

Small  
&  
watertight

# 0T SERIES IP 68 PUSH-PULL CONNECTORS



## OT series

OT series connectors have been specifically designed for outdoor applications. They include an inner sleeve and seals to prevent penetration of solids or liquids. This series is watertight when mated to give a protection index of IP68 as per IEC 60529 standard and have the following main features:

- IP68 mated
- Push-Pull self-latching system
- Mechanical key (FGG) with multiple keys to avoid cross-mating
- High packing density for space savings
- 360° shielding for full EMC shielding
- Compatible with existing 0B sockets
- Same mounting hole as 0B sockets
- Black-chrome plated brass and plastic outershell available
- Multipole types 2 to 9 contacts
- For cables 1.0 up to 5.0 mm
- Solder, crimp or print contacts

### Technical Characteristics

Mechanical and Climatical	Value	Standard
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	-
Temperature range	-55° C, +200° 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)	IP68	IEC 60529
Latching retention force	> 150 N	-

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

### Material and Treatments

Outershell and collet nut		Latch sleeve/earthing crown		Other metallic components	
Material	Surf. treat.	Material	Surf. treat.	Material	Surf. treat.
Brass	Chrome	Brass/Bronze	Nickel	Brass	Nickel
Brass	Black chrome	Brass/Bronze	Nickel	Brass	Nickel
POM	-	Brass/Bronze	Nickel	Brass	Nickel

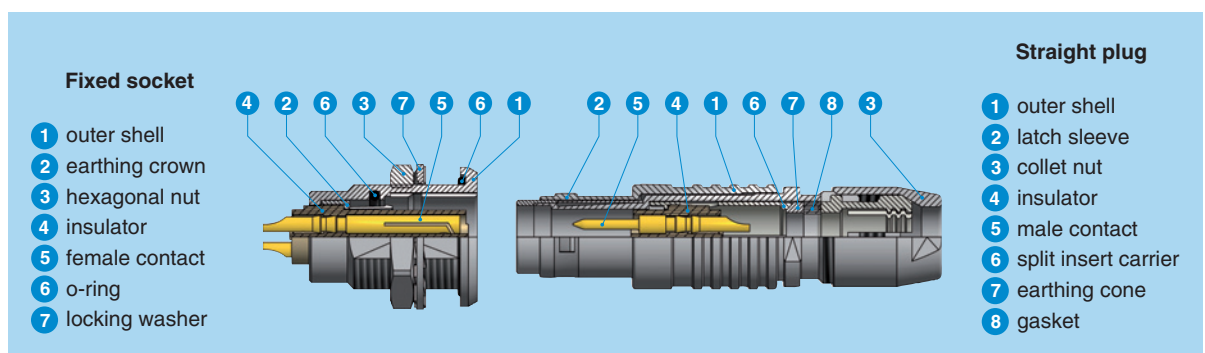
### Contacts

Material	Contact type
Brass (UNS C 34500)	Male contact
Bronze (UNS C 54400)	Female contact

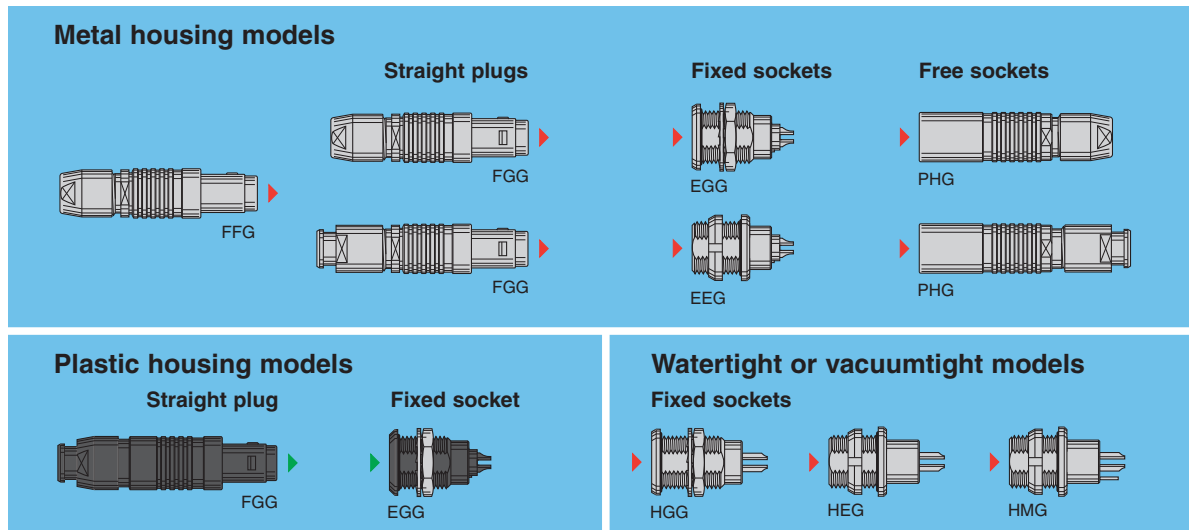
### Insulators

Material	Contact type
PEEK	Crimp, solder or print

### Part Section Showing Internal Components

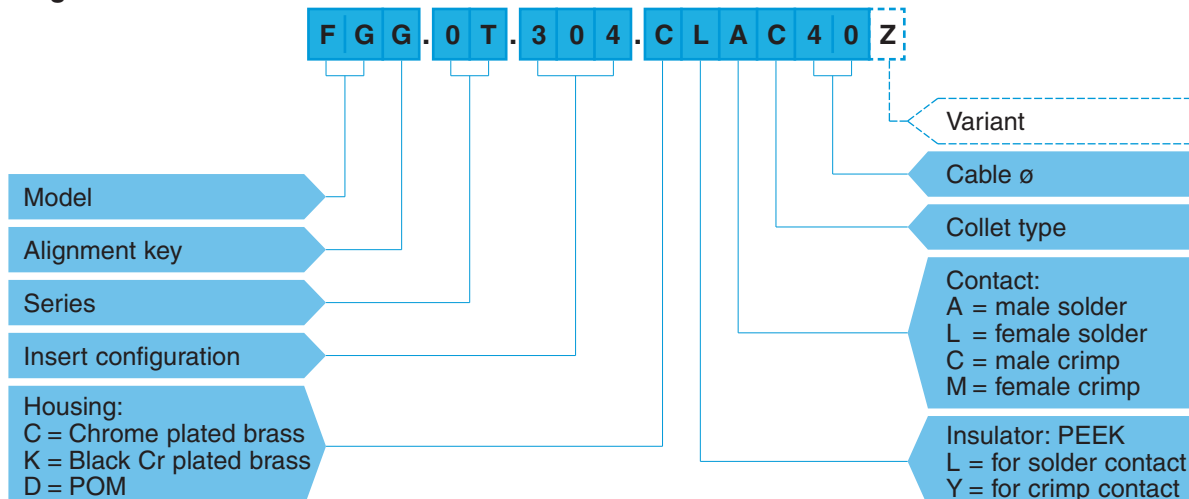


## Interconnections



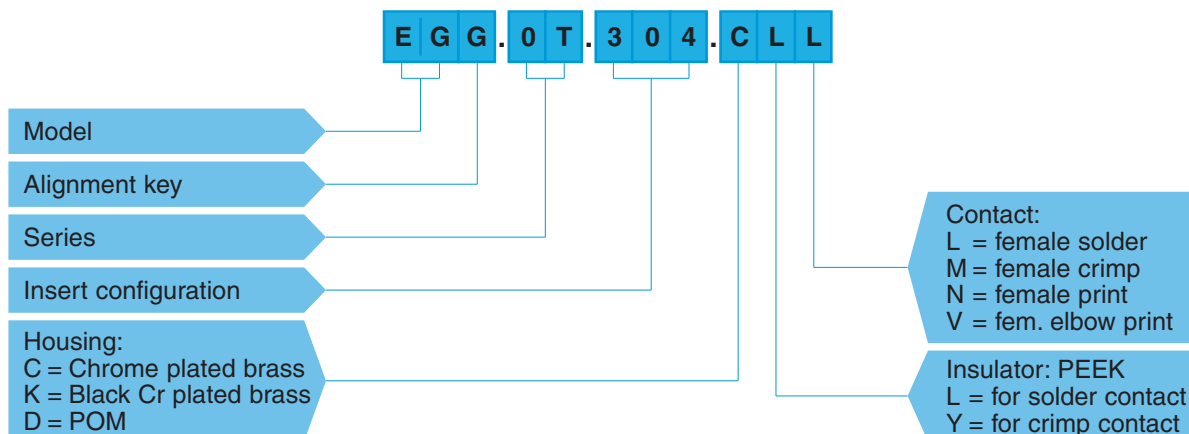
## Part Numbering System

### Plug and free socket



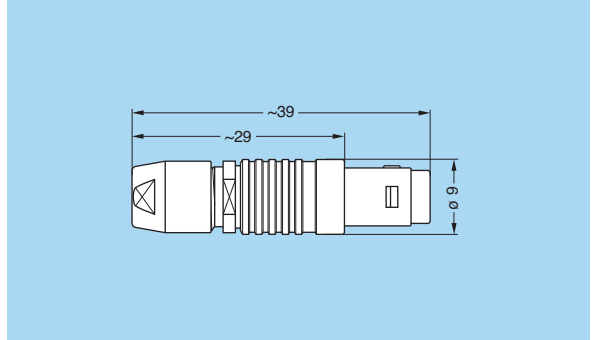
**FGG.0T.304.CLAC40Z** = Straight plug with key (G) and cable collet for bend relief, 0T series, multipole type with 4 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, C type collet for 4.0 mm diameter cable and nut for fitting a bend relief.

### Fixed socket

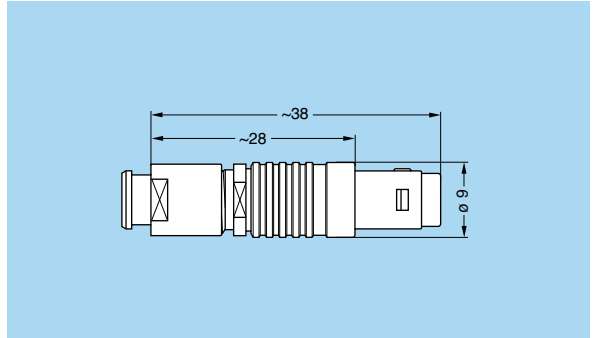


**EGG.0T.304.CLL** = fixed socket, nut fixing, with key (G), 0T series, multipole type with 4 contacts, outer shell in chrome-plated brass, PEEK insulator, female solder contacts.

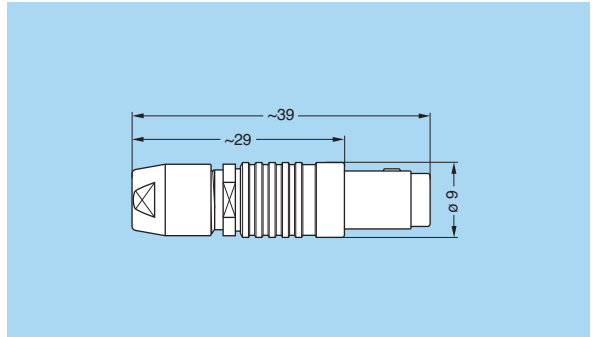
**FGG** Straight plug, cable collet



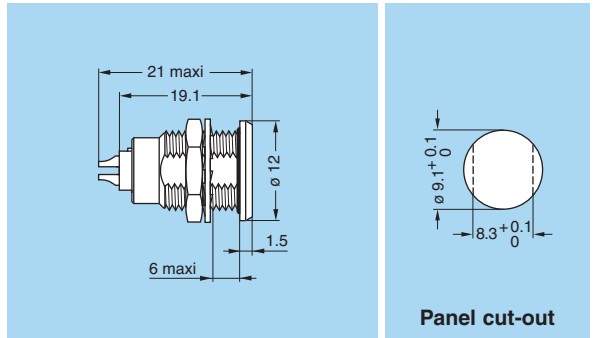
**FGG** Straight plug, cable collet and nut for fitting a bend relief



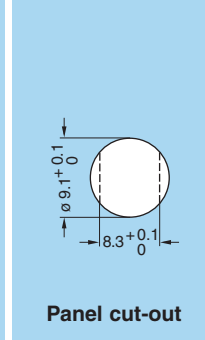
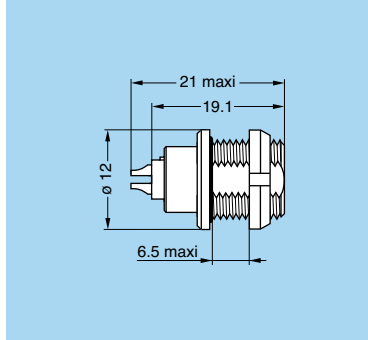
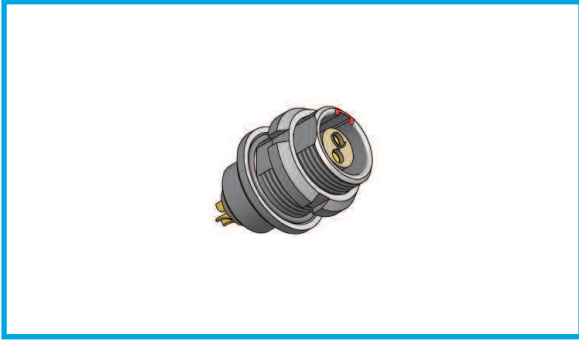
**FFG** Straight plug, non latching, cable collet



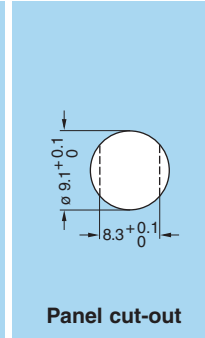
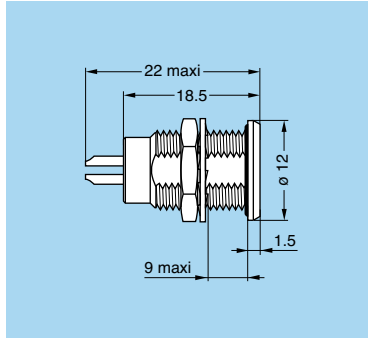
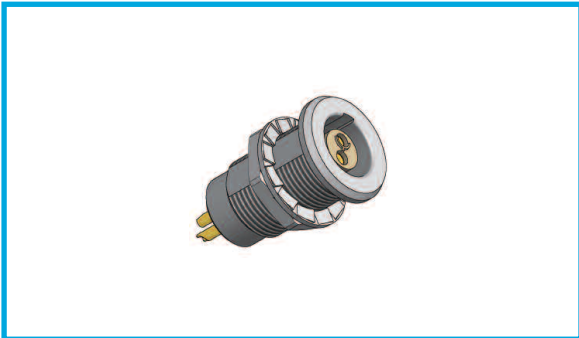
**EGG** Fixed socket, nut fixing



### EEG Fixed socket, nut fixing, back panel mounting

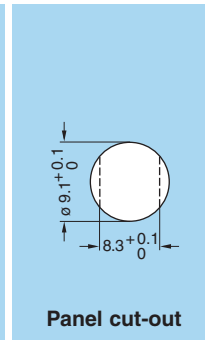
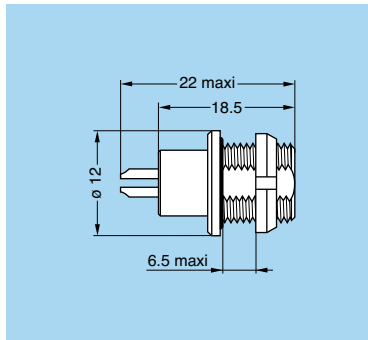


### HGG Fixed socket, nut fixing, watertight or vacuumtight



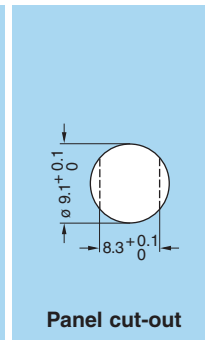
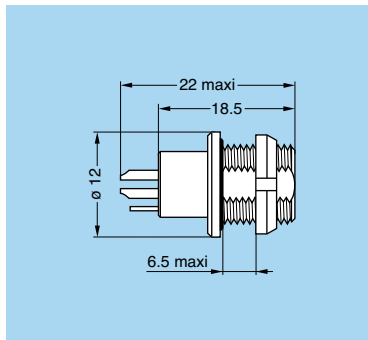
Note: temperature range -20°C / +100°C

### HEG Fixed socket, nut fixing, watertight or vacuumtight, back panel mounting



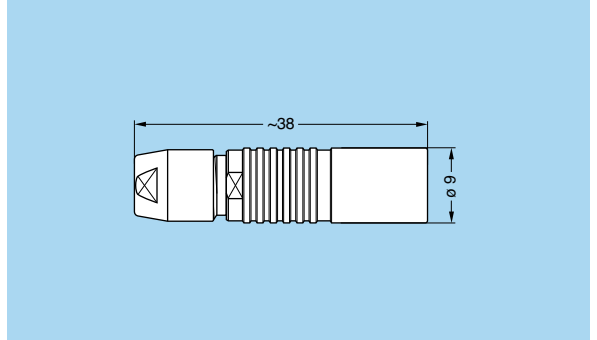
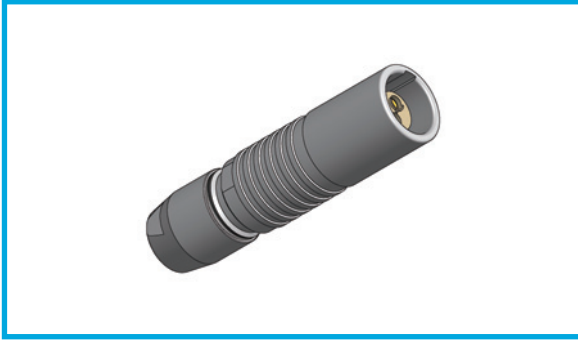
Note: temperature range -20°C / +100°C

### HMG Fixed socket, nut fixing, watertight or vacuumtight, back panel mounting

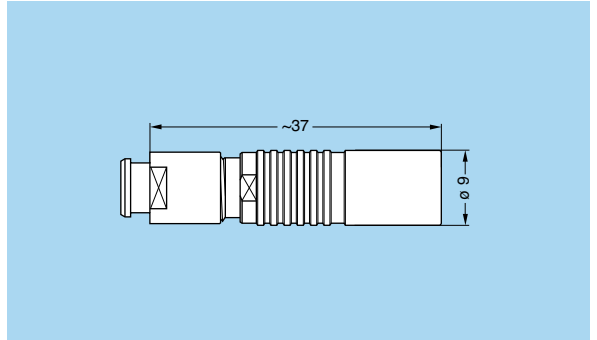


Note: temperature range -20°C / +100°C

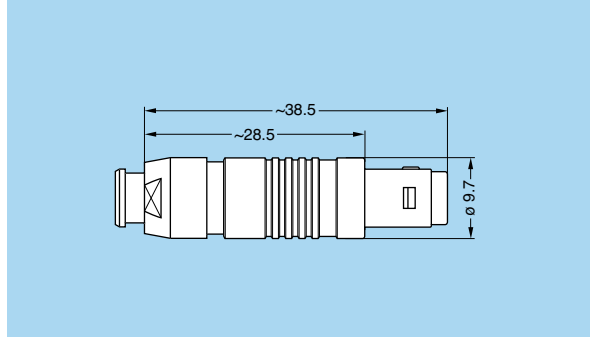
**PHG** Free socket, cable collet



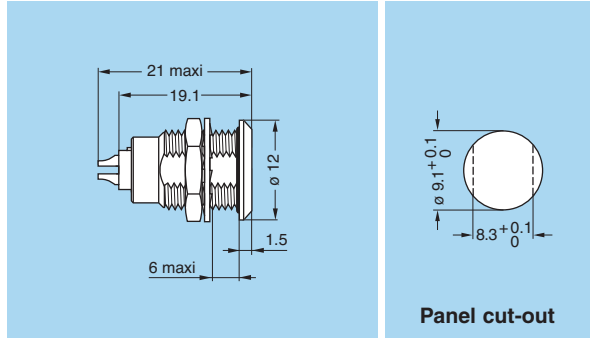
**PHG** Free socket, cable collet and nut for fitting a bend relief



**FGG** Straight plug, cable collet and nut for fitting a bend relief, POM outer shell



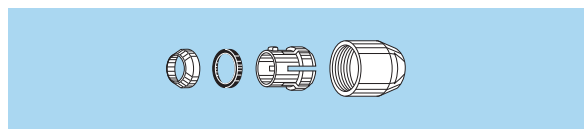
**EGG** Fixed socket, nut fixing, POM outer shell



## Insert configurations

Solder contacts	Crimp contacts	Reference	Number of contacts	Contact $\phi$ (mm)	Contact type				AWG			Test voltage (kV rms)	Test voltage (kV rms)	Rated current (A)
					Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	min.	max.			
		<b>302</b>	2	0.9	●	●	●	●	22	32	20	1.00	1.05	10.0
		<b>303</b>	3	0.9	●	●	●	●	22	32	20	1.20	0.90	8.0
		<b>304</b>	4	0.7	●	●	●	●	22	32	22	0.85	0.70	7.0
		<b>305</b>	5	0.7	●	●	●	●	22	32	22	1.00	0.70	6.5
		<b>306</b>	6	0.5	●		●	●	28	32	28	0.85	0.65	2.5
		<b>307</b>	7	0.5	●		●	●	28	32	28	0.80	0.70	2.5
		<b>309</b>	9	0.5	●		●	●	28	32	28	0.60	0.50	2.0

## Collets



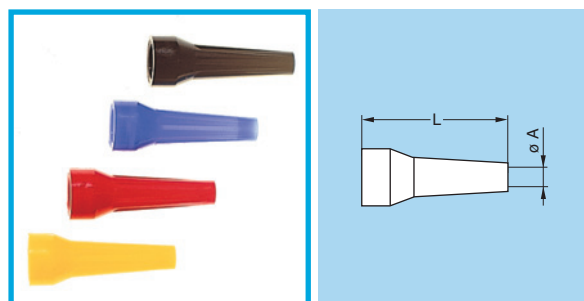
Type	Cable $\phi$ (mm)	
	min.	max.
<b>C10</b>	1.0	1.2
<b>C15</b>	1.3	1.5
<b>C20</b>	1.6	2.0
<b>C25</b>	2.1	2.5
<b>C30</b>	2.6	3.0

Type	Cable $\phi$ (mm)	
	min.	max.
<b>C35</b>	3.1	3.5
<b>C40</b>	3.6	4.0
<b>C45</b>	4.1	4.5
<b>C50</b>	4.6	5.0

## Alignment Key

Key	Contact type	
	Plug	Socket
<b>G</b>	male	female
<b>A</b>	male	female
<b>B</b>	male	female
<b>J</b>	female	male

## Bend relief



Part number	Bend relief		Cable $\phi$	
	A	L	min.	max.
<b>GMA.0B.025.DG</b>	2.5	24	2.5	2.9
<b>GMA.0B.030.DG</b>	3.0	24	3.0	3.4
<b>GMA.0B.035.DG</b>	3.5	24	3.5	3.9
<b>GMA.0B.040.DG</b>	4.0	24	4.0	4.4
<b>GMA.0B.045.DG</b>	4.5	24	4.5	5.2

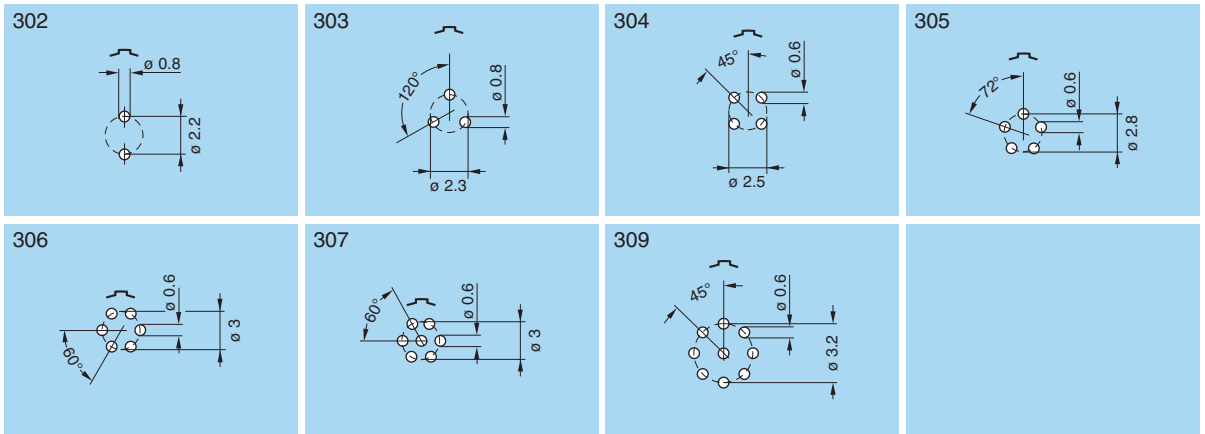
**Note:** all dimensions are in millimetres.

Ref.	Colour	Ref.	Colour	Ref.	Colour
<b>A</b>	blue	<b>J</b>	yellow	<b>R</b>	red
<b>B</b>	white	<b>M</b>	brown	<b>S</b>	orange
<b>G</b>	grey	<b>N</b>	black	<b>V</b>	green

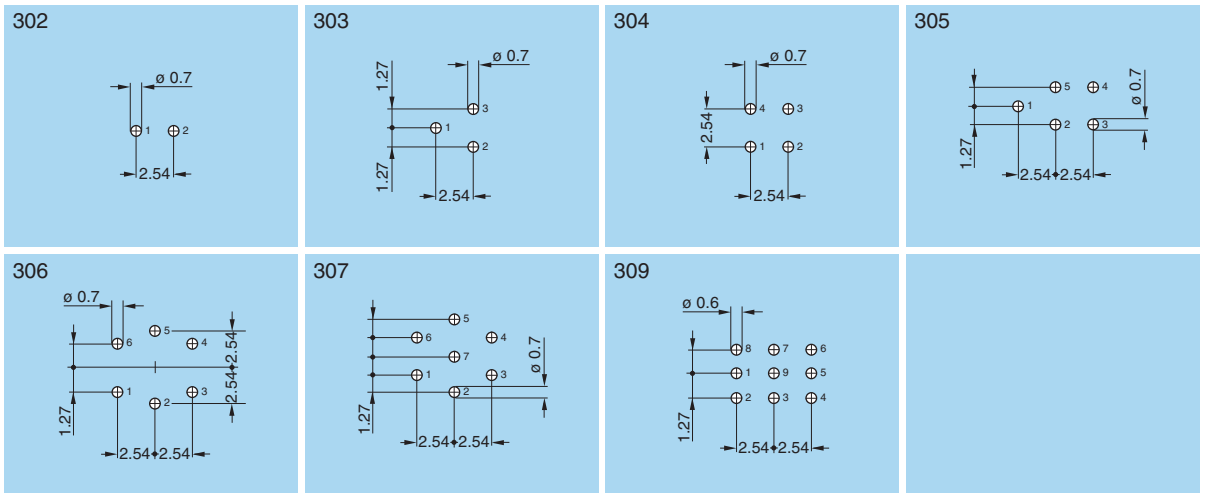
**Note:** the last letter «G» of the part number indicates the grey colour of the bend relief. For ordering a bend relief with another colour, see table and replace the letter «G» by the letter of the required colour.

## PCB drilling pattern

### Fixed socket with straight print contact



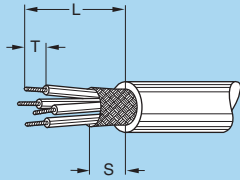
### Fixed socket with elbow print contact



## Tooling

For crimp contact tooling see 0B series in the unipole/multipole catalogue.

## Cable assembly



Reference	Ø contact (mm)	Cable stripping lengths (mm)					
		Solder			Crimp		
		L	S	T	L	S	T
<b>302/303</b>	0.9	14.5	7	3.5	17	7	4
<b>304/305</b>	0.7	14.5	7	3.5	17	7	4
<b>306/307/309</b>	0.5	14.0	7	2.5	18	7	3

## LEMO HEADQUARTERS

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