12
PEG	4B	32	34	M25x1.0	12.5	73	5.0	23.5	20	27	20

P1 Panel cut-out (page 152)

M1 Cable assembly (page 161)

Note: the 4B series has an o-ring on the flange.

R●● Fixed coupler, nut fixing, key (G) or keys (A and J) at the flange end and keys (J, K or M) at the other end



Reference		Contacts	Dimensions (mm)								
Model	Series	Type	A	B	e	E	L	M	S1	S3	
RGG ¹⁾	0B	female – female	12	13.8	M10x0.75	8.0	34	2.0	9.0	12	
RGG ²⁾	0B	female – female	12	13.8	M10x0.75	8.0	43	2.0	9.0	12	
RJG	0B	male – female	12	13.8	M10x0.75	8.0	34	2.0	9.0	12	
RGJ		female – male									
RAK		female – male									
RGM		female – male									
RGG ³⁾	1B	female – female	16	19.2	M14x1.00	8.5	47	2.5	12.5	17	
RJG	1B	male – female	16	19.2	M14x1.00	8.5	39	2.5	12.5	17	
RGJ		female – male									
RJG	2B	male – female	20	21.5	M16x1.00	12.0	44	4.0	15.0	19	
RGJ		female – male									
RGJ	3B	female – male	25	27.0	M20x1.00	32.0	53	4.0	18.5	24	
RGJ	4B	female – male	34	34.0	M25x1.00	50.0	65	4.0	23.5	30	

P4 Panel cut-out (page 152)

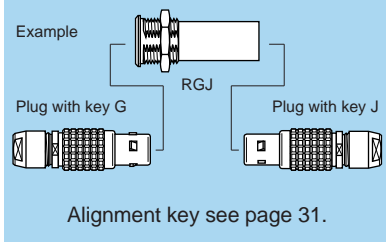
Note:

¹⁾ only available with two contacts.

²⁾ only available with three and four contacts.

³⁾ only available with three contacts.

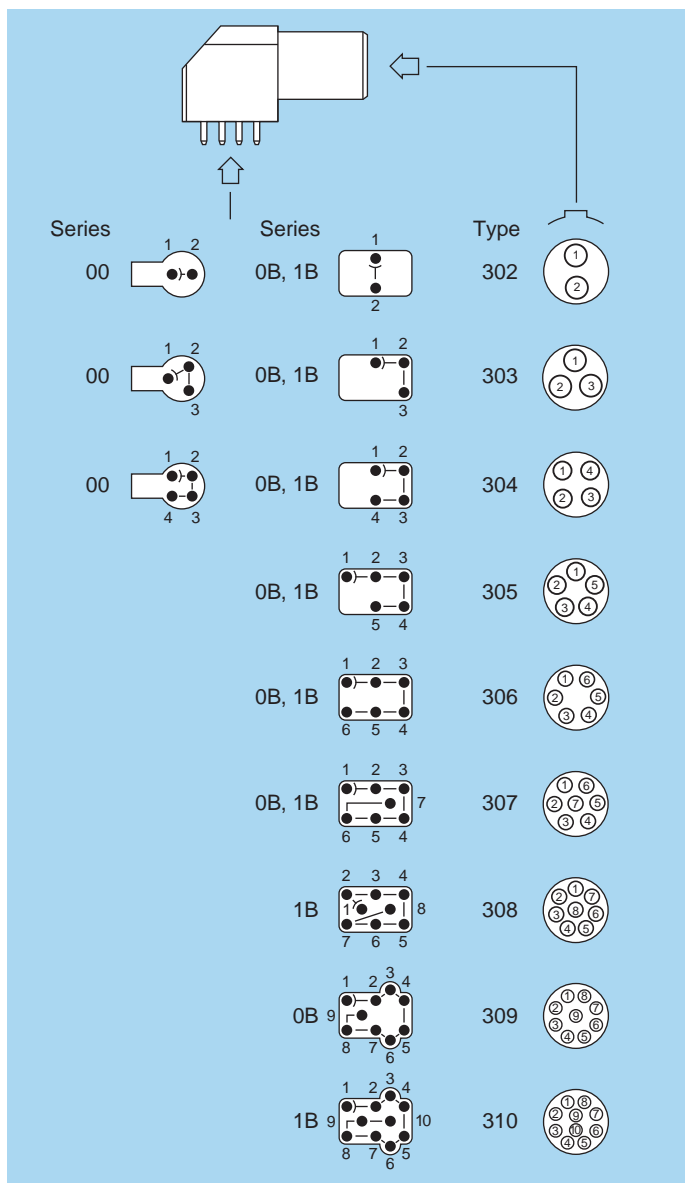
For this fixed coupler, the first contact type mentioned is always the one at the flange end. On request, these couplers can be produced in other series, with other keys.



Elbow socket models

Technical Characteristics

Types



Materials and Treatment

Component	Material	Surface treat. (µm)		
		Cu	Ni	Au
Housing	PPS	-		
	Brass	0.5	3	-
Metallic parts	Brass	0.5	3	-
Earthing crown	Bronze	0.5	3	-
Insulator	PEEK	-		
Female contact	Bronze	0.5	3	1.5

Note:

The surface treatment standards are as follows:
 - Nickel: FS QQ-N-290A. - Gold: ISO 4523

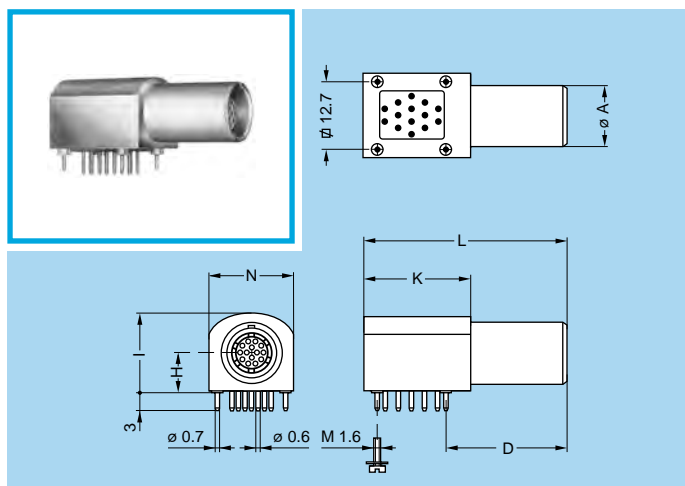
Electrical

Model	Series	Types	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	Rated current (A) ¹⁾
EPG-XBG	00	302-303-304	0.80	0.65	2.0
EPG-EXG	0B	302	1.30	1.05	4.5
EPG-EXG	0B	303	1.20	0.90	4.5
EPG-EXG	0B	304	0.85	0.70	4.5
EPG-EXG	0B	305	1.00	0.70	4.5
EPG-EXG	0B	306	0.85	0.65	2.5
EPG-EXG	0B	307	0.80	0.70	2.0
EPG-EXG	0B	309	0.60	0.50	1.5
EPG-EXG	1B	302	1.50	1.35	4.5
EPG-EXG	1B	303	1.30	1.55	4.5
EPG-EXG	1B	304	1.35	1.45	4.5
EPG-EXG	1B	305	1.25	1.15	4.5
EPG-EXG	1B	306	1.05	1.20	4.5
EPG-EXG	1B	307	0.95	1.05	2.0
EPG-EXG	1B	308	0.95	1.15	2.0
EPG-EXG	1B	310	0.90	1.50	1.5
EPG	1B	314	0.80	1.20	1.0

Note:

¹⁾ see calculation method, caution and suggested standard on page 178.

EPG Elbow (90°) socket for printed circuit, key (G) or keys (A...F) (solder or screw fixing)



Reference	Dimensions (mm)						
	A	D	H	I	K	L	N
EPG.1B.314.NLN	11	21	7.7	14.3	19	36	15.4

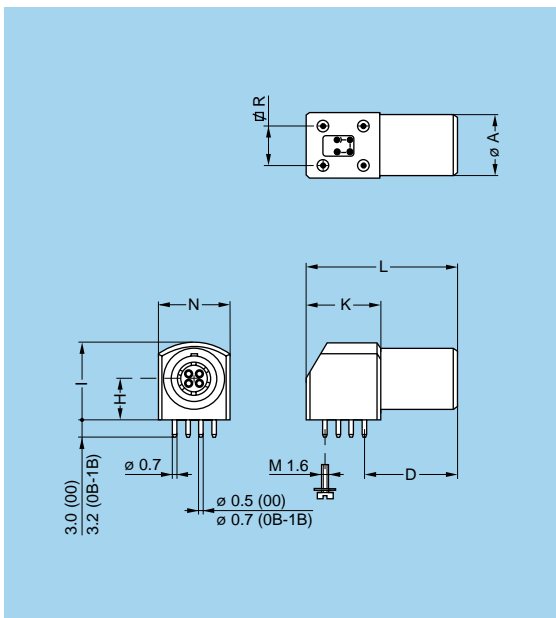
P20 PCB drilling pattern (page 158)

Note: to replace the 4 ground pins by 4 screws (M1.6) add an «S» to the end of the part number. (e.g.: EPG.1B.314.NLNS)



EPG Elbow (90°) socket for printed circuit, key (G) or keys (A...F) (solder or screw fixing)

Reference	Dimensions (mm)							
	A	D	H	I	K	L	N	R
EPG.00.302.HLN								
EPG.00.303.HLN	6.8	11.5	3.5	7.0	8.7	19	7.1	5.08
EPG.00.304.HLN								
EPG.0B.302.HLN								
EPG.0B.303.HLN								
EPG.0B.304.HLN								
EPG.0B.305.HLN	9.0	14.6	6.7	12.7	13.3	25	11.7	7.62
EPG.0B.306.HLN								
EPG.0B.307.HLN								
EPG.0B.309.HLN								
EPG.1B.302.HLN								
EPG.1B.303.HLN								
EPG.1B.304.HLN								
EPG.1B.305.HLN	11.0	16.6	7.5	14.0	13.3	27	12.6	7.62
EPG.1B.306.HLN								
EPG.1B.307.HLN								
EPG.1B.308.HLN								
EPG.1B.310.HLN								



P18 PCB drilling pattern 00 series (page 158)

P19 PCB drilling pattern 0B, 1B series (page 158)

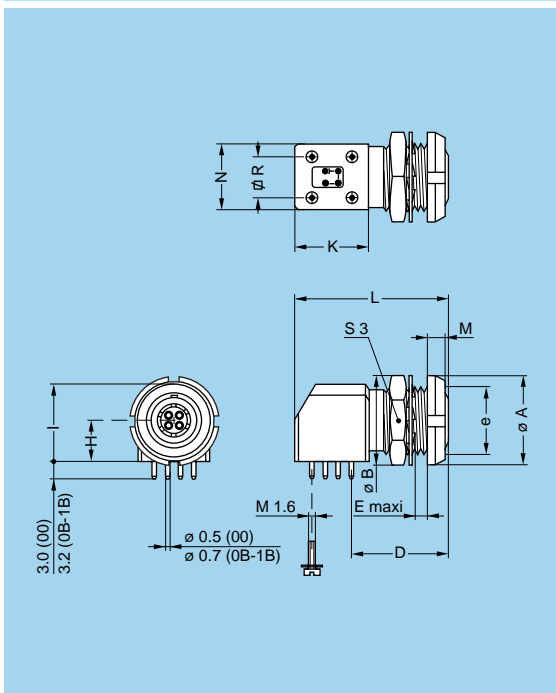
Note: In the 0B and 1B series, it is possible to replace the 4 ground pins by 4 screws (M1.6) add an «S» to the end of the part number. (e.g.: EPG.0B.307.HLNS)



EXG Elbow (90°) socket for printed circuit with two nuts, key (G) or keys (A...F) (solder or screw fixing) (back panel mounting)

XBG Elbow (90°) socket fixing nut for printed circuit, key (G) or keys (A, B) (back panel mounting)

Reference	Dimensions (mm)												
	A	B	D	e	E	H	I	K	L	M	N	R	S3
XBG.00.302.HLN													
XBG.00.303.HLN	10	10.2	11.5	M7x0.5	2.1	3.5	7.0	8.7	19	2.5	7.1	5.08	9
XBG.00.304.HLN													
EXG.0B.302.HLN													
EXG.0B.303.HLN													
EXG.0B.304.HLN													
EXG.0B.305.HLN	12	12.4	14.6	M9x0.6	6.0	6.7	12.7	13.3	25	2.5	11.7	7.62	11
EXG.0B.306.HLN													
EXG.0B.307.HLN													
EXG.0B.309.HLN													
EXG.1B.302.HLN													
EXG.1B.303.HLN													
EXG.1B.304.HLN													
EXG.1B.305.HLN	14	15.0	16.6	M11x0.5	7.5	7.5	14.0	13.3	27	3.5	12.6	7.62	13
EXG.1B.306.HLN													
EXG.1B.307.HLN													
EXG.1B.308.HLN													
EXG.1B.310.HLN													



P2 Panel cut-out 00, 0B series (page 152)

P10 Panel cut-out 1B series (page 152)

P18 PCB drilling pattern 00 series (page 158)

P19 PCB drilling pattern 0B, 1B series (page 158)

Note: In the 0B and 1B series, it is possible to replace the 4 ground pins by 4 screws (M1.6) add an «S» to the end of the part number. (e.g.: EXG.0B.307.HLNS).

Plastic housing models

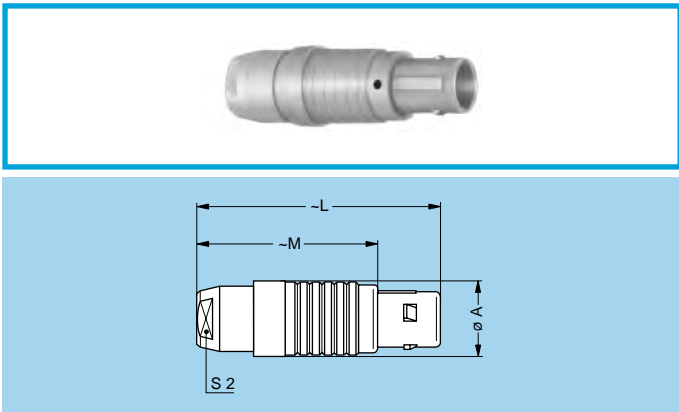
These connectors are particularly recommended for all applications requiring maximum electrical insulation when mated. The design, including a latch sleeve and a metal earthing crown, guarantees EMC screening efficiency to meet most requirements.

Technical Characteristics

Mechanical and Climatical

Characteristics	Value			Standard
	PEEK	PSU	PPSU	
Colour	natural (beige)	white or grey	cream	–
Endurance	> 5000 cycles	> 5000 cycles	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C			–
Temperature range	- 50° C/+250° C	- 50° C/+150° C	- 50° C/+180° C	–
Sterilization resistance ¹⁾	> 200 cycles	~20 cycles	> 100 cycles	IEC 60601-1 § 44.7
Resistance to solvents	very good	limited	good	–

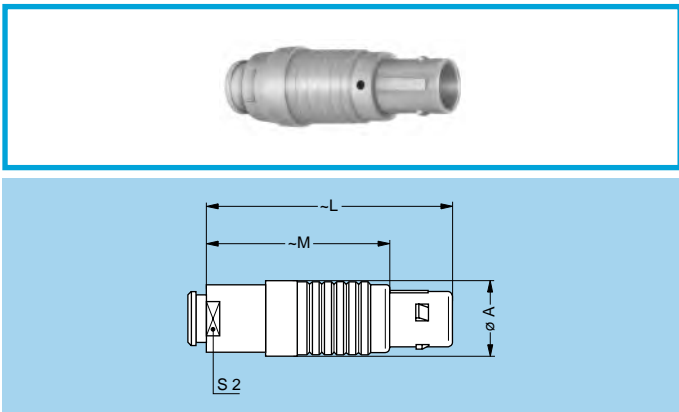
Note: ¹⁾ Steam sterilization



FGG Straight plug, key (G or J), cable collet, PEEK outer shell

Reference		Dimensions (mm)			
Model	Series	A	L	M	S2
FGG	1B	13.5	43.0	32.0	10
FGG	3B	19.0	62.0	47.0	15
FGG	4B	26.0	78.5	60.5	20

M1 Cable assembly (page 161)



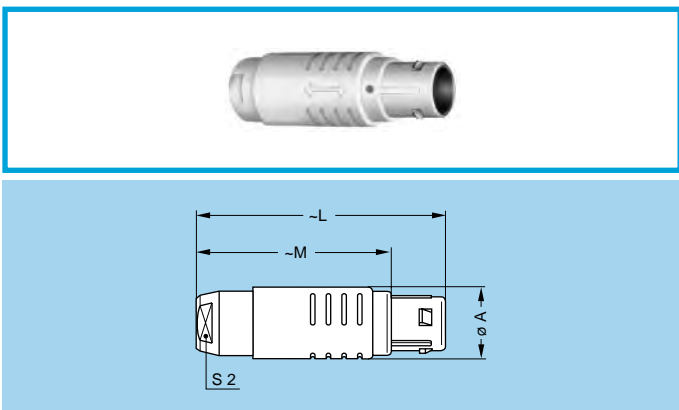
FGG Straight plug, key (G or J), cable collet, PEEK outer shell and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)				Note on availability
Model	Series	A	L	M	S2	
FGG	1B	13.5	42.2	31.2	10	for all collet type
FGG	4B	26.0	83.2	65.2	20	only from collet M82 and up

M1 Cable assembly (page 161)

Note: ¹⁾ to order, add a «Z» at the end of the reference.

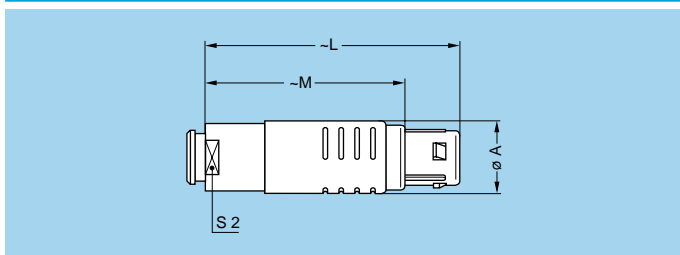
The bend relief must be ordered separately (see page 141).



FGY Straight plug, keys (Y), cable collet and PSU or PPSU outer shell

Reference		Dimensions (mm)			
Model	Series	A	L	M	S2
FGY	2B	16.5	50.5	39.5	13
FGY	3B	19.0	58.0	43.0	15
FGY	4B	26.0	76.2	58.2	20

M1 Cable assembly (page 161)



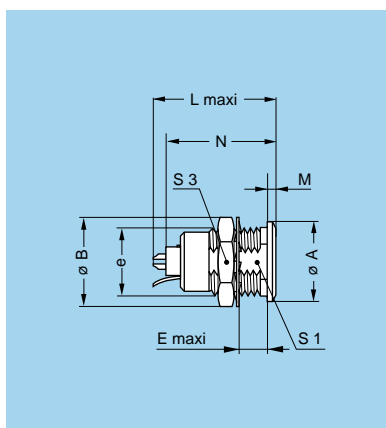
FGY Straight plug, keys (Y), cable collet and PSU or PPSU outer shell and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)				Note on availability
Model	Series	A	L	M	S2	
FGY	2B	16.5	49.5	38.5	13	only for collet M42 and up
FGY	3B	19.0	56.5	41.5	15	only for collet D62 and up
FGY	4B	26.0	74.4	56.4	20	only for collet M82 and up

M1 Cable assembly (page 161)

Note: ¹⁾ to order, add a «Z» at the end of the reference.

The bend relief must be ordered separately (see page 141).

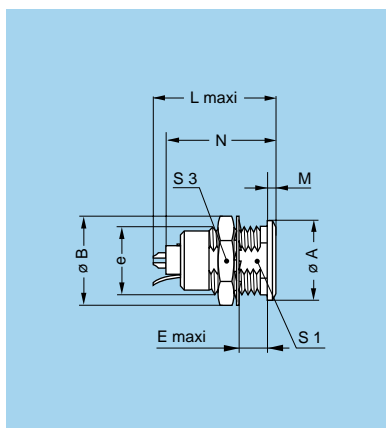


ENG Fixed socket with earthing tag, nut fixing, key (G or J), PEEK outer shell

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
ENG	1B	14	15.8	M12x1.0	7.5	23.0	1.5	21.1	10.5	14
ENG	3B	22	25.0	M18x1.0	11.5	30.7	2.0	28.1	16.5	22
ENG	4B	28	34.0	M25x1.0	12.0	35.7	2.5	32.6	23.5	30

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts.



ENY Fixed socket with earthing tag, nut fixing, keys (Y), PSU or PPSU outer shell

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
ENY	2B	18	19.2	M15x1.0	8.5	26.7	1.8	24.6	13.5	17
ENY	3B	22	25.0	M18x1.0	11.5	30.7	2.0	28.1	16.5	22
ENY	4B	28	34.0	M25x1.0	12.0	35.7	2.5	32.6	23.5	30

P1 Panel cut-out (page 152)

Note: ¹⁾ maximum length with crimp contacts.

Note: other models with plastic outer shell are available on request.

Watertight or vacuumtight models

These plug, socket and coupler models allow the device on which they are fitted to reach a protection index of IP68 as per IEC 60529. They are fully compatible with plugs of the same series and are widely used for portable radios, military, laboratory equipment, aviation, etc.

These models are identified by a letter «P» at the end of the reference.

Most of these models are also available in a vacuumtight version. Such models are identified by an additional letter «V» at the end of the part number (certificate on request).

Epoxy resin is used to seal these models.

Technical Characteristics

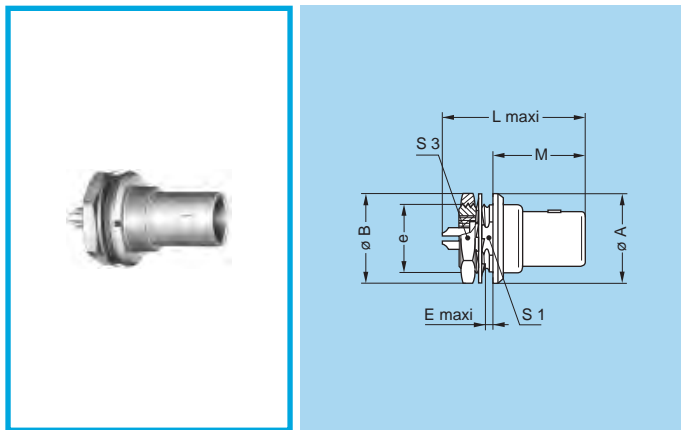
Mechanical and Climatical

Characteristics	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range (00 to 1B)	- 20° C/+100° C	
Temperature range (2B to 5B)	- 20° C/+80° C	
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Climatical category	20/80/21	IEC 60068-1
Leakage rate (He) ¹⁾	< 10 ⁻⁷ mbar.l.s ⁻¹	IEC 60512-7 test 14b

Note: ¹⁾ only for vacuumtight models.

Characteristics	Value	Standard
Maximum operating pressure ²⁾	00	60 bars
	0B	60 bars
	1B	60 bars
	2B	40 bars
	3B	30 bars
	4B	15 bars
5B	5 bars	
		IEC 60512-7 test 14d

Note: ²⁾ this value corresponds to the maximum allowed pressure difference for the assembled socket.

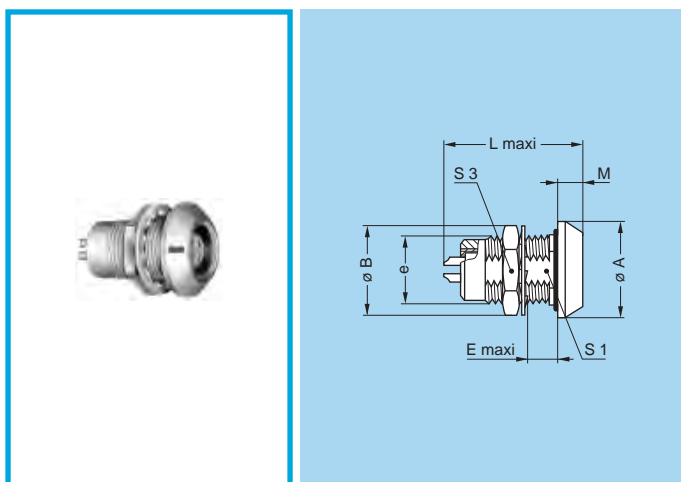


YHG Fixed plug, nut fixing, non-latching, key (G) or keys (A...M)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	S1	S3	
YHG	0B	13.0	12.4	M9x0.6	2.4	24.1	14.2	8.2	11	
YHG	1B	16.0	15.8	M12x1.0	3.9	28.0	16.2	10.5	14	
YHG	2B	19.0	19.2	M15x1.0	5.5	33.1	17.8	13.5	17	
YHG	3B	22.0	25.0	M18x1.0	5.1	38.2	22.2	16.5	22	

P9 Panel cut-out (page 152)

Note: this model does not include an O-ring behind the flange, it ensures only IP61 protection index. Consequently, it is not vacuumtight. Watertightness (when mated) is only ensured with HHG and HCG sockets.



HGG Fixed socket, nut fixing, key (G) or keys (A...M and R), watertight or vacuumtight

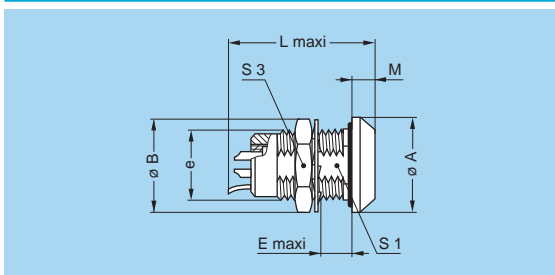
Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	S1	S3	
HGG	00	11	10.2	M7x0.5	8.0	18.0	1.5	–	9	
HGG	0B	13	12.4	M9x0.6	7.0	21.5	3.0	8.2	11	
HGG	1B	18	15.8	M12x1.0	7.0	26.6	4.5	10.5	14	
HGG	2B	20	19.2	M15x1.0	8.0	31.6	4.0	13.5	17	
HGG	3B	25	25.0	M18x1.0	11.5	36.1	4.0	16.5	22	
HGG	4B	34	34.0	M25x1.0	11.0	43.1	4.0	23.5	30	
HGG	5B	45	40.0	M35x1.0	11.0	53.6	5.0	33.5	–	

P9 Panel cut-out (page 152)

Note: the 5B series is delivered with a tapered washer and a round nut.



HNG Fixed socket, nut fixing, with earthing tag, key (G) or keys (A...M), watertight or vacuumtight

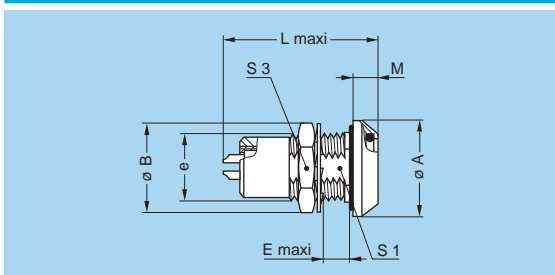


Reference		Dimensions (mm)							
Model	Series	A	B	e	E	L	M	S1	S3
HNG	0B	13	12.4	M9x0.6	7	21.5	3	8.2	11

P9 Panel cut-out (page 152)



HHG Fixed socket, nut fixing, key (G) or keys (A...M), watertight or vacuumtight (watertight when mated)



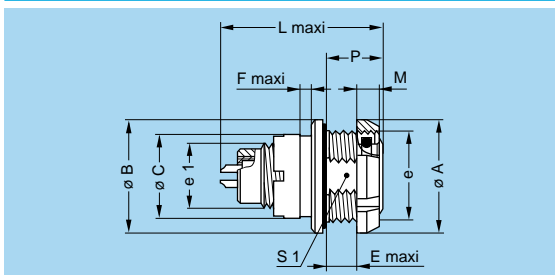
Reference		Dimensions (mm)							
Model	Series	A	B	e	E	L	M	S1	S3
HHG	0B	13	12.4	M9x0.6	7.0	24.5	4.8	8.2	11
HHG	1B	18	15.8	M12x1.0	7.0	30.3	5.2	10.5	14
HHG	2B	22	19.2	M15x1.0	8.0	35.6	6.0	13.5	17
HHG	3B	25	25.0	M18x1.0	11.5	41.3	7.2	16.5	22

P9 Panel cut-out (page 152)

Note: this model ensures watertightness (IP66) in the mating area when mated with FGG or similar plug.



HCG Fixed socket, nut fixing, key (G) or keys (A...M), watertight or vacuumtight (watertight when mated) (back panel mounting)



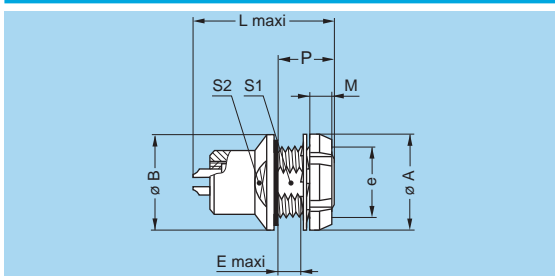
Reference		Dimensions (mm)										
Model	Series	A	B	C	e	e1	E	F	L	M	P	S1
HCG	0B	18	18	12.0	M14x1.0	M9x0.6	3.9	1.0	24.5	3.5	7.5	12.5
HCG	1B	20	20	14.5	M16x1.0	M12x1.0	6.2	2.0	30.3	3.5	10.0	14.5
HCG	2B	24	24	17.5	M19x1.0	M14x1.0	6.7	1.5	35.6	3.5	11.3	17.0

P3 Panel cut-out (page 152)

Note: this model ensures watertightness (IP66) in the mating area when mated with FGG or similar plug.

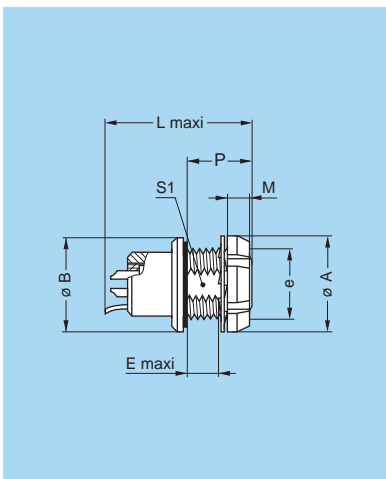


HEG Fixed socket, nut fixing, key (G) or keys (A...M), watertight or vacuumtight (back panel mounting)



Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	P	S1	S2
HEG	00	10	11	M7x0.5	2.5	18.2	2.5	6.0	6.3	–
HEG	0B	12	13	M9x0.6	5.5	21.5	2.5	9.0	8.2	–
HEG	1B	16	18	M12x1.0	5.5	26.6	3.5	11.0	10.5	–
HEG	2B	20	20	M15x1.0	5.5	31.6	3.5	9.6	13.5	15

P9 Panel cut-out (page 152)



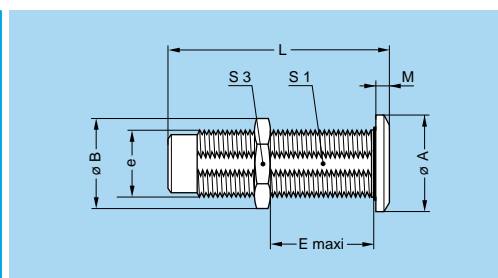
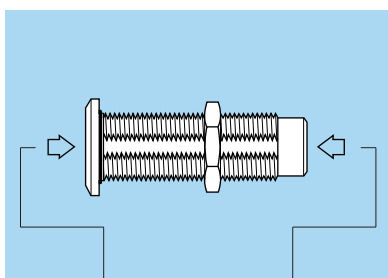
HMG Fixed socket with earthing tag, nut fixing, key (G) or keys (A...M), watertight or vacuumtight (back panel mounting)

Reference		Dimensions (mm)							
Model	Series	A	B	e	E	L	M	P	S1
HMG	00	10	11	M7x0.5	2.5	18.0	2.5	6.0	6.3
HMG	0B	12	13	M9x0.6	5.5	21.5	2.5	9.0	8.2
HMG	1B	16	18	M12x1.0	5.5	26.6	3.5	11.0	10.5
HMG	2B ¹⁾	20	20	M15x1.0	5.5	31.6	3.5	9.6	13.5
HMG	3B	24	25	M18x1.0	7.5	36.1	4.5	14.0	16.5

P9 Panel cut-out (page 152)

Note: ¹⁾ the surface design of the 2B series is different. The 3B series is delivered with a conical nut.

S... Fixed coupler, nut fixing, key (G) or keys (A, B, J, K and L) at the flange end and key (G) or keys (A, B, J, K and L) at the other end, watertight or vacuumtight



G	SGJ	J
J	SJG	G
K	SKA	A
L	SLB	B
A	SAK	K
B	SBL	L

Example

Alignment key see page 31.

Reference		Contacts Type	Dimensions (mm)							
Model	Series		A	B	e	E	L	M	S1	S3
SGJ	0B	female – male	14	13.8	M10x0.75	17	34	2.0	9.0	12
SJG		male – female								
SGJ	1B	female – male	17	15.8	M12x1.00	28	39	2.5	10.5	14
SJG		male – female								
SGJ	2B	female – male	20	21.5	M16x1.00	25	44	4.0	15.0	19
SJG		male – female								
SGJ	3B	female – male	25	27.0	M20x1.00	30	53	4.0	18.5	24
SJG		male – female								
SAK		female – male								
SBL		female – male								
SAK	4B	female – male	34	34.0	M25x1.00	50	65	4.0	23.5	30
SBL		female – male								
SGJ		female – male								
SJG		male – female								
SGJ	5B	female – male	45	40.0	M35x1.00	58	80	5.0	33.5	–
SJG		male – female								
SKA		male – female								
SLB		male – female								
SAK		female – male								
SBL		female – male								

P4 Panel cut-out (page 152)

P9 Panel cut-out 1B series (page 152)

Note: for this fixed coupler, the first contact type mentioned is always the one at the flange end. On request these couplers can be produced in other series, with other keys. The 5B series is delivered with a round nut.

Bridge models

Technical Characteristics

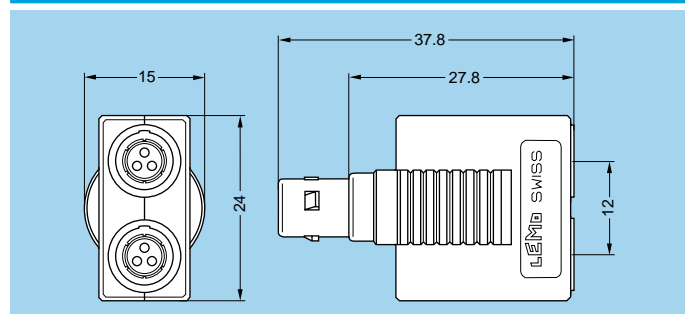
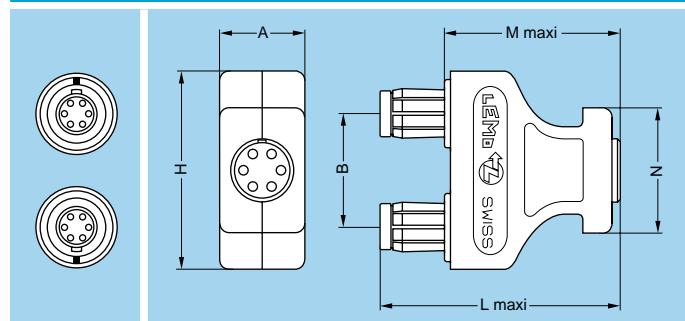
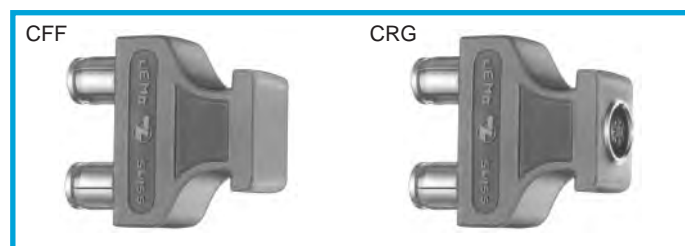
Mechanical and Climatical

Characteristics	Value	Standard
Endurance	> 1000 cycles	IEC 60512-5 test 9a
Working temperature	maximum 90° C	

Materials and Treatment

Component	Material	Surface treat. (µm)			
		Cu	Ni	Cr	Au
Plastic housing	Polyamide	-			
Metallic parts	Brass	0.5	3	-	-
	Brass	0.5	3	0.3	-
Insulator	PEEK	-			
Male contact	Brass	0.5	3	-	1.0
Female contact	Bronze	0.5	3	-	1.5

Note: the surface treatment standards are as follows:
 - Nickel: FS QQ-N-290A, chrome: FS QQ-C-320B, gold: ISO 4523



Electrical

Characteristics	Value	Standard
Contact resistance	< 6 mΩ	IEC 60512-2 test 2a

Reference	Series	Audio-Mono	Audio-Stereo	Test voltage (kV rms) ¹⁾²⁾	Rated current (A)
CFF.0B.302.PLCG	0B	●	-	1.05	4
CRG.0B.302.PLEG	0B	●	-	1.05	4
CFF.0B.303.PLCG	0B	●	-	0.80	4
CRG.0B.303.PLEG	0B	●	-	0.80	4
CRG.0B.306.PLEG	0B	-	●	0.40	2
CFF.1B.303.PLCG	1B	●	-	1.25	5
CRG.1B.303.PLEG	1B	●	-	1.25	5
CFF.1B.306.PLCG	1B	-	●	0.80	3
CRG.1B.306.PLEG	1B	-	●	0.80	3

Note: the last letter of the part number indicates the colour of the housing. Ex. G (standard) is grey. To obtain another colour, replace this letter by the letter corresponding to the selected colour (see table on page 54).
 1) see calculation method, caution and suggested standard on page 178.
 2) lowest measured value; contact to contact or contact to shell.

CFF Bridge plug with two non-latching plugs

CRG Bridge plug with two non-latching plugs, and monitoring socket, key (G) or keys (A...M)

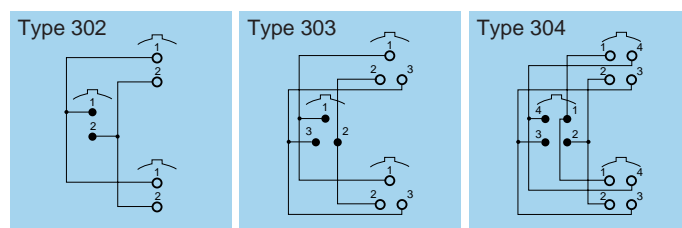
Reference		Dimensions (mm)					
Model	Series	A	B	H	L	M	N
CFF-CRG	0B	13.5	14	27.5	37.2	27.2	22.5
CFF-CRG	1B	15.0	20	35.0	42.0	31.0	22.0

Note: in order to provide the user with a coding system, the bridge plug housing, the double panel washers and the bend reliefs are available in nine colours.

FTG Straight plug, key (G) and two parallel sockets

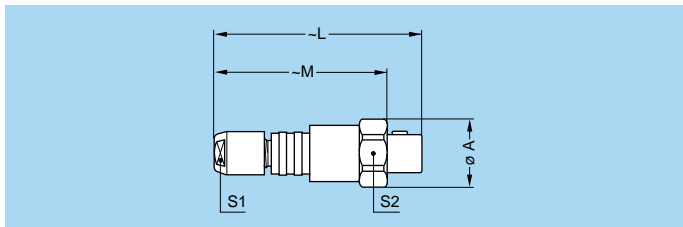
Reference	Number of contacts	Test voltage (kV rms) ¹⁾	Nominal current (A)
FTG.0B.302.PLFG	2	1.05	4
FTG.0B.303.PLFG	3	0.80	4
FTG.0B.304.PLFG	4	0.80	3

Note:
 1) see calculation method, caution and suggested standard on page 178.





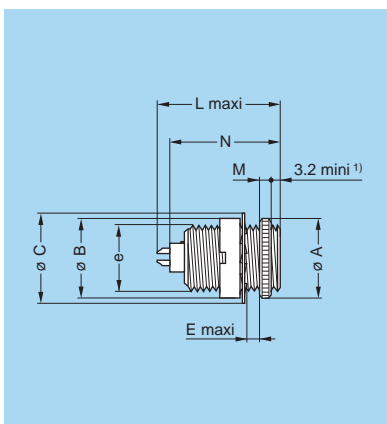
Threaded-latching models



FVG Straight plug, key (G) or keys (B), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FVG	00	9	28.5	24	5	8

Note: to be ordered with nut for fitting a bend relief to obtain the rating IP 64.

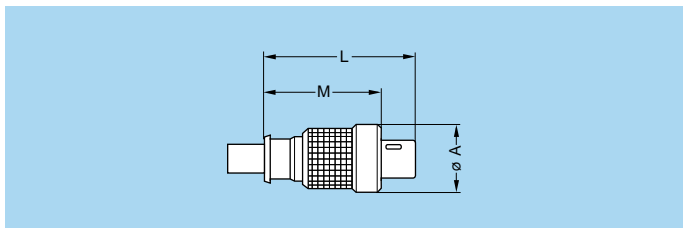


ESG Fixed socket with two round nuts, key (G) or keys (B), long threaded shell (back panel mounting)

Reference		Dimensions (mm)							
Model	Series	A	B	C	e	E	L	M	N
ESG	00	9	9	9.5	M7x0.5	3.2	15.5	2	13.7

P2 Panel cut-out (page 152)

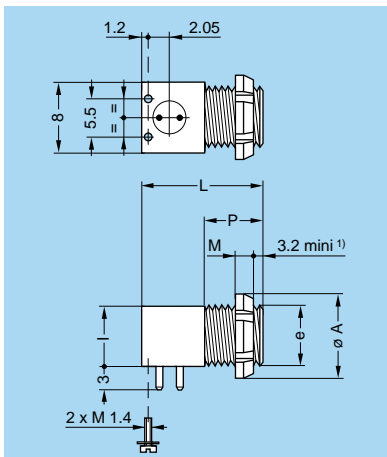
Note: ¹⁾ minimum length of free thread to ensure mating.



FVB Straight plug, keys (B), short shell for special cable crimping and for fitting a bend relief

Reference		Dimensions (mm)		
Model	Series	A	L	M
FVB	00	9	20	15.4

Note: after assembly the special bend relief GMF.00.018.D● (to be ordered separately) is to be fitted.



XRB Elbow (90°) socket for printed circuit, keys (B), short shell with one nut, screw fixing (back panel mounting)

Reference		Dimensions (mm)					
Model	Series	A	e	I	L	M	P
XRB	00	10	M7x0.5	7	14	2.5	7

P2 Panel cut-out (page 152)

P18 PCB drilling pattern for contact only (page 158)

Note: ¹⁾ minimum length of free thread to ensure mating.

Alignment Key (B series)

Alignment Key and Polarized Keying System

B series connector model part numbers are composed of three letters. The LAST LETTER indicates the key position and the contact type (male or female).

Front view of a socket	Reference	Nb of keys	Angles	Series			Reference	Nb of keys	Angles	Series				Contact type		Note										
	G			A	B	C	D			E	F	J	K	L	M		Y	00	0B	1B	2B	3B	4B	5B	Plug	Socket
		0°	30°					60°	90°							135°										
	G	1		0°	0°	0°	G	1		0°	0°	0°	0°	male	female	●										
	A	2		30°	30°	30°	A	2		30°	30°	30°	30°	male	female	●										
	B	2	α	60°	60°	60°	B	2	α	45°	45°	45°	45°	male	female	●										
	C	2		–	90°	90°	C	2		60°	60°	60°	60°	male	female	●										
	D	2		–	135°	135°	D	2	γ	95°	95°	95°	95°	male	female	○										
	E	2	β	–	145°	145°	E	2	β	120°	120°	120°	120°	male	female	○										
	F	2		–	155°	155°	F	2		145°	145°	145°	145°	male	female	○										
	J	2		45°	45°	45°	J	2	α	37.5°	37.5°	37.5°	37.5°	female	male	●										
	K	2	γ	–	70°	70°	K	2	α	52.5°	52.5°	52.5°	52.5°	female	male	○										
	L	2		–	80°	80°	L	2	γ	70°	70°	70°	70°	female	male	○										
	M	2	δ	–	110°	–	M	2	–	–	–	–	–	female	male	○										
	Y	3		–	–	–	Y	3		β	112.5°	126°	112.5°	–	male	female	● ¹⁾									
				–	–	–			γ	100°	102°	147.5°	–													

Front view of a socket	Reference	Nb of keys	Angles	Series			Reference	Nb of keys	Angles	Series				Contact type		Note															
	R			5	α	–	–			–	R	5	α	–	–		–	95°	male	female											
		00	0B					1B	2B							3B					4B	5B									
																–					–	–									
									β							–					–	–			β	–	–	–	115°		
									γ							–					–	–			γ	–	–	–	20°		
			δ	–	–	–			δ	–	–	–	30°																		

Note:
 FTG, FGY, ENY models are not available with all the keys. Please consult pages corresponding to these models.
 For R●● models see explanation on page 21 and for S●● models see explanation on page 28.
¹⁾ only FGY and ENY models are available.

- First choice alternative
- Special order alternative

K Series

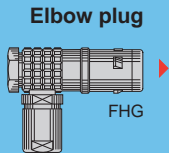
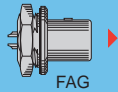
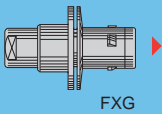
K series connectors have been specifically designed for outdoor applications. They include an inner sleeve and two seals to prevent penetration of solids or liquids into the housing formed by the plug, free socket, fixed socket or coupler. All models of this series are watertight when mated to give a protection index of IP68 as per IEC 60529 standard (in mated condition) when correctly assembled to an appropriate cable (IP66 otherwise).

K series connectors have the same insulators as the B series and have the following main features:

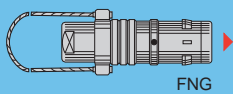
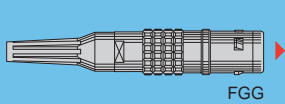
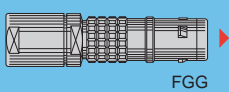
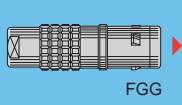
- security of the Push-Pull latching system
- multipole types 2 to 64 contacts
- keying system («G» key standard) for connector alignment
- 360° screening for full EMC shielding
- rugged housing for extreme working conditions.
- watertight connection (IP 68/IP 66)
- solder, crimp or print (straight or elbow) contacts
- multiple key options to avoid cross mating of similar connectors
- high packing density for space savings

Metal housing models (page 34)

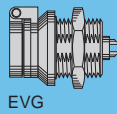
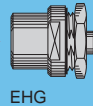
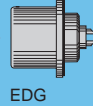
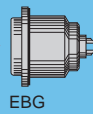
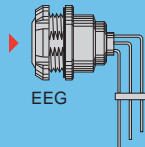
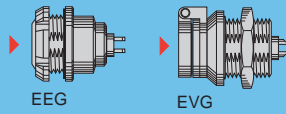
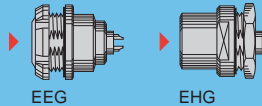
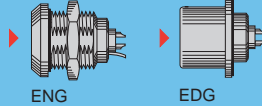
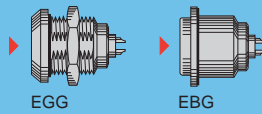
Fixed plugs



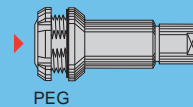
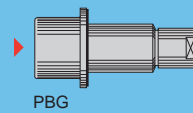
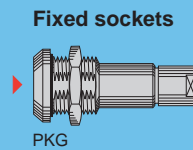
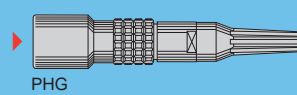
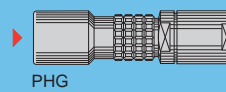
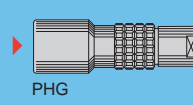
Straight plugs



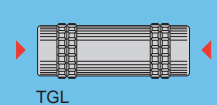
Fixed sockets



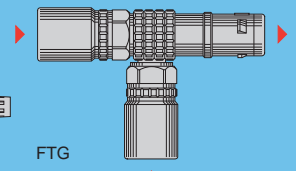
Free sockets



Free coupler

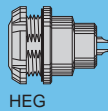
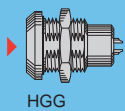


T-plug with sockets (90°)

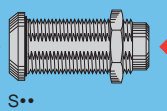


Watertight or vacuumtight models (page 41)

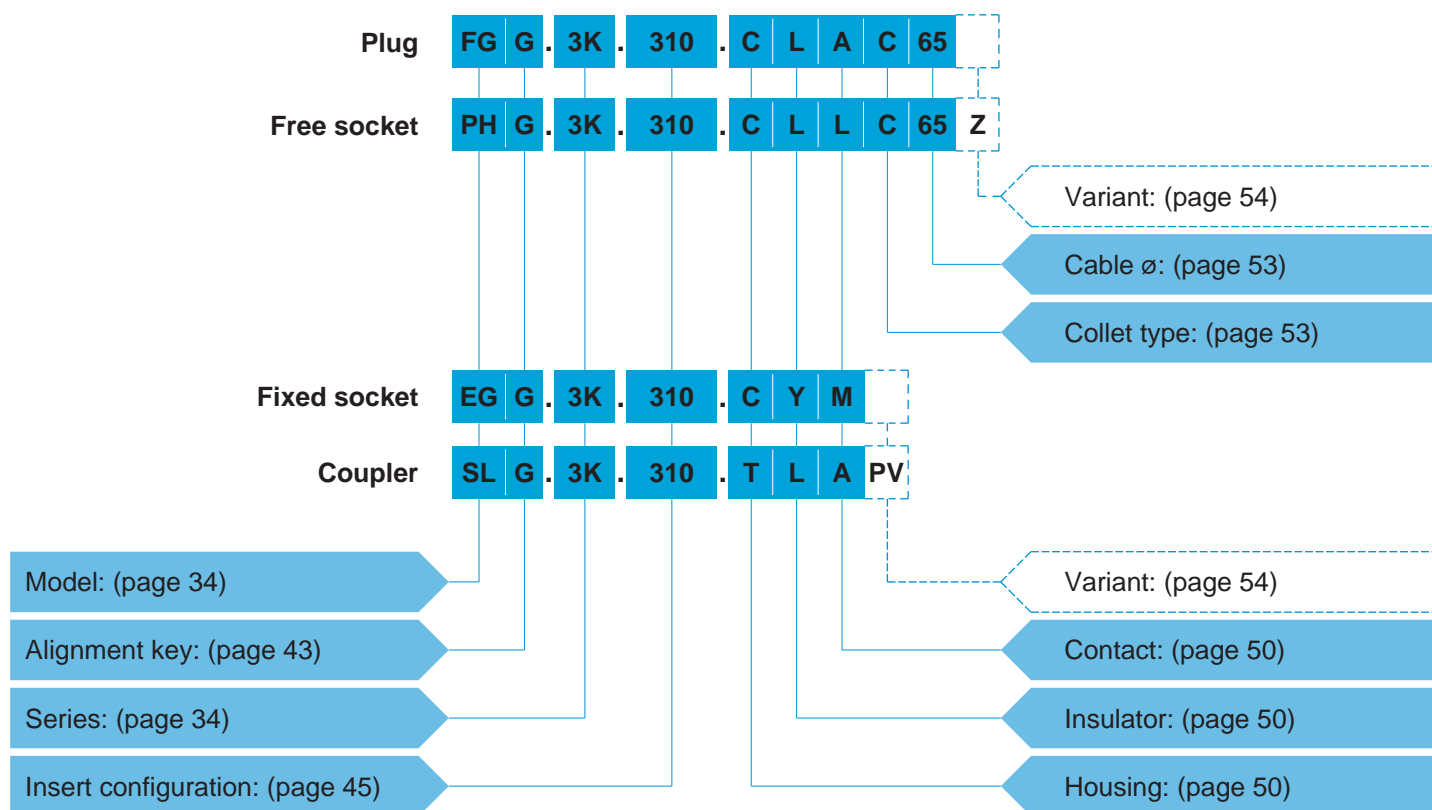
Fixed sockets



Fixed coupler



Part Numbering System



Part Number Example

Straight plug with cable collet:

FGG.3K.310.CLAC65 = straight plug with key (G) and cable collet, 3K series, multipole type with 10 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, C type collet for 6.5 mm diameter cable.

Free socket:

PHG.3K.310.CLLC65Z = free socket with key (G) and cable collet, 3K series, multipole type with 10 contacts, outer shell in chrome-plated brass, PEEK insulator, female solder contacts, C type collet for 6.5 mm diameter cable and nut for fitting a bend relief.

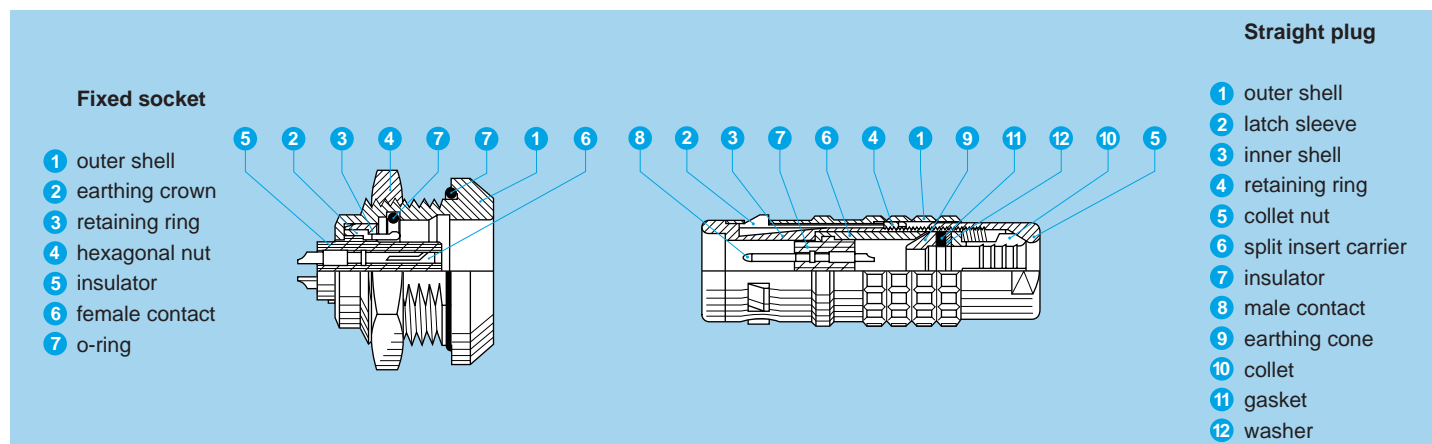
Fixed socket:

EGG.3K.310.CYM = fixed socket, nut fixing, with key (G), 3K series, multipole type with 10 contacts, outer shell in chrome-plated brass, PEEK extended insulator, female crimp contacts.

Fixed coupler:

SLG.3K.310.TLAPV = fixed coupler, nut fixing, keys (L) on the flange end and key (G) at the other end, 3K series, multipole type with 10 contacts, outer shell in stainless steel, PEEK insulator, male-female contacts, vacuumtight.

Part Section Showing Internal Components



Metal housing models

Technical Characteristics

Mechanical and Climatical

Characteristics	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range ¹⁾	-55° C, +200° C	
Resistance to vibrations	10-2000 Hz, 15 g	IEC 60512-4 test 6d
Shock resistance	100 g, 6 ms	IEC 60512-4 test 6c
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Protection index (mated) ²⁾	IP 68/IP 66	IEC 60529
Climatical category	50/175/21	IEC 60068-1

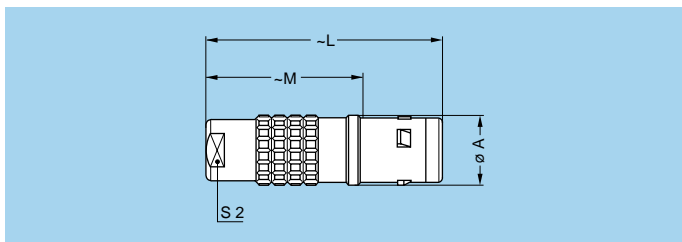
Electrical

Characteristics	Value	Standard
Shielding efficiency	at 10 MHz	> 95 dB
	at 1 GHz	> 80 dB
		IEC 60169-1-3
		IEC 60169-1-3

Note:

the various tests have been carried out with FGG and EGG connector pairs, with chrome-plated brass shell, PEEK insulator and silicone O-ring. Detailed electrical characteristics, as well as materials and treatment are presented in the chapter Technical Characteristics on page 171.

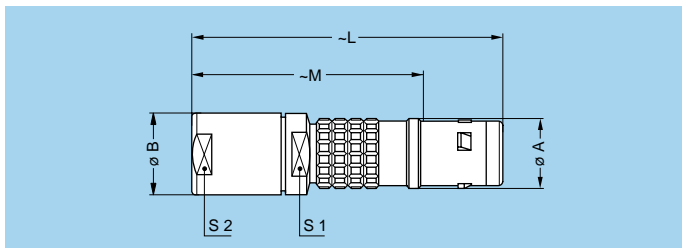
- ¹⁾ minimum operating temperature is -20°C for sockets fitted with an FPM (Viton®) O-ring.
²⁾ IP68 achieved providing that the cable is perfectly circular and that assembly process ensures a high integrity seal.



FGG Straight plug, key (G) or keys (A to F, L and R), cable collet

Reference		Dimensions (mm)			
Model	Series	A	L	M	S2
FGG	0K	11	34	23.0	8
FGG	1K	13	42	28.0	9
FGG	2K	16	52	36.0	12
FGG	3K	19	61	41.0	15
FGG	4K	25	71	50.5	19
FGG	5K	38	92	67.0	30

M1 Cable assembly (page 162)

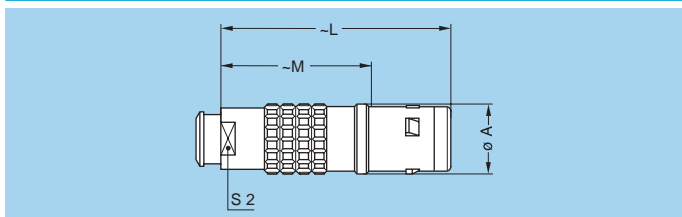
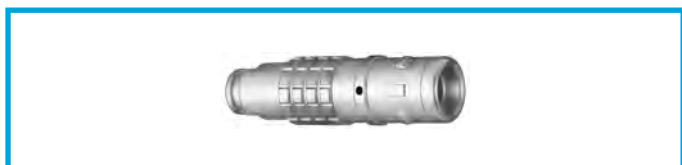


FGG Straight plug, key (G) or keys (A to F, L and R), cable collet and oversized cable collet ¹⁾

Reference		Dimensions (mm)					
Model	Series	A	B	L	M	S1	S2
FGG	1K	13	14.5	60.0	46	12	12
FGG	2K	16	17.0	68.0	52	15	15
FGG	3K	19	22.0	85.0	65	19	19
FGG	4K	25	36.0	119.5	99	30	32

M2 Cable assembly (page 163)

Note: ¹⁾ correspond to K type of collet, the fitting of oversized collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 53).

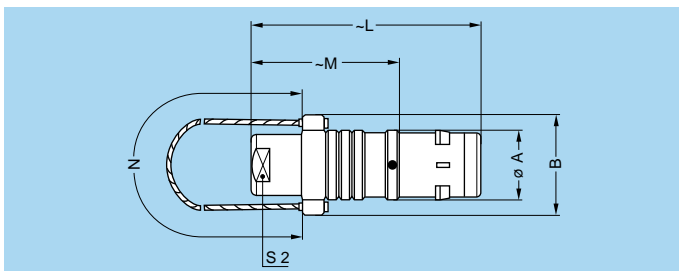


FGG Straight plug, key (G) or keys (A to F, L and R), cable collet and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)			
Model	Series	A	L	M	S2
FGG	0K	11	34	23.0	7
FGG	1K	13	42	28.0	9
FGG	2K	16	52	36.0	12
FGG	3K	19	60	40.0	15
FGG	4K	25	71	50.5	19

M1
Cable assembly
(page 162)

Note: ¹⁾ to order, add a «Z» at the end of the reference. The bend relief must be ordered separately (see page 141).

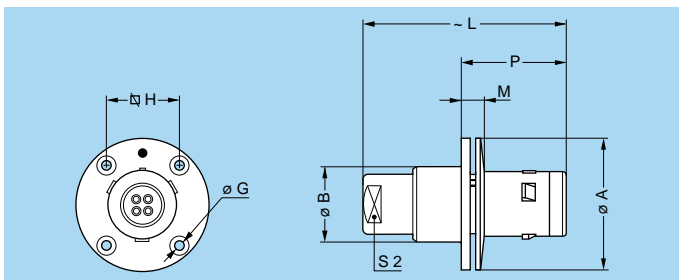


FNG Straight plug, key (G) or keys (A to F and L), cable collet and lanyard release

Reference		Dimensions (mm)					
Model	Series	A	B	L	M	N	S2
FNG	2K	16	23.6	52	36.0	160	12
FNG	4K	25	35.2	71	50.5	230	19

M1 Cable assembly (page 162)

Note: cable material: stainless steel with Polyamide sheath

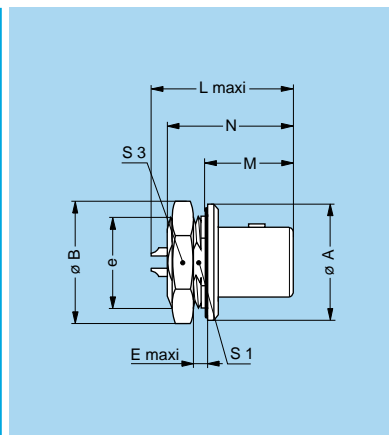


FXG Fixed plug with round flange, key (G) or keys (A to F, L and R) and screw fixing

Reference		Dimensions (mm)							
Model	Series	A	B	G	H	L	M	P	S2
FXG	3K	38	22.5	3.4	20.6	61	10.0	30.0	15
FXG	4K	47	28.5	3.4	27.0	71	11.0	32.0	19
FXG	5K	65	42.5	4.4	38.0	100	12.5	38.5	30

P6 Panel cut-out (page 153)

Note: this model does not include an O-ring behind the flange, it allows the device on which it is fitted to reach only IP50 protection index. It does not have a cable collet.

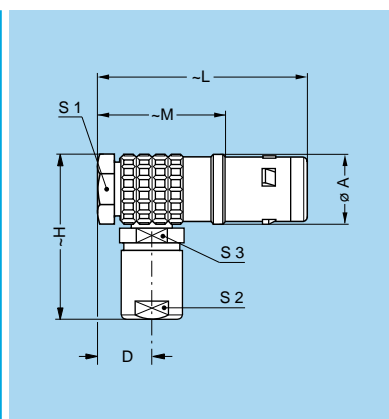


FAG Fixed plug, nut fixing, non-latching, key (G) or keys (A to F, L and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
FAG	1K	20	21.5	M16x1.0	2.3	22.6	16.0	22.5	14.5	19
FAG	2K	25	27.0	M20x1.0	4.5	33.6	18.0	28.3	18.5	24
FAG	3K	31	34.0	M24x1.0	4.0	34.3	22.5	33.8	22.5	30
FAG	4K	37	40.5	M30x1.0	4.0	35.3	23.0	36.3	28.5	36
FAG	5K	55	54.0	M45x1.5	4.0	43.5	28.5	42.3	42.5	-

P1 Panel cut-out (page 153)

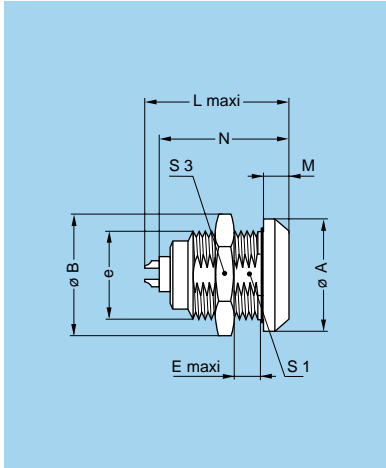
Note: ¹⁾ maximum length with crimp contacts. The 1K series is delivered with a locking washer. The 5K series is delivered with a round nut.



FHG Elbow (90°) plug, key (G) or keys (A to F, L and R), cable collet

Reference		Dimensions (mm)							
Model	Series	A	D	H	L	M	S1	S2	S3
FHG	0K	11.5	7.6	27	36	25.0	10	8	8
FHG	1K	14.0	8.8	33	43	29.0	12	9	10
FHG	2K	17.5	10.5	40	51	35.0	15	12	13
FHG	3K	21.0	11.5	47	60	40.0	18	15	15
FHG	4K	27.5	15.5	57	72	51.5	24	19	20

M3 Cable assembly (page 162)

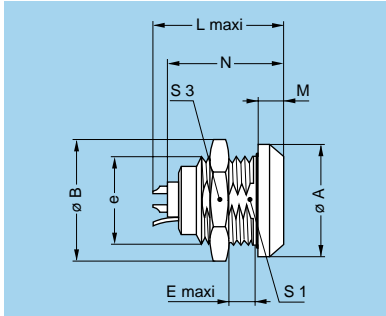


EGG Fixed socket, nut fixing, key (G) or keys (A to F, L and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
EGG	0K	18	19.2	M14x1.0	6	21.7	4.0	20.1	12.5	17
EGG	1K	20	21.5	M16x1.0	9	27.0	4.5	25.1	14.5	19
EGG	2K	25	27.0	M20x1.0	9	30.7	5.0	28.6	18.5	24
EGG	3K	31	34.0	M24x1.0	11	36.2	6.0	33.6	22.5	30
EGG	4K	37	40.5	M30x1.0	9	40.2	6.5	38.6	28.5	36
EGG	5K	55	54.0	M45x1.5	10	47.5	9.0	43.6	42.5	-

P1 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts. The 5K series is delivered with a round nut.

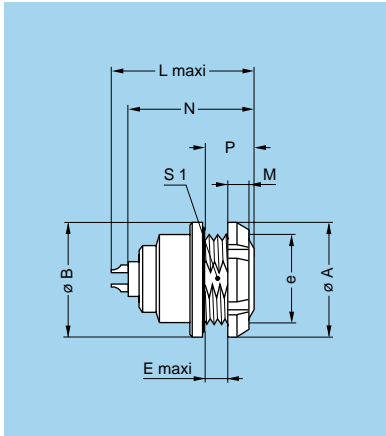


ENG Fixed socket, nut fixing, key (G) or keys (A to F, L and R) and earthing tag

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3
ENG	3K	31	34	M24x1.0	11.3	36.2	6	33.6	22.5	30

P1 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts.

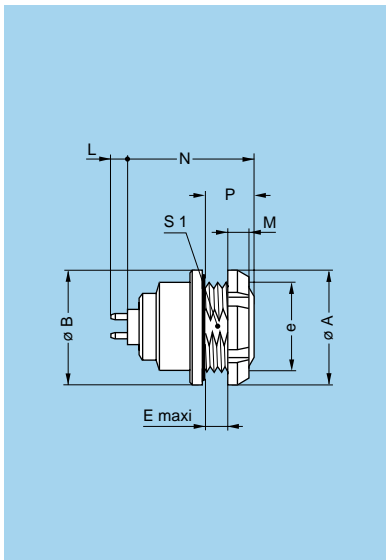


EEG Fixed socket, nut fixing, key (G) or keys (A to F, L and R) (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N ¹⁾	P	S1
EEG	0K	18.0	18	M14x1.0	3.4	21.7	3.5	20.1	7.0	12.5
EEG	1K	20.0	20	M16x1.0	6.2	27.0	3.5	25.1	10.0	14.5
EEG	2K	25.0	25	M20x1.0	5.0	30.7	3.5	28.6	10.0	18.5
EEG	3K	30.0	31	M24x1.0	7.5	36.2	4.5	33.6	12.0	22.5
EEG	4K	41.5	37	M30x1.0	6.0	40.2	7.0	38.6	13.5	28.5

P1 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts. The 3K and 4K series are delivered with a conical nut.



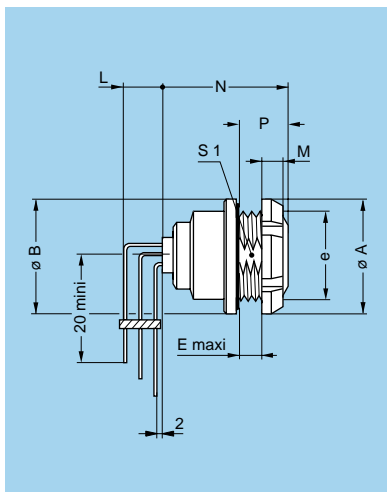
EEG Fixed socket, nut fixing, key (G) or keys (A to F and R) with straight print contacts for printed circuit (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	M	N	P	S1	
EEG	0K	18.0	18	M14x1.0	3.4	3.5	17.6	7.0	12.5	
EEG	1K	20.0	20	M16x1.0	6.2	3.5	23.8	10.0	14.5	
EEG	2K	25.0	25	M20x1.0	5.0	3.5	25.8	10.0	18.5	
EEG	3K	30.0	31	M24x1.0	7.5	4.5	31.3	12.0	22.5	
EEG	4K	41.5	37	M30x1.0	6.0	7.0	34.3	13.5	28.5	

P1 Panel cut-out (page 153)

P15 PCB drilling pattern (page 154)

Note: this contact type is available for E●● socket models fitted with female contact. Length «L» depends on the number of contacts, see table page 156. The 3K and 4K series are delivered with a conical nut.



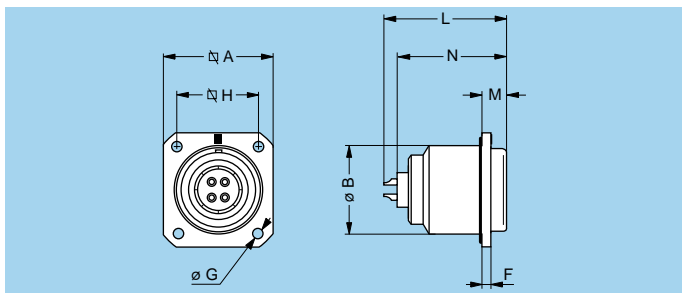
EEG Fixed socket, nut fixing, key (G) or keys (A to F and R) with elbow (90°) contacts for printed circuit (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	M	N	P	S1	
EEG	0K	18	18	M14x1.0	3.4	3.5	19.3	7	12.5	
EEG	1K	20	20	M16x1.0	6.2	3.5	24.3	10	14.5	
EEG	2K	25	25	M20x1.0	5.0	3.5	26.6	10	18.5	
EEG	3K	30	31	M24x1.0	7.5	4.5	31.3	12	22.5	

P1 Panel cut-out (page 153)

P17 PCB drilling pattern (page 157)

Note: length «L» depends on the number of contacts, see PCB drilling pattern page 157. The 3K series is delivered with a conical nut.

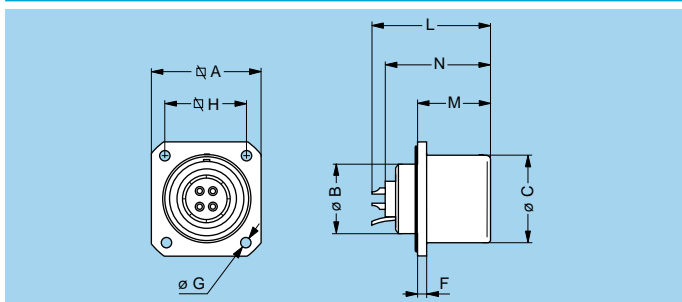


EBG Fixed socket with square flange, key (G) or keys (A to F, L and R) and screw fixing

Reference		Dimensions (mm)							
Model	Series	A	B	F	G	H	L	M	N ¹⁾
EBG	3K	29	23	3	3.4	23	36.2	6.0	32.6
EBG	4K	37	30	3	3.4	29	40.2	6.5	36.6
EBG	5K	54	45	4	4.4	44	47.5	8.0	42.1

P7 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts.

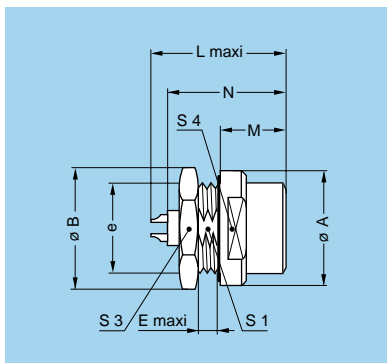


EDG Fixed socket with square flange, key (G) or keys (A to F, L and R), protruding shell and earthing tag, screw fixing

Reference		Dimensions (mm)								
Model	Series	A	B	C	F	G	H	L	M	N ¹⁾
EDG	3K	29	18	23	3	3.4	23	36.2	22.5	32.6

P7 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts.

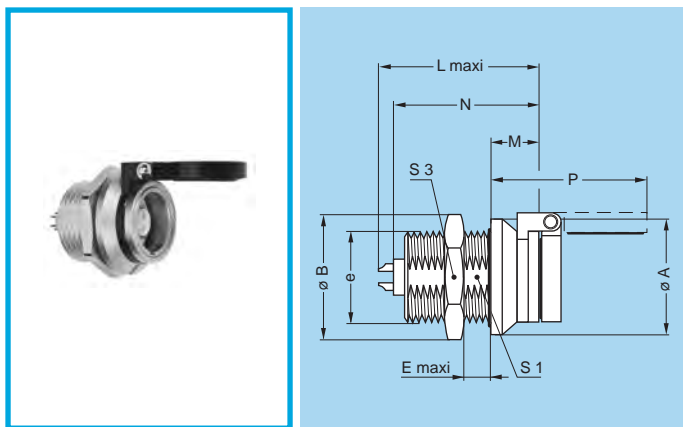


EHG Fixed socket, nut fixing, key (G) or keys (A to F and L), protruding shell

Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N ¹⁾	S1	S3	S4
EHG	0K	18	19.2	M14x1.0	1.5	21.7	10.5	20.1	12.5	17	15
EHG	1K	20	21.5	M16x1.0	1.5	27.0	15.5	25.1	14.5	19	17
EHG	2K	25	27.0	M20x1.0	1.5	30.7	17.0	27.1	18.5	24	20

P1 Panel cut-out (page 153)

Note: ¹⁾ maximum length with crimp contacts.

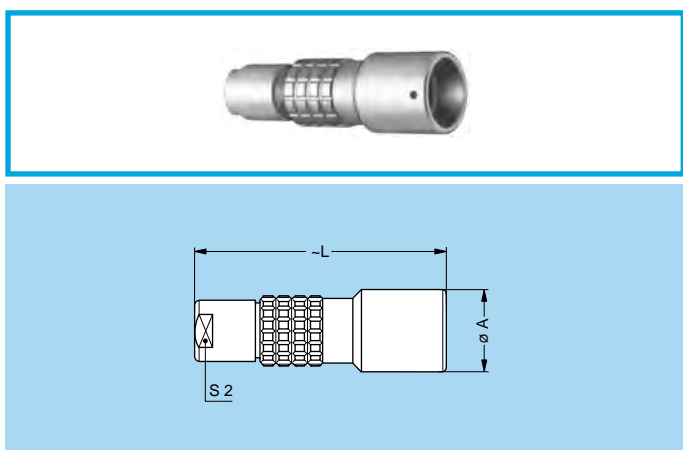


EVG Fixed socket, nut fixing, key (G) or keys (A to F and L) and dust cap (spring loaded)

Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N ¹⁾	P	S1	S3
EVG	0K	18	19.2	M14x1.0	6.5	24.8	6.3	23.3	23.3	12.5	17

P1 Panel cut-out (page 153)

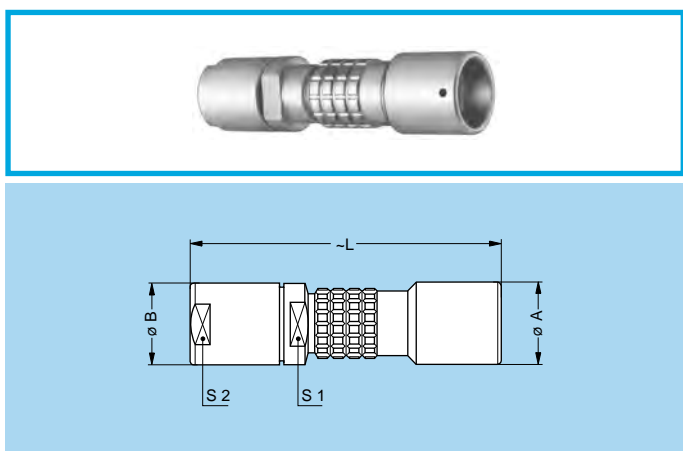
Note: ¹⁾ maximum length with crimp contacts.



PHG Free socket, key (G) or keys (A to F, L and R), cable collet

Reference		Dimensions (mm)		
Model	Series	A	L	S2
PHG	0K	13	34.0	8
PHG	1K	15	45.0	9
PHG	2K	19	54.0	12
PHG	3K	23	65.0	15
PHG	4K	29	75.5	19
PHG	5K	42	95.0	32

M1 Cable assembly (page 162)

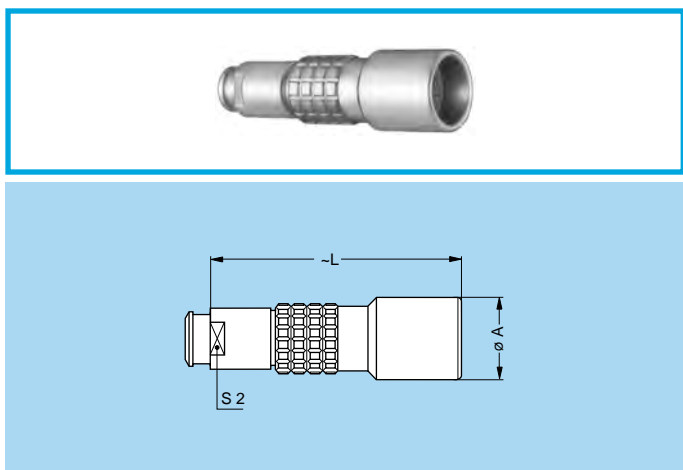


PHG Free socket, key (G) or keys (A to F, L and R), cable collet and oversized cable collet ¹⁾

Reference		Dimensions (mm)				
Model	Series	A	B	L	S1	S2
PHG	1K	15	14.5	63	12	12
PHG	2K	19	17.0	70	15	15
PHG	3K	23	22.0	89	19	19
PHG	4K	29	36.0	124	30	32

M2 Cable assembly (page 163)

Note: ¹⁾ correspond to K type of collet, the fitting of oversized collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 53).



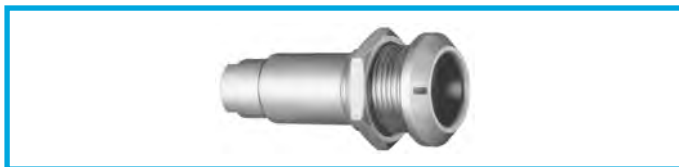
PHG Free socket, key (G) or keys (A to F, L and R), cable collet and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)		
Model	Series	A	L	S2
PHG	0K	13	34.0	7
PHG	1K	15	45.0	9
PHG	2K	19	54.0	12
PHG	3K	23	64.0	15
PHG	4K	29	75.5	19

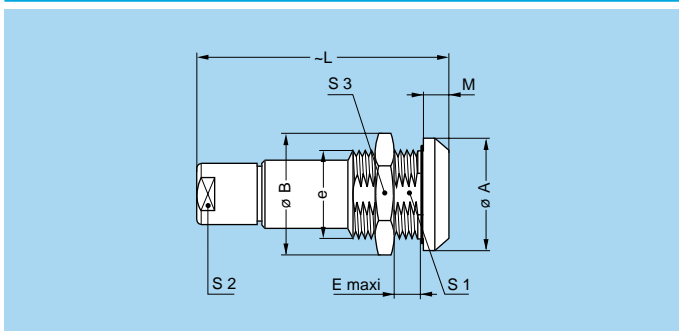
M1 Cable assembly (page 162)

Note: ¹⁾ to order, add a «Z» at the end of the reference.

The bend relief must be ordered separately (see page 141).



PKG Fixed socket, nut fixing, key (G) or keys (A to F, L and R), cable collet

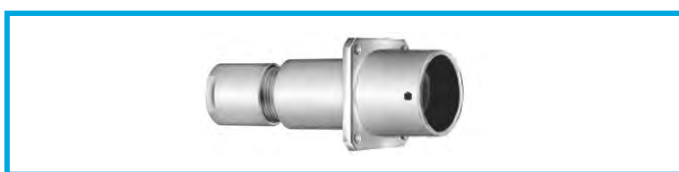


Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	S1	S2	S3
PKG	0K	18	19.2	M14x1.0	6.0	34.0	4.0	12.5	8	17
PKG	1K	20	21.5	M16x1.0	9.0	45.0	4.5	14.5	9	19
PKG	2K	25	27.0	M20x1.0	9.0	54.0	5.0	18.5	12	24
PKG	3K	31	34.0	M24x1.0	11.5	65.0	6.0	22.5	15	30
PKG	4K	37	40.5	M30x1.0	9.0	75.5	6.5	28.5	19	36
PKG	5K	55	54.0	M45x1.0	15.0	98.0	9.0	42.5	30	-

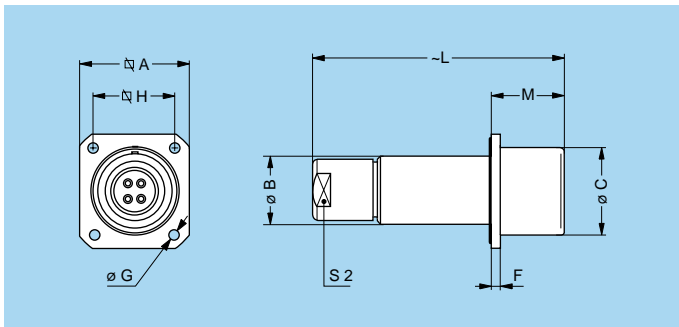
P1 Panel cut-out (page 153)

M1 Cable assembly (page 162)

Note: the 5K series is delivered with a round nut.



PBG Fixed socket, key (G) with square flange, cable collet and screw fixing



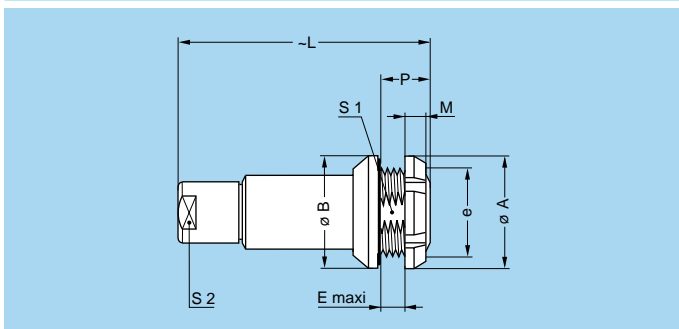
Reference		Dimensions (mm)								
Model	Series	A	B	C	F	G	H	L	M	S2
PBG	3K	29	19	23	3	3.4	23	65	22.5	15

P7 Panel cut-out (page 153)

M1 Cable assembly (page 162)



PEG Fixed socket, nut fixing, key (G) or keys (A to F, L and R), cable collet (back panel mounting)

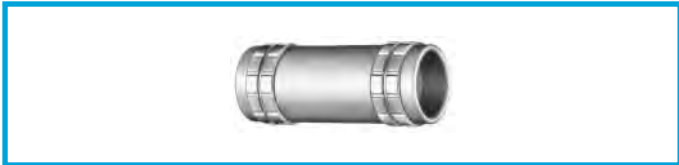


Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	P	S1	S2
PEG	0K	18	18	M14x1.0	5.0	34	3.5	8.5	12.5	8
PEG	1K	20	20	M16x1.0	6.5	45	3.5	10.0	14.5	9
PEG	2K	25	25	M20x1.0	4.0	54	3.5	7.5	18.5	12
PEG	3K	30	31	M24x1.0	7.5	65	4.5	12.0	22.5	15

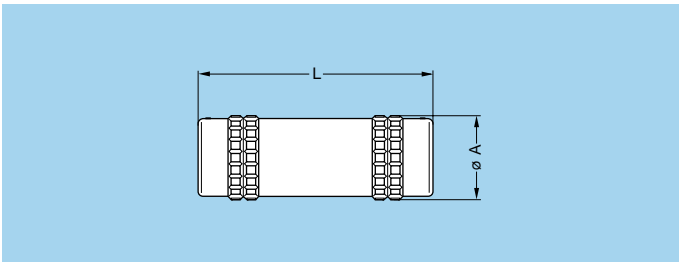
P1 Panel cut-out (page 153)

M1 Cable assembly (page 162)

Note: the 3K series is delivered with a conical nut.

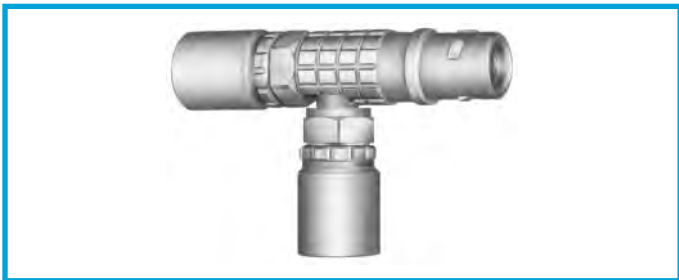


TGL Free coupler, key (G) on one side and keys (L) on the other

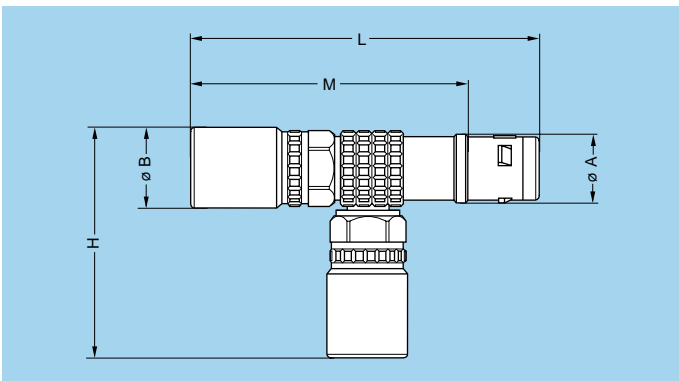


Reference	Dim. (mm)	
	A	L
TGL.3K.3●●.CLLP	24	64.2

Note: this model is only available in type 308, 310, 316, 318, 320, 324 and 330.



FTG T-plug, key (G) with sockets (90°), key (G)



Reference	Dimensions (mm)				
	A	B	H	L	M
FTG.2K.304.CLF	16	19	48	77	60
FTG.2K.308.CLF	16	19	48	77	60

Watertight or vacuumtight models

These socket and coupler models allow the device on which they are fitted to reach a protection index of IP68 as per IEC 60529. They are fully compatible with plugs of the same series and are widely used for portable radios, military, laboratory equipment, aviation, etc.

These models are identified by a letter «P» at the end of the reference.

Most of these models are also available in a vacuumtight version. Such models are identified by an additional letter «V» at the end of the part number (certificate on request).

Epoxy resin is used to seal these models.

Technical Characteristics

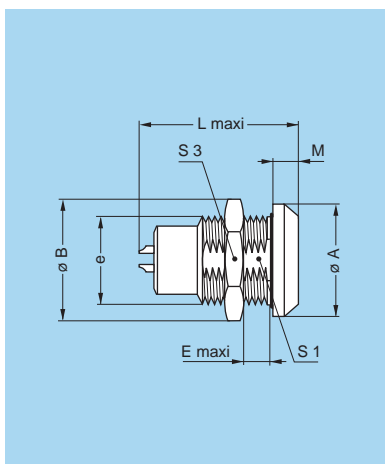
Mechanical and Climatrical

Characteristics	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range (0K-1K)	- 20° C/+100° C	
Temperature range (2K to 5K)	- 20° C/+80° C	
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Climatrical category	20/80/21	IEC 60068-1
Leakage rate (He) ¹⁾	< 10 ⁻⁷ mbar.l.s ⁻¹	IEC 60512-7 test 14b

Note: ¹⁾ only for vacuumtight models.

Characteristics	Value	Standard
Maximum operating pressure ²⁾	0K	60 bars
	1K	60 bars
	2K	40 bars
	3K	30 bars
	4K	15 bars
	5K	5 bars

Note: ²⁾ this value corresponds to the maximum allowed pressure difference for the assembled socket.

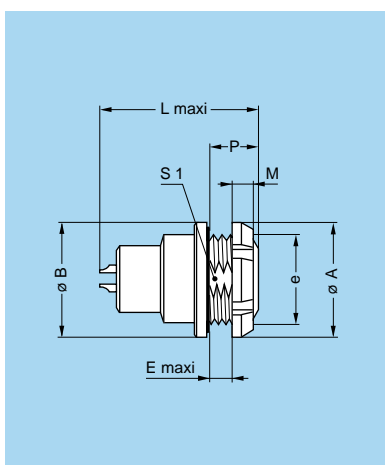


HGG Fixed socket, nut fixing, key (G) or keys (A to F and L), watertight or vacuumtight

Reference		Dimensions (mm)							
Model	Series	A	B	e	E	L	M	S1	S3
HGG	0K	18	19.2	M14x1.0	5.5	23.0	4.0	12.5	17
HGG	1K	20	21.5	M16x1.0	9.0	30.0	4.5	14.5	19
HGG	2K	25	27.0	M20x1.0	13.0	33.7	5.0	18.5	24
HGG	3K	31	34.0	M24x1.0	16.0	41.7	6.0	22.5	30
HGG	4K	37	40.5	M30x1.0	14.0	49.2	6.5	28.5	36
HGG	5K	55	54.0	M45x1.5	10.0	55.7	9.0	42.5	—

P1 Panel cut-out (page 153)

Note: the 5K series is delivered with a round nut.

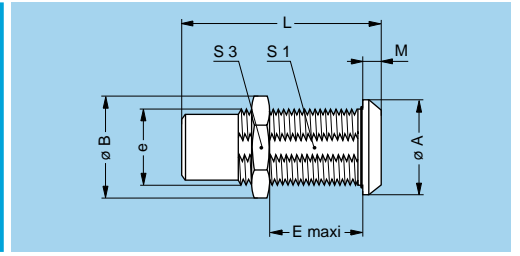
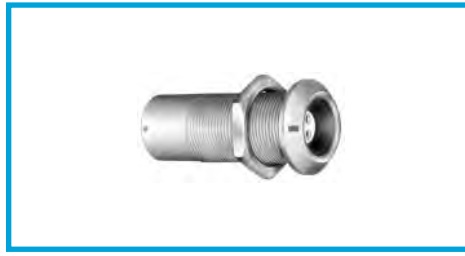
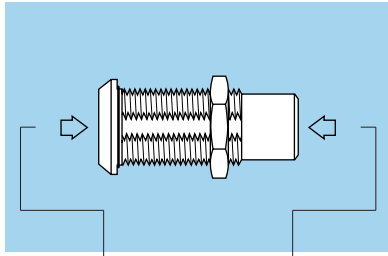


HEG Fixed socket, nut fixing, key (G) or keys (A to F and L), watertight or vacuumtight (back panel mounting)

Reference		Dimensions (mm)							
Model	Series	A	B	e	E	L	M	P	S1
HEG	0K	18	18	M14x1.0	2.4	23.0	3.5	7	12.5
HEG	1K	20	20	M16x1.0	6.2	30.0	3.5	10	14.5
HEG	2K	25	25	M20x1.0	5.0	33.7	3.5	10	18.5

P1 Panel cut-out (page 153)

S●● Fixed coupler, nut fixing, key (G) or keys (L) at the flange end, and key (G) or keys (C or L) at the other end, watertight or vacuumtight



G		SGL		L
L		SLG		G
L		SLC		C

Example

Plug with key G SGL Plug with key L

Alignment key see page 43.

Reference		Contacts Type	Dimensions (mm)							
Model	Series		A	B	e	E	L	M	S1	S3
SGL	2K	female – male	25	27.0	M20x1.0	25	52.4	5.0	18.5	24
SLG		male – female								
SLG	3K	male – female	31	34.0	M24x1.0	33	64.0	6.0	22.5	30
SLG	4K	male – female	37	40.5	M30x1.0	48	74.0	6.5	28.5	36
SLC										
SLG	5K	male – female	55	54.0	M45x1.5	58	88.0	9.0	42.5	–
SLC										

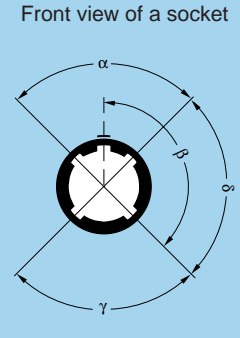
P1 Panel cut-out (page 153)

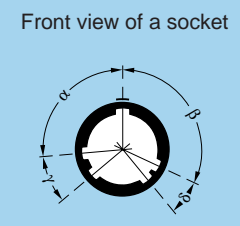
Note: for this fixed coupler, the first contact type mentioned is always the one at the flange end. On request, these couplers can be produced in other series, with other keys. The 5K series is delivered with a round nut.

Alignment Key (K series)

Alignment Key and Polarized Keying System

K series connector model part numbers are composed of three letters. The LAST LETTER indicates the key position and the contact type (male or female).

Front view of a socket 	Reference	Nb of keys	Angles	Series						Contact type		Note
				0K	1K	2K	3K	4K	5K	Plug	Socket	
	G	1		0°	0°	0°	0°	0°	0°	male	female	●
	A	2	α	30°	30°	30°	30°	30°	30°	male	female	●
	B	2		45°	45°	45°	45°	45°	45°	male	female	●
	C	2		60°	60°	60°	60°	60°	60°	male	female	●
	D	2		95°	95°	95°	95°	95°	95°	male	female	○
	E	2	β	120°	120°	120°	120°	120°	120°	male	female	○
	F	2		145°	145°	145°	145°	145°	145°	male	female	○
	L	2	γ	75°	75°	75°	75°	75°	75°	female	male	●

Front view of a socket 	Reference	Nb of keys	Angles	Series						Contact type		Note
				0K	1K	2K	3K	4K	5K	Plug	Socket	
	R	5	α	-	-	-	95°	-	-	male	female	●
			β	-	-	-	115°	-	-			
			γ	-	-	-	35°	-	-			
			δ	-	-	-	25°	-	-			

Note: S●● and TGL models are not available with all the keys. For S●● models see explication on page 42. Please consult the pages corresponding to these models.

- First choice alternative
- Special order alternative

Insert configuration (B and K series)

Multipole

	 Male solder contacts		 Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts	Female crimp contacts	Solder	Crimp				Print (straight)	Print (elbow)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾⁵⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾⁵⁾ Contact-shell			
00					302	2	0.5	●	●	●	●	1.00	0.95	1.15	1.20	5.0
					303	3	0.5	●	●	●	●	0.80	0.95	1.35	1.10	3.0
					304	4	0.5	●	●	●	●	0.80	0.65	1.05	1.05	2.0
0B 0K					302	2	0.9	●	●	●	●	1.30	1.05	1.45	1.20	10.0 ²⁾
					303	3	0.9	●	●	●	●	1.20	0.90	1.70	1.60	8.0 ²⁾
					304	4	0.7	●	●	●	●	0.85	0.70	1.35	1.10	7.0 ²⁾
					305	5	0.7	●	●	●	●	1.00	0.70	1.25	1.20	6.5 ²⁾
					306	6	0.5	●	○ ⁴⁾	●	●	0.85	0.65	1.40	1.20	2.5
					307	7	0.5	●	○ ⁴⁾	●	●	0.80	0.70	1.40	1.20	2.5
					309	9	0.5	●	○ ⁴⁾	●	○	0.60	0.50	1.00	0.85	2.0
1B 1K					302	2	1.3	●	●	●	●	1.50	1.35	1.70	1.45	15.0 ³⁾
					303	3	1.3	●	●	●	●	1.30	1.55	1.60	1.85	12.0
					304	4	0.9	●	●	●	●	1.35	1.45	1.70	1.80	10.0 ²⁾
					305	5	0.9	●	●	●	●	1.25	1.15	1.30	1.55	9.0 ²⁾
					306	6	0.7	●	●	●	●	1.05	1.20	1.35	1.45	7.0 ²⁾
					307	7	0.7	●	●	●	●	0.95	1.05	1.45	1.45	7.0 ²⁾
					308	8	0.7	●	●	●	●	0.95	1.15	1.30	1.30	5.0
					310	10	0.5	●	○ ⁴⁾	●	●	0.90	1.50	1.20	1.80	2.5
					314	14	0.5	●	○ ⁴⁾	●	●	0.80	1.20	0.95	1.60	2.0
					316	16	0.5	●	○ ⁴⁾	●	○	0.80	1.25	0.95	1.60	1.5

- First choice alternative
- Special order alternative

Note: 1) see calculation method, caution and suggested standard on page 178.
 2) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 3) rated current = 12A for socket with elbow (90°) contact for printed circuit.
 4) available only for connectors fitted with male contacts.
 5) test voltage (kV) contact-shell may be lower for K series (values shown here are for B series).

Multipole

2B
2K

	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ⁴⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ⁴⁾ Contact-shell	
					302	2	2.0	●	●	●	●	2.10	1.75	2.85	2.70	25.0 ³⁾
					303	3	1.6	●	●	●	●	2.40	1.85	1.90	1.90	17.0 ³⁾
					304	4	1.3	●	●	●	●	1.85	1.85	2.20	2.20	15.0 ³⁾
					305	5	1.3	●	●	●	●	1.75	1.60	2.15	2.15	14.0 ³⁾
					306	6	1.3	●	●	●	●	1.35	1.45	2.00	2.35	12.0
					307	7	1.3	●	●	●	●	1.75	1.60	1.95	2.15	11.0
					308	8	0.9	●	●	●	●	1.50	1.25	1.95	1.95	10.0 ²⁾
					310	10	0.9	●	●	●	●	1.45	1.30	1.80	2.10	8.0 ²⁾
					312	12	0.7	●	●	●	●	1.25	1.35	1.65	2.00	7.0 ²⁾
					314	14	0.7	●	●	●	●	1.15	1.35	1.55	1.55	6.5 ²⁾
					316	16	0.7	●	●	●	●	0.95	1.25	1.55	1.75	6.0
					318	18	0.7	●	●	●	●	0.85	1.20	1.45	2.10	5.5
					319	19	0.7	●	●	●	●	0.95	1.25	1.55	1.65	5.0
					326	26	0.5	●	–	●	○	0.95	1.30	1.20	1.80	2.0
					332	32	0.5	●	–	●	○	0.80	1.2	0.95	1.60	1.5

● First choice alternative
○ Special order alternative

Note: 1) see calculation method, caution and suggested standard on page 178.
2) rated current = 6A for socket with elbow (90°) contact for printed circuit.
3) rated current = 12A for socket with elbow (90°) contact for printed circuit.
4) test voltage (kV) contact-shell is a little bit lower for K series (values here are for B series).



Multipole

		Male solder contacts	Female solder contacts	Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ¹⁾
		Male crimp contacts	Female crimp contacts				Solder	Crimp	Print (straight)	Print (elbow)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ³⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ³⁾ Contact-shell	
3B	3K			302	2	3.0	●	●	○	–	2.10	1.55	2.30	1.80	35.0
				303	3	2.0	●	●	●	○	1.90	1.50	3.20	2.65	25.0
				304	4	2.0	●	●	●	○	1.45	1.25	2.50	2.20	19.0
				305	5	1.6	●	●	●	○	1.90	1.25	2.40	1.75	19.0
				306	6	1.6	●	●	●	○	1.60	1.15	1.90	1.80	17.0
				307	7	1.6	●	●	●	○	1.70	1.25	2.00	2.05	15.0
				308	8	1.3	●	●	●	●	1.65	1.15	1.85	1.75	13.0
				309	8 1	1.3 2.0	●	●	●	–	1.35 1.35	1.05 1.05	1.10 1.10	1.05 1.05	6.0 15.0
				310	10	1.3	●	●	●	○	1.25	0.90	1.50	1.80	12.0
				312	12	0.9	●	●	●	●	1.45	1.00	1.65	1.85	9.0
				314	14	0.9	●	●	●	●	1.20	1.20	1.80	1.65	9.0 ²⁾
				316	16	0.9	●	●	●	●	1.20	0.85	1.80	1.50	8.0
				318	18	0.9	●	●	●	●	1.20	1.05	1.85	1.60	7.0
				320	20	0.7	●	●	●	●	1.00	0.90	1.35	1.55	6.0
				322	22	0.7	●	●	●	○	1.00	0.90	1.70	1.45	5.5
				324	24	0.7	●	●	●	●	0.95	0.80	1.35	1.35	4.0
				326	26	0.7	●	●	●	○	0.95	0.70	1.50	1.30	4.0
				330	30	0.7	●	●	●	●	0.80	0.70	1.35	1.20	3.5

- First choice alternative
- Special order alternative

Note: 1) see calculation method, caution and suggested standard on page 178.
 2) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 3) test voltage (kV) contact-shell is a little bit lower for K series (values here are for B series).

Multipole

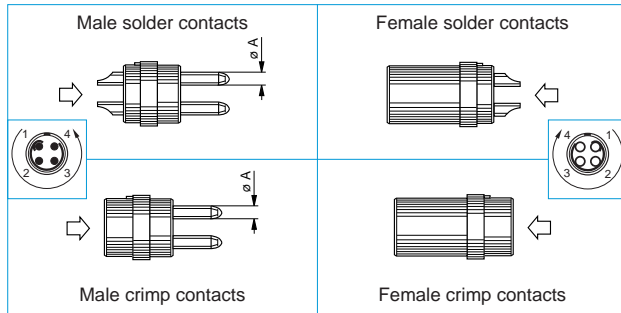
	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type			Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ²⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ ²⁾ Contact-shell	
4B 4K					304	4	3.0	●	●	○	2.10	1.50	1.80	1.20	30.0
					306	6	2.0	●	●	○	2.00	1.75	2.75	2.40	24.0
					307	7	2.0	●	●	○	2.00	1.80	1.50	1.35	20.0
					310	10	1.6	●	●	○	1.85	1.30	1.90	1.95	17.0
					312	12	1.3	●	●	○	1.45	1.60	1.90	1.85	12.0
					316	16	0.9	●	●	●	1.35	1.50	2.30	2.10	10.0
					320	20	0.9	●	●	●	1.35	1.00	1.05	0.95	8.0
					324	24	0.9	●	●	●	1.20	1.45	1.80	2.05	7.0
					330	30	0.9	●	●	●	0.95	0.85	1.75	1.45	5.0
					340	40	0.7	●	●	●	0.90	0.90	1.30	1.30	2.0
				348	48	0.7	●	●	●	0.70	0.70	1.00	1.00	1.5	

- First choice alternative
- Special order alternative

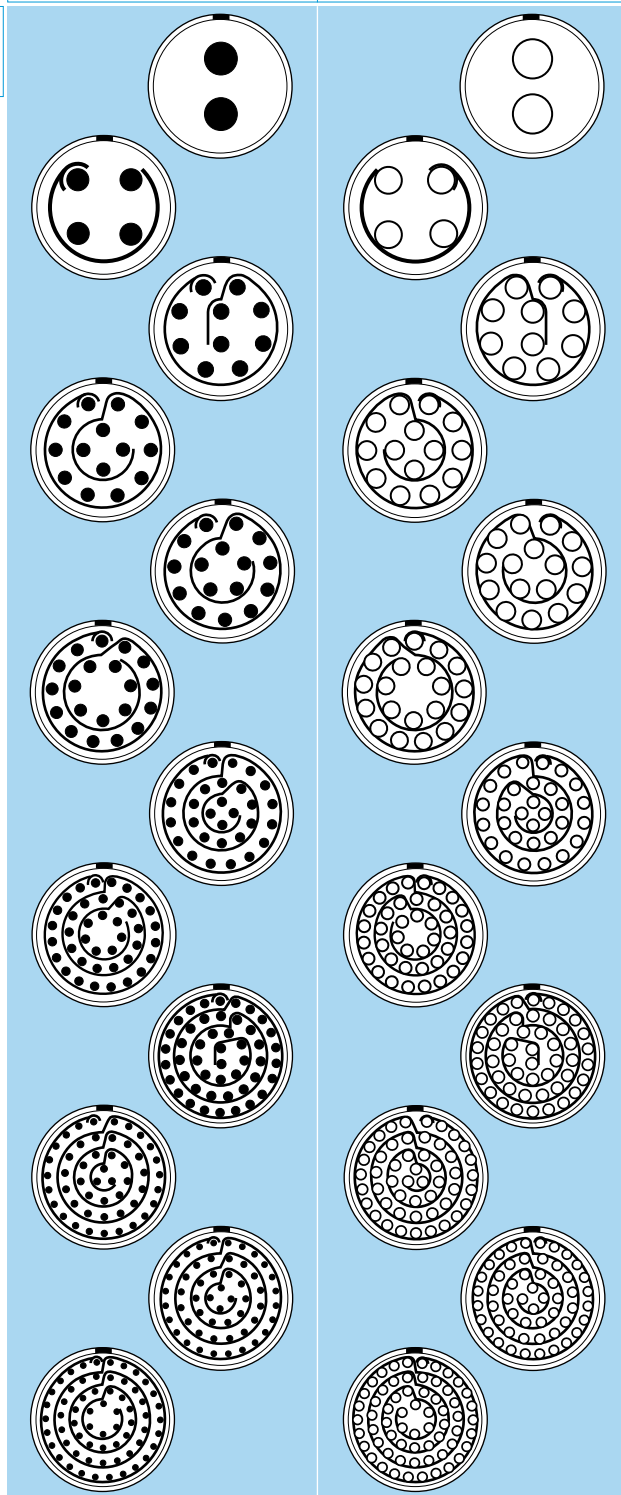
Note: ¹⁾ see calculation method, caution and suggested standard on page 178.
²⁾ test voltage (kV) contact-shell is a little bit lower for K series (values here are for B series).



Multipole



5B
5K



Reference	Number of contacts	ø A (mm)	Contact type			Solder contact		Crimp contact		Rated current (A) ¹⁾
			Solder	Crimp	Print (straight)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ^{1) 2)} Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ^{1) 2)} Contact-shell	
302	2	6.0	●	-	-	3.60	2.95	-	-	50.0
304	4	4.0	●	●	○	2.95	2.65	3.20	2.40	35.0
310	10	3.0	●	●	○	2.35	2.30	2.65	3.20	20.0
314	14	2.0	●	●	○	2.10	2.00	2.85	2.95	18.0
316	16	2.0	●	●	○	1.85	1.95	2.45	3.05	12.0
320	20	1.6	●	●	○	1.90	1.70	2.20	2.40	10.0
330	30	1.3	●	●	○	1.45	1.60	2.05	2.45	8.0
340	40	1.3	●	●	○	1.30	1.45	2.00	1.95	7.0
348	48	1.3	●	●	●	1.20	1.10	2.00	1.55	6.0
350	50	0.9	●	●	●	1.30	1.60	1.20	1.45	6.0
354	54	0.9	●	●	●	1.15	1.55	2.00	2.10	5.0
364	64	0.9	●	●	●	1.30	1.55	1.35	1.85	3.0

- First choice alternative
- Special order alternative

Note: ¹⁾ see calculation method, caution and suggested standard on page 178.
²⁾ test voltage (kV) contact-shell is a little bit lower for K series (values here are for B series).



Housings (B and K series)

Ref.	Outer shell and collet nut		Latch sleeve + earthing crown		Other metallic components		Remarks	Note
	Material	Surf. treatment	Material	Surf. treatment	Material	Surf. treatment		
C	Brass	chrome	brass/bronze	nickel ²⁾	brass	nickel		●
N	Brass	nickel	brass/bronze	nickel ²⁾	brass	nickel		○
K	Brass	black chrome	brass/bronze	nickel ²⁾	brass	nickel		●
S	Stainless steel	–	brass/bronze	nickel ²⁾	brass	nickel		●
T	Stainless steel	–	stainless steel	–	brass	nickel		○
U	Stainless steel	–	stainless steel	–	stainless steel	–		○
L	Aluminium alloy	anodized	brass/bronze	nickel ²⁾	brass	nickel	¹⁾	○
X	Aluminium alloy	nickel anthracite	brass/bronze	nickel ²⁾	brass	nickel		○
G	PEEK (natural)	–	brass/bronze	nickel ²⁾	brass	nickel	Only for FGG and ENG (B series)	●
P	PSU	–	brass/bronze	nickel ²⁾	brass	nickel	Only for FGY and ENY (B series) ¹⁾	●
R	PPSU	–	brass/bronze	nickel ²⁾	brass	nickel	Only for FGY and ENY (B series) ¹⁾	●
H	PPS/brass	–/nickel	brass/bronze	nickel ²⁾	brass	nickel	Only for elbow sockets (B series)	●
P	PA.6	–	brass/bronze	nickel ²⁾	brass	nickel	Only for CRF and CRG bridge plug ¹⁾	●

Note: detailed characteristics of these materials and treatments are presented on page 171.

¹⁾ see «variant» for the colour.

²⁾ in the K series, the latch sleeve is chrome-plated.

- First choice alternative
- Special order alternative



Insulators (B and K series)

Ref.	Material	Contact type	Remarks	Note
Y	PEEK	Crimp	extended design, with contacts that recess into insulator	●
L	PEEK	Solder or print		●

Note: detailed characteristics of these materials are presented on page 175.



Contacts (B and K series)

Soldering characteristics

- no need to order specific tools, a simple soldering iron is sufficient
- ideal for very small and fragile conductors
- contacts with solder cups to allow the solder to flow

Crimping characteristics

- practical, quick contact fixing outside the insulator
- possible use at high temperature
- need to order specific tools
- no risk of heating the insulator during the conductor-contact fixing
- high tensile strength
- totally lead-free solution

Note: see page 176 for more information.



Contacts reference for plugs, free or fixed sockets

Contact type	Reference		Contact			Conductor						F _r ¹⁾ (N)	Notes
	Male	Female	ø A (mm)	ø C (mm)	Form per fig.	Solid		Stranded					
						AWG max.	Section max. (mm ²)	AWG		Section (mm ²)			
								min.	max.	min.	max.		
Solder 	A	L	0.5 ²⁾	0.40 ²⁾	–	28	0.09	–	30	–	0.05	–	–
			0.5	0.45	–	28	0.09	–	28	–	0.09	–	–
			0.7	0.80	–	22	0.34	–	22 ³⁾	–	0.34	–	–
			0.9	0.80	–	22	0.34	–	22 ³⁾	–	0.34	–	–
			1.3	1.00	–	20	0.50	–	20 ³⁾	–	0.50	–	–
			1.6	1.40	–	16	1.00	–	18	–	1.00	–	–
			2.0	1.80	–	14	1.50	–	16	–	1.50	–	–
			3.0	2.70	–	10	4.00	–	12	–	4.00	–	–
			4.0	3.70	–	10	6.00	–	10	–	6.00	–	–
6.0	5.20	–	–	–	–	8	–	10.00	–	–	–		
fig. 1 Crimp fig. 2 Crimp 	C	M	0.5 ⁴⁾	0.45	1	–	–	32	28	0.035	0.09	12	●
	C	M	0.7	0.80	1	–	–	26	22 ³⁾	0.140	0.34	22	●
	B	P		0.45	2	–	–	32	28	0.035	0.09		○
	C	M	0.9	1.10	1	–	–	24	20	0.250	0.50	30	●
	B	P		0.80	2	–	–	26	22 ³⁾	0.140	0.34		○
	G	U		0.45	2	–	–	32	28	0.035	0.09		○
	C	M	1.3	1.40	1	–	–	20	18	0.500	1.00	40	●
	B	P		1.10	2	–	–	24	20	0.250	0.50		○
	G	U		0.80	2	–	–	26	22 ³⁾	0.140	0.34		○
	C	M	1.6	1.90	1	–	–	18	14 ³⁾	1.000	1.50	50	●
	B	P		1.40	2	–	–	22	18	0.340	1.00		○
	C	M	2.0	2.40	1	–	–	16	12 ³⁾	1.500	2.50	65	●
	B	P		1.90	2	–	–	18	14	1.000	1.50		○
	C	M	3.0	2.90	1	–	–	14	10 ³⁾	2.500	4.00	75	●
	C	M	4.0	4.00	1	–	–	12	10	4.000	6.00	90	●
Print 	D	N	L dimensions and C are detailed in the section on PCB drilling pattern. See page 156.										●
Print (elbow) 	V	V	L dimensions and C are detailed in the section on PCB drilling pattern. See page 157.										●

Note: 1) contact retention force in the insulator (according to IEC 60512-8 test 15 a).

2) for 00 multipole series.

3) for a given AWG, the diameter of some stranded conductor designs is larger than the solder cup diameter. Make sure that the maximum conductor diameter is smaller than ø C.

4) available only for 00 multipole series and connectors fitted with male contacts of the 0B and 1B series.

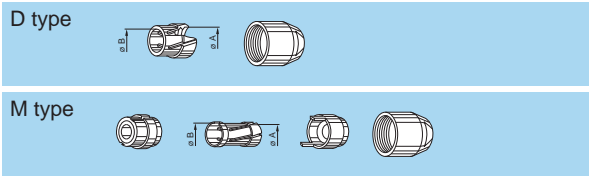
- First choice alternative
- Special order alternative

Contacts reference for couplers R●●, S●● and TGL

Ref.	Contact type	Remarks
A	Male - Female	contact configuration is explained on page 21, 28, 42
L	Female - Male	contact configuration is explained on page 21, 28, 42
M	Female - Female	contact configuration is explained on page 21

Collets (B and K series)

D and M type collets for B series



	Reference		Collet ø		Cable ø		Notes
	Type	Code	ø A	ø B	max.	min.	
00	D	22	2.2	–	2.2	1.4	NEW
	D	27	2.7	–	2.7	> 2.2	NEW
	D	35	3.5	2.8	3.5	> 2.7	NEW
0B	D	21	2.1	–	2.2	1.4	NEW
	D	31	3.1	–	3.2	> 2.2	NEW
	D	42	4.2	–	4.2	> 3.2	NEW
	D	52	5.2	4.7	5.2	> 4.2	NEW
	D	56	5.6	4.7	5.6	> 5.2	NEW¹⁾
1B	M	27	2.7	–	2.7	> 2.2	NEW
	M	31	3.1	–	3.1	> 2.7	NEW
	D	42	4.2	–	4.2	2.5	NEW
	D	52	5.2	–	5.2	> 4.2	NEW
	D	62	6.2	–	6.2	> 5.2	NEW
	D	72	7.2	6.7	7.2	> 6.2	NEW
	D	76	7.6	6.7	7.6	> 7.2	NEW¹⁾
2B	M	21	2.1	–	2.2	1.4	NEW
	M	31	3.1	–	3.2	> 2.2	NEW
	D	42	4.2	–	4.2	> 3.2	NEW
	D	52	5.2	–	5.2	> 4.2	NEW
	D	62	6.2	–	6.2	> 5.2	NEW
	D	72	7.2	–	7.2	> 6.2	NEW
	D	82	8.2	–	8.2	> 7.2	NEW
	D	92	9.2	8.6	9.2	> 8.2	NEW
	D	99	9.9	8.6	9.9	> 9.2	NEW¹⁾

	Reference		Collet ø		Cable ø		Notes
	Type	Code	ø A	ø B	max.	min.	
3B	M	52	5.2	–	5.0	4.1	
	D	62	6.2	–	6.2	4.9	NEW
	D	72	7.2	–	7.7	> 6.2	NEW
	D	92	9.2	–	9.2	> 7.7	NEW
	D	10	10.2	–	10.0	> 9.2	NEW
4B	D	12	12.0	10.2	11.9	10.8	NEW¹⁾
	M	62	6.2	–	6.0	5.1	
	M	72	7.2	–	7.0	6.1	
	M	82	8.2	–	8.0	7.1	
	M	92	9.2	8.6	9.0	8.1	
	D	10	10.8	–	10.5	9.1	
	D	12	12.3	–	12.0	10.6	
	D	13	13.8	12.5	13.5	12.1	
	D	15	15.3	12.5	15.0	13.6	
5B	D	16	16.3	12.5	16.0	15.1	¹⁾
	D	11	11.8	–	11.5	9.6	
	D	13	13.8	–	13.5	11.6	
	D	15	15.8	–	15.5	13.6	
	D	17	17.8	–	17.5	15.6	¹⁾
	D	19	19.8	–	19.5	17.6	¹⁾
	D	21	21.8	–	21.5	19.6	¹⁾
	D	23	23.8	21.8	23.5	21.6	¹⁾
	D	25	25.3	21.8	25.0	23.6	¹⁾

Note: all dimensions are in millimetres.

¹⁾ these collets cannot be used for connector models with nut for fitting a bend relief.



C and K type collets for K series

C type



K type
oversize
cable collet



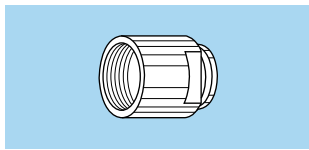
	Reference		Collet ø		Cable ø		
	Type	Code	ø A	ø B	max.	min.	
0K	C	10	1.6	–	1.2	1.0	
	C	15	1.6	–	1.5	1.3	
	C	20	2.1	–	2.0	1.6	
	C	25	3.1	–	2.5	2.1	
	C	30	3.1	–	3.0	2.6	
	C	35	4.2	4.2	3.5	3.1	
	C	40	4.2	4.2	4.0	3.6	
	C	45	5.2	5.2	4.5	4.1	
	C	50	5.2	5.2	5.0	4.6	
1K	C	15	1.6	–	1.5	1.3	
	C	20	2.2	–	2.0	1.6	
	C	25	3.2	–	2.5	2.1	
	C	30	3.2	–	3.0	2.6	
	C	35	4.2	–	3.5	3.1	
	C	40	4.2	–	4.0	3.6	
	C	45	5.2	–	4.5	4.1	
	C	50	5.2	–	5.0	4.6	
	C	55	6.2	6.2	5.5	5.1	
	C	60	6.2	6.2	6.0	5.6	
	C	65	7.2	6.7	6.5	6.1	
	K	70	7.2	–	7.0	6.6	
	K	75	8.2	8.2	7.5	7.1	
	K	80	8.2	8.2	8.0	7.6	
	K	85	9.2	8.6	8.5	8.1	
2K	C	15	2.2	–	1.5	1.3	
	C	20	2.2	–	2.0	1.6	
	C	25	3.2	–	2.5	2.1	
	C	30	3.2	–	3.0	2.6	
	C	35	4.2	–	3.5	3.1	
	C	40	4.2	–	4.0	3.6	
	C	45	5.2	–	4.5	4.1	
	C	50	5.2	–	5.0	4.6	
	C	55	6.2	–	5.5	5.1	
	C	60	6.2	–	6.0	5.6	
	C	65	7.2	–	6.5	6.1	
	C	70	7.2	–	7.0	6.6	
	C	75	8.2	8.2	7.5	7.1	
	C	80	8.2	8.2	8.0	7.6	
	C	85	9.2	8.6	8.5	8.1	
	K	90	9.2	–	9.0	8.6	
	K	95	10.2	10.2	9.5	9.1	
	K	10	10.2	10.2	10.0	9.6	
	K	11	11.2	10.6	10.5	10.1	
	3K	C	30	3.2	–	3.0	2.6
		C	35	4.2	–	3.5	3.1
		C	40	4.2	–	4.0	3.6
		C	45	5.2	–	4.5	4.1
C		50	5.2	–	5.0	4.6	
C		55	6.2	–	5.5	5.1	
C		60	6.2	–	6.0	5.6	
C		65	7.2	–	6.5	6.1	
C		70	7.2	–	7.0	6.6	

	Reference		Collet ø		Cable ø		
	Type	Code	ø A	ø B	max.	min.	
3K	C	70	7.2	–	7.0	6.6	
	C	75	8.2	–	7.5	7.1	
	C	80	8.2	–	8.0	7.6	
	C	85	9.2	–	8.5	8.1	
	C	90	9.2	–	9.0	8.6	
	C	95	10.2	10.2	9.5	9.1	
	C	10	10.2	10.2	10.0	9.6	
	C	11	11.2	10.6	10.5	10.1	
	K	11	12.3	–	12.0	10.6	
	K	12	13.8	13.8	12.8	12.1	
	K	13	13.8	13.8	13.5	12.9	
	K	14	15.3	15.3	14.0	13.6	
	K	15	15.3	15.3	15.0	14.1	
	4K	C	50	6.3	–	5.0	4.6
		C	55	6.3	–	5.5	5.1
C		60	6.3	–	6.0	5.6	
C		65	7.3	–	6.5	6.1	
C		70	7.3	–	7.0	6.6	
C		75	8.3	–	7.5	7.1	
C		80	8.3	–	8.0	7.6	
C		85	9.3	–	8.5	8.1	
C		90	9.3	–	9.0	8.6	
C		95	10.8	–	9.5	9.1	
C		10	10.8	–	10.5	9.6	
C		11	12.3	–	12.0	10.6	
C		12	13.8	13.8	12.8	12.1	
C		13	13.8	13.8	13.5	12.9	
C		14	15.3	15.3	14.0	13.6	
C		15	15.3	15.3	15.0	14.1	
K		16	17.8	–	16.5	15.6	
K		17	17.8	–	17.5	16.6	
K	18	19.8	–	18.5	17.6		
K	19	19.8	–	19.5	18.6		
K	20	21.8	–	20.5	19.6		
K	21	21.8	–	21.5	20.6		
K	22	23.8	23.8	22.5	21.6		
K	23	23.8	23.8	23.5	22.6		
5K	C	10	11.8	–	10.5	9.6	
	C	11	11.8	–	11.5	10.6	
	C	12	13.8	–	12.5	11.6	
	C	13	13.8	–	13.5	12.6	
	C	14	15.8	–	14.5	13.6	
	C	15	15.8	–	15.5	14.6	
	C	16	17.8	–	16.5	15.6	
	C	17	17.8	–	17.5	16.6	
	C	18	19.8	–	18.5	17.6	
	C	19	19.8	–	19.5	18.6	
C	20	21.8	–	20.5	19.6		
C	21	21.8	–	21.5	20.6		
C	22	23.8	23.8	22.5	21.6		
C	23	23.8	23.8	23.5	22.6		

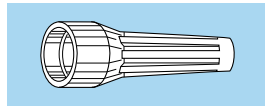
Note: all dimensions are in millimetres.

Variant (B and K series)

Bend relief for B series models with collet

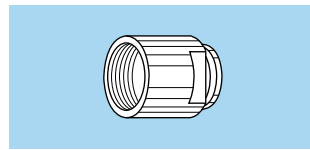


Need to be ordered

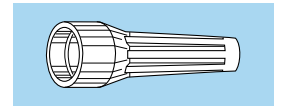


	Ref.	Collet		Need to be ordered separately (see pages 141 and 142)
		Type	Code	
00	Z	D	22 to 35	GMA.00.●●●●●● GMB.00.●●●●●●
0B	Z	D	21 to 52	GMA.0B.●●●●●●
1B	Z	M	27 and 31	GMA.1B.●●●●●●
		D	42 to 72	GMA.1B.●●●●●●
2B	Z	M	21 and 31	GMA.0B.●●●●●●
		D	42	GMA.2B.●●●●●●
		D	52 to 92	GMA.2B.●●●●●●
3B	Z	M	52	GMA.1B.●●●●●●
		D	62 to 11	GMA.3B.●●●●●●
4B	Z	M	62 and 72	GMA.2B.●●●●●●
		M	82 and 92	GMA.4B.●●●●●●
		D	10 to 15	GMA.4B.●●●●●●
5B	Z	D	11 to 15	GMA.4B.●●●●●●

Bend relief for K series models with collet



Need to be ordered



	Ref.	Collet		Need to be ordered separately (see pages 141 and 142)
		Type	Code	
0K	Z	C	10 to 50	GMA.0B.●●●●●●
1K	Z	C	15 to 65	GMA.1B.●●●●●●
		K	70 to 85	GMA.2B.●●●●●●
2K	Z	C	15 to 85	GMA.2B.●●●●●●
		K	90 to 10	GMA.3B.●●●●●●
3K	Z	C	30 to 10	GMA.3B.●●●●●●
		K	11 to 15	GMA.4B.●●●●●●
4K	Z	C	50 to 15	GMA.4B.●●●●●●

Note: All dimensions are in millimetres.

Colour of the bridge plug shells and connectors shell made of plastic material and aluminium alloys

Reference	Colour	Bridge plug and plastic shell			Aluminium alloys	
		PSU	PPSU	PA.6	Anodized colour	Anodized colour for bend relief collet nut
A	blue			●	●	
B	white	●		●		
G	grey	●		●		
J	yellow			●	●	
M	brown			●		
N	black			●	●	
R	red			●	●	
S	orange			●		
T	natural				●	
V	green			●	●	
L	black					●
X	natural					●
F	cream		●			

Note: other anodizing colours are available for connectors with collet nut for bend relief. Please consult us.

Watertight and vacuumtight socket and coupler models (B and K series)

	Model	Reference	
		Watertight	Vacuumtight
B	YH●, HG●, HN●, HH●, HC●, HE●, HM●, S●●	P	PV
K	HG●, HE●, S●●	P	PV

O-ring and gasket material (K series)

Standard connectors are delivered with silicone o-ring and gaskets. The vacuumtight models, identified with the letter «PV», are delivered with Viton® gaskets. Other gaskets material can be delivered upon special request.

O-ring material	Reference
FPM (Viton®)	H
EPDM	E
FPM (Viton®) and collet nut for bend relief	D