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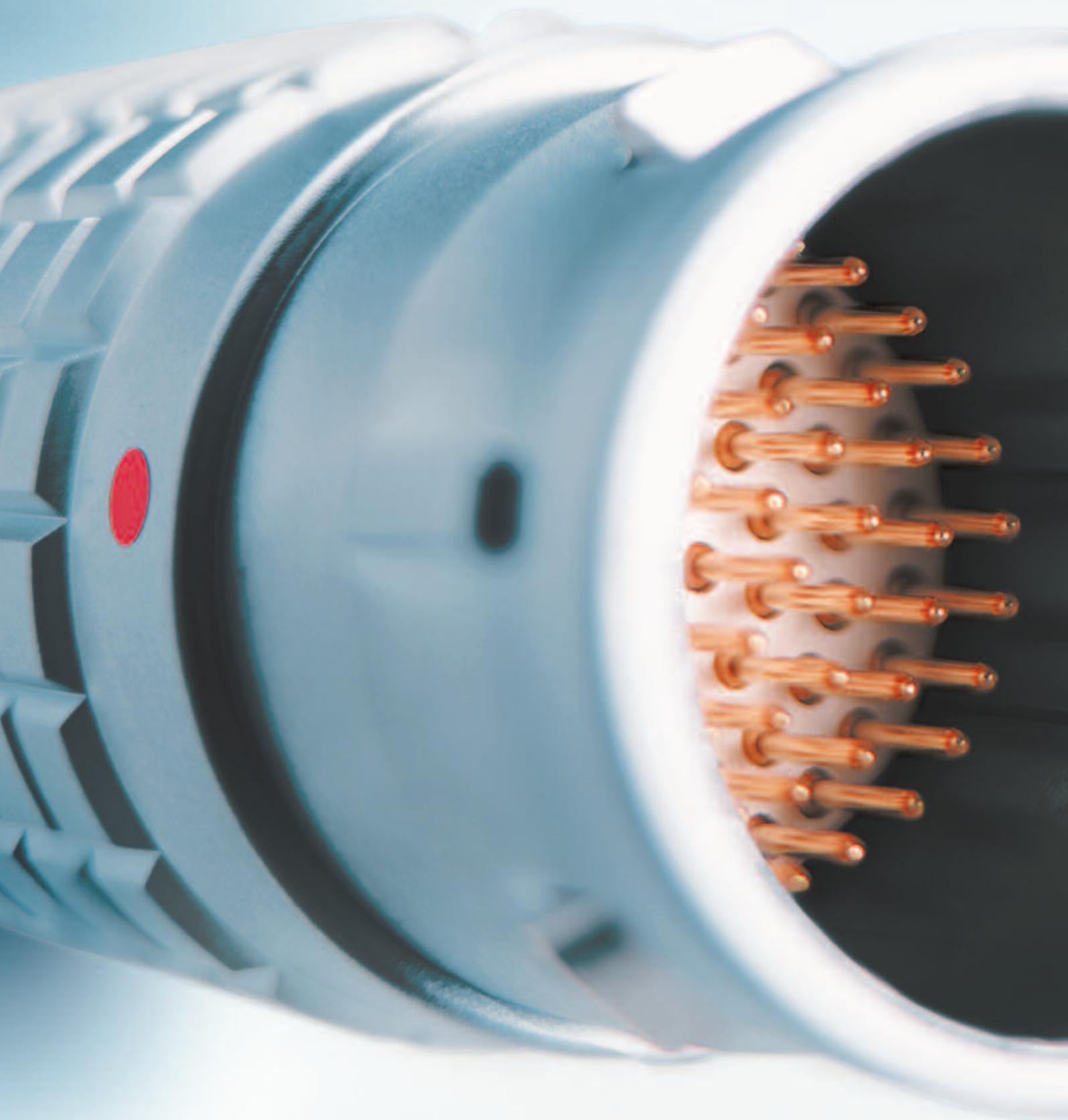
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# UNIPOLE & MULTIPOLE CONNECTORS





## 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 electro-magnetic 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.

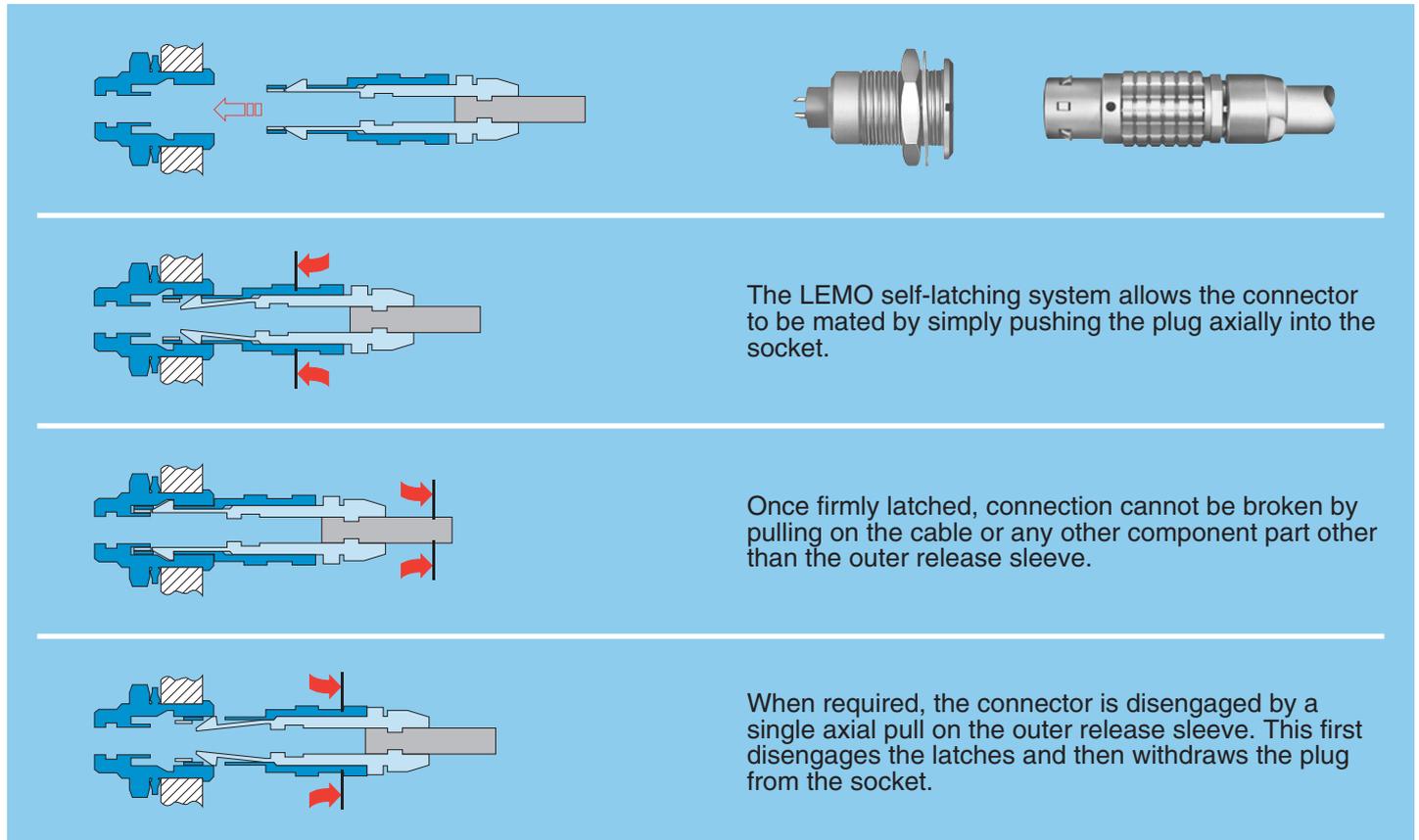
### Over 75'000 connectors

The modular design of the LEMO range provides over 75'000 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 recognized.

### 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.**

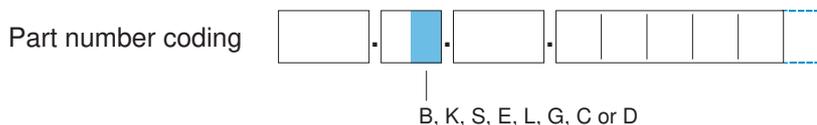
### RoHS

LEMO connector specifications conforms the requirements of the RoHS directive (2011/65/EU) 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.

# 3 steps to select the right connector

## ● Step 1: Select connector series

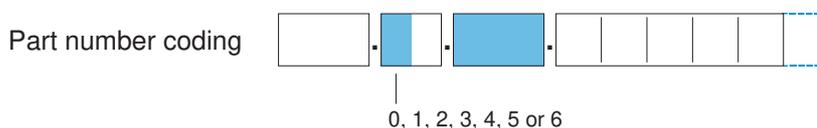
Select the appropriate LEMO connector series according to the environmental parameters that will affect your device or cable such as indoor, outdoor, temperature range, ingress protection of the mated connector and of your device. Use the table shown on page 4.



## ● Step 2: Select connector size

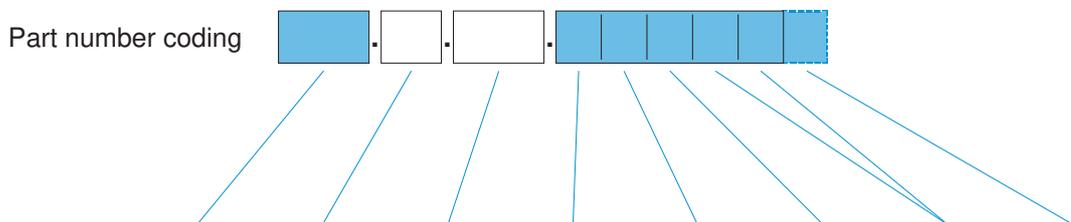
Use the section (mm<sup>2</sup>) or the AWG of your cable wire to select the optimal contact diameter (values vary between solder, crimp or print contact), see page 7.

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)

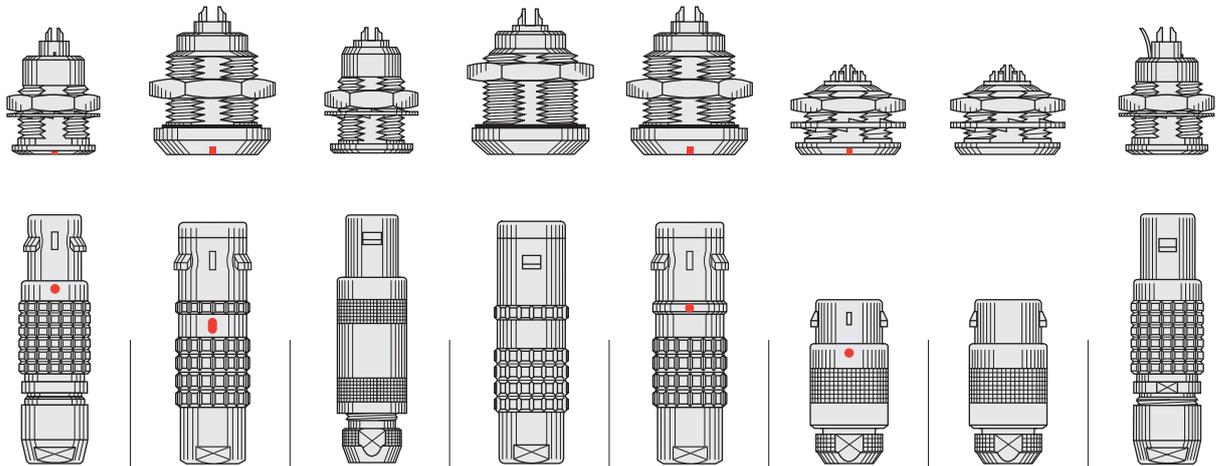
These series are watertight when mated and assembled to an appropriate cable. They include the 0K to 5K series, available in the same types as the 0B to 5B series, and the 0L to 2L series with keying and hermaphroditic insulator.

### 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 to 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 <sup>1)</sup> protection	IP50	IP66 to IP68	IP50	IP66 to IP68		IP50		
Ingress <sup>2)</sup> 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	8 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, crimp 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:**

<sup>1)</sup> Mated connector. See ingress protection code page 5.

<sup>2)</sup> 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**

IP letter code \_\_\_\_\_  
 1st digit \_\_\_\_\_  
 2nd digit \_\_\_\_\_

### 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.)

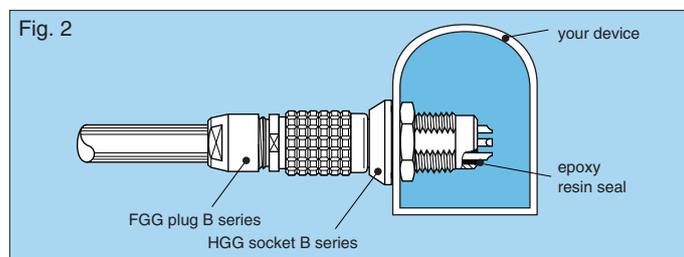
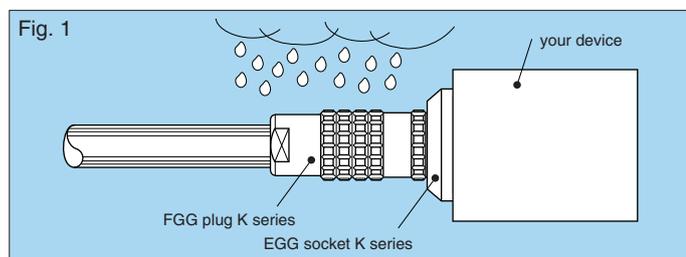
Code	Second digit description
0	No special protection
1	Protection from vertically dripping water
2	Protection from dripping water when tilted up to 15°
3	Protection from sprayed water
4	Protection from splashed water
5	Protection from water projected from a nozzle
6	Protection against heavy seas, or 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).



## 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						$F_r$ <sup>1)</sup> (N)	Note
	$\varnothing A$ (mm)	$\varnothing C$ (mm)	Form per fig.	Solid		Stranded					
				AWG max.	Section max. (mm <sup>2</sup> )	AWG		Section (mm <sup>2</sup> )			
min.	max.	min.	max.								
<p>Solder</p>	0.35	0.40	–	28	0.09	–	30	–	0.05	–	●
	0.5 <sup>2)</sup>	0.40 <sup>2)</sup>	–	28	0.09	–	30	–	0.05	–	
	0.5	0.45 <sup>7)</sup>	–	28	0.09	–	28	–	0.09	–	
	0.7 <sup>3)</sup>	0.60 <sup>3)</sup>	–	24	0.25	–	26	–	0.14	–	
	0.7	0.80	–	22	0.34	–	22 <sup>4)</sup>	–	0.34	–	
	0.9	0.80 <sup>6)</sup>	–	22 <sup>6)</sup>	0.34 <sup>6)</sup>	–	22 <sup>4)6)</sup>	–	0.34 <sup>6)</sup>	–	
	1.3	1.00	–	20	0.50	–	20 <sup>4)</sup>	–	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 <sup>5)</sup>	0.45	1	–	–	32	28	0.035	0.09	12	●
	0.7	0.80	1	–	–	26	22 <sup>4)</sup>	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 <sup>4)</sup>	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 <sup>4)</sup>	0.140	0.34		○
	1.6	1.90	1	–	–	18	14 <sup>4)</sup>	1.000	1.50	50	●
		1.40	2	–	–	22	18	0.340	1.00		○
	2.0	2.40	1	–	–	16	12 <sup>4)</sup>	1.500	2.50	65	●
		1.90	2	–	–	18	14	1.000	1.50		○
3.0	3.20	1	–	–	14	10 <sup>4)</sup>	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:** <sup>1)</sup> contact retention force in the insulator (according to IEC 60512-8 test 15 a).

<sup>2)</sup> for 00 multipole series.

<sup>3)</sup> for S, E, 2C, 2G and 1D series.

<sup>4)</sup> 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  $\varnothing C$ .

<sup>5)</sup> for 00 multipole series or for 0B and 1B series with male contacts.

<sup>6)</sup> for 0B.302/0B.303 and 0K.302/0K.303  $\varnothing C = 1.0$  mm, AWG max 20, section max (mm<sup>2</sup>) 0.50.

<sup>7)</sup> for 00 and 1B/1K series, according to manufacturing and plating tolerance  $\varnothing C$  min = 0.43 mm.

## 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 <sup>1)</sup>	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
XB	4.4	8.0	4.4	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 <sup>3)</sup>	1.3	8.5
2K	1.3	10.5 <sup>3)</sup>	1.3	10.5
3K	2.6	15.0 <sup>3)</sup>	2.6	15.0
4K	4.6	23.5 <sup>3)</sup>	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 <sup>2)</sup>	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 <sup>3)</sup>	1.3	8.5
2E	1.3	10.5 <sup>3)</sup>	1.3	10.5
3E	2.6	15.0 <sup>3)</sup>	2.6	15.0
4E	4.6	23.5 <sup>3)</sup>	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 <sup>3)</sup>	1.3	8.5
2L	1.3	10.5 <sup>3)</sup>	1.3	10.5

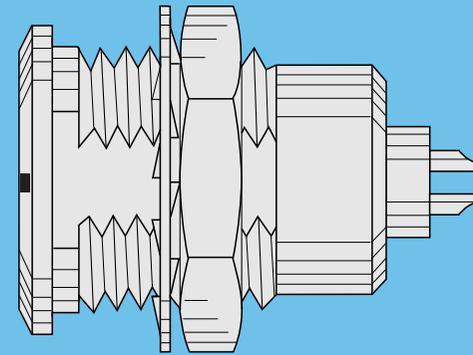
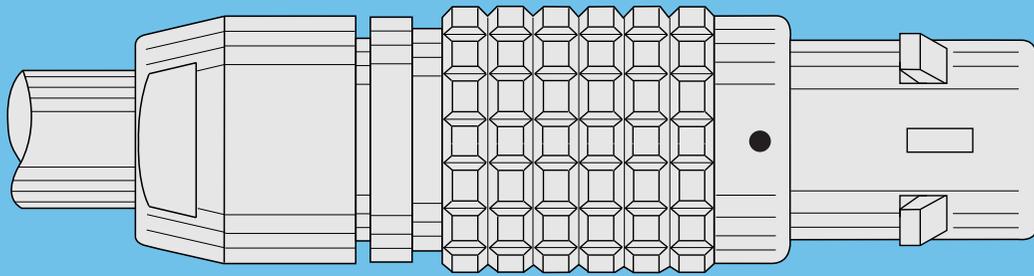
Series	Cable diameter range (mm)			
	Collet		Collet for fitting a bend relief	
	min.	max.	min.	max.
2C	2.2	8.1	2.2	8.1
2G	4.5	7.9	4.5	7.9
1D	3.1	7.5	3.1	7.0

**Note:**

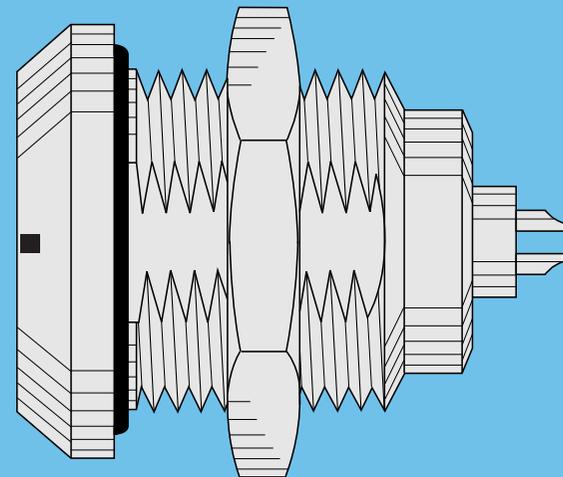
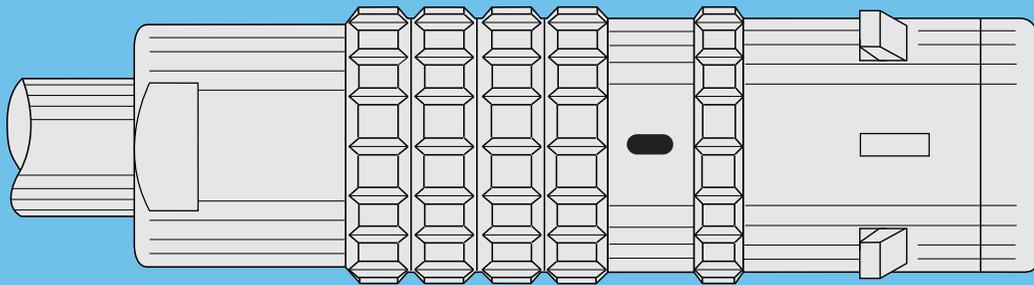
<sup>1)</sup> for multipole only.

<sup>2)</sup> for unipole only.

<sup>3)</sup> 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)

<p><b>Fixed plugs</b></p> <p><b>Elbow plugs</b></p>	<p><b>Straight plugs</b></p>	<p><b>Fixed sockets</b></p>	<p><b>Free sockets</b></p> <p><b>Fixed sockets</b></p>
		<p><b>Fixed coupler</b></p>	

## Elbow socket models (page 22)

**Elbow sockets**

## Plastic housing models (page 24)

<p><b>Straight plugs</b></p>	<p><b>Fixed sockets</b></p>
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## Bridge models (page 29)

<p><b>Plug with two parallel sockets</b></p>	<p><b>Bridge plugs</b></p>
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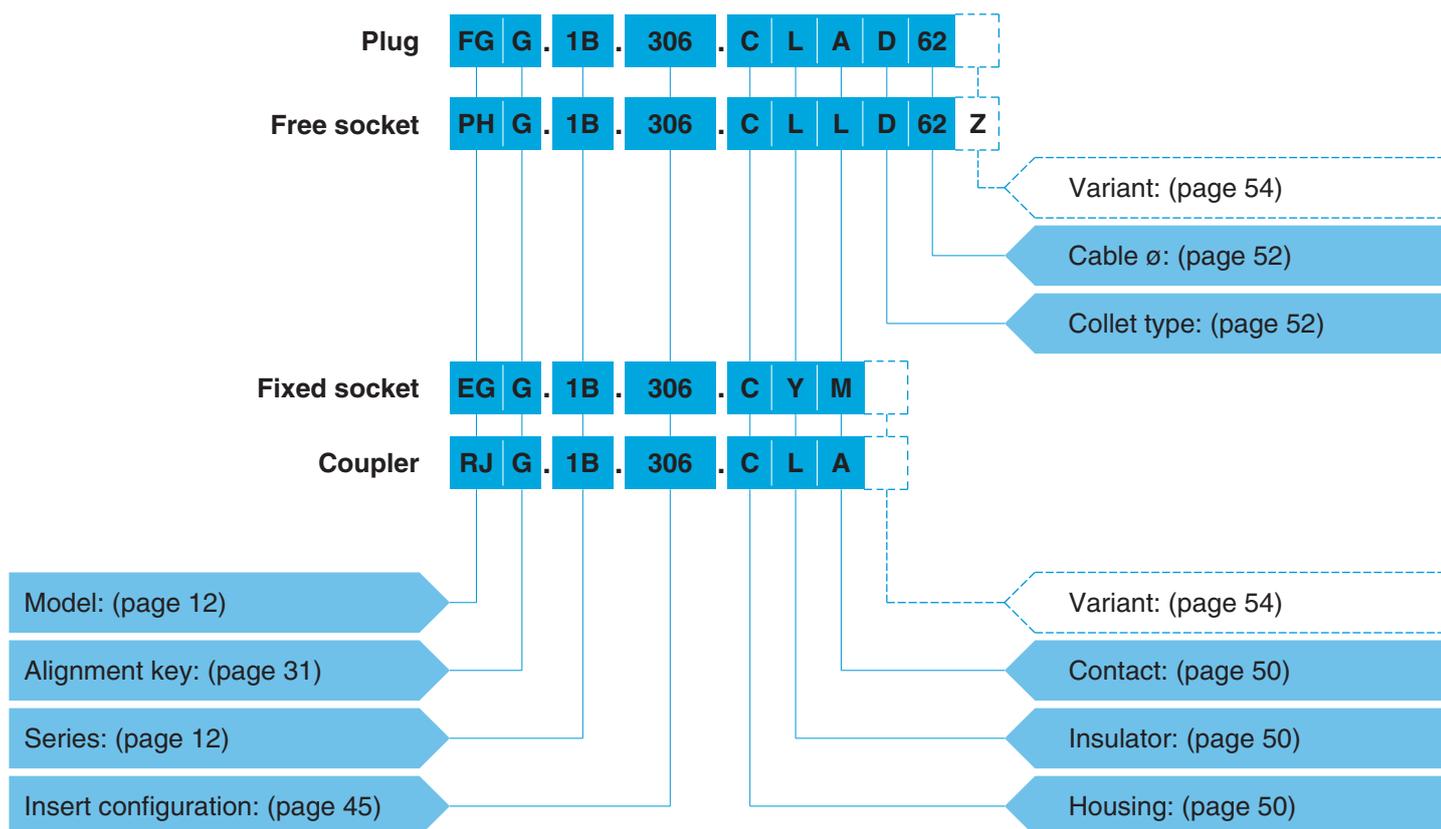
## Watertight or vacuumtight models (page 26)

<p><b>Fixed plug</b></p>	<p><b>Fixed sockets</b></p>	<p><b>Fixed coupler</b></p>
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## Threaded-latching models (page 30)

<p><b>Straight plugs</b></p>	<p><b>Fixed socket</b></p> <p><b>Elbow socket</b></p>
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## 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.

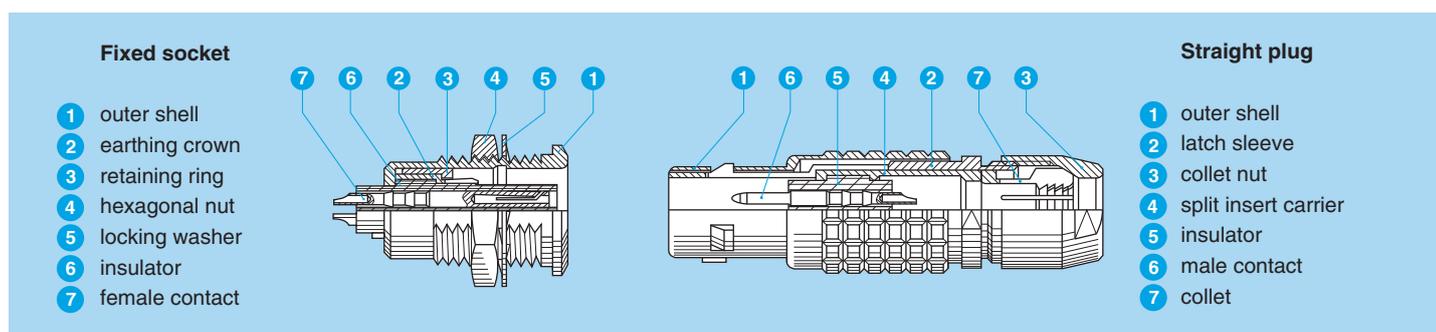
### Fixed socket:

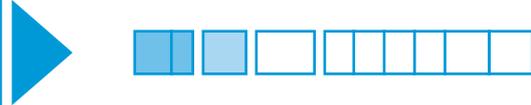
**EGG.1B.306.CYM** = fixed socket, nut fixing, with key (G), 1B series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK extended insulator, female crimp contacts.

### 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

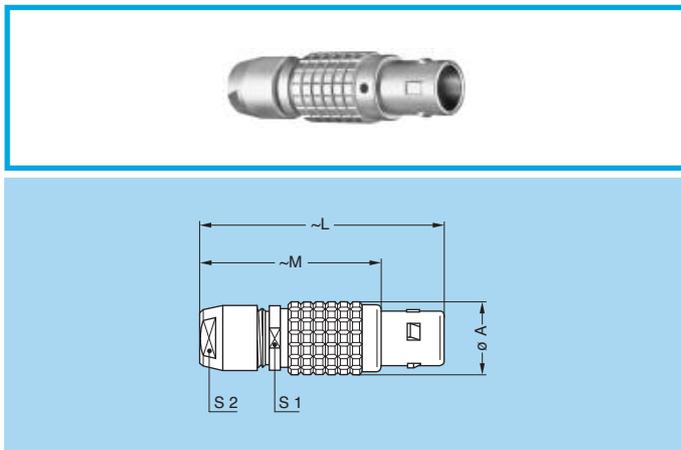
Characteristics	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range	-55° C, +250° C	
Resistance to vibration	10-2000 Hz, 15 g	IEC 60512-4 test 6d
Shock resistance	100 g, 6 ms	IEC 60512-4 test 6c
Salt spray corrosion test	> 1000h	IEC 60512-6 test 11f
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	IEC 60169-1-3
	at 1 GHz	> 40 dB	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.

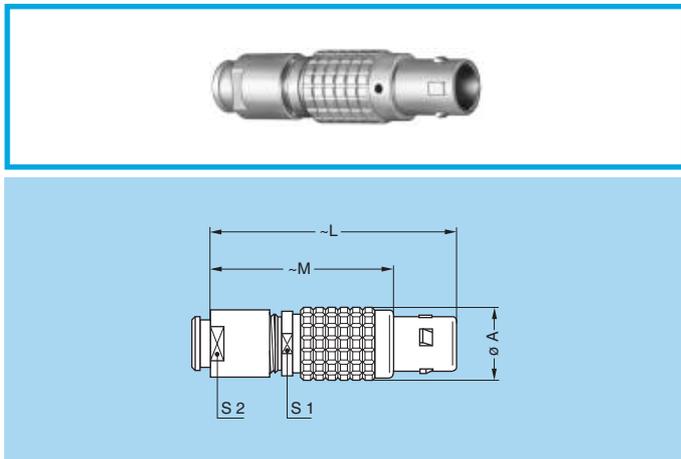


#### FGG Straight plug, key (G) or keys (A...M and R), cable collet

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FGG	00 <sup>1)</sup>	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	XB	13.0	44.0	33.5	11.0	10
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: <sup>1)</sup> the surface design of the 00 series is different.



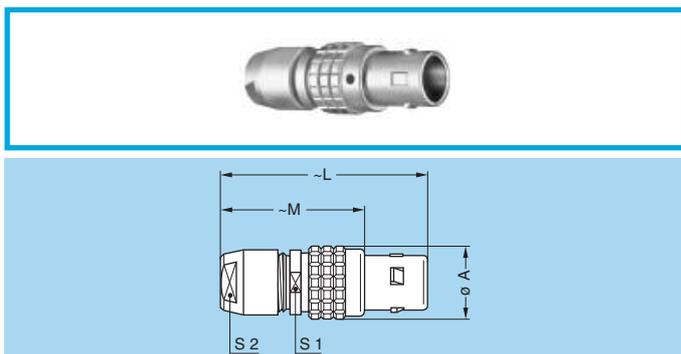
#### FGG Straight plug, key (G) or keys (A...M), cable collet and nut for fitting a bend relief <sup>2)</sup>

Reference		Dimensions (mm)				
Model	Series	A	L	M	S1	S2
FGG	00 <sup>1)</sup>	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	XB	13.0	47.5	37.0	11.0	10
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: <sup>1)</sup> the surface design of the 00 series is different.

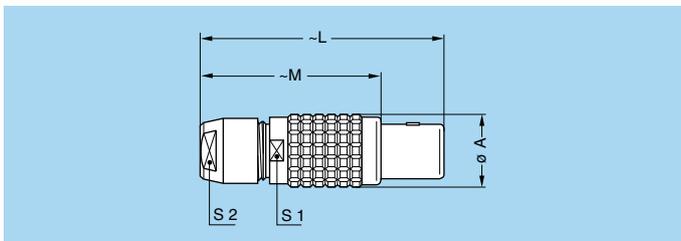
<sup>2)</sup> to order, add a «Z» at the end of the reference. The bend relief must be ordered separately (see page 141).



#### 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

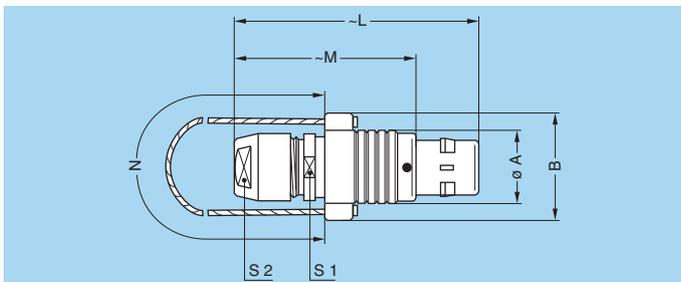
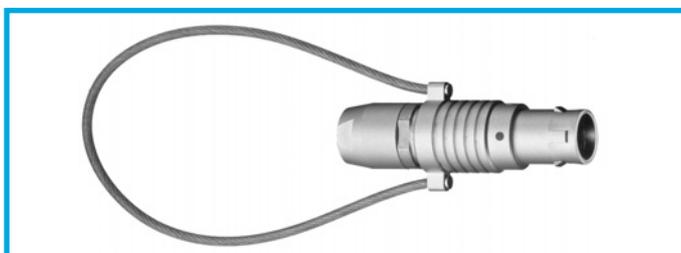
**M4** Cable assembly (page 161)



### 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)

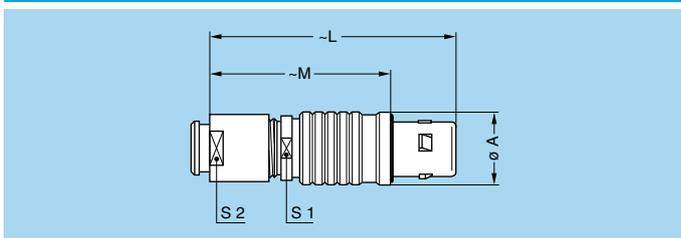
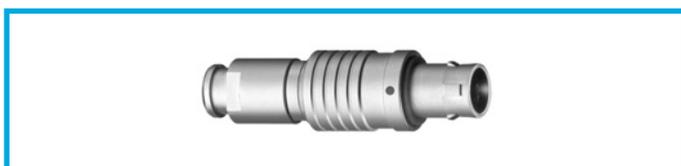


### FNG Straight plug, key (G) or keys (A...M and R), cable collet and lanyard release

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.

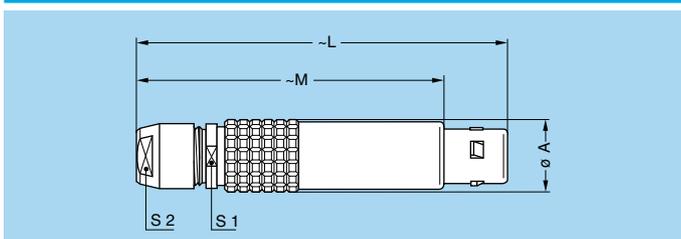
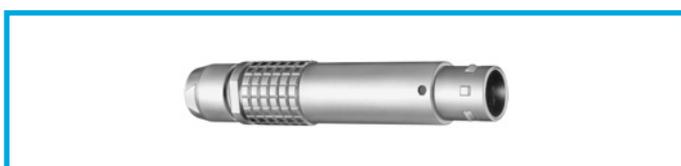


### FEG Straight plug, key (G) or keys (A...L), cable collet, front seal and nut for fitting a bend relief <sup>1)</sup> (IP 54 protection index when mated)

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)

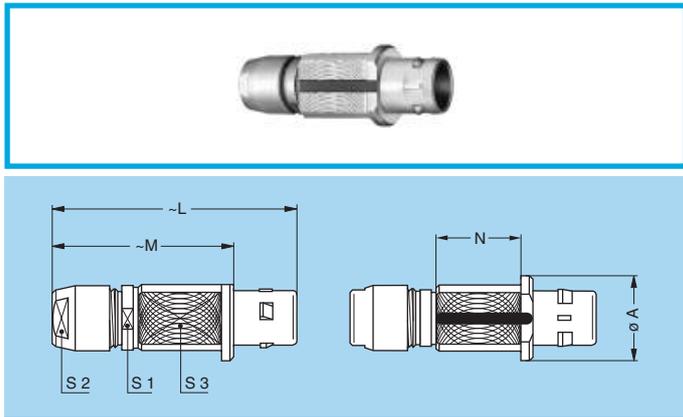
**Note:** <sup>1)</sup> to order, add a «Z» at the end of the reference. The bend relief must be ordered separately (see page 141).



### 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

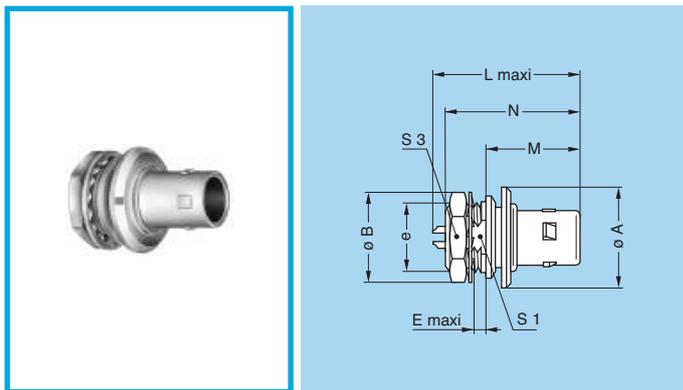
**M2** Cable assembly (page 162)



**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	21.0	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)

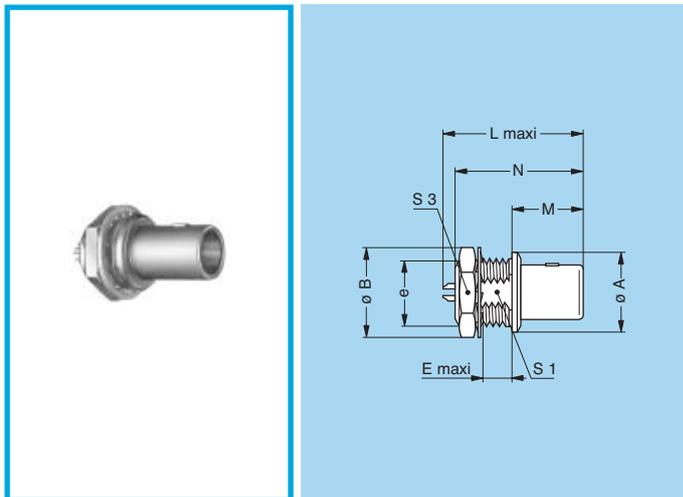


**FWG** Fixed plug, nut fixing, key (G) or keys (A...L)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts

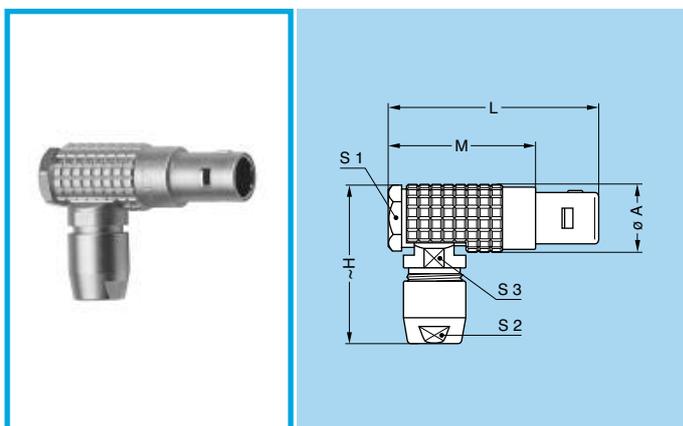


**FAG** Fixed plug, non-latching, nut fixing, key (G) or keys (A...M and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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)

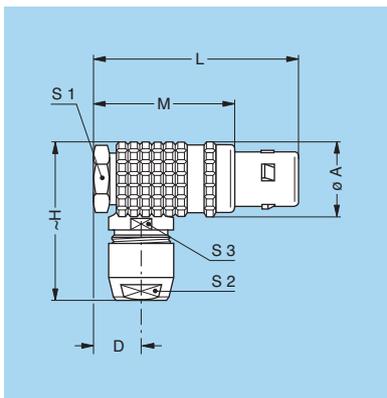
**Note:** <sup>1)</sup> maximum length with crimp contacts. The 5B series is delivered without locking washer or tapered washer and with a round nut.



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

Reference		Dimensions (mm)						
Model	Series	A	H	L	M	S1	S2	S3
FPG	00	7.5	18.0	24.5	16.5	6.5	5	5.3
FPG	0B	9.5	23.0	30.0	20.0	8.0	7	8.0
FPG	1B	12.0	29.0	36.0	25.0	11.0	9	10.0
FPG	2B	15.0	35.0	41.5	29.5	13.5	12	13.0

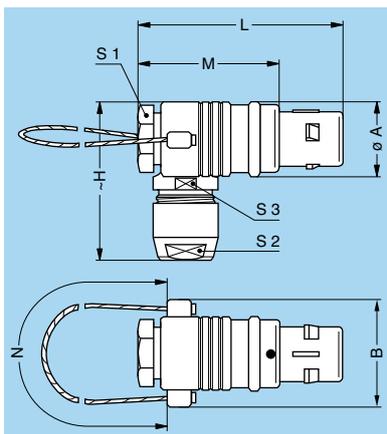
**M3** Cable assembly (page 161)



### 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	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)

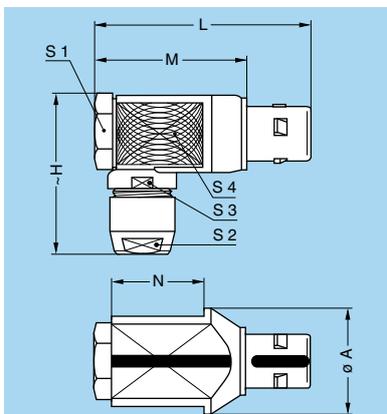


### FMG Elbow (90°) plug, key (G) or keys (A...M), cable collet and lanyard release, long key <sup>1)</sup>

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:** <sup>1)</sup> long key: only in 0B series and with key (G).  
Cable material: stainless steel with Polyamide sheath.

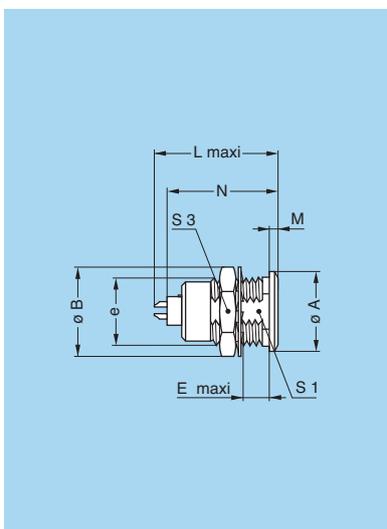


### FKG Elbow (90°) plug for remote handling, key (G) or keys (A...L), special alignment mark, knurled handling surface, cable collet

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.

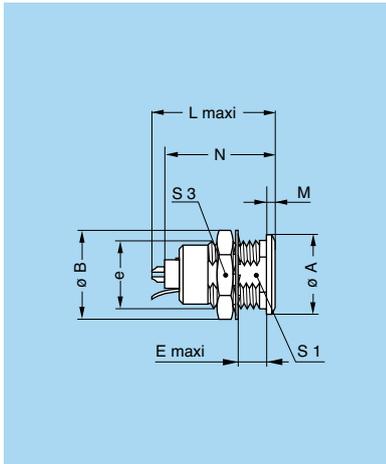


### EGG Fixed socket, nut fixing, key (G) or keys (A...M and R)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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	XB	16	19.0	M14x1.0	7.0	23.5	1.5	20.0	12.5	17
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:** <sup>1)</sup> maximum length with crimp contacts.  
The 5B series is delivered with a tapered washer and a round nut.

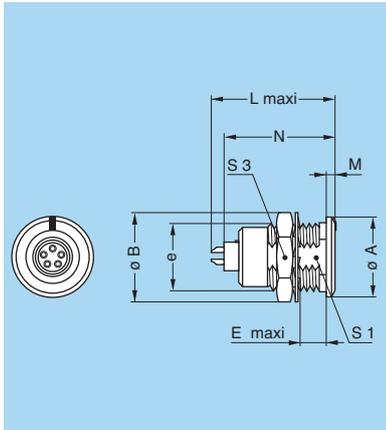


### ENG Fixed socket with earthing tag, nut fixing, key (G) or keys (A...M)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	S1	S3
ENG	00	8	10.2	M7x0.5	6.0	15.5	1.0	13.7	6.3	9
ENG	0B	10	12.4	M9x0.6	7.0	20.7	1.2	19.1	8.2	11
ENG	1B <sup>2)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts.  
<sup>2)</sup> for the 1B series the earthing tag is on the same side of the key.

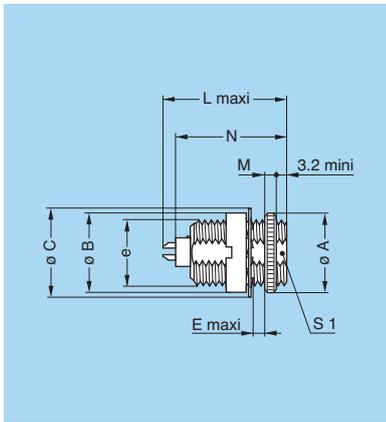


### EKG Fixed socket, nut fixing, key (G) or keys (A...L and R), special alignment mark on the front

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts.  
 The 5B series is delivered with a tapered washer and a round nut.



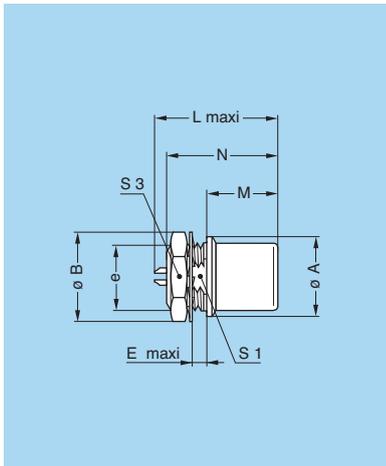
### ESG Fixed socket with two round nuts, key (G) or keys (A...L), long threaded shell (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	C	e	E	L	M	N <sup>1)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts.

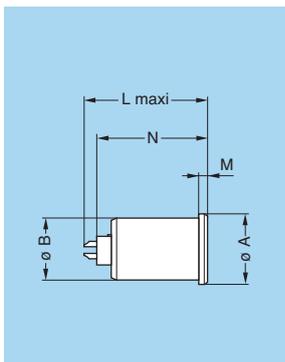


### EHG Fixed socket, nut fixing, key (G) or keys (A...M and R), and protruding shell

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts. The 5B series is delivered without locking washer or tapered washer and with a round nut.

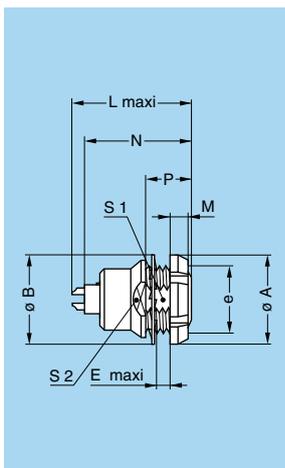


### EJM Fixed socket, press or adhesive fit, key (G) or keys (A...M)

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

**P5** Panel cut-out (page 152)

**Note:** <sup>1)</sup> maximum length with crimp contacts.

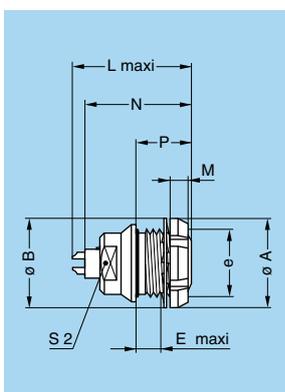


### EEG Fixed socket, nut fixing, key (G) or keys (A...M and R) (back panel mounting)

Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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	4.3	26.7	3.5	24.6	9.0	13.5	15.0
EEG	3B	24	25.0	M18x1.0	6.1	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:** <sup>1)</sup> 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.

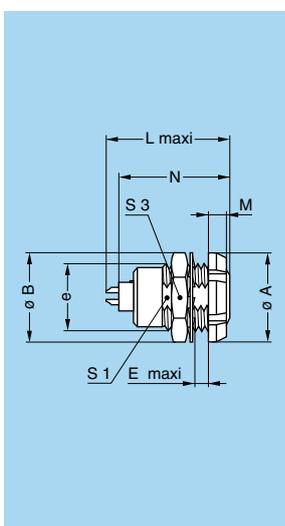


### EFG Fixed socket, nut fixing, key (G) or keys (A...M), with two flats on the shell and O-ring (back panel mounting)

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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:** <sup>1)</sup> maximum length with crimp contacts.

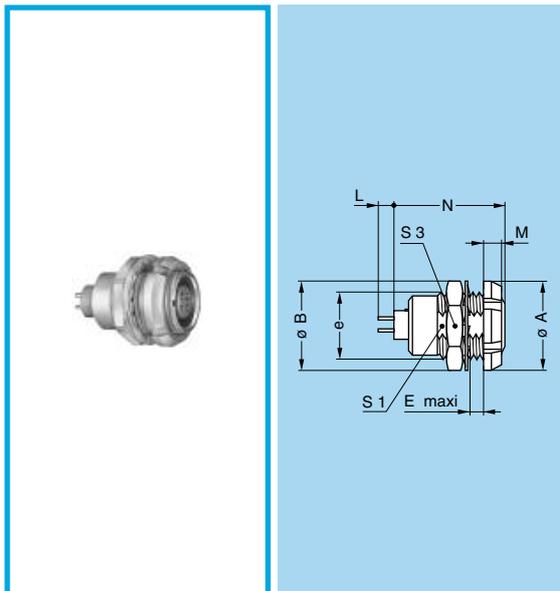


### ECG Fixed socket with two nuts, key (G) or keys (A...M and R) (back panel mounting)

Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N <sup>1)</sup>	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	XB	18	19.0	M14x1.0	6.0	23.5	3.5	20.0	12.5	17	
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:** <sup>1)</sup> 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.



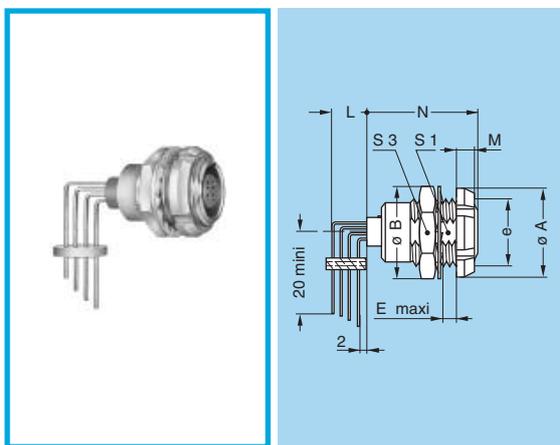
### ECG Fixed socket with two nuts, key (G) or keys (A...F and R) and straight contact for printed circuit (back panel mounting)

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	16.1	8.2	11
ECG	1B	16	15.8	M12x1.0	6.0	3.5	19.8	10.5	14
ECG	XB	18	19.0	M14x1.0	6.0	3.5	20.0	12.5	17
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.



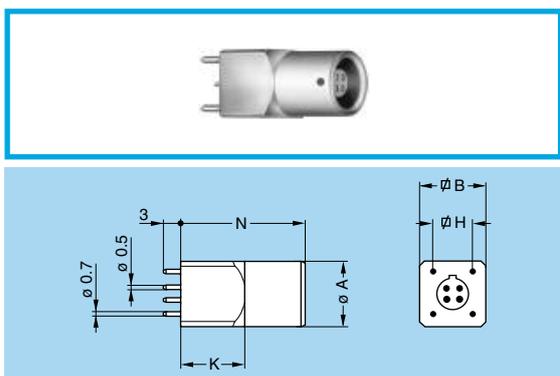
### ECG Fixed socket with two nuts, key (G) or keys (A...F) with elbow (90°) contact for printed circuit (back panel mounting)

Reference		Dimensions (mm)							
Model	Series	A	B	e	E	M	N <sub>max</sub>	S1	S3
ECG	0B	12	12.4	M9x0.6	5.5	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)

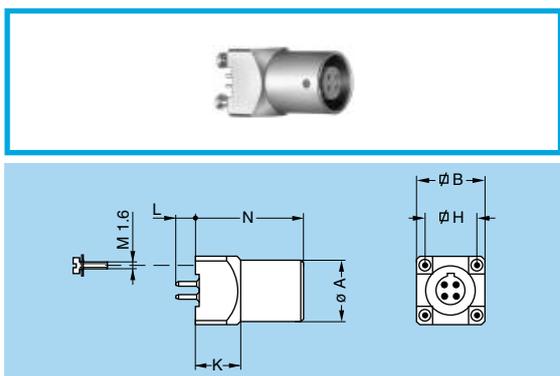
**Note:** this female contact type is available for all back panel mounting socket models. Length «L» depends on the number of contacts, see PCB drilling pattern on page 157. For male contacts, sockets are available upon request, with J, K or L keys. The 3B series is delivered with a conical nut.



### 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)

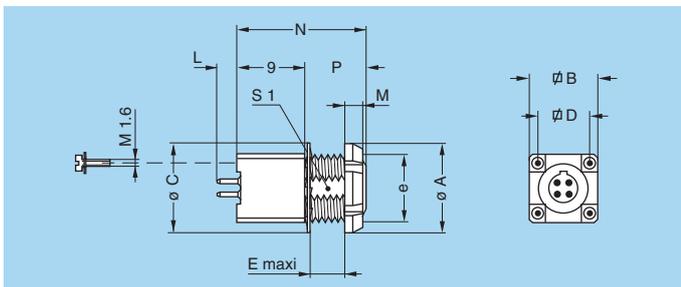


### EZG Straight socket for printed circuit, key (G) or keys (A...F)

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)

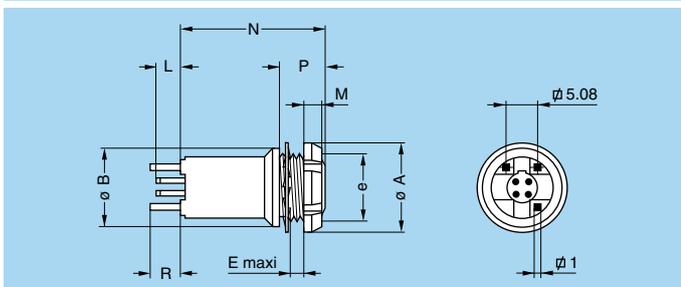
Reference		Dimensions (mm)									
Model	Series	A	B	C	D	e	E	M	N	P	S1
EYG	0B	12	10	12.5	7.62	M9x0.6	2.6	2.5	15.0	6.0	8.2
EYG	1B	14	12	16.0	7.62	M11x0.5	5.0	3.5	19.0	10.0	—
EYG	2B	20	15	19.5	10.16	M15x1.0	7.5	3.5	22.5	13.5	13.5

**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.



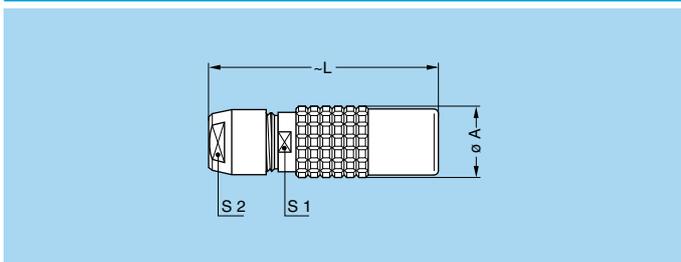
### XPF Fixed socket, nut fixing, long shell, keys (F) for printed circuit (back panel mounting)

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.

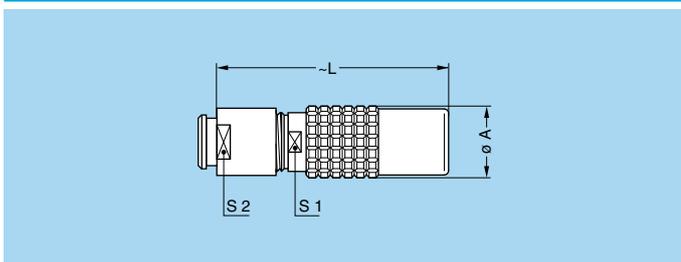


### PHG Free socket, key (G) or keys (A...M and R), cable collet

Reference		Dimensions (mm)			
Model	Series	A	L	S1	S2
PHG	00 <sup>1)</sup>	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	XB	13.0	46.0	11.0	10
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:** <sup>1)</sup> the surface design of the 00 series is different.



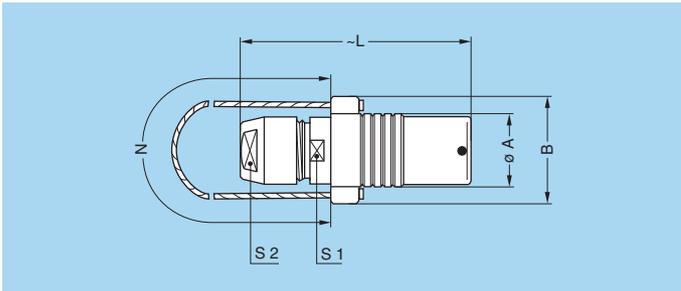
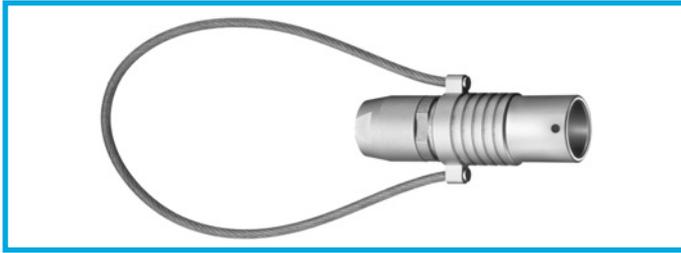
### PHG Free socket, key (G) or keys (A...M), cable collet and nut for fitting a bend relief <sup>2)</sup>

Reference		Dimensions (mm)			
Model	Series	A	L	S1	S2
PHG	00 <sup>1)</sup>	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	XB	13.0	49.5	11.0	10
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:** <sup>1)</sup> the surface design of the 00 series is different. <sup>2)</sup> to order, add a «Z» at the end of the reference.

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

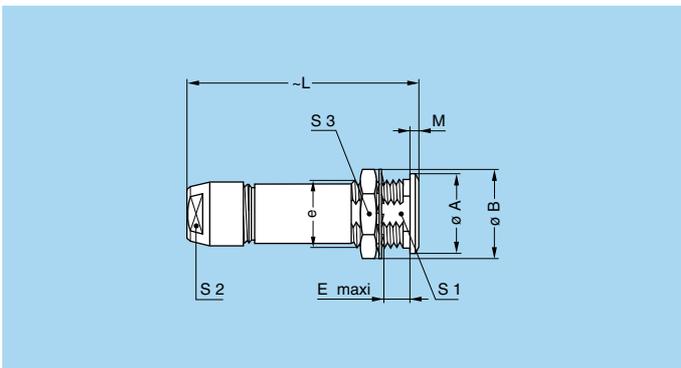


### PNG Free socket, nut fixing, key (G) or keys (A...L and R), cable collet with lanyard release

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



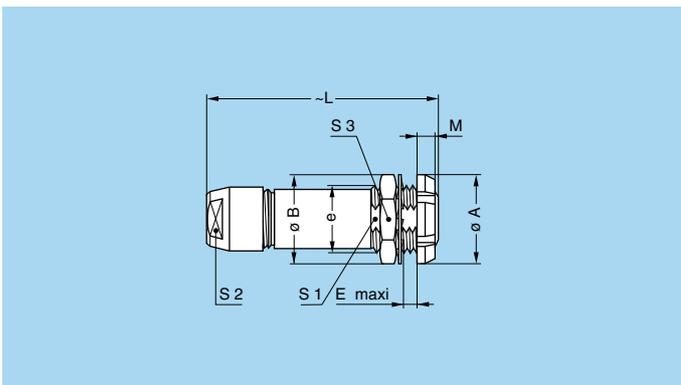
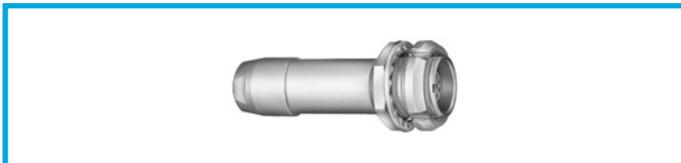
### PKG Fixed socket, nut fixing, key (G) or keys (A...M and R), cable collet

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	-

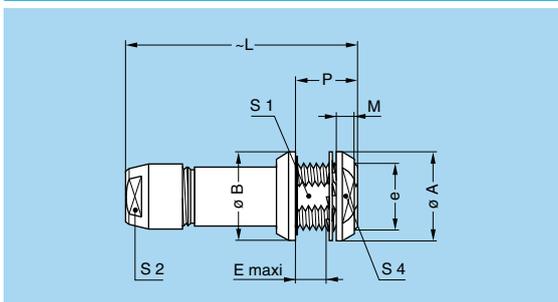
**P1** Panel cut-out (page 152)

**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)**



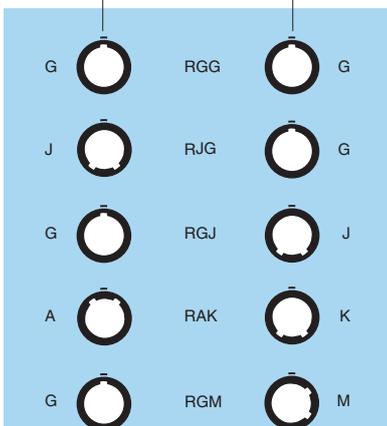
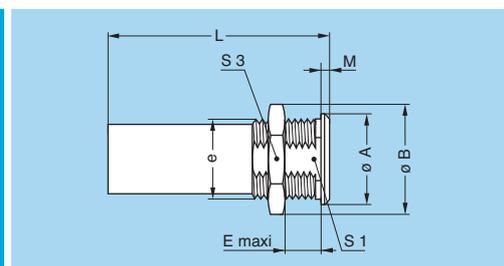
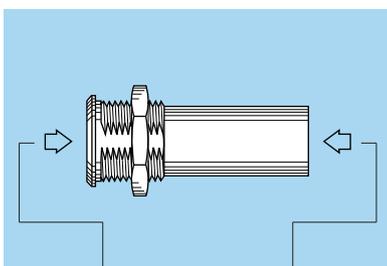
Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	S1	S2	S4	P
PEG	3B	24	25	M18x1.0	5.0	56	4.5	16.5	14	20	12
PEG	4B	32	34	M25x1.0	12.5	73	5.0	23.5	20	27	20

**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 <sup>1)</sup>	0B	female – female	12	13.8	M10x0.75	8.0	34	2.0	9.0	12	
RGG <sup>2)</sup>	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 <sup>3)</sup>	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)

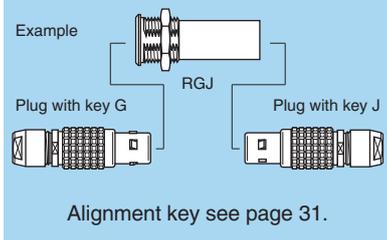
**Note:**

<sup>1)</sup> only available with two contacts.

<sup>2)</sup> RGG.0B only available from 3 till 5 contacts.

<sup>3)</sup> RGG.1B only available till 7 contacts.

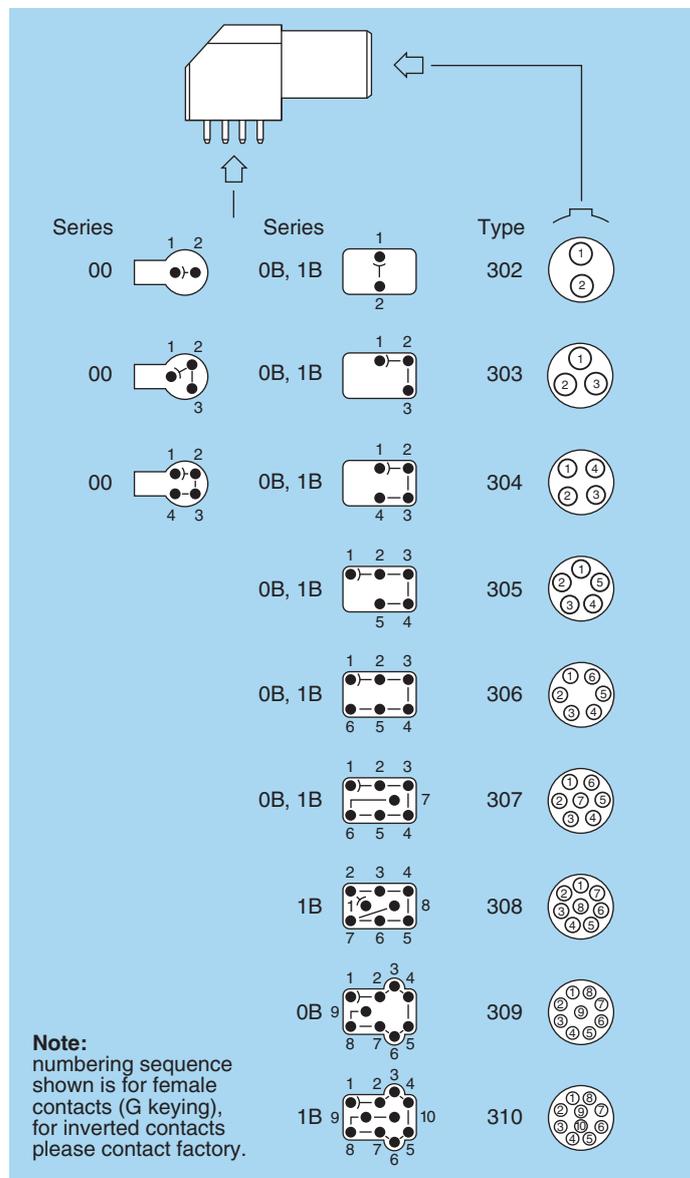
For this fixed coupler, the first contact type mentioned is always the one at the flange end. On request, these couplers can be produced in other series, with other keys.



## 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: SAE AMS QQ N 290. - Gold: ISO 27874

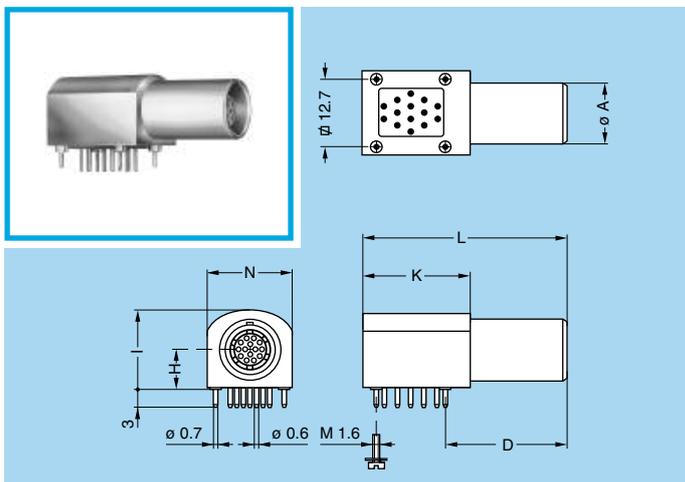
#### Electrical

Model	Series	Types	Test voltage (kV rms) <sup>1)</sup> Contact-contact	Test voltage (kV rms) <sup>1)</sup> Contact-shell	Rated current (A) <sup>1)</sup>
EPG-XBG	00	302-303-304	1.00	1.00	2.0
EPG-EXG	0B	302	1.45	1.20	4.5
EPG-EXG	0B	303	1.70	1.60	4.5
EPG-EXG	0B	304	1.30	1.10	4.5
EPG-EXG	0B	305	1.25	1.20	4.5
EPG-EXG	0B	306	1.25	1.20	2.5
EPG-EXG	0B	307	1.00	1.00	2.0
EPG-EXG	0B	309	0.60	0.50	1.5
EPG-EXG	1B	302	1.70	1.45	4.5
EPG-EXG	1B	303	1.60	1.85	4.5
EPG-EXG	1B	304	1.70	1.80	4.5
EPG-EXG	1B	305	1.30	1.55	4.5
EPG-EXG	1B	306	1.35	1.45	4.5
EPG-EXG	1B	307	1.45	1.45	2.0
EPG-EXG	1B	308	1.30	1.30	2.0
EPG-EXG	1B	310	1.00	1.00	1.5
EPG	1B	314	1.00	1.30	1.0

#### Note:

<sup>1)</sup> see calculation method, caution and suggested standard on page 178.

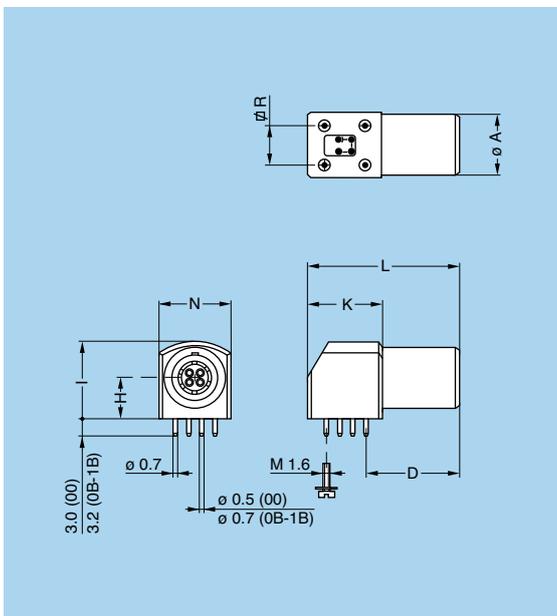
#### EPG Elbow (90°) socket for printed circuit, key (G) or keys (A...F) (solder or screw fixing)



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)



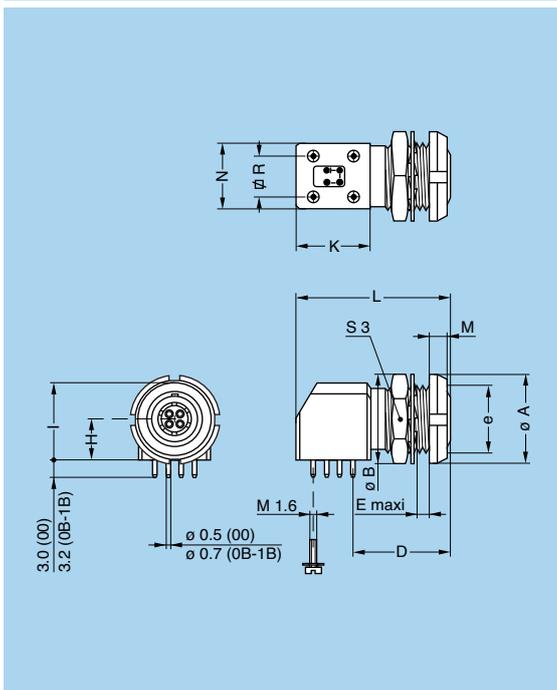
**EPG Elbow (90°) socket for printed circuit, key (G) or keys (A...F) (solder or screw fixing)**

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	12.6	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	4.5	6.7	12.6	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	7.7	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).