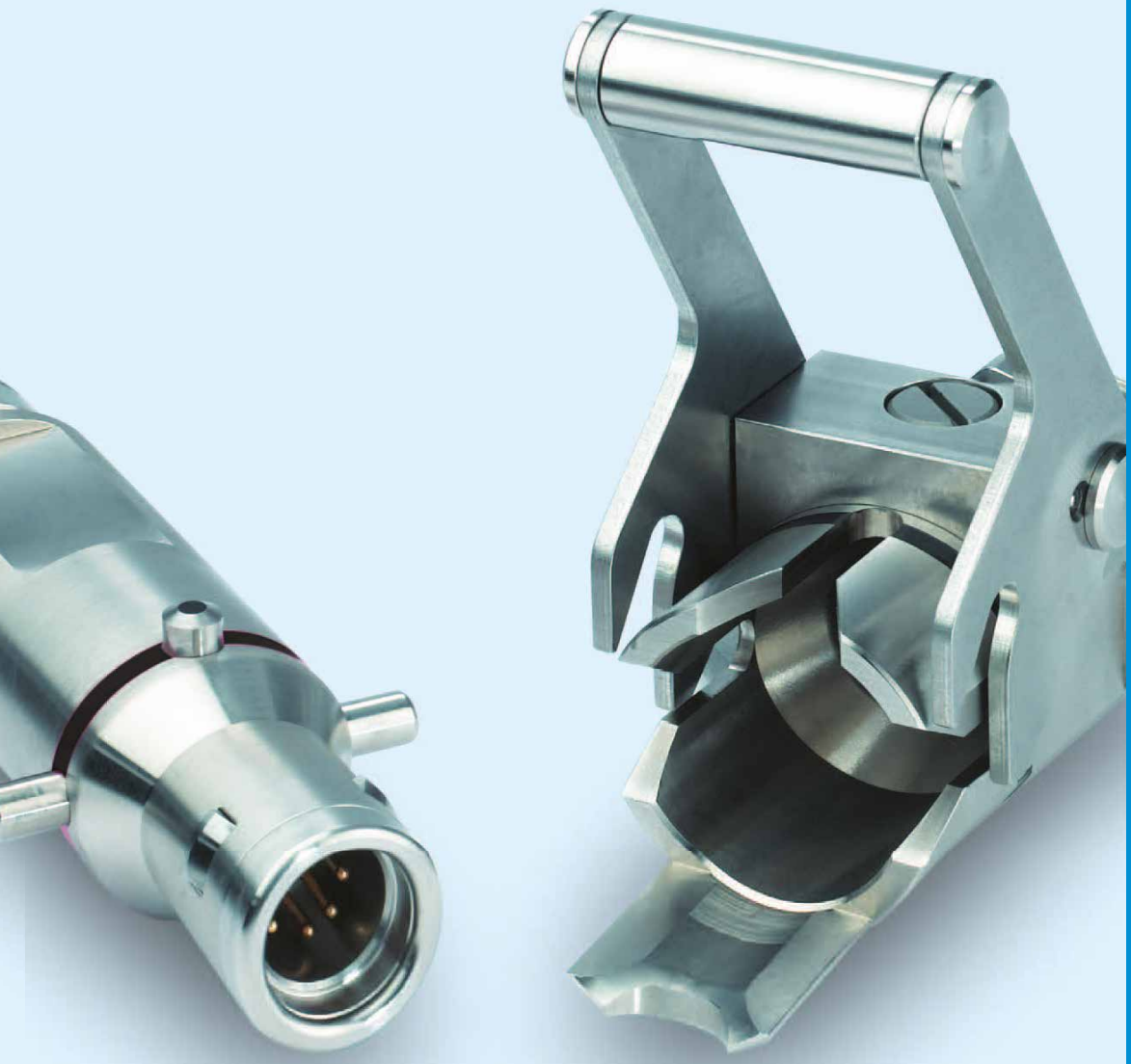
TELEMANIPULATOR CONNECTORS N SERIES



Precision modular connectors to suit your application

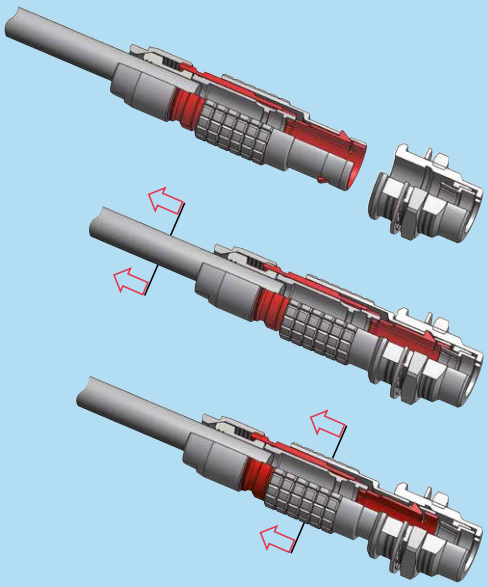
Since its creation in Switzerland in 1946 the LEMO Group has been recognized as a global leader of circular Push-Pull connectors and connector solutions. Today LEMO and its affiliated companies, REDEL and COELVER, are active in more than 80 countries with the help of over 40 subsidiaries and distributors.

Over 75000 connectors

The modular design of the LEMO range provides over 75000 connectors from miniature ø 3 mm to ø 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

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.



The LEMO self-latching system allows the connector to be mated by simply pushing the plug axially into the socket.

Once firmly latched, connection cannot be broken by pulling on the cable or any other component part other than the outer release sleeve.

When required, the connector is disengaged by a single axial pull on the outer release sleeve.
This first disengages the latches and then withdraws the plug from the socket.

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

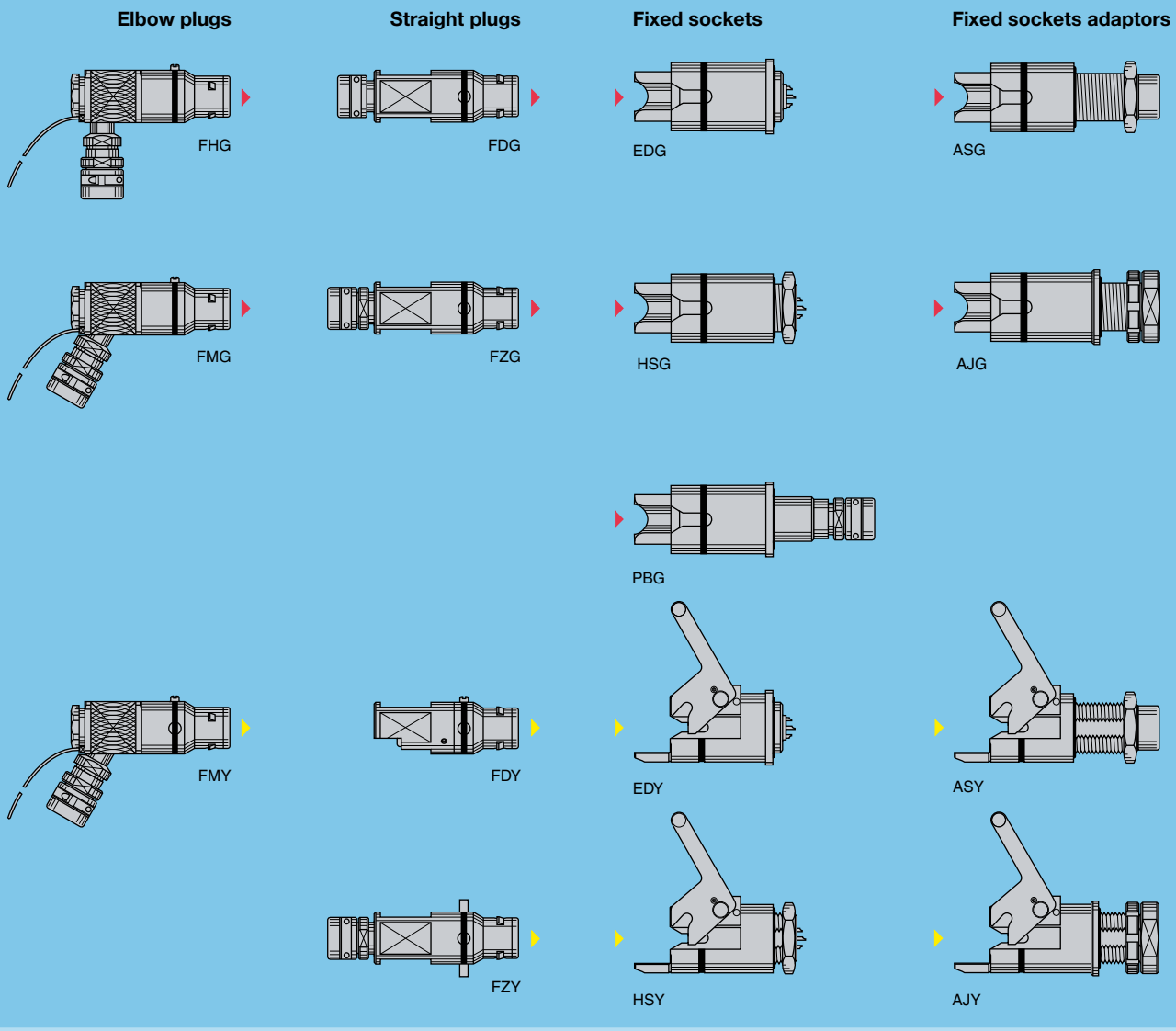
LEMO connector specifications conforms the requirements of the RoHS directive (2011/65/EU) of the European Parliament and the latest amendments. This directive specifies the restrictions of the use of hazardous substances in electrical and electronic equipment marketed in Europe.

N Series

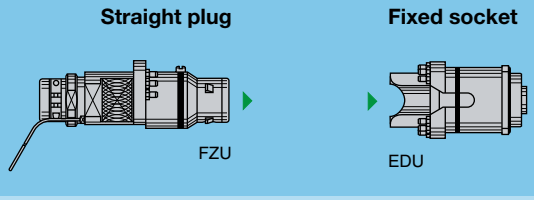
A range of remote handling stainless steel connectors suitable for operating in harsh environments such as nuclear reprocessing cells and the chemical industry. Features include alignment system and connection identification for ease of use. The N series are non-shielded connectors, one of the connector pin can be used as shield ground.

Feature / Benefits:
– Self-latching connection system based on K series
– Easy handling and gripping with highly efficient pre-positioning
– Reduced mating and unmating forces
– Black visual indicator on plug and socket shell
– Cable clamp on all plugs
– Non-schielded connection

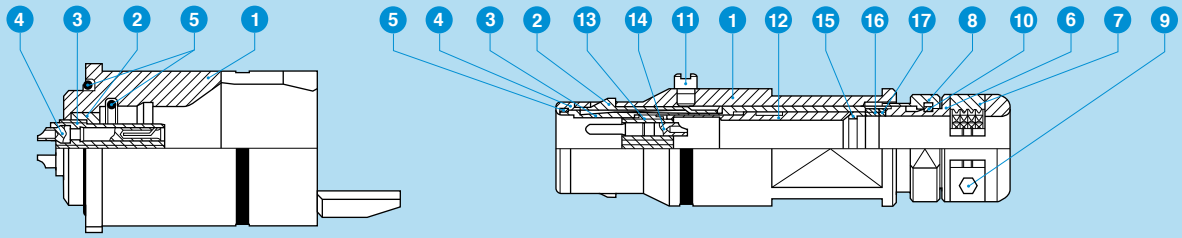
Models (page 6)



Keyed models (page 15)



Part Section Showing Internal Components



Fixed socket

1. shell
2. retaining ring
3. insulator
4. female contact
5. O-ring

Straight plug

1. shell
2. latch sleeve
3. inner shell
4. front retaining ring
5. O-ring
6. cable clamp body
7. clamp
8. clamp nut
9. hexagonal cap screw
10. clips
11. aligned pin
12. center piece
13. insulator
14. male contact
15. earthing cone
16. gasket
17. washer

Shell material and Treatment

Components	Material (Standard)	Surface treatment (µm)	
		Nickel-plated	
		Cu	Ni
Outer shell, collet clamp, pre-positioning sleeve, washer	AISI 304L	without treatment	
Latch sleeve	Special stainless steel	without treatment	
Earthing crown	AISI 304L	without treatment	
Pin, screw	Stainless steel	without treatment	
Other metallic parts	Brass (UNS C 38500)	0.5	3
O-ring and gasket	EPDM	without treatment	
Insulator	PEEK	without treatment	

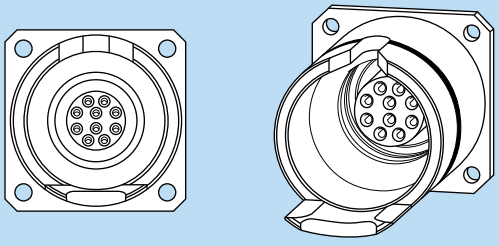
Note: the surface treatment standards are as follows: chrome FS-QQ-C-320B, nickel FS-QQ-N-290A.

Alignment Key

Standard positioning offers landing tray and notched entry for self-correcting alignment in robotic applications. Optional user configurable version provides further flexibility.

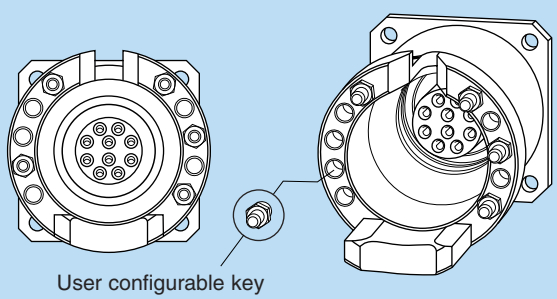
G-Positioning (Standard) - 2N-5N

- Standard alignment & positioning for 2N to 5N Series

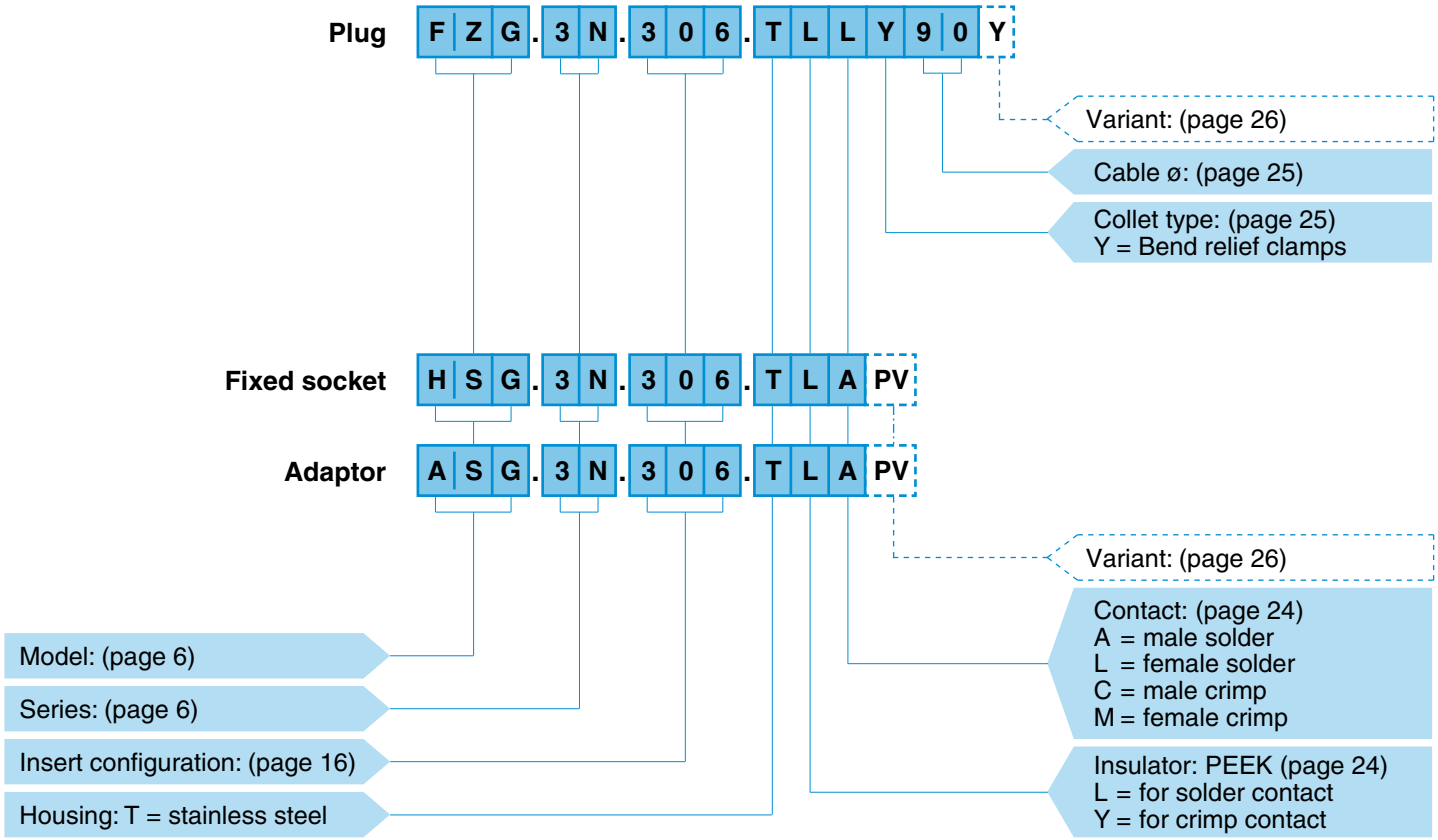


U-Keying (Robust) - 5N only

- Same features as the standard G-positioning, plus:
- 32 user configurable keying options



Part Numbering System



FZG.3N.306.TLLY90Y = straight plug, 3N series, multipole type with 6 contacts, outer shell in stainless steel, PEEK insulator, female solder contacts, Y type collet for 9.0 mm diameter cable.

HSG.3N.306.TLAPV = fixed socket, nut fixing, 3N series, multipole type with 6 contacts, outer shell in stainless steel, PEEK insulator, male solder contacts, vacuumtight.

ASG.3N.306.TLAPV = fixed adaptor, 3N series, multipole type with 6 contacts, outer shell in stainless steel, PEEK insulator, male solder contacts on the N series side and female solder contacts on the K series side, vacuumtight.

Metal housing models

Technical Characteristics

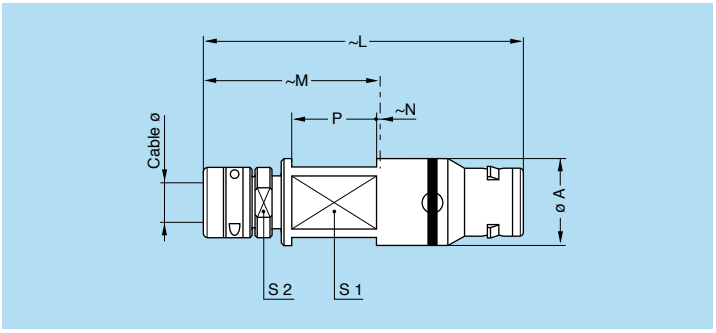
Mechanical and Climatical

Characteristics	Value	Standard
Endurance [1]	> 5000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range [2]	-40° C, +160° C	
Resistance to vibrations	10-2000 Hz, 15g	IEC 60512-4 test 6d

Characteristics	Value	Standard
Shock resistance	100 g, 6 ms	IEC 60512-4 test 6c
Salt spray corrosion test	> 1000h	IEC 60512-6 test 11f
Protection index (mated)	IP 66	IEC 60529
Climatical category	20/80/21	IEC 60068-1

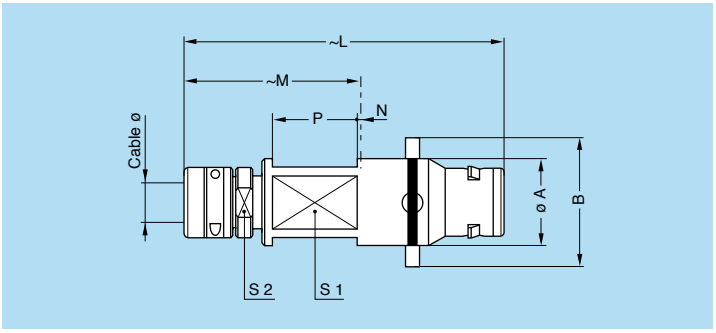
Note: [1] in order to perform correctly and withstand the pressure, cable assembly shall be made according to instruction we recommand.
[2] vacuumtight version: -20°C, + 80°C.

FZG Straight plug with positioning pin, cable clamp and smooth handling surface



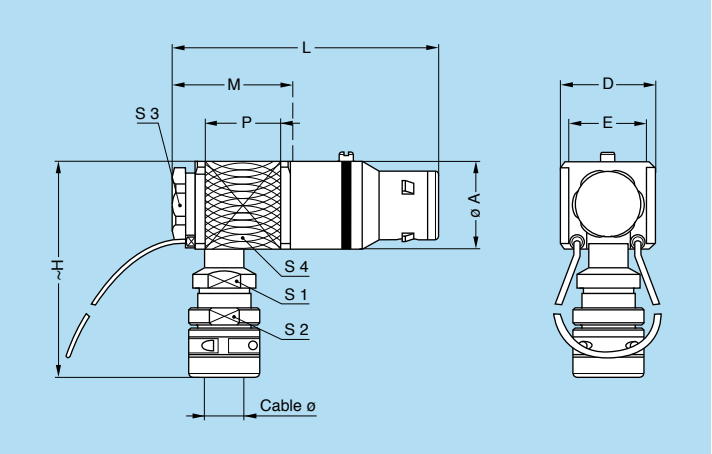
Reference		Dimensions (mm)							Cable ø	
Model	Series	A	L	M	N	P	S1	S2	mini	maxi
FZG	**3N**	25	103	55	1	25	21	20	6.1	12
FZG	**4N**	31	113	62	1	30	26	25	6.1	17
FZG	**5N**	45	155	90	1	50	39	40	9.1	30

FZY Straight plug with positioning pin, cable clamp and smooth handling surface



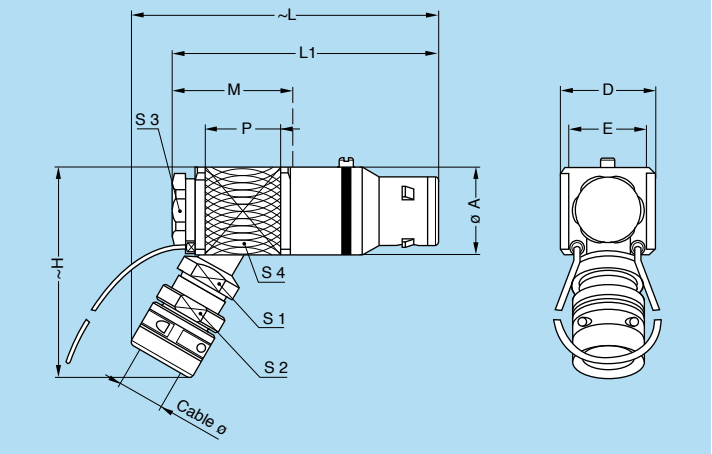
Reference		Dimensions (mm)								Cable ø	
Model	Series	A	B	L	M	N	P	S1	S2	mini	maxi
FZY	**2N**	22	29.4	89	48	1	22	18	17	7.6	10
FZY	**3N**	25	38.0	103	55	1	25	21	20	6.1	12
FZY	**4N**	31	44.0	113	62	1	30	26	25	6.1	17
FZY	**5N**	45	61.0	155	90	1	50	39	40	9.1	30

FHG Elbow plug (90°) with positioning pin, cable clamp and rough handling surface



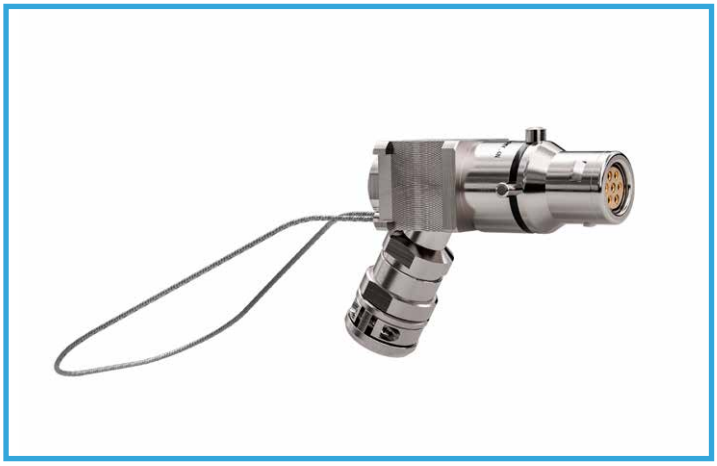
Reference		Dimensions (mm)											Cable ø	
Model	Series	A	D	E	H	L	M	P	S1	S2	S3	S4	mini	maxi
FHG	**3N**	25	28	24	70.2	82.3	34.6	23	17	20	18	24	6.1	12

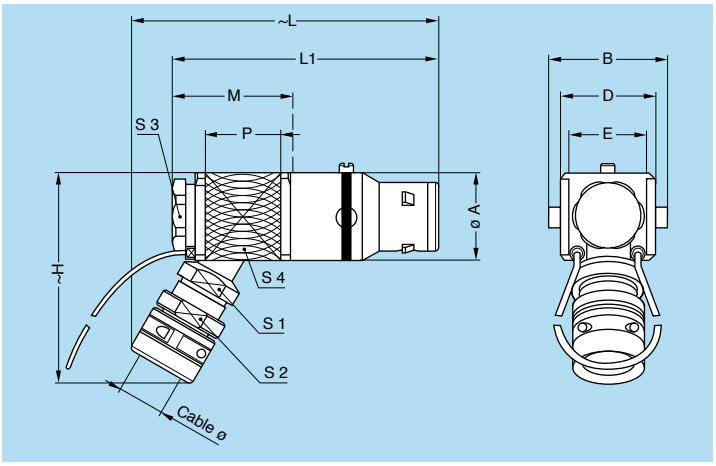
FMG Elbow plug (120°) with positioning pin, cable clamp and rough handling surface



Reference		Dimensions (mm)												Cable ø	
Model	Series	A	D	E	H	L	L1	M	P	S1	S2	S3	S4	mini	maxi
FMG	**3N**	25	28	24	67.0	98.9	82.3	34.6	23	17	20	18	24	6.1	12
FMG	**4N**	31	36	30	76.8	109.2	93.0	42.5	23	22	25	24	30	6.1	17
FMG	**5N**	45	48	42	116.9	154.5	129.6	66.3	23	36	40	38	42	9.1	30

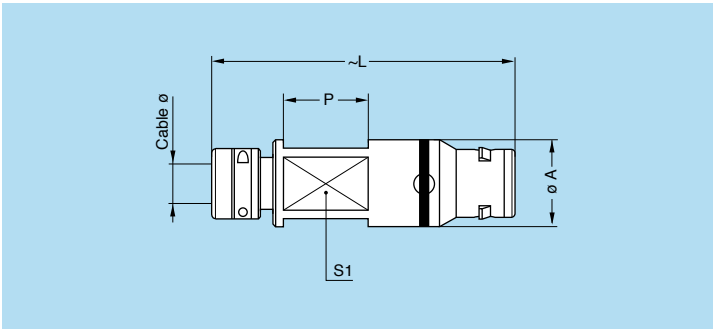
FMY Elbow plug (120°) with positioning pin, cable clamp and rough handling surface





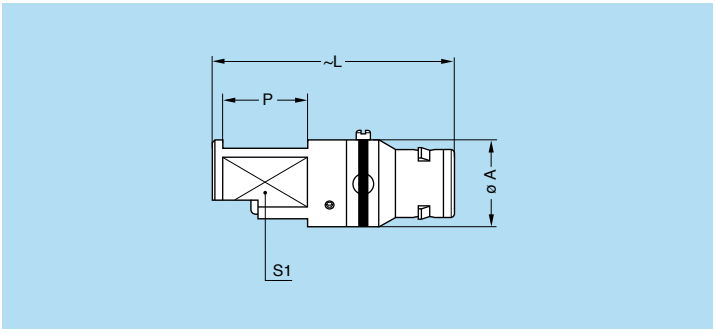
Reference		Dimensions (mm)												Cable ø	
Model	Series	A	B	D	E	H	L	L1	M	P	S1	S2	S3	S4	mini	maxi
FMY	**4N**	31	44	36	30	76.8	109.2	93.0	42.5	23	22	25	24	30	6.1	17
FMY	**5N**	45	61	48	42	116.9	154.5	129.6	66.3	23	36	40	38	42	9.1	30

FDG Straight plug with positioning pin, cable clamp and smooth handling surface



Reference		Dimensions (mm)				Cable ø	
Model	Series	A	L	P	S1	mini	maxi
FDG	**3N**	25	91	23	21	6.1	12

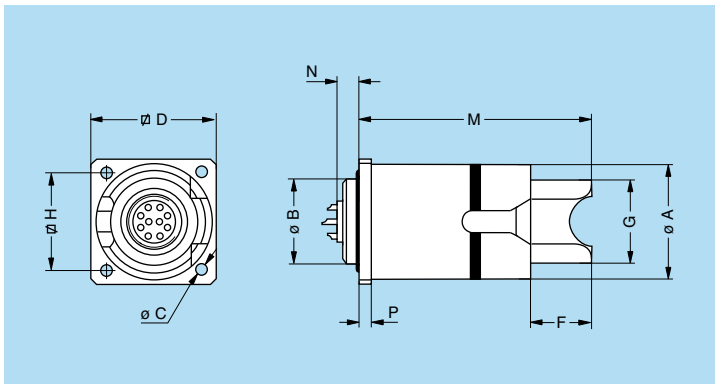
FDY Straight plug with positioning pin, cable clamp and smooth handling surface



Reference		Dimensions (mm)			
Model	Series	A	L	P	S1
FDY	**4N**	31	85.6	30	26

Part number example: FDY.4N.3●●.TL●C●●

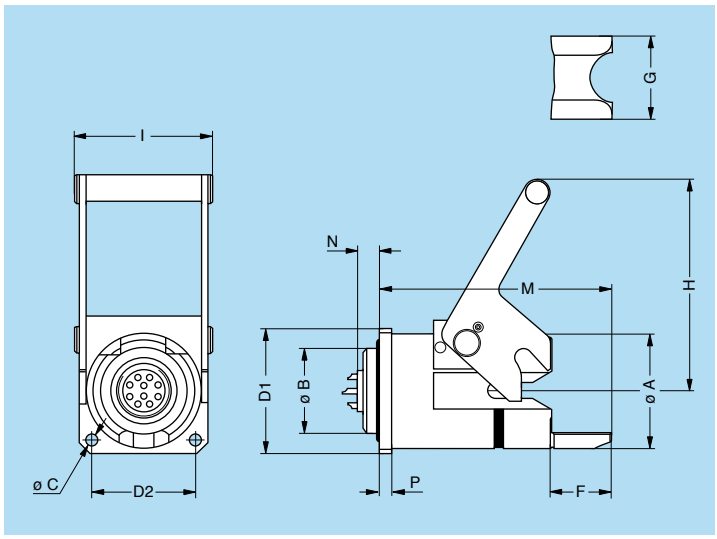
EDG Fixed socket with square flange, 4 screws fixing, with long pre-positioning sleeve. Without earthing crown



Reference		Dimensions (mm)									
Model	Series	A	B	C	D	F	G	H	M	N	P
EDG	**3N**	32	24	3.2	34	18.5	19	27	68.5	8.7	3
EDG	**4N**	40	30	4.2	43	20.0	24	35	74.0	10.7	4
EDG	**5N**	55	45	5.2	58	28.0	35	46	94.0	13.2	5

P3 Panel cut-out (page 27)

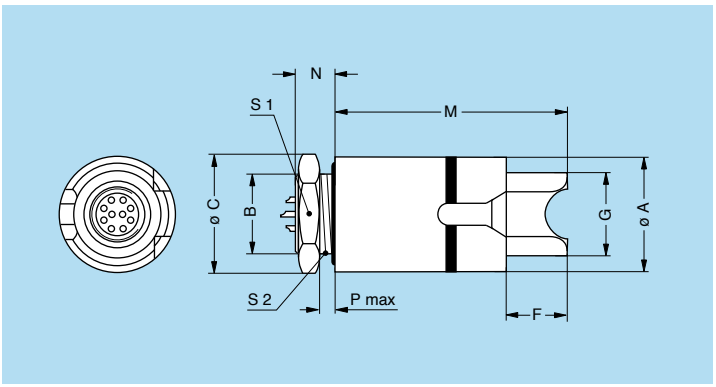
EDY Fixed socket for remote handling with square flange and lever



Reference		Dimensions (mm)											
Model	Series	A	B	C	D1	D2	F	G	H	I	M	N	P
EDY	**3N**	32	24	3.2	34	27	18.5	19	68.4	36.6	68.5	8.7	3
EDY	**4N**	40	30	4.2	43	35	20.0	24	75.8	43.6	74.0	10.7	4
EDY	**5N**	55	45	5.2	58	46	28.0	35	96.4	60.6	94.0	13.2	5

P3 Panel cut-out (page 27)

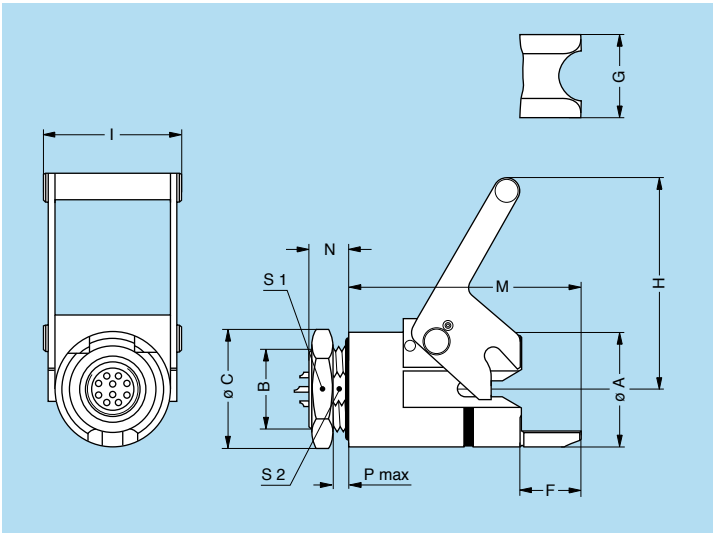
HSG Fixed socket, with long pre-positioning sleeve, without earthing crown, watertight or vacuumtight



Reference		Dimensions (mm)									
Model	Series	A	B	C	F	G	M	N	P	S1	S2
HSG	**2N**	27	M20x1.0	27.8	14.0	16	56.5	12.0	8.0	24	18.5
HSG	**3N**	32	M24x1.0	34.0	18.5	19	68.5	13.0	8.0	30	22.5
HSG	**4N**	40	M30x1.0	40.5	20.0	24	74.0	16.0	9.0	36	28.5
HSG	**5N**	55	M45x1.5	54.0	28.0	35	94.0	19.5	11.5	–	42.5

P1 Panel cut-out (page 27)

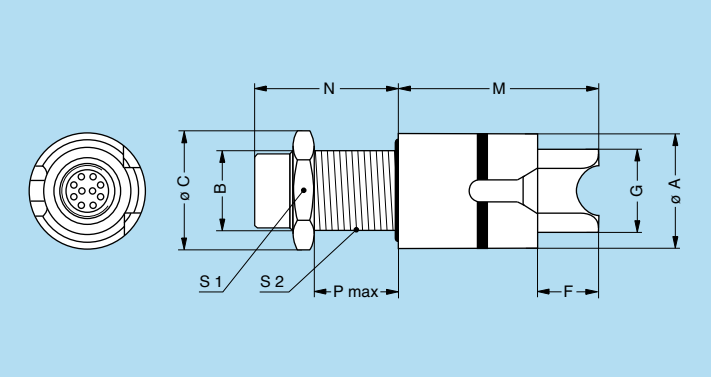
HSY Fixed socket for remote handling with lever, watertight or vacuumtight



Reference		Dimensions (mm)											
Model	Series	A	B	C	F	G	H	I	M	N	P	S1	S2
HSY	**2N**	27	M21x1.0	27.8	14.0	16	58.5	31.6	56.5	12.0	8.0	24	18.5
HSY	**3N**	32	M24x1.0	34.0	18.5	19	68.4	36.6	68.5	13.0	8.0	30	22.5
HSY	**4N**	40	M30x1.0	40.5	20.0	24	75.8	43.6	74.0	16.0	9.0	36	28.5
HSY	**5N**	55	M45x1.5	54.0	28.0	35	96.4	60.6	94.0	19.5	11.5	–	42.5

P1 Panel cut-out (page 27)

ASG **Fixed adaptor to K series** (the K side is equipped with female contacts, the N side with male ones)

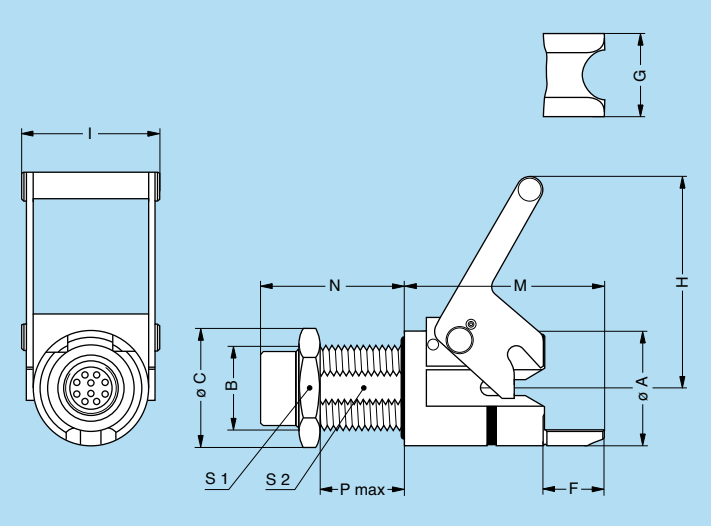


Reference		Dimensions (mm)									
Model	Series	A	B	C	F	G	M	N	P	S1	S2
ASG	**3N**	32	M24x1.0	34.0	18.5	19	56.5	54.0	37.0	30	22.5
ASG	**4N**	40	M30x1.0	40.5	20.0	24	74.0	50.2	31.2	36	28.5
ASG	**5N**	55	M45x1.5	54.0	28.0	35	94.0	60.5	37.5	1)	42.5

P1 Panel cut-out (page 27)

Note: 1) delivered with a round nut (GEB.5E.240.AZ).

ASY **Fixed adaptor to K series** (the K side is equipped with female contacts, the N side with male ones)

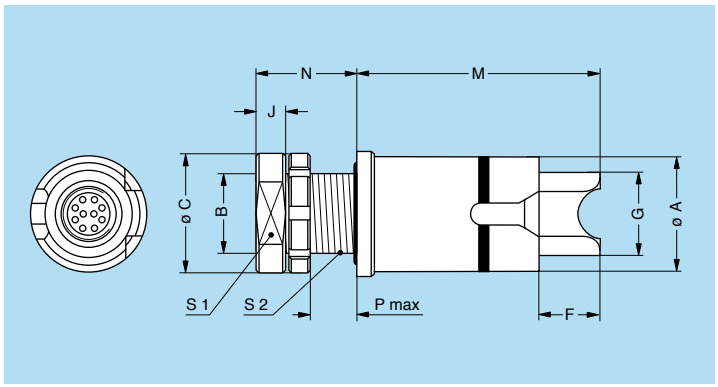


Reference		Dimensions (mm)											
Model	Series	A	B	C	F	G	H	I	M	N	P	S1	S2
ASY	**3N**	32	M24x1.0	34.0	18.5	19	68.4	36.6	68.5	42.0	24.0	30	22.5
ASY	**4N**	40	M30x1.0	40.5	20.0	24	75.8	43.6	81.7	42.5	23.5	36	28.5
ASY	**5N**	55	M45x1.5	54.0	28.0	35	96.4	60.6	94.0	60.5	37.5	1)	42.5

P1 Panel cut-out (page 27)

Note: 1) delivered with a round nut (GEB.5E.240.AZ).

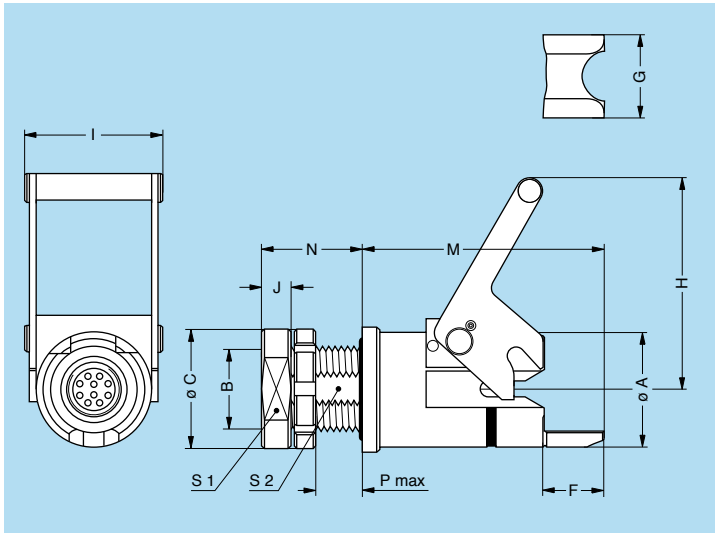
AJG Fixed adaptor to K series, vacuumtight (interchangeable insulator)
(the K side is equipped with female contacts, the N side with male ones)



Reference		Dimensions (mm)										
Model	Series	A	B	C	F	G	J	M	N	P	S1	S2
AJG	**3N**	32	M30x1	40	18.5	19	13	80.6	30	7	36	28.5

P2 Panel cut-out (page 27)

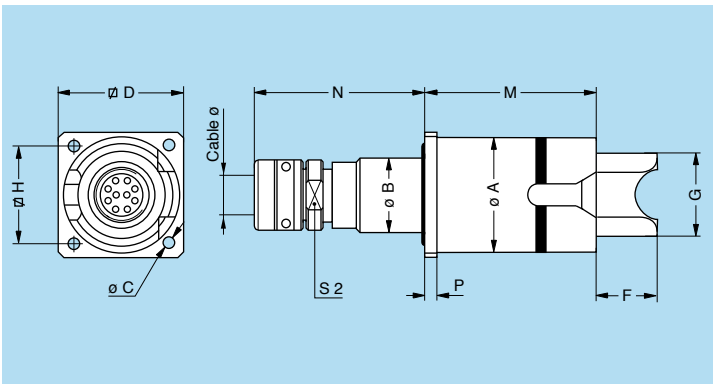
AJY Fixed adaptor to K series, vacuumtight with lever (interchangeable insulator)
(the K side is equipped with female contacts, the N side with male ones)



Reference		Dimensions (mm)												
Model	Series	A	B	C	F	G	H	I	J	M	N	P	S1	S2
AJY	**3N**	32	M30x1.0	40	18.5	19	68.4	36.6	13	80.6	30.0	7	36	28.5
AJY	**4N**	40	M40x1.5	50	20.0	24	75.8	43.6	13	89.5	34.9	12	46	38.0
AJY	**5N**	55	M55x2.0	65	28.0	35	96.4	60.6	13	120.5	34.0	11	60	52.0

P2 Panel cut-out (page 27)

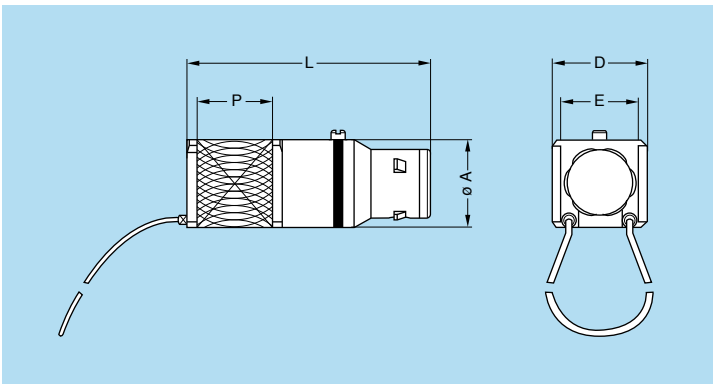
PBG Fixed socket with square flange, 4 screws fixing, with long pre-positioning sleeve and cable clamp. Without earthing crown



Reference		Dimensions (mm)											Cable ø	
Model	Series	A	B	C	D	F	G	H	M	N	P	S2	mini	maxi
PBG	**3N**	32	24	3.2	34	18.5	19	27	50	58.5	3	20	6.1	12
PBG	**4N**	40	30	4.2	43	20.0	24	35	54	66.0	4	25	6.1	17
PBG	**5N**	55	45	5.2	58	28.0	35	46	66	91.0	5	40	9.1	30

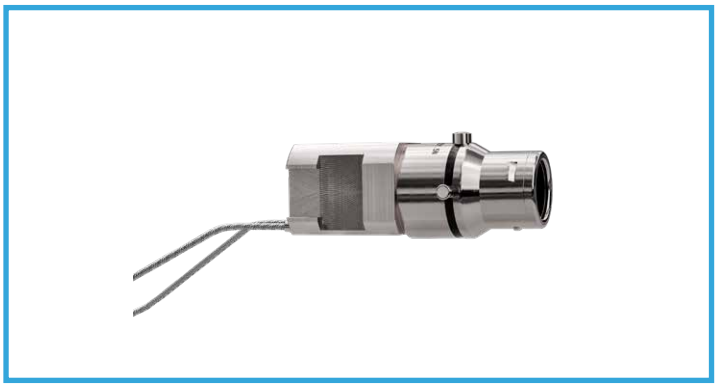
P3 Panel cut-out (page 27)

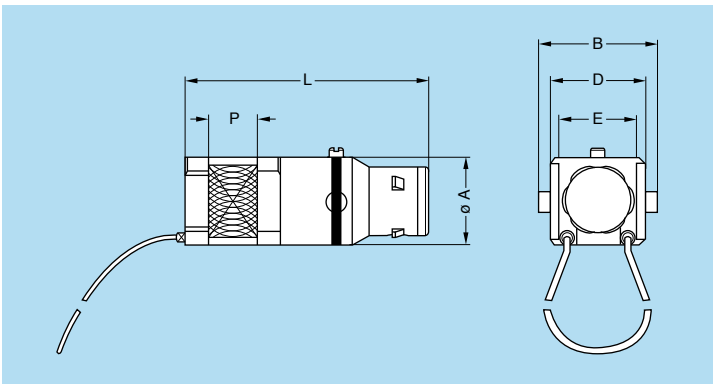
BZG Cap for socket (model ●●G)



Part number	Dimensions (mm)				
	A	D	E	L	P
BZG.3N.200.TAV	25	28	24	76.8	23
BZG.4N.200.TAV	31	36	30	86	23
BZG.5N.200.TAV	45	48	42	120	23

BZY Cap for socket (model ●●Y)

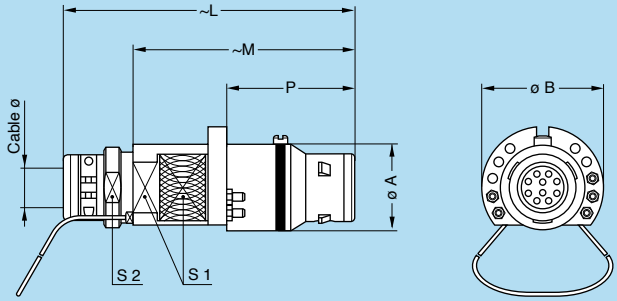




Part number	Dimensions (mm)					
	A	B	D	E	L	P
BZY.4N.200.TAV	31	44	36	30	86	23
BZY.5N.200.TAV	45	61	48	42	120	23

Keyed models

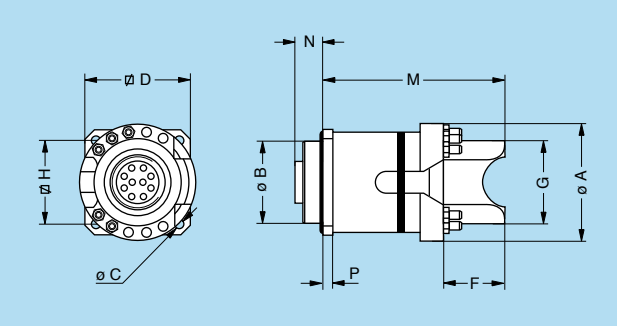
FZU Straight plug with positioning pin and coding pins, cable clamp and rough handling surface, with lanyard release



Reference		Dimensions (mm)							Cable ø	
Model	Series	A	B	L	M	P	S1	S2	mini	maxi
FZU	**5N**	45	65	155.3	118.1	68.1	42	40	16.6	17.5

Note: Please contact the factory for other cable clamps.

EDU Fixed socket with square flange with coding pins, 4 screws fixing

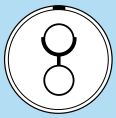
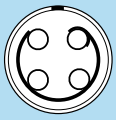


Reference		Dimensions (mm)									
Model	Series	A	B	C	D	F	G	H	M	N	P
EDU	**5N**	65	45	5.2	58	28	35	46	94	16	5

P4 Panel cut-out (page 27)

Insert configuration

Multipole

	Solder contacts / Crimp contacts		Reference	Series	Contact ø (mm)	Contact type: Solder	Contact type: Crimp	Contact type: Print (straight)	Contact type: Print (elbow)	AWG: Solder (max.)	AWG: Crimp min.	AWG: Crimp max.	Solder contact: Test voltage (kV rms)[1] Contact-contact	Solder contact: Test voltage (kV rms)[2] Contact-shell	Crimp contact: Test voltage (kV rms)[1] Contact-contact	Crimp contact: Test voltage (kV rms)[2] Contact-shell	Rated current (A)[1]
2			302	2N	2.0	●	●	–	–	16	18	12	2.10	1.75	2.85	2.70	25.0
				3N	3.0	●	●	–	–	12	14	10	2.10	1.55	2.30	1.80	35.0
				5N	6.0	●	–	–	–	8	–	–	3.60	2.95	–	–	50.0
3			303	2N	1.6	●	●	–	–	18	22	14	2.40	1.85	1.90	1.90	17.0
				3N	2.0	●	●	–	–	16	18	12	1.90	1.50	3.20	2.65	25.0
4			304	2N	1.3	●	●	–	–	20	26	18	1.85	1.85	2.20	2.20	15.0
				3N	2.0	●	●	–	–	16	18	12	1.45	1.25	2.50	2.20	19.0
				4N	3.0	●	●	–	–	12	14	10	2.10	1.50	1.80	1.20	30.0
				5N	4.0	●	●	–	–	10	12	10	2.95	2.65	3.20	2.40	35.0
5			305	2N	1.3	●	●	–	–	20	26	18	1.75	1.60	2.15	2.15	14.0
				3N	1.6	●	●	–	–	18	22	14	1.90	1.25	2.40	1.75	19.0
6			306	2N	1.3	●	●	–	–	20	26	18	1.35	1.45	2.00	2.35	12.0
				3N	1.6	●	●	–	–	18	22	14	1.60	1.15	1.90	1.80	17.0
				4N	2.0	●	●	–	–	16	18	12	2.00	1.75	2.75	2.40	24.0
7			307	2N	1.3	●	●	–	–	20	26	18	1.75	1.60	1.95	2.15	11.0
				3N	1.6	●	●	–	–	18	22	14	1.70	1.25	2.00	2.05	15.0
				4N	2.0	●	●	–	–	16	18	12	2.00	1.80	1.50	1.35	20.0

Note: [1] see calculation method, caution and suggested standard.
[2] test voltage (kV) contact-shell (values here are for B series).

● First choice alternative
○ Special order alternative

Multipole

	Solder contacts / Crimp contacts		Reference	Series	Contact ø (mm)	Contact type: Solder	Contact type: Crimp	Contact type: Print (straight)	Contact type: Print (elbow)	AWG: Solder (max.)	AWG: Crimp min.	AWG: Crimp max.	Solder contact: Test voltage (kV rms)[1] Contact-contact	Solder contact: Test voltage (kV rms)[2] Contact-shell	Crimp contact: Test voltage (kV rms)[1] Contact-contact	Crimp contact: Test voltage (kV rms)[2] Contact-shell	Rated current (A)[1]
8			308	2N	0.9	●	●	–	–	22	32	20	1.50	1.25	1.95	1.95	10.0
				3N	1.3	●	●	–	–	20	26	18	1.65	1.15	1.85	1.75	13.0
9			309	3N	8x1.3 1x2.0	●	●	–	–	20 16	26 18	18 12	1.35	1.05	1.10	1.05	6.0 15.0
10			310	2N	0.9	●	●	–	–	22	32	20	1.45	1.30	1.80	2.10	8.0
				3N	1.3	●	●	–	–	20	26	18	1.25	0.90	1.50	1.80	12.0
				4N	1.6	●	●	–	–	18	22	14	1.85	1.30	1.90	1.95	17.0
				5N	3.0	●	●	–	–	12	14	10	2.35	2.30	2.65	3.20	20.0
12			312	2N	0.7	●	●	–	–	22	32	22	1.25	1.35	1.65	2.00	7.0
				3N	0.9	●	●	–	–	22	32	20	1.45	1.00	1.65	1.85	9.0
				4N	1.3	●	●	–	–	20	26	18	1.45	1.60	1.90	1.85	12.0
14			314	2N	0.7	●	●	–	–	22	32	22	1.15	1.35	1.55	1.55	6.5
				3N	0.9	●	●	–	–	22	32	20	1.20	1.20	1.80	1.65	9.0
				5N	2.0	●	●	–	–	16	18	12	2.10	2.00	2.85	2.95	18.0
16			316	2N	0.7	●	●	–	–	22	32	22	0.95	1.25	1.55	1.75	6.0
				3N	0.9	●	●	–	–	22	32	20	1.20	0.85	1.80	1.50	8.0
				4N	0.9	●	●	–	–	22	32	20	1.35	1.50	2.30	2.10	10.0
				5N	2.0	●	●	–	–	16	18	12	1.85	1.95	2.45	3.05	12.0
18			318	2N	0.7	●	●	–	–	22	32	22	0.85	1.20	1.45	2.10	5.5
				3N	0.9	●	●	–	–	22	32	20	1.20	1.05	1.85	1.60	7.0

Note: [1] see calculation method, caution and suggested standard.
[2] test voltage (kV) contact-shell (values here are for B series).

● First choice alternative
○ Special order alternative

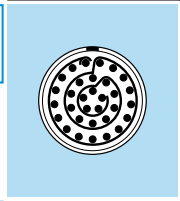
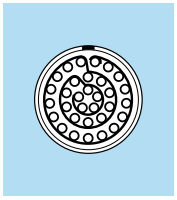
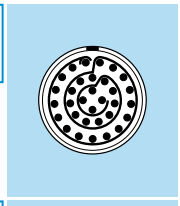
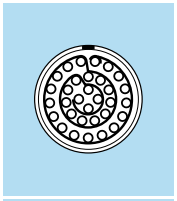
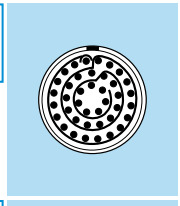
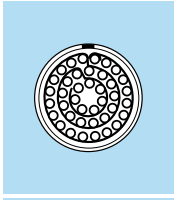
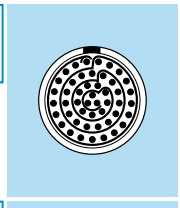
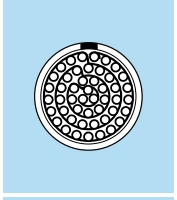
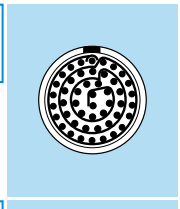
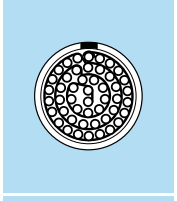
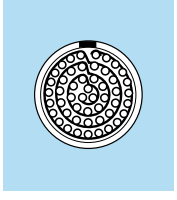
Multipole

	Solder contacts / Crimp contacts		Reference	Series	Contact ø (mm)	Contact type: Solder	Contact type: Crimp	Contact type: Print (straight)	Contact type: Print (elbow)	AWG: Solder (max.)	AWG: Crimp min.	AWG: Crimp max.	Solder contact: Test voltage (kV rms)[1] Contact-contact	Solder contact: Test voltage (kV rms)[2] Contact-shell	Crimp contact: Test voltage (kV rms)[1] Contact-contact	Crimp contact: Test voltage (kV rms)[2] Contact-shell	Rated current (A)[1]
19			319	2N	0.7	●	●	–	–	22	32	22	0.95	1.25	1.55	1.65	5.0
20			320	3N	0.7	●	●	–	–	22	32	22	1.00	0.90	1.35	1.55	6.0
20			320	4N	0.9	●	●	–	–	22	32	20	1.35	1.00	1.05	0.95	8.0
				5N	1.6	●	●	–	–	18	22	14	1.90	1.70	2.20	2.40	10.0
22			322	3N	0.7	●	●	–	–	22	32	22	1.00	0.90	1.70	1.45	5.5
24			324	3N	0.7	●	●	–	–	22	32	22	0.95	0.80	1.35	1.35	4.0
				4N	0.9	●	●	–	–	22	32	20	1.20	1.45	1.80	2.05	7.0
26			326	2N	0.5	●	–	–	–	28	–	–	0.95	1.30	–	–	2.0
				3N	0.7	●	●	–	–	22	32	22	0.95	0.70	1.50	1.30	4.0
30			330	3N	0.7	●	●	–	–	22	32	22	0.80	0.70	1.35	1.20	3.5
				4N	0.9	●	●	–	–	22	32	20	0.95	0.85	1.75	1.45	5.0
				5N	1.3	●	●	–	–	20	26	18	1.45	1.60	2.05	2.45	8.0

Note: [1] see calculation method, caution and suggested standard.
[2] test voltage (kV) contact-shell (values here are for B series).

● First choice alternative
○ Special order alternative

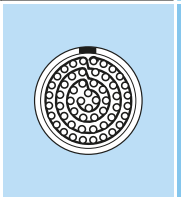
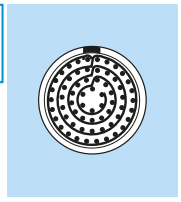
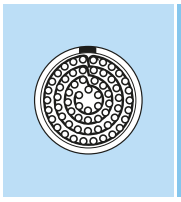
Multipole

	Solder contacts / Crimp contacts		Reference	Series	Contact ø (mm)	Contact type: Solder	Contact type: Crimp	Contact type: Print (straight)	Contact type: Print (elbow)	AWG: Solder (max.)	AWG: Crimp min.	AWG: Crimp max.	Solder contact: Test voltage (kV rms)[1] Contact-contact	Solder contact: Test voltage (kV rms)[2] Contact-shell	Crimp contact: Test voltage (kV rms)[1] Contact-contact	Crimp contact: Test voltage (kV rms)[2] Contact-shell	Rated current (A)[1]
32			332	2N	0.5	●	–	–	–	28	–	–	0.80	1.20	–	–	1.5
32			332	3N	0.7	●	○	–	–	22	32	22	0.75	0.70	–	–	3.0
40			340	4N	0.7	●	●	–	–	22	32	22	0.90	0.90	1.30	1.30	2.0
				5N	1.3	●	●	–	–	20	26	18	1.30	1.45	2.00	1.95	7.0
48			348	4N	0.7	●	●	–	–	22	32	22	0.70	0.70	1.00	1.00	1.5
48			348	5N	1.3	●	●	–	–	20	26	18	1.20	1.10	2.00	1.55	6.0
50			350	5N	0.9	●	●	–	–	22	32	20	1.30	1.60	1.20	1.45	6.0

Note: [1] see calculation method, caution and suggested standard.
[2] test voltage (kV) contact-shell (values here are for B series).

● First choice alternative
○ Special order alternative

Multipole

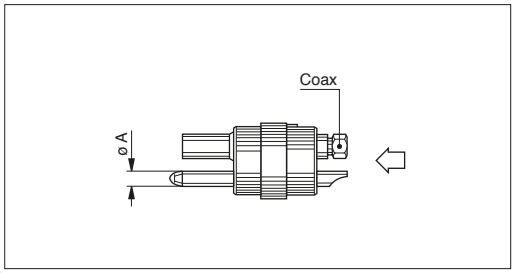
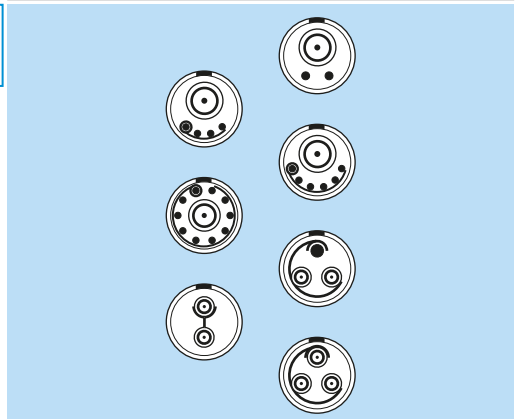
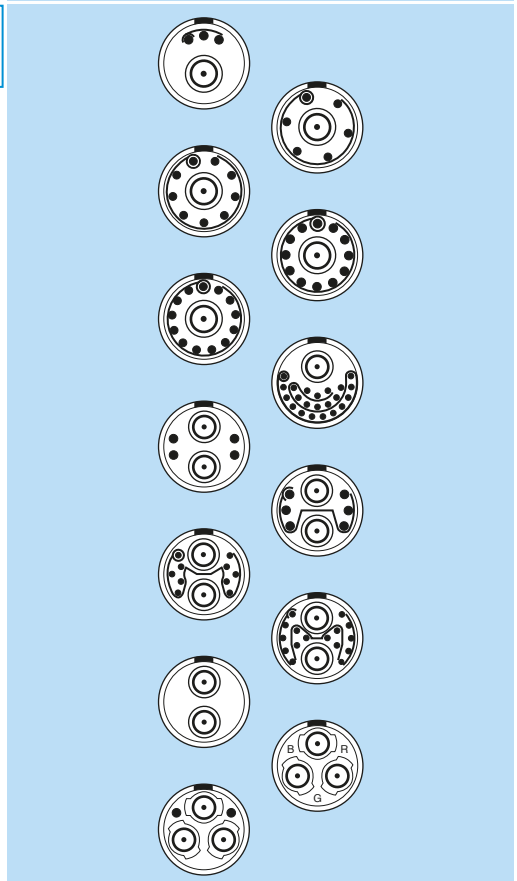
	Solder contacts / Crimp contacts		Reference	Series	Contact ø (mm)	Contact type: Solder	Contact type: Crimp	Contact type: Print (straight)	Contact type: Print (elbow)	AWG: Solder (max.)	AWG: Crimp min.	AWG: Crimp max.	Solder contact: Test voltage (kV rms)[1] Contact-contact	Solder contact: Test voltage (kV rms)[2] Contact-shell	Crimp contact: Test voltage (kV rms)[1] Contact-contact	Crimp contact: Test voltage (kV rms)[2] Contact-shell	Rated current (A)[1]
54			354	5N	0.9	●	●	–	–	22	32	20	1.15	1.55	2.00	2.10	5.0
64			364	5N	0.9	●	●	–	–	22	32	20	1.30	1.55	1.35	1.85	3.0

Note: [1] see calculation method, caution and suggested standard.
[2] test voltage (kV) contact-shell (values here are for B series).

● First choice alternative
○ Special order alternative

Note:
More contact configurations are available, please consult our coax-triax-hybrid catalogue.
Thermocouple contacts are also available, please contact your local sales subsidiary for more information.

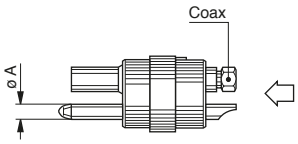
Multi coax, hybrid coax + LV

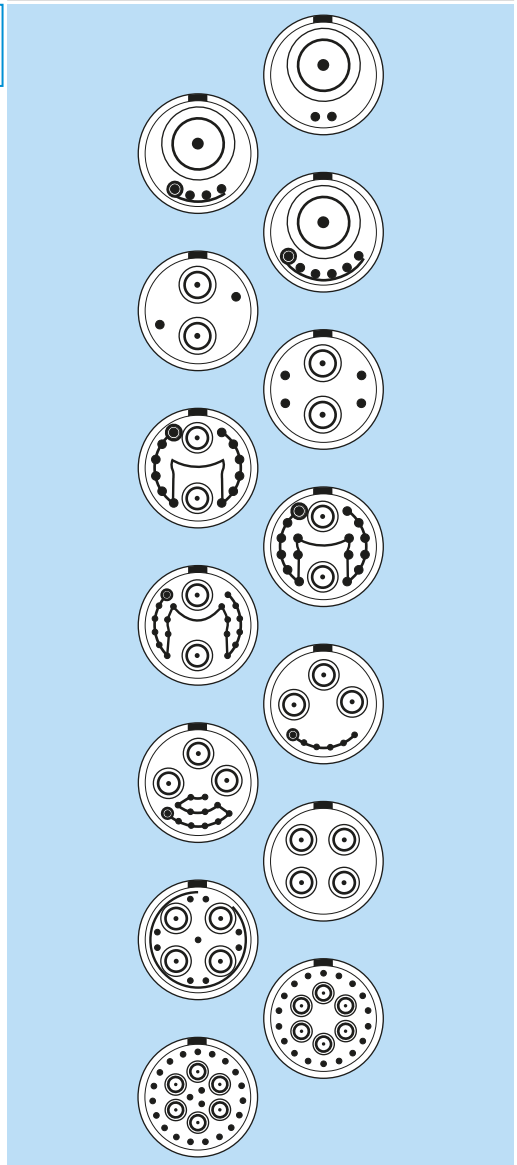
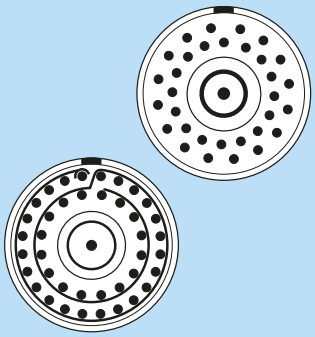
		Reference	Coax				Low voltage (LV)						
			Number of contacts	Impedance (Ω)	Type[1]	Cable group[1]	Number of contacts	ø A (mm)	Contacts type: Solder	Contacts type: Crimp	Test voltage (kV rms)	Test voltage (kV dc)	Rated current (A)
2N		**802**	1	50	A1	1-2-3	2	0.9	●	●	0.85	1.20	10
		804	1	50	A1	1-2-3	4	0.7	●	●	0.75	1.05	7
		806	1	50	A1	1-2-3	6	0.7	●	●	0.75	1.05	7
		810	1	50	C	1-2-3	10	0.7	●	●	0.95	1.35	7
		841	2	50	E	2	1	1.6	●	●	1.90	2.70	17
		232	2	50	G	–	–	–	–	–	–	–	–
		243	3	50	E	2	–	–	–	–	–	–	–
3N		**803**	1	50	A0	6	3	0.9	●	–	1.10	1.55	8
		806	1	50	A1	1-2-3	6	0.7	●	●	1.00	1.50	7
		809	1	50	A1	1-2-3	9	0.7	●	●	1.00	1.50	7
		812	1	50	A1	1-2-3	12	0.9	●	●	0.80	1.10	5
		813	1	50	A1	1-2-3	13	0.7	●	●	0.90	1.30	7
		822	1	50	C	1-2-3	22	0.7	●	●	0.70	1.00	5
		844	2	50	C	1-2-3	4	0.9	●	●	0.90	1.30	10
		846	2	50	C	1-2-3	6	0.9	●	●	0.90	1.30	10
		850	2	50	C	1-2-3	10	0.7	●	●	0.75	1.05	8
		856	2	50	C	1-2-3	16	0.7	●	●	0.70	1.00	7
		242	2	50	C	1-2-3	–	–	–	–	–	–	–
		243	3	50	C	1-2-3	–	–	–	–	–	–	–
		862	3	50	C	1-2-3	2	0.9	●	●	1.10	1.60	9

Note: [1] see coax, triax and hybrid catalogue.

● First choice alternative ○ Special order alternative

Multi coax, hybrid coax + LV

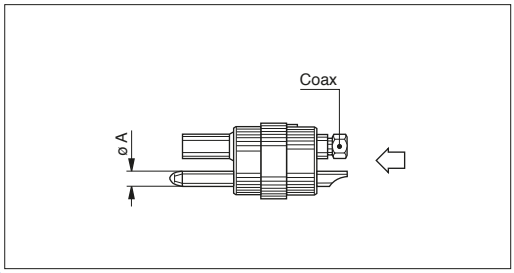


		Reference	Coax				Low voltage (LV)						
			Number of contacts	Impedance (Ω)	Type[1]	Cable group[1]	Number of contacts	ø A (mm)	Contacts type: Solder	Contacts type: Crimp	Test voltage (kV rms)	Test voltage (kV dc)	Rated current (A)
4N		**802** **822**	1	50 75	A A	5-6 4 to 6	2	0.9	●	●	1.00	1.40	12
		804 **824**	1	50 75	A A	5-6 4 to 6	4	0.9	●	●	1.00	1.40	10
		806 **826**	1	50 75	A A	5-6 4 to 6	6	0.9	●	●	1.00	1.40	10
		842	2	50	A1	1-2-3	2	0.9	●	●	1.70	2.40	12
		844	2	50	A1	1-2-3	4	0.9	●	●	1.70	2.40	10
		852	2	50	C	1-2-3	12	0.9	●	●	0.90	1.30	8
		856	2	50	C	1-2-3	16	0.9	●	●	0.90	1.30	8
		858	2	50	C	1-2-3	18	0.7	●	●	0.80	1.10	7
		866	3	50	C	1-2-3	6	0.7	●	●	0.80	1.10	7
		885	3	50	C	1-2-3	12	0.7	●	●	0.80	1.10	8
		244	4	50	C	1-2-3	–	–	–	–	–	–	–
		879	4	50	C	1-2-3	9	0.7	●	●	0.90	1.30	8
		890	6	50	E	2	18	0.7	●	○	0.90	1.30	5
		894	6	50	E	2	22	0.7	●	○	0.90	1.30	4
5N		**997**[2]	1	75	A4	N/A	32	1.3	●	○	1.20	1.70	8
		840	1	50	A	5-6	40	0.9	●	●	1.30	1.80	7

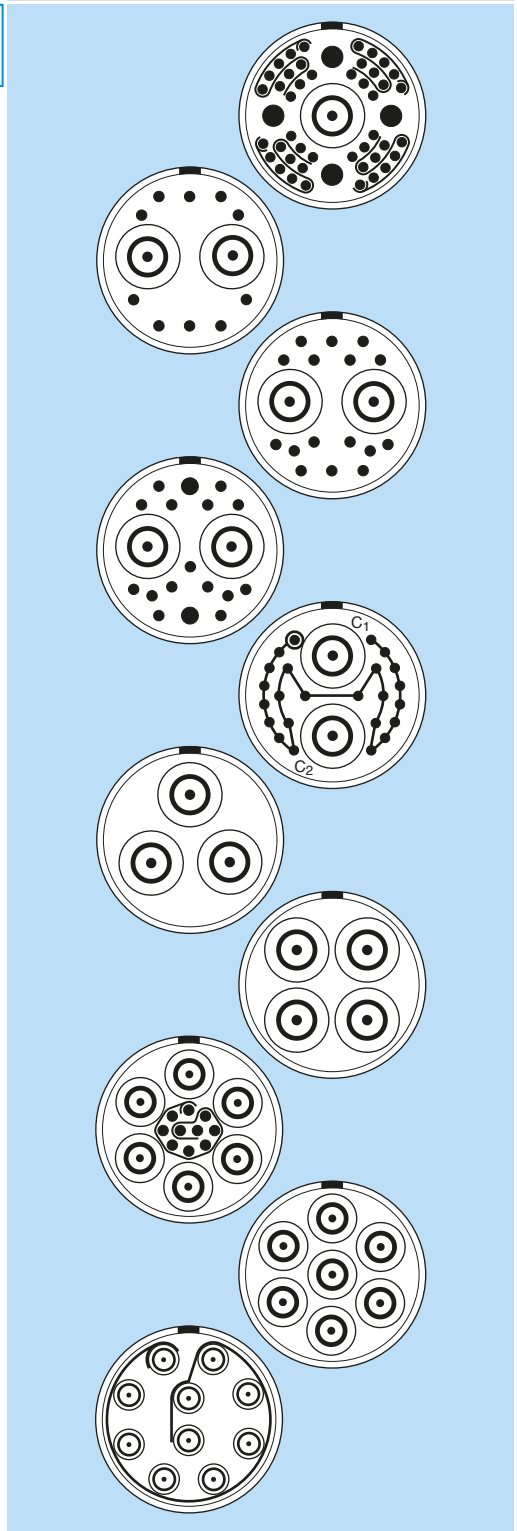
Note: [1] see coax, triax and hybrid catalogue.
[2] only available in 5B series. Solution for triaxial cable fixing.

● First choice alternative
○ Special order alternative

Multi coax, hybrid coax + LV



	Reference	Coax				Low voltage (LV)						
		Number of contacts	Impedance (Ω)	Type[1]	Cable group[1]	Number of contacts	ø A (mm)	Contacts type: Solder	Contacts type: Crimp	Test voltage (kV rms)	Test voltage (kV dc)	Rated current (A)
5N	**868** **878**	1	50 75	B B	6 3-5	4 44	3.0 0.9	●	○	0.80	1.15	35 6
	850 **870**	2	50 75	B B	6 3-5	10	0.9	○	●	1.40	2.00	8
	856 **876**	2	50 75	B B	6 3-5	16	0.9	○	●	1.40	2.00	7
	857 **877**	2	50 75	B B	6 3-5	2 15	2.0 0.9	○ ○	● ●	1.40 1.40	2.00 2.00	30 7
	864	2	75	B0	1-6	24	1.3	●	○	0.90	1.30	8
	273	3	75	B1	5	–	–	–	–	–	–	–
	274	4	75	B1	5	–	–	–	–	–	–	–
	892	6	75	D	5-8-9	10	0.9	●	○	0.70	1.00	7
	260	7	75	D	5-8-9	–	–	–	–	–	–	–
	240	10	50	C	1-2-3	–	–	–	–	–	–	–



Note: [1] see coax, triax and hybrid catalogue.

● First choice alternative ○ Special order alternative

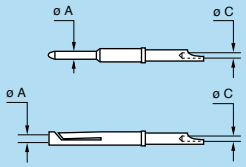
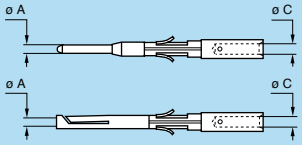
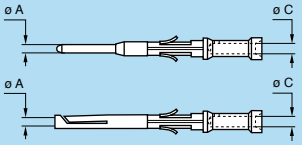
Insulators

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

Note: detailed characteristics of these materials are presented in the Unipole/Multipole catalogue.

Contacts

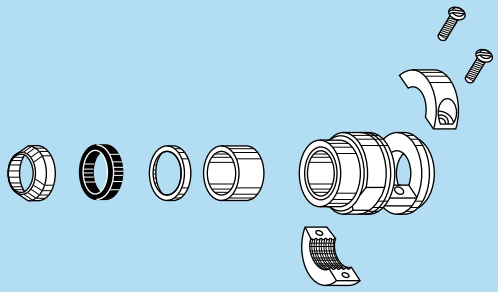
Contacts reference for plugs, free or fixed sockets

Contact type	Reference		Contact			Conductor						F_r [1] (N)	Notes
						Solid		Stranded					
								AWG		Section (mm²)			
	Male	Female	ø A (mm)	ø C (mm)	Form per fig.	AWG max.	Section max. (mm²)	min.	max.	min.	max.		
Solder 	**A**	**L**	0.5	0.45	–	28	0.09	–	28	–	0.09	–	
			0.7	0.80	–	22	0.34	–	22[2]	–	0.34	–	
			0.9	0.80	–	22	0.34	–	22[2]	–	0.34	–	
			1.3	1.00	–	20	0.50	–	20[2]	–	0.50	–	
			1.6	1.40	–	16	1.00	–	18	–	1.00	–	●
			2.0	1.80	–	14	1.50	–	16	–	1.50	–	
			3.0	2.70	–	10	4.00	–	12	–	4.00	–	
			4.0	3.70	–	10	6.00	–	10	–	6.00	–	
			6.0	5.20	–	–	–	–	8	–	10.00	–	
Crimp fig. 1 	**C**	**M**	0.7	0.80	1	–	–	26	22[2]	0.140	0.34	22	●
	B	**P**	0.7	0.45	2	–	–	32	28	0.035	0.09	22	○
	C	**M**	0.9	1.10	1	–	–	24	20	0.250	0.50	30	●
	B	**P**	0.9	0.80	2	–	–	26	22[2]	0.140	0.34	30	○
	G	**U**	0.9	0.45	2	–	–	32	28	0.035	0.09	30	○
	C	**M**	1.3	1.40	1	–	–	20	18	0.500	1.00	40	●
	B	**P**	1.3	1.10	2	–	–	24	20	0.250	0.50	40	○
	G	**U**	1.3	0.80	2	–	–	26	22[2]	0.140	0.34	40	○
fig. 2 	**C**	**M**	1.6	1.90	1	–	–	18	14[2]	1.000	1.50	50	●
	B	**P**	1.6	1.40	2	–	–	22	18	0.340	1.00	50	○
	C	**M**	2.0	2.40	1	–	–	16	12[2]	1.500	2.50	65	●
	B	**P**	2.0	1.90	2	–	–	18	14	1.000	1.50	65	○
	C	**M**	3.0	3.20	1	–	–	14	10[2]	2.500	4.00	75	●
	C	**M**	4.0	4.00	1	–	–	12	10	4.000	6.00	90	●

Note:
[1] contact retention force in the insulator (according to IEC 60512-8 test 15 a).
[2] for a given AWG, the diameter of some stranded conductor designs is larger than the solder cup diameter. Make sure that the maximum conductor diameter is smaller than ø C.

● First choice alternative ○ Special order alternative

Collets

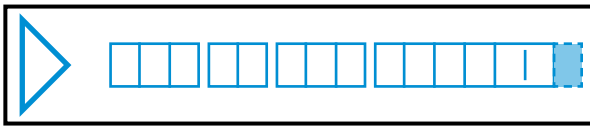


	Type	Cable ø (mm)	
		min.	max.
2N	Y80	7.6	8.0
	Y85	8.1	8.5
	Y90	8.6	9.0
	Y95	9.1	9.5
	Y10	9.6	10.5

	Type	Cable ø (mm)	
		min.	max.
3N	Y65	6.1	6.5
	Y70	6.6	7.0
	Y75	7.1	7.5
	Y80	7.6	8.0
	Y85	8.1	8.5
	Y90	8.6	9.0
	Y95	9.1	9.5
	Y10	9.6	10.5
	Y11	10.6	11.5
	Y12	11.6	12.5

	Type	Cable ø (mm)	
		min.	max.
4N	Y65	6.1	6.5
	Y70	6.6	7.0
	Y75	7.1	7.5
	Y80	7.6	8.0
	Y85	8.1	8.5
	Y90	8.6	9.0
	Y95	9.1	9.5
	Y10	9.6	10.5
	Y11	10.6	11.5
	Y12	11.6	12.5
	Y13	12.6	13.5
	Y14	13.6	14.5
	Y15	14.6	15.5
	Y16	15.6	16.5
	Y17	16.6	17.5

	Type	Cable ø (mm)	
		min.	max.
5N	Y95	9.1	9.5
	Y10	9.6	10.5
	Y11	10.6	11.5
	Y12	11.6	12.5
	Y13	12.6	13.5
	Y14	13.6	14.5
	Y15	14.6	15.5
	Y16	15.6	16.5
	Y17	16.6	17.5
	Y18	17.6	18.5
	Y19	18.6	19.5
	Y20	19.6	20.5
	Y21	20.6	21.5
	Y22	21.6	22.5
	Y23	22.6	23.5
	Y24	23.6	24.5
	Y25	24.6	25.5
	Y26	25.6	26.5
	Y27	26.6	27.5
	Y28	27.6	28.5
	Y30	28.6	30.0



Variant

Heatshrink boot

Ref.	Supplier part number	LEMO Part number	ø as delivered (mm)	Length (mm)	Cable ø (mm)
Y	Raychem® – WCSF-115-9/3-350/N	GMA.90.028.SN	9	28	2.9 to 7.3
	Raychem® – WCSF-300-28/8-350/N	GMA.91.028.SN	28	28	7.9 to 19
	Raychem® – WCSF-500-38/13-350/N	GMA.92.028.SN	38	28	14 to 32

Watertight and vacuumtight socket

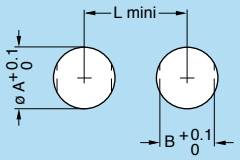
Ref.	Materials
PV	O-ring is in EPDM, potting is done with our standard solution and uses two compound Araldite. Other potting solutions available on request & based on your application (i.g rad-hard)

Tooling

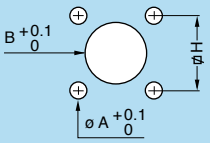
The tools for the crimp contacts are given in the Unipole/Multipole connectors catalogue.

Panel cut-outs

P1-P2



P3-P4



Series	P1			P2			P3			P4		
	ø A	B	L	ø A	B	L	ø A	B	H	ø A	B	H
2N	21.1	18.5	32	–	–	–	–	–	–	–	–	–
3N	24.2	22.5	37	30.2	28.6	45	3.3	24	27	–	–	–
4N	30.2	28.5	45	40.2	38.1	54	4.3	30	35	–	–	–
5N	45.2	42.5	58	55.2	52.1	69	5.3	45	46	5.3	45	46

Model	Type
AJG	P2
AJY	P2
ASG	P1
ASY	P1

Model	Type
EDG	P3
EDU	P4
EDY	P3
HSG	P1

Model	Type
HSY	P1
PBG	P3

Technical characteristics of plastic materials

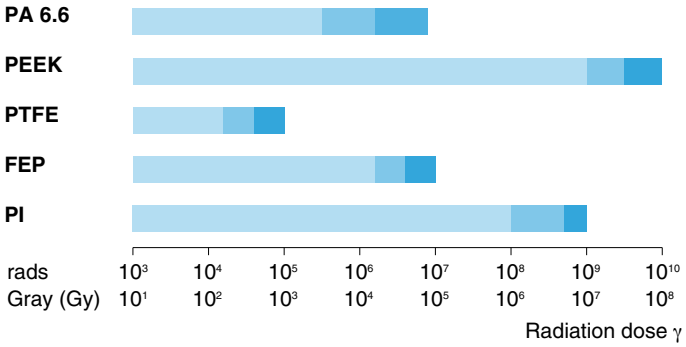
Type	Standard	Units	PEEK	EPDM	Epoxy
Density	ASTM D 792	g/cm^3	1.3-1.4	~1.13	1.58
Tensile strength (at 23°C)	ASTM D 638/ ISO R527	MPa	92-142	12-15	16
Flexurale strength (at 23°C)	ASTM D 790/ ISO R178	MPA	170	–	24
Dielectric strength	ASTM D 149/IEC 60243	kV/mm	19-25	–	15
Volume resis. at 50% HR and 23°C	ASTM D 257/IEC 60093	Ω • cm	10^{16}	10^{16}	10^{14}
Surface resistivity	ASTM D 257	Ω	10^{15}	–	–
Thermal conductivity	ASTM C 177	W/K • m	0.25	0.15-0.26	0.8
Comparative tracking index	IEC 60112	V	CTI 150	–	CTI>600
Maxi. continuous service temperature	UL 746	°C	250	160	80
Min. continuous service temperature	UL 746	°C	-55	-40	-20
Max. short-time service temperature	–	°C	300	180	120
Water absorption in 24h at 23°C	ASTM D 570/ISO R62A	%	0.12	–	0.25
Radiation resistance	–	Gy[1)]	10^7	8x10^7	2x10^6
Flammability rating	ASTM D 635/UL 94	–	V-0/1.5	–	V-0/4
Resistance to steam sterilization	–	–	excel.	excel.	bad

Notes: [1)] 1 Gy (Gray) = 100 rad.

ASTM = American Society for Testing Material
ISO = International Standards Organisation

UL = Underwriters Laboratories
IEC = International Electrotechnical Commission

Radiation resistance



Damage

- Minimum to slight (almost available usable)
- Slight to medium (often satisfactory)
- Medium to serious (not usable)