

P1/P3 FLUIDIC CONTACT WITH VALVE



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.

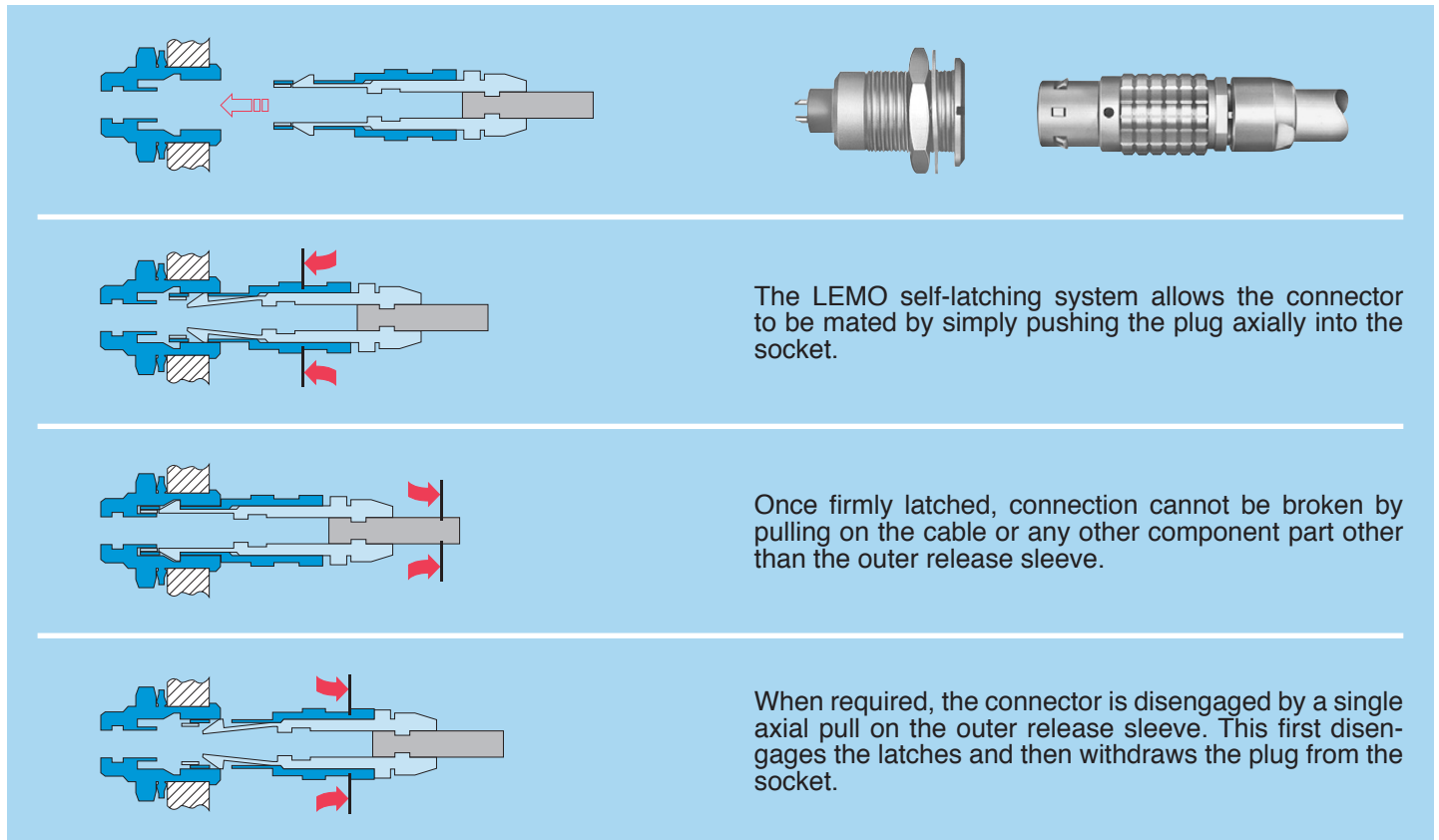
Over 75000 connectors

The modular design of the LEMO range provides over 75000 connectors from miniature \varnothing 3 mm to \varnothing 50 mm, capable of handling cable diameters up to 30 mm and for up to 114 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 (not shown in this catalogue)



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.

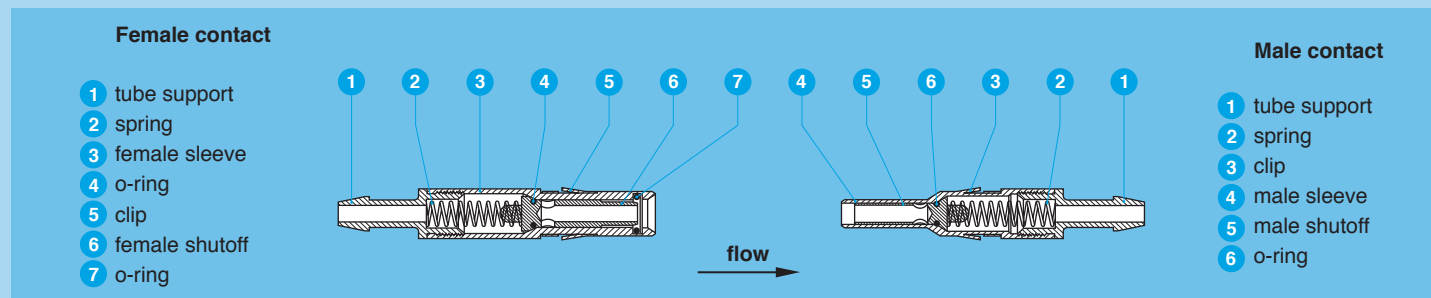
P1/P3 Fluidic contact with valve

The P1 fluidic contact is designed to fit multi fluid connectors or mixed fluid/electrical connectors from 2B to 5B and 2K to 5K series. This new design includes a shut-off valve. It fits into all insert cavities that already accept the LEMO coaxial type «C» of contact. The P3 fluidic contact is designed to fit multi fluid connectors of the 5B and 5K series.

Its main features are:

- contacts with shut-off valve
 - maximum working pressure 6 bars
 - stainless alloy body
 - after mounting on tube, the contact is installed in the main insulator and retained with a metallic clip.
- The contact is fitted with FPM o-ring, it can be used with liquids or gas.

Part Section Showing Internal Components



Technical Characteristics

Material and Treatment

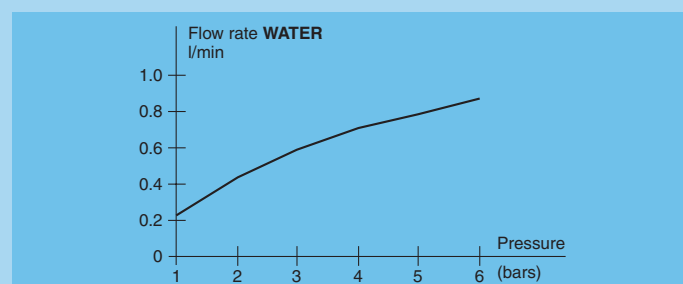
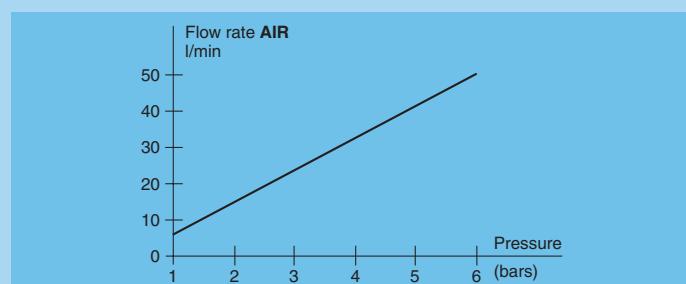
| Components | Value |
|------------|-----------------|
| Body | Stainless steel |
| Valve | Alloy CuNiZn |
| Spring | Stainless steel |
| Clips | CuBe |
| O-ring | FPM |

Mechanical and Environmental

| Characteristics | Value | Cont. type | Standard |
|---------------------------|---------------|------------|---------------------|
| Mating durability | 1000 cycles | P1/P3 | IEC 60512-5 test 9a |
| Temperature range | -20°C, +125°C | P1/P3 | |
| Max. working pressure | 6 bars | P1/P3 | |
| Air flow rate at 6 bars | 50 l/min | P1 | |
| Water flow rate at 6 bars | 0.80 l/min | P1 | |
| Air flow rate at 6 bars | 210 l/min | P3 | |
| Water flow rate at 6 bars | 4.20 l/min | P3 | |

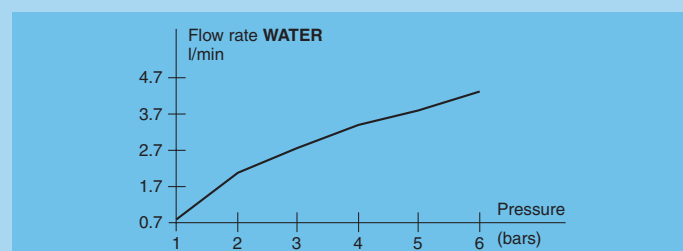
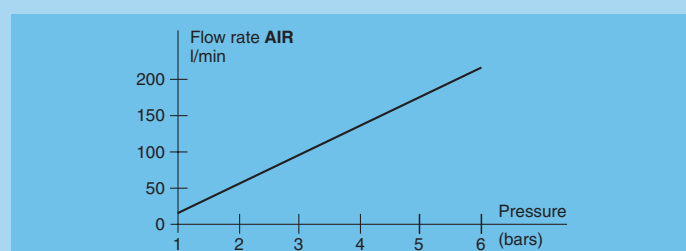
Note: flow direction is always from female contact to male contact.

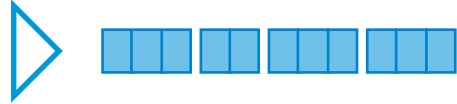
Flow/pressure diagram P1 contact type



Note: test carried out with a 2 mm inner diameter tube.

Flow/pressure diagram P3 contact type

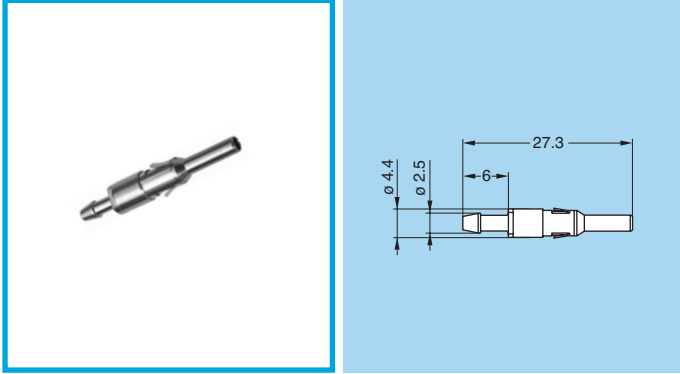




Model - Fluidic Contact Type

P1 contacts

FGG.P1 Male fluidic contact with valve

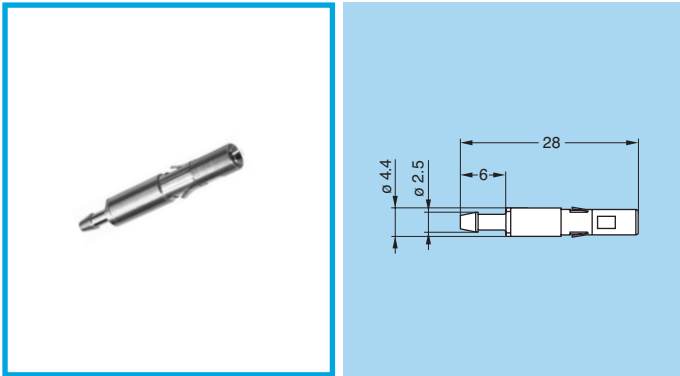


Part number

FGG.P1.150.AC

Note: Connectors are delivered without the P1 contacts.

EGG.P1 Female fluidic contact with valve



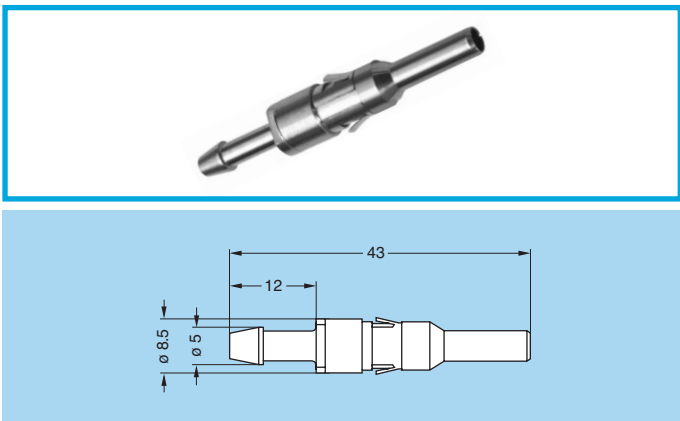
Part number

EGG.P1.150.AC

Note: Connectors are delivered without the P1 contacts.

P3 contacts

FGG.P3 Male fluidic contact with valve



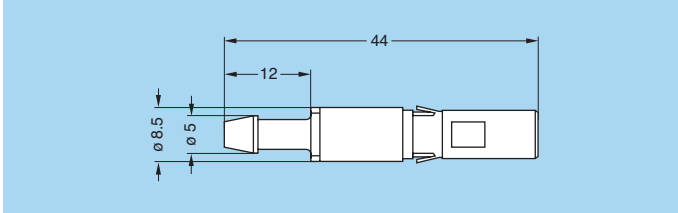
Part number

FGG.P3.300.AC

Note: Connectors are delivered without the P3 contacts.



EGG.P3 Female fluidic contact with valve



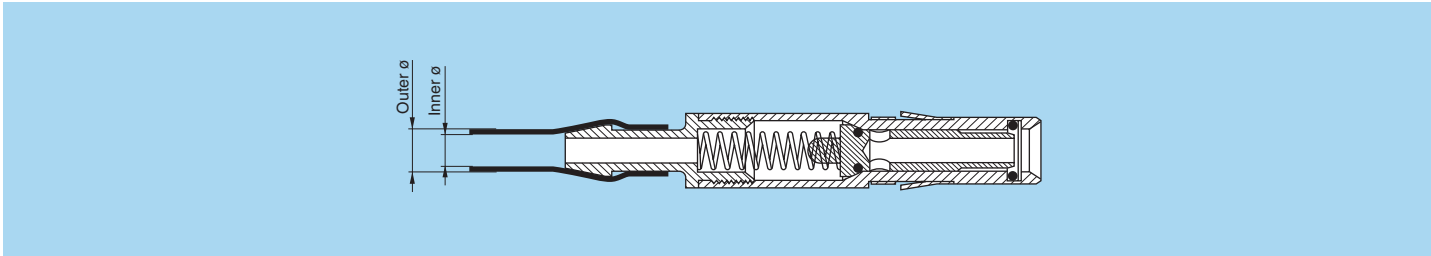
Part number

EGG.P3.300.ACV

Note: Connectors are delivered without the P3 contacts.

Recommended tubing/hose

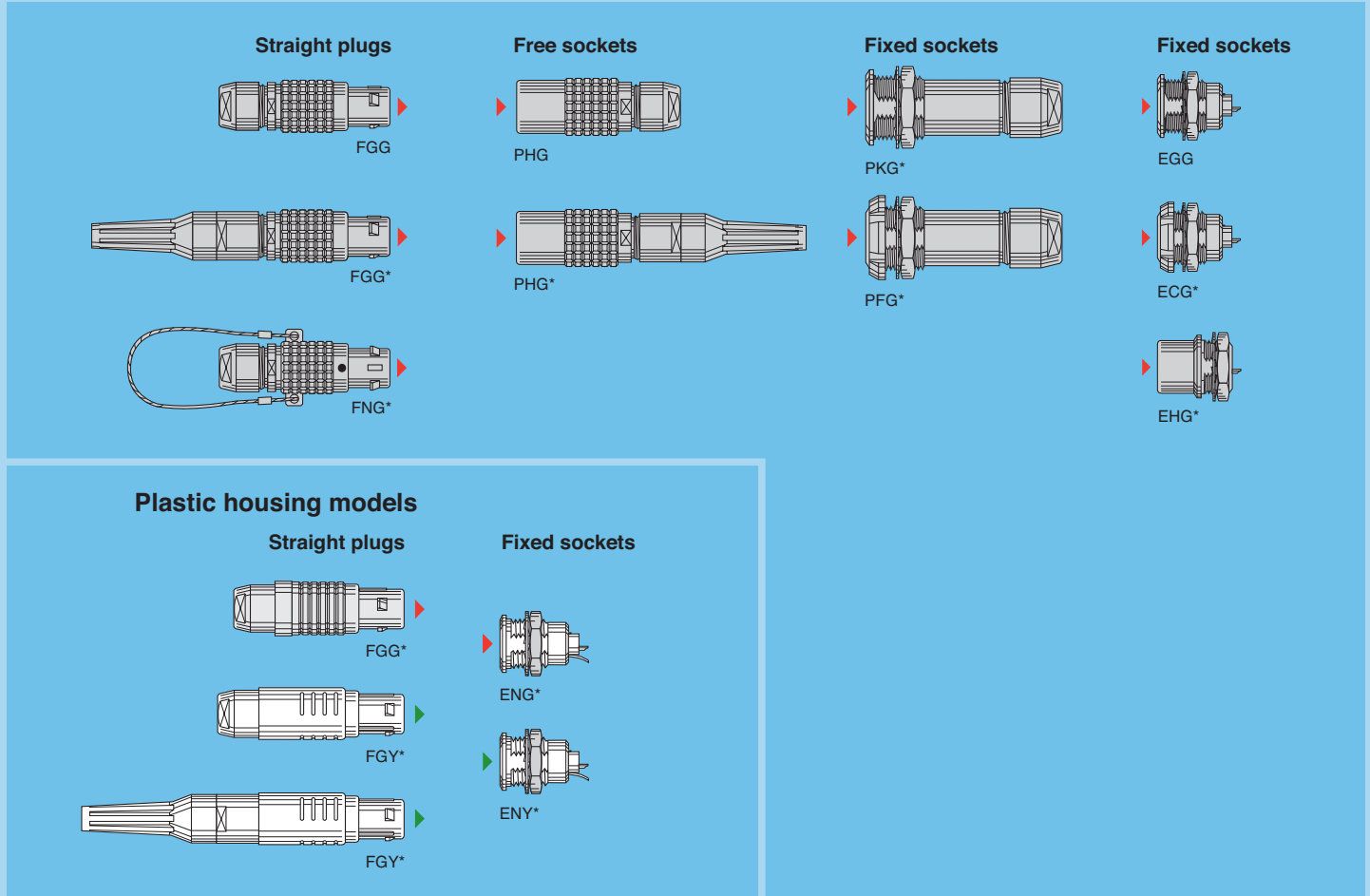
| Series | Contact type | Diameter (mm) | | Supplier | Material | Colour | Working temperature |
|----------------|--------------|---------------------|---------------------|--------------------|-------------------|--------|---------------------|
| | | Outer \varnothing | Inner \varnothing | | | | |
| 2B, 3B, 2K, 3K | P1 | 4.0 | 2.0 | Legris 1100P0400 | Polyamide (nylon) | White | -20° C to 80° C |
| 2B, 3B, 2K, 3K | P1 | 4.0 | 2.0 | Legris 1100P0401 | Polyamide (nylon) | Black | -20° C to 80° C |
| 2B, 3B, 4B, 5B | P1 | 3.0 | 1.8 | Legris 1025U030118 | Polyurethane | Black | -20° C to 70° C |
| 2K, 3K, 4K, 5K | P1 | 3.0 | 1.8 | Legris 1025U030118 | Polyurethane | Black | -20° C to 70° C |
| 5B, 5K | P3 | 6.0 | 4.0 | Legris 1100P0601 | Polyamide (nylon) | Black | -20° C to 80° C |



2B-5B Series

The P1 fluidic contact has been designed to work in the 2B to 5B series. The P3 contact has been designed to work in the 5B series. The main features of these series are as follows:

- security of the LEMO Push-Pull self-latching system
 - the alignment key (G, A...F, Y and R) ensures excellent repeatability of performance during frequent matings
 - the P1 fluidic contact allows hybrid configuration in the 2B series and multi fluid up to 10 channels in the 5B series.
- The possible outer cable diameters range from 4.0 to 25 mm.

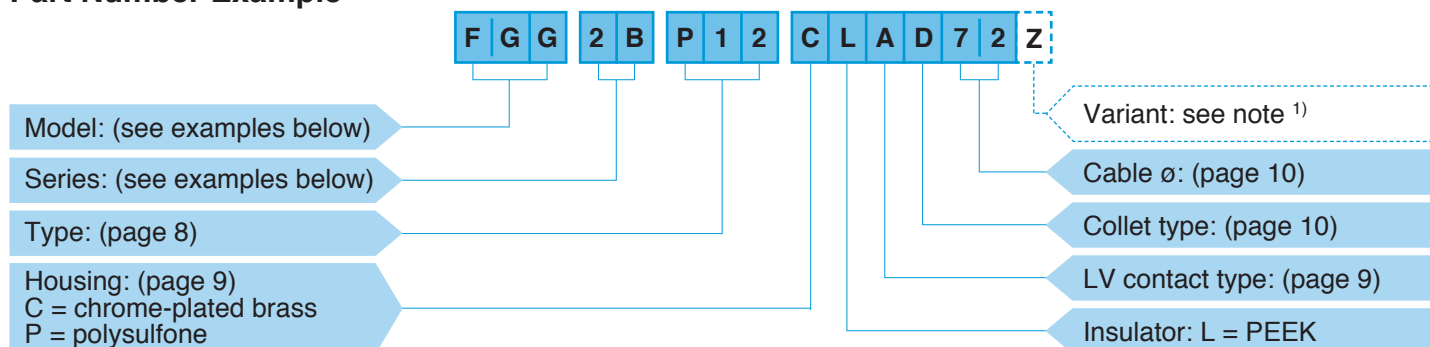


Model Description

- | | | |
|--|---|--|
| <p>ECG Fixed socket, with two nuts, key (G) or keys (A...F and R), (back panel mounting)</p> <p>EGG Fixed socket, nut fixing, key (G) or keys (A...F and R)</p> <p>EHG Fixed socket, nut fixing, key (G) or keys (A...F and R) with visible shell</p> <p>ENG Fixed socket with grounding tab, nut fixing, key (G), PEEK outer shell</p> <p>ENY Fixed socket with grounding tab, nut fixing, keys (Y), PSU or PPSU outer shell</p> <p>FGG Straight plug, key (G) or keys (A...F and R) and cable collet</p> <p>FGG Straight plug, key (G) or keys (A...F) cable collet and nut for fitting a bend relief</p> | <p>FGG Straight plug, key (G), cable collet, PEEK outer shell</p> <p>FGY Straight plug, keys (Y), cable collet and PSU or PPSU outer shell</p> <p>FGY Straight plug, keys (Y), cable collet and PSU or PPSU outer shell and nut for fitting a bend relief</p> <p>FNG Straight plug, key (G) or keys (A...F and R) and cable collet with lanyard release</p> <p>PFG Fixed socket, with two nuts, key (G) or keys (A...F and R) and cable collet (back panel mounting)</p> <p>PHG Free socket, key (G) or keys (A...F and R) and cable collet</p> | <p>PHG Free socket, key (G) or keys (A...F) and cable collet and nut for fitting a bend relief</p> <p>PKG Fixed socket, nut fixing, key (G) or keys (A...F and R) and cable collet</p> |
|--|---|--|
- * Not show in this catalogue. Refer to our catalogue unipole-multipole

Certain models and certain alignment key may not be available in all series. Please consult us.

Part Number Example

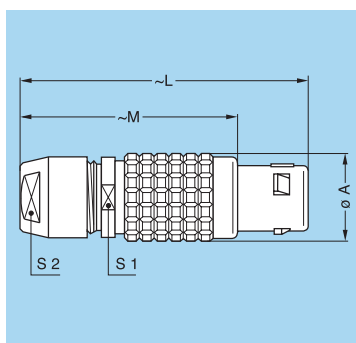


FGG.2B.P12.CLAD72Z = Straight plug with key (G), 2B series, mixed type to accept one P1 fluid contact and 4 low voltage electrical contacts, chrome-plated brass housing, PEEK insulator, 4 male solder electrical contacts, type D collet system to suit a 6.1 to 7.0 mm diameter cable, and a nut for fitting a bend relief.

Note: Connectors are always delivered without fluidic contact.

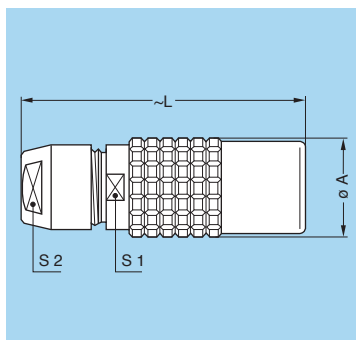
¹⁾ The «Variant» position in the reference is used to indicate the presence of a collet nut for fitting the bend relief. The bend relief must be ordered separately (see page 12).

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



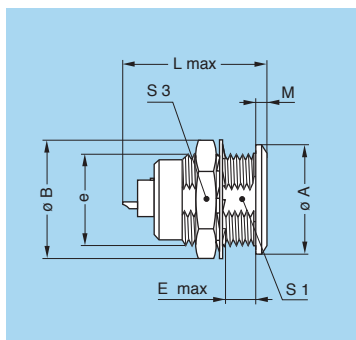
| Reference | | Dimensions (mm) | | | | |
|-----------|--------|-----------------|-----|----|----|----|
| Model | Series | A | L | M | S1 | S2 |
| FGG | 2B | 15 | 50 | 38 | 13 | 12 |
| FGG | 3B | 18 | 58 | 43 | 15 | 14 |
| FGG | 4B | 25 | 75 | 57 | 21 | 20 |
| FGG | 5B | 35 | 103 | 78 | 31 | 30 |

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



| Reference | | Dimensions (mm) | | | |
|-----------|--------|-----------------|------|----|----|
| Model | Series | A | L | S1 | S2 |
| PHG | 2B | 16.5 | 47.0 | 13 | 12 |
| PHG | 3B | 19.0 | 56.0 | 15 | 14 |
| PHG | 4B | 24.4 | 73.0 | 21 | 20 |
| PHG | 5B | 34.2 | 99.0 | 31 | 30 |

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



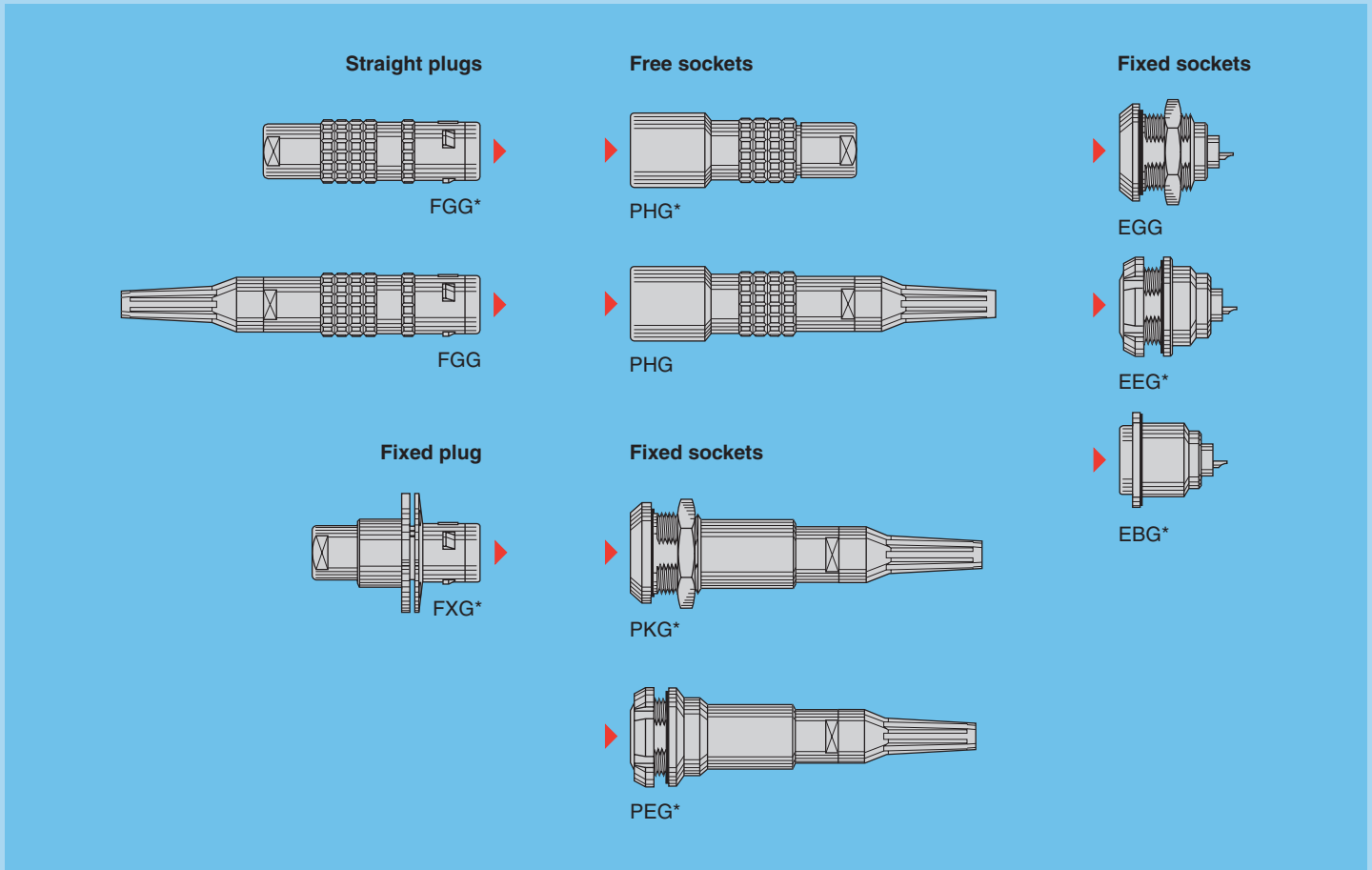
| Reference | | Dimensions (mm) | | | | | | | |
|-----------|------------------|-----------------|------|---------|------|------|-----|------|----|
| Model | Series | A | B | e | E | L | M | S1 | S3 |
| EGG | 2B | 18 | 19.2 | M15x1.0 | 8.5 | 28.8 | 1.8 | 13.5 | 17 |
| EGG | 3B | 22 | 25.0 | M18x1.0 | 11.5 | 30.0 | 2.0 | 16.5 | 22 |
| EGG | 4B | 28 | 34.0 | M25x1.0 | 12.0 | 34.5 | 2.5 | 23.5 | 30 |
| EGG | 5B | 40 | 40.0 | M35x1.0 | 11.0 | 36.5 | 3.0 | 33.5 | – |
| EGG | 5B ¹⁾ | 40 | 40.0 | M35x1.0 | 11.0 | 45.9 | 3.0 | 33.5 | – |

Note: ¹⁾ with P3 contact.

2K-5K Series

The P1 fluidic contact has been designed to work in the 2K-5K series. The P3 contact has been designed to work in the 5K series. The main features of these series are as follows:

- security of the LEMO Push-Pull self-latching system
 - specially designed for outdoors applications. All these models are waterproof when mated and reach a protection index of IP 66-IP 68, according to the IEC 60529 standard
 - the alignment key (G, A...F and R) ensures excellent repeatability of performance during frequent matings
 - the P1 fluidic contact allows hybrid configuration in the 2K series and multi fluid up to 10 channels in the 5K series.
- The 2K-5K series consists of ten models which will accept outer cable diameters ranging from 2.6 mm to 23.5 mm.



Model Description

EBG Fixed socket with square flange, key (G) or keys (A...F and R), four holes fixing

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

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

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

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

FXG Fixed plug with round flange, four holes fixing, key (G) or keys (A...F and R)

PEG Fixed socket, nut fixing, key (G) or keys (A...F and R), cable collet and nut for fitting a bend relief (back panel mounting)

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

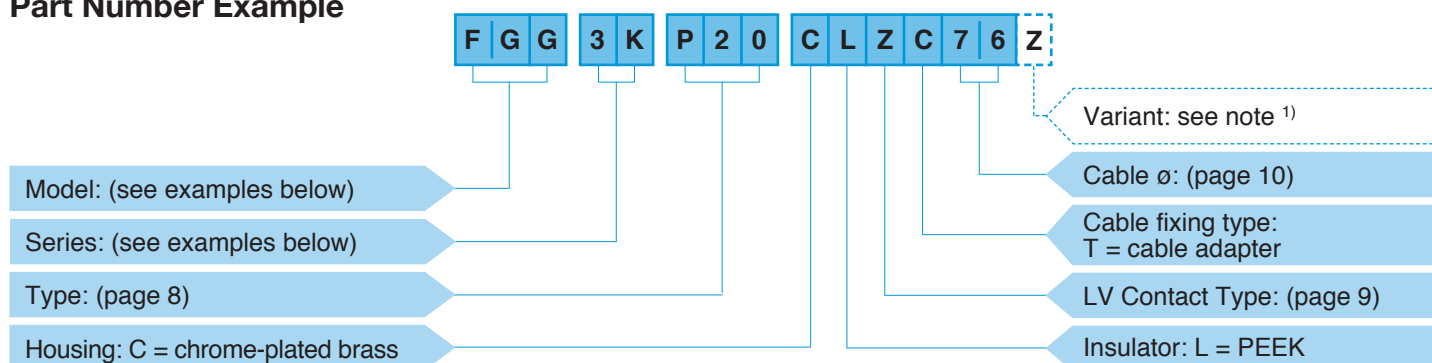
PHG Free socket, key (G) or keys (A...F and R), cable collet and nut for fitting a bend relief

PKG Fixed socket, nut fixing, key (G) or keys (A...F and R), cable collet and nut for fitting a bend relief

* Not show in this catalogue. Refer to our catalogue unipole-multipole

Certain models and certain alignment key may not be available in all series. Please consult us.

Part Number Example

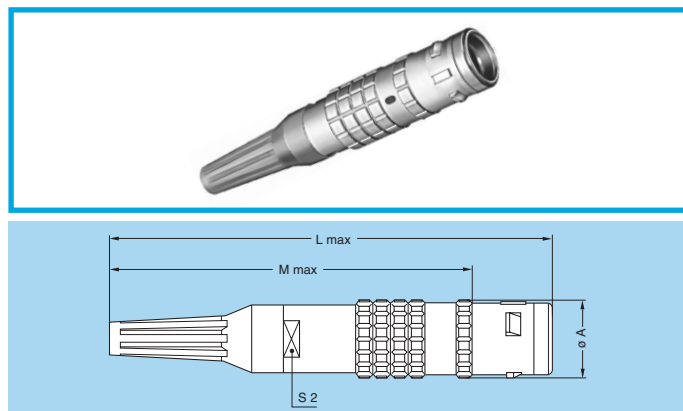


FGG.3K.P20.CLZC76Z = Straight plug with key (G), 3K series, multi fluid with 2 times P1 contacts, chrome-plated brass housing, PEEK insulator, C type collet for 7.5 mm diameter cable, and nut for fitting a bend relief.

Note: Connectors are always delivered without fluidic contact.

¹⁾ The «Variant» position in the reference is used to indicate the presence of a collet nut for fitting the bend relief. The bend relief must be ordered separately (see page 12).

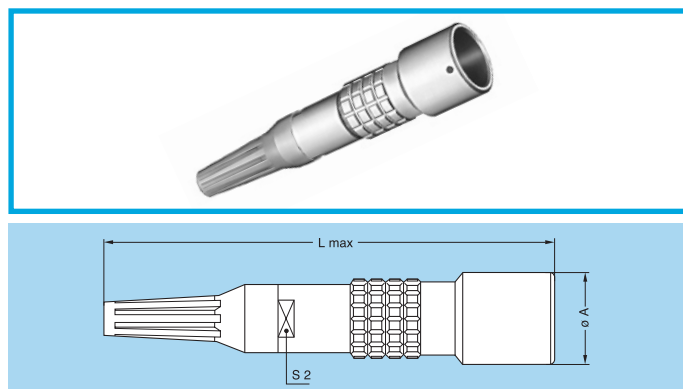
FGG Straight plug, key (G) or keys (A...F and R), cable collet and nut for fitting a bend relief



| Reference | | Dimensions (mm) | | | |
|-----------|--------|-----------------|-----|-------|----|
| Model | Series | A | L | M | S2 |
| FGG | 2K | 16 | 101 | 85.0 | 12 |
| FGG | 3K | 19 | 109 | 89.0 | 15 |
| FGG | 4K | 25 | 131 | 110.5 | 19 |
| FGG | 5K | 38 | 160 | 135.0 | 30 |

Note: The overall length dimension is with bend relief

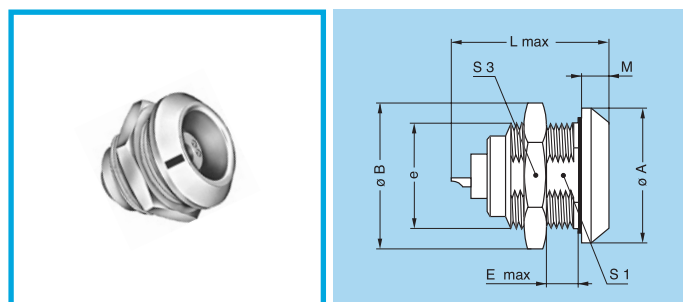
PHG Free socket, key (G) or keys (A...F and R), cable collet and nut for fitting a bend relief



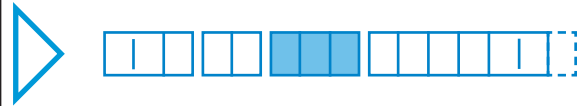
| Reference | | Dimensions (mm) | | |
|-----------|--------|-----------------|-------|----|
| Model | Series | A | L | S2 |
| PHG | 2K | 19 | 103.0 | 12 |
| PHG | 3K | 23 | 113.0 | 15 |
| PHG | 4K | 29 | 135.5 | 19 |
| PHG | 5K | 42 | 164.0 | 30 |

Note: The overall length dimension is with bend relief

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



| Reference | | Dimensions (mm) | | | | | | | |
|-----------|--------|-----------------|------|---------|----|------|-----|------|----|
| Model | Series | A | B | e | E | L | M | S1 | S3 |
| EGG | 2K | 25 | 27.0 | M20x1.0 | 9 | 32.8 | 5.0 | 18.5 | 24 |
| EGG | 3K | 31 | 34.0 | M24x1.0 | 11 | 35.5 | 6.0 | 22.5 | 30 |
| EGG | 4K | 37 | 40.5 | M30x1.0 | 9 | 37.0 | 6.5 | 28.5 | 36 |
| EGG | 5K | 55 | 54.0 | M45x1.5 | 10 | 40.5 | 9.0 | 42.5 | - |



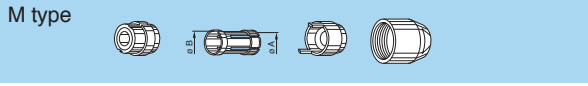
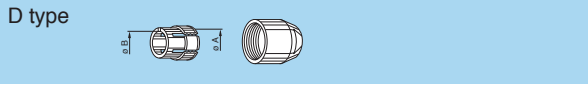
Insert configuration

Multi fluid and Mixed fluid + LV

| | | Fluidic contact | | | | | | Low Voltage contact | | | | | | | | | |
|------------------------|------------------------|-----------------|--------------------|------|----------------------------------|----------------------------------|------------------------------|---------------------|---------------|--------------|-------|---------------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-------------------|-----|
| | | Reference | Nb of fluidic tube | Type | Ext. ϕ of tube (see page 3) | Int. ϕ of tube (see page 3) | Max. working pressure (bars) | Contact No | ϕ A (mm) | Contact type | | Solder contact | | Crimp contact | | Rated current (A) | |
| Male solder contacts | Female solder contacts | | | | | | | | | Solder | Crimp | Test voltage (kV rms) Contact-contact | Test voltage (kV rms) Contact-shell | Test voltage (kV rms) Contact-contact | Test voltage (kV rms) Contact-shell | | |
| Male crimp contacts | Female crimp contacts | | | | | | | | | | | | | | | | |
| 2B 2K | | | P11 | 1 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 2 | 0.9 | ● | ● | 1.75 | 1.60 | 1.85 | 1.60 | 9.0 |
| | | | P12 | 1 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 4 | 0.7 | ● | ● | 0.85 | 1.20 | 0.85 | 1.25 | 6.0 |
| | | | P13 | 1 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 6 | 0.7 | ● | ● | 0.85 | 1.20 | 0.85 | 1.25 | 6.0 |
| | | | P15 | 1 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 10 | 0.7 | ● | ● | 1.15 | 1.35 | 1.30 | 1.05 | 6.0 |
| 3B 3K | | | P20 | 2 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | - | - | - | - | - | - | - | - | - |
| | | | P22 | 2 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 4 | 0.9 | ● | ● | 1.20 | 1.05 | 1.00 | 0.80 | 8.0 |
| | | | P23 | 2 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 6 | 0.9 | ● | ● | 1.20 | 1.05 | 1.00 | 0.80 | 8.0 |
| | | | P25 | 2 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 10 | 0.7 | ● | ● | 0.95 | 0.75 | 0.85 | 0.65 | 6.0 |
| | | | P28 | 2 | P1 | 3.0 4.0 | 1.8 2.0 | 6 | 16 | 0.7 | ● | ● | 0.80 | 0.70 | 0.80 | 0.75 | 5.5 |
| 4B 4K | | | P40 | 4 | P1 | 3.0 | 1.8 | 6 | - | - | - | - | - | - | - | - | - |
| | | | P49 | 4 | P1 | 3.0 | 1.8 | 6 | 9 | 0.7 | ● | ● | 1.00 | 1.00 | 0.80 | 0.80 | 8 |
| | | | P33 | 3 | P1 | 3.0 | 1.8 | 6 | 6 | 0.7 | ● | ● | 0.90 | 0.95 | 0.80 | 0.80 | 8 |
| | | | P36 | 3 | P1 | 3.0 | 1.8 | 6 | 12 | 0.7 | ● | ● | 0.90 | 0.95 | 0.80 | 0.80 | 6 |
| | | | P26 | 2 | P1 | 3.0 | 1.8 | 6 | 12 | 0.9 | ● | ● | 0.95 | 0.85 | 0.90 | 1.20 | 10 |
| | | | P28 | 2 | P1 | 3.0 | 1.8 | 6 | 16 | 0.9 | ● | ● | 0.95 | 0.85 | 0.85 | 0.85 | 10 |
| | | | P29 | 2 | P1 | 3.0 | 1.8 | 6 | 18 | 0.7 | ● | ● | 0.90 | 0.95 | 0.85 | 0.75 | 8 |

Collets (B and K series)

D and M type collets for B series



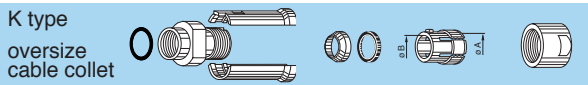
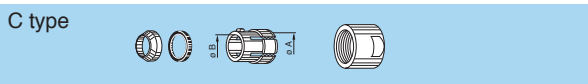
| | Reference | | Collet ϕ | | Cable ϕ | | Notes |
|-----------|-----------|------|---------------|----------|--------------|--------|-------|
| | Type | Code | ϕ A | ϕ B | max. | min. | |
| 2B | D | 42 | 4.2 | – | 4.2 | > 3.2 | |
| | D | 52 | 5.2 | – | 5.2 | > 4.2 | |
| | D | 62 | 6.2 | – | 6.2 | > 5.2 | |
| | D | 72 | 7.2 | – | 7.2 | > 6.2 | |
| | D | 82 | 8.2 | – | 8.2 | > 7.2 | |
| | D | 92 | 9.2 | 8.6 | 9.2 | > 8.2 | |
| | D | 99 | 9.9 | 8.6 | 9.9 | > 9.2 | 1) |
| | 3B | M | 52 | 5.2 | – | 5.2 | > 4.2 |
| D | | 62 | 6.2 | – | 6.2 | 4.9 | |
| D | | 72 | 7.7 | – | 7.7 | > 6.2 | |
| D | | 92 | 9.2 | – | 9.2 | > 7.7 | |
| D | | 10 | 10.2 | – | 10.0 | > 9.2 | |
| D | | 11 | 11.0 | – | 11.0 | > 10.1 | |
| D | | 12 | 12.0 | 10.2 | 11.9 | 10.8 | 1) |

| | Reference | | Collet ϕ | | Cable ϕ | | Notes |
|-----------|-----------|------|---------------|----------|--------------|-------|-------|
| | Type | Code | ϕ A | ϕ B | max. | min. | |
| 4B | M | 62 | 6.2 | – | 6.2 | 4.9 | |
| | M | 72 | 7.2 | – | 7.7 | > 6.2 | |
| | M | 92 | 9.2 | 8.6 | 9.2 | > 7.7 | |
| | 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 | |
| | D | 16 | 16.3 | 12.5 | 16.0 | 15.1 | 1) |
| 5B | 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



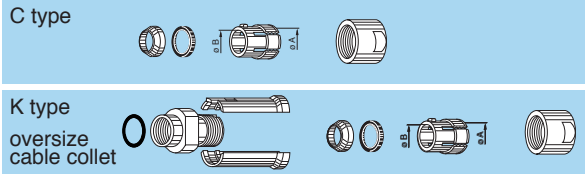
| | Reference | | Collet ϕ | | Cable ϕ | |
|-----------|-----------|------|---------------|----------|--------------|------|
| | Type | Code | ϕ A | ϕ B | max. | min. |
| 2K | C | 35 | 4.2 | – | 3.5 | 3.1 |
| | C | 40 | 4.2 | – | 4.0 | 3.6 |
| | C | 45 | 5.2 | – | 4.5 | 4.1 |
| | C | 50 | 5.2 | – | 5.0 | 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 ϕ | | Cable ϕ | |
|-----------|-----------|------|---------------|----------|--------------|------|
| | Type | Code | ϕ A | ϕ B | max. | min. |
| 2K | 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 |

Note: all dimensions are in millimetres.



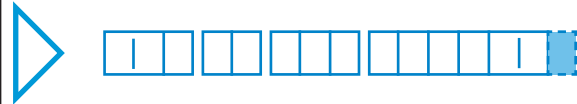
C and K type collets for K series



| | Reference | | Collet \varnothing | | Cable \varnothing | |
|-----------|-----------|------|----------------------|-----------------|---------------------|------|
| | Type | Code | \varnothing A | \varnothing B | max. | min. |
| 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 |
| | 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 |

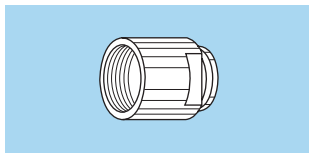
| | Reference | | Collet \varnothing | | Cable \varnothing | |
|-----------|-----------|------|----------------------|-----------------|---------------------|------|
| | Type | Code | \varnothing A | \varnothing B | max. | min. |
| 4K | C | 14 | 15.3 | 15.3 | 14.0 | 13.6 |
| | C | 15 | 15.3 | 15.3 | 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.

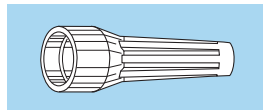


Variant (B and K series)

Bend relief for B series models with collet

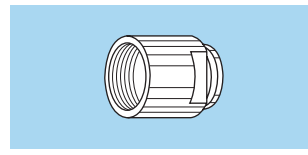


Need to be ordered

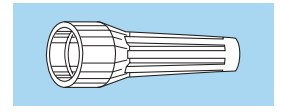


| | Ref. | Collet | | Need to be ordered separately |
|-----------|------|--------|-----------|-------------------------------|
| | | Type | Code | |
| 2B | Z | D | 42 to 92 | GMA.2B.●●●.●● |
| | | M | 52 | GMA.1B.●●●.●● |
| 3B | Z | D | 62 to 10 | GMA.3B.●●●.●● |
| | | M | 62 and 72 | GMA.2B.●●●.●● |
| 4B | Z | M | 92 | GMA.4B.●●●.●● |
| | | M | 62 and 72 | GMA.2B.●●●.●● |
| | | D | 10 to 15 | GMA.4B.●●●.●● |
| 5B | Z | D | 11 to 15 | GMA.4B.●●●.●● |

Bend relief for K series models with collet



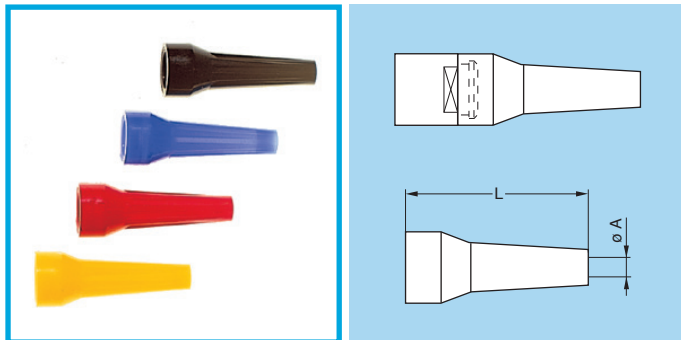
Need to be ordered



| | Ref. | Collet | | Need to be ordered separately |
|-----------|------|--------|----------|-------------------------------|
| | | Type | Code | |
| 2K | Z | C | 40 to 85 | GMA.2B.●●●.●● |
| | | K | 90 to 10 | GMA.3B.●●●.●● |
| 3K | Z | C | 40 to 10 | GMA.3B.●●●.●● |
| | | K | 11 to 15 | GMA.4B.●●●.●● |
| 4K | Z | C | 50 to 15 | GMA.4B.●●●.●● |

Note: All dimensions are in millimetres.

GM Bend relief



A bend relief made from thermoplastic polyurethane elastomer can be fitted over LEMO plugs and sockets that are supplied with nut for fitting such bend relief.

They are available in nine different colours that match with the GRA insulating washers (see unipole-multipole catalog). Use the part numbers shown below to order this accessory separately.



Main characteristics

- Material: TPU (Thermoplastic Polyurethane)
- Temperature range in dry atmosphere: -40°C +80°C

| Part number | Dimensions (mm) | | | | Series |
|----------------------|-----------------|----|---------|------|----------|
| | Bend relief | | Cable ø | | |
| | A | L | max. | min. | |
| GMA.2B.040.DG | 4.0 | 36 | 4.5 | 4.0 | 2B-2K |
| GMA.2B.045.DG | 4.5 | 36 | 5.0 | 4.5 | 2B-2K |
| GMA.2B.060.DG | 6.0 | 36 | 6.5 | 6.0 | 2B-2K |
| GMA.2B.070.DG | 7.0 | 63 | 7.7 | 7.0 | 2B-2K |
| GMA.3B.060.DG | 6.0 | 42 | 6.9 | 6.0 | 3B-3K |
| GMA.3B.070.DG | 7.0 | 42 | 7.9 | 7.0 | 3B-3K |
| GMA.3B.080.DG | 8.0 | 42 | 8.9 | 8.0 | 3B-3K |
| GMA.4B.011.DG | 11.0 | 60 | 11.9 | 11.0 | 4B-4K-5B |
| GMA.4B.012.DG | 12.0 | 60 | 13.0 | 12.0 | 4B-4K-5B |
| GMA.4B.013.DG | 13.5 | 60 | 14.5 | 13.5 | 4B-4K-5B |

| Ref. | Colour | Ref. | Colour |
|----------|--------|----------|--------|
| A | blue | N | black |
| B | white | R | red |
| G | grey | S | orange |
| J | yellow | V | green |
| M | brown | | |

Note: the last letter «G» of the part number indicates the grey colour of the bend relief. For ordering a bend relief with another colour, see table above and replace the letter «G» by the letter of the required colour.

Tools

Extractor

| Reference | Contact type |
|-----------------------|--------------|
| DCC.91.10P.1LA | P1 |
| DCC.91.808.0LC | P3 |

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