

**HIGH PRESSURE  
CONNECTORS  
V SERIES**



## Precision modular connectors to suit your application

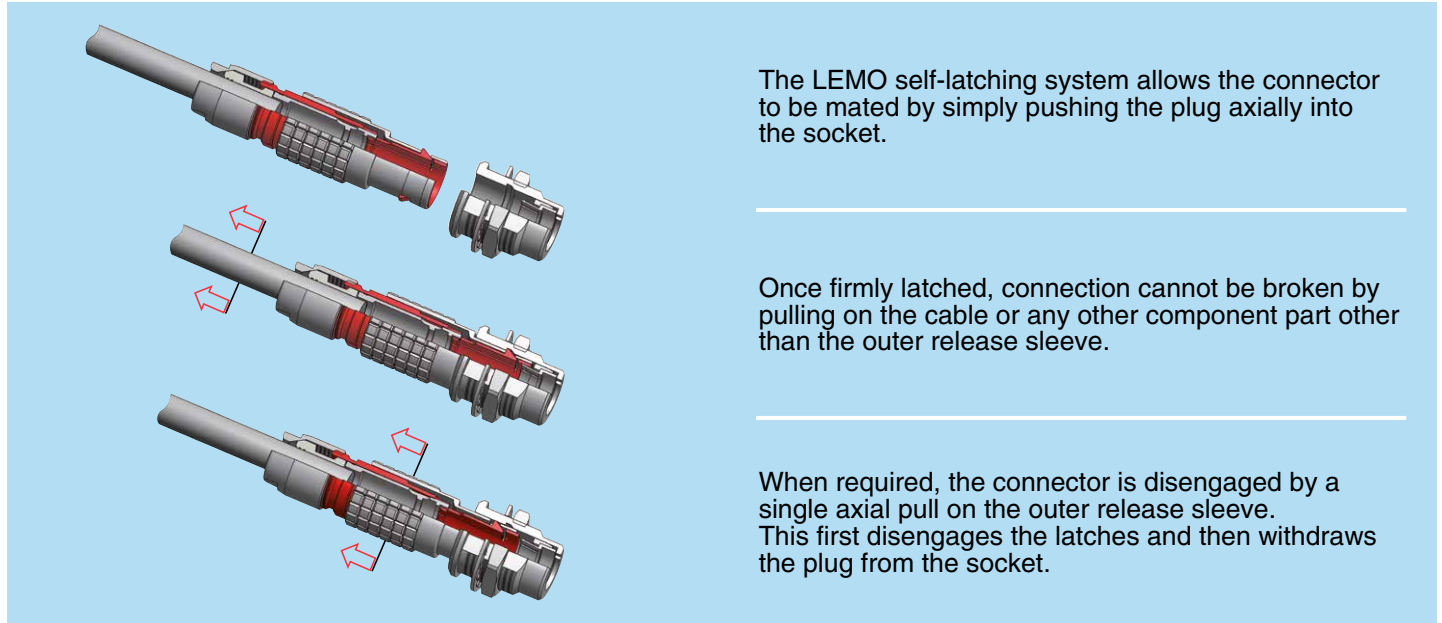
Since its creation in Switzerland in 1946 the LEMO Group has been recognized as a global leader of circular Push-Pull connectors and connector solutions. Today LEMO and its affiliated companies, REDEL and COELVER, are active in more than 80 countries with the help of over 40 subsidiaries and distributors.

## Over 75000 connectors

The modular design of the LEMO range provides over 75000 connectors from miniature  $\varnothing$  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 conform to 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.

## Product safety notice & disclaimers

Please read and follow all instructions specified on the last page or on our [website](http://www.lemo.com) carefully and consult all relevant national and international safety regulations for your application. Improper handling, cable assembly, or wrong use of connectors can result in hazardous situations.

LEMO products and services are provided "as is." LEMO makes no warranties or representations with regard to LEMO product & services or use of them, express, implied or statutory, including for accuracy, completeness, or security.

In no event shall LEMO be liable for any direct, indirect, punitive, incidental, special consequential damages, to property or life, whatsoever arising out of or connected with the use or misuse of LEMO's products.

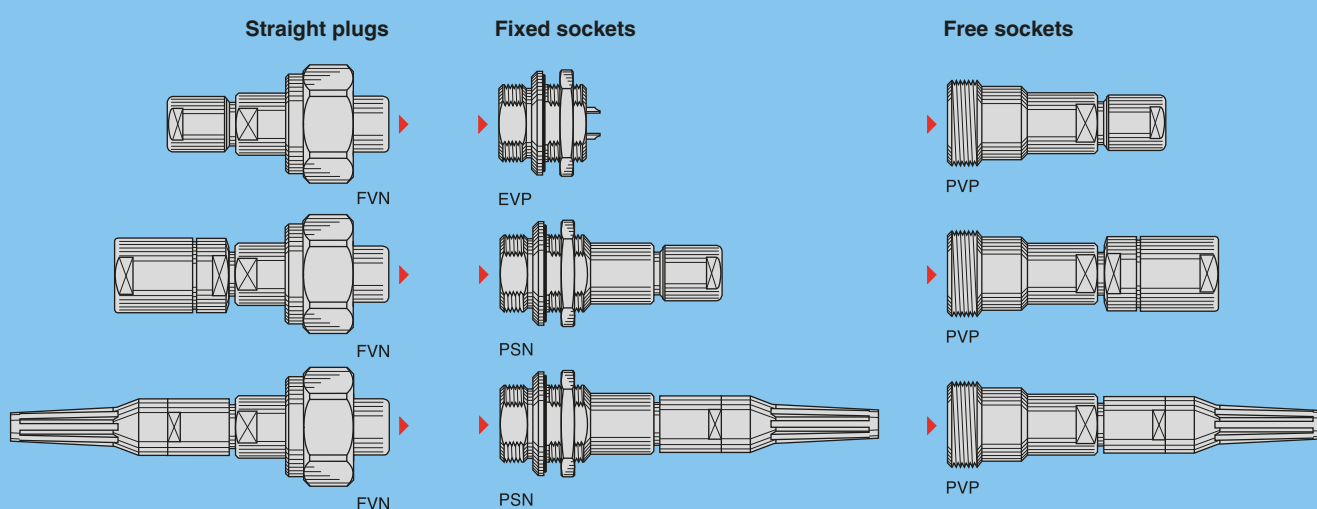
# V Series

V series connectors have been developed for utilisation where protection must be guaranteed under high pressures of liquids. The basic elements, insulators, contacts and clamping system are from the S and E series. The push-pull latching system has been replaced by a screw coupling system with watertightness maintained by compression of an O-ring in FPM (Viton®) according to the triangular shaped cavity principle. There are multiple application possibilities, from nuclear physics to the petroleum industry. After cable assembly the rear part must be covered with an adhesive heatshrink boot in order to ensure watertightness on the cable side. V series connectors provide the following main features:

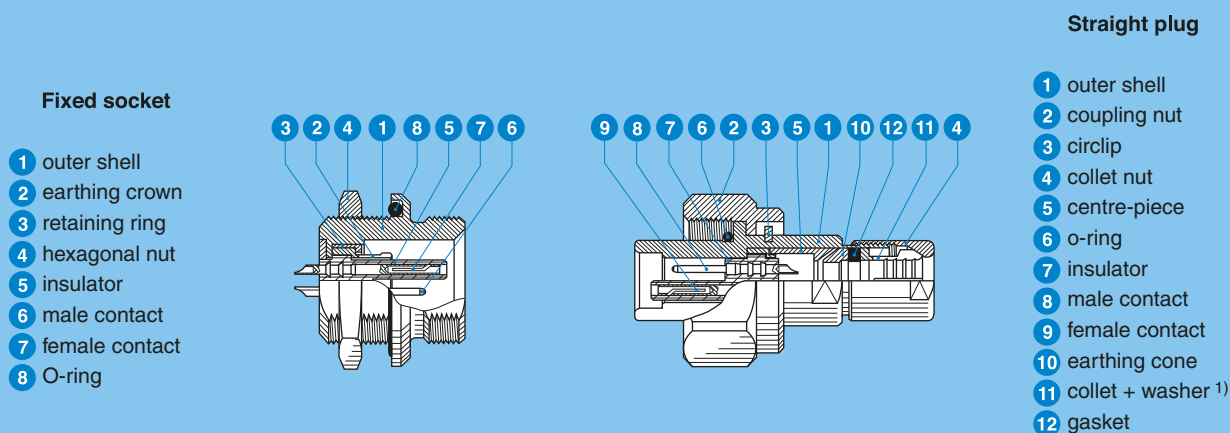
- unipole and multipole type
- coaxial, triaxial or hybrid type available upon request
- polarisation by stepped insert (half moon)
- 360° screening for full EMC shielding
- rugged housing for extreme working conditions.

## Interconnections

### Models (page 3)



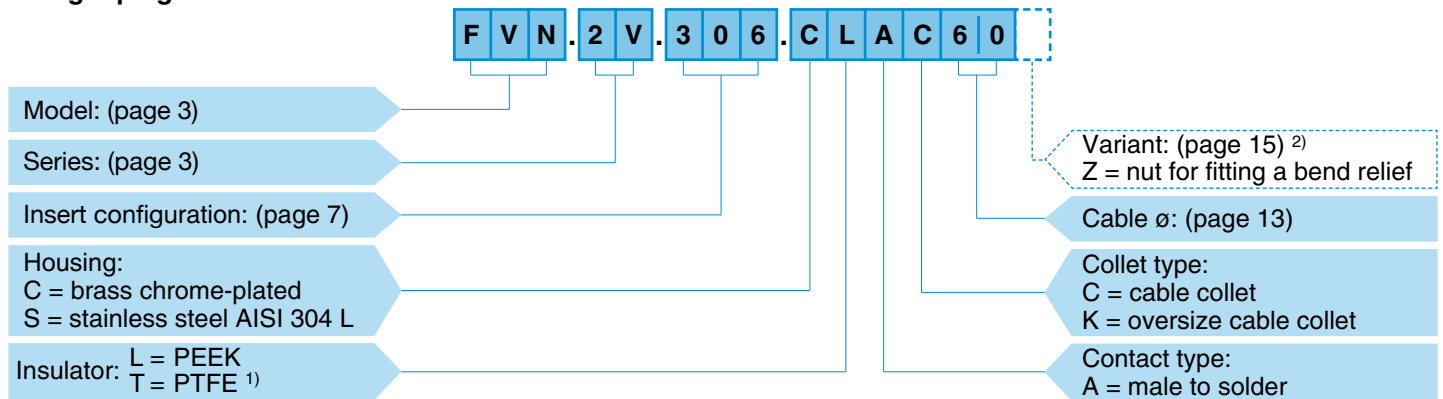
## Part Section Showing Internal Components (multipole)



**Note:** <sup>1)</sup> depending on models.

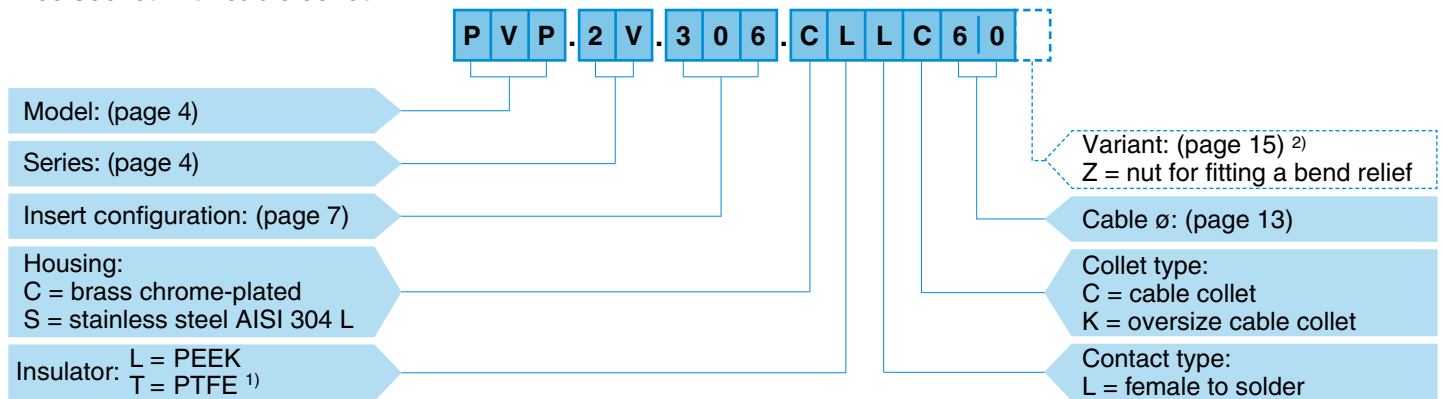
## Part Number Example

### Straight plug with cable collet



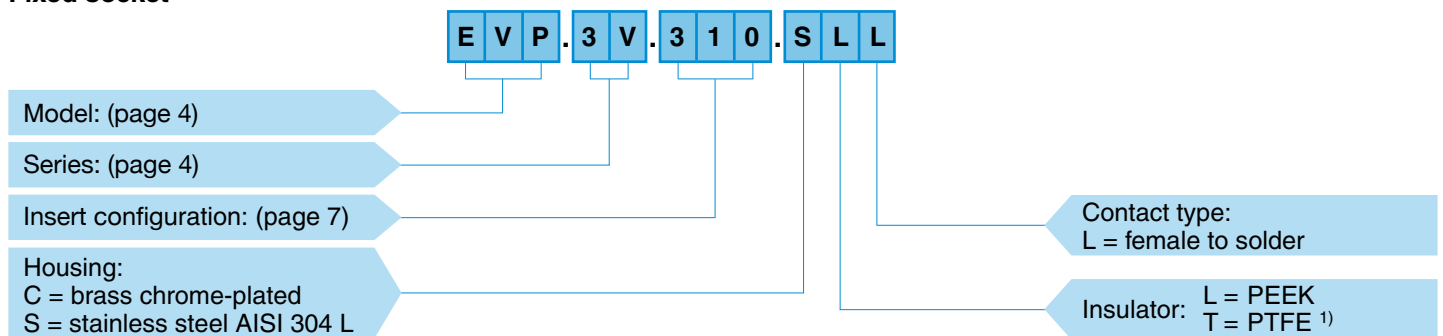
**FVN.2V.306.CLAC60** = straight plug with cable collet, 2V series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, C type collet for 6 mm diameter cable.

### Free socket with cable collet



**PVP.2V.306.CLLC60** = free socket with cable collet, 2V series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, female solder contacts, C type collet for 6 mm diameter cable.

### Fixed socket



**EVP.3V.310.SLL** = fixed socket, nut fixing, 3V series, multipole type with 10 contacts, outer shell in stainless steel, PEEK insulator, female solder contacts.

**Note:** <sup>1)</sup> PTFE insulator for unipole type only.

<sup>2)</sup> The «Variant» position in the reference is used to specify either the presence of a collet nut for fitting the bend relief.

For models with collet nut for fitting the bend relief, a «Z» should be indicated and a bend relief can be ordered separately. An order for a connector with bend relief should thus include two part numbers.



## Models

### Technical Characteristics

#### Mechanical and Climatical

Characteristics	Value	Standard
Endurance	> 1000 cycles	IEC 60512-5 test 9a
Temperature range <sup>3)</sup>	-20° C, +200° C	
Salt spray corrosion test <sup>2)</sup>	> 1000 h	IEC 60512-6 test 11f
Protection index (mated)	> IP 68	IEC 60529
Resistance to hydrostatic pressure (mated)	~ 30 bars <sup>1)</sup>	IEC 60512-7 test 14d
Climatical category	20/200/21	IEC 60068-1

#### Electrical

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

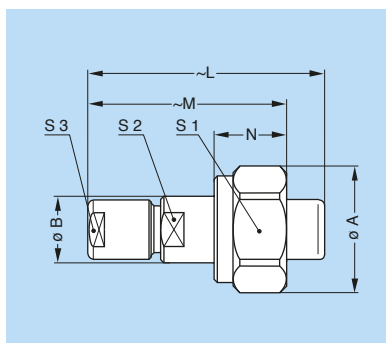
#### Note:

<sup>1)</sup> in order to perform correctly and withstand the pressure, cable assembly shall be made according to instruction we recommend. See page 18.

<sup>2)</sup> for chrome plated product (« C » material code).

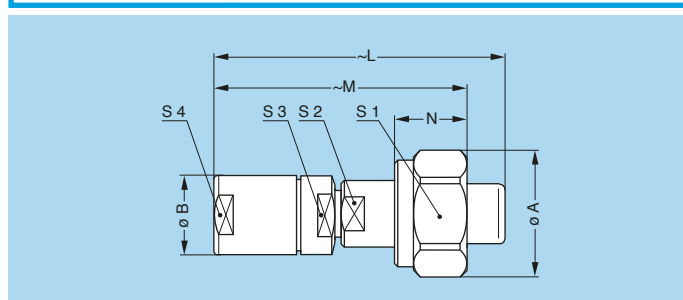
<sup>3)</sup> maximum temperature valid for short periods of use.

#### FVN Straight plug with cable collet



Reference		Dimensions (mm)							
Model	Series	A	B	L	M	N	S1	S2	S3
FVN	0V	17.2	10	34.0	29	13.5	16	9	8
FVN	1V	19.3	12	43.0	35	14.0	18	10	9
FVN	2V	23.5	16	52.5	42	15.5	22	14	12
FVN	3V	27.8	18	61.0	47	16.5	26	16	15
FVN	4V	34.3	24	71.0	57	17.5	32	22	19
FVN	5V	50.0	38	94.0	78	21.0	47	34	30

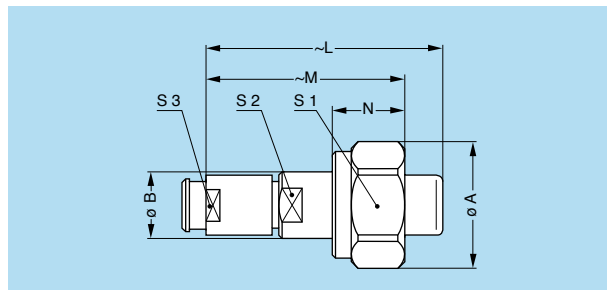
#### FVN Straight plug with oversize cable collet <sup>1)</sup>



Reference		Dimensions (mm)								
Model	Series	A	B	L	M	N	S1	S2	S3	S4
FVN	1V	19.3	14.5	55	47	14.0	18	10	12	12
FVN	2V	23.5	17.0	65	55	15.5	22	14	15	15
FVN	3V	27.8	22.0	80	66	16.5	26	16	19	19
FVN	4V	34.3	36.0	105	91	17.5	32	22	30	32

**Note:** <sup>1)</sup> correspond to K type of collet, the fitting of oversize collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 13).

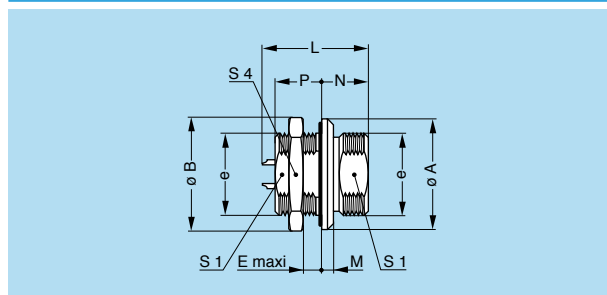
## FVN Straight plug, cable collet and nut for fitting a bend relief <sup>1)</sup>



Reference		Dimensions (mm)							
Model	Series	A	B	L	M	N	S1	S2	S3
FVN	0V	17.2	10	34	29	13.5	16	9	7
FVN	1V	19.3	12	43	35	14.0	18	10	9
FVN	2V	23.5	16	52	42	15.5	22	14	12
FVN	3V	27.8	18	60	47	16.5	26	16	15
FVN	4V	34.3	24	71	57	17.5	32	22	19

**Note:** <sup>1)</sup> to order, add a «Z» at the end of the reference.  
The bend relief must be ordered separately (see pages 141 and 142 of the unipole/multipole catalog).

## EVP Fixed socket, nut fixing

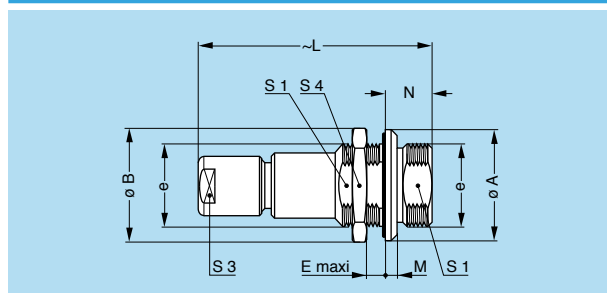


Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N	P	S1	S4
EVP	0V	19	19.2	M14x1.0	5.5	19.0	2.0	8.0	8.0	12.5	17
EVP	1V	21	21.5	M16x1.0	10.5	26.0	2.0	8.0	13.5	14.5	19
EVP	2V	26	27.0	M20x1.0	11.0	29.0	2.5	9.0	15.0	18.5	24
EVP	3V	31	34.0	M24x1.0	15.0	34.5	3.0	9.5	20.0	22.5	30
EVP	4V	38	40.5	M30x1.0	14.5	35.0	3.5	10.0	21.5	28.5	36
EVP	5V	55	54.0	M45x1.5	15.5	44.5	4.5	12.5	24.5	42.5	—

Panel cut-out (page 15)

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

## PSN Fixed socket, cable collet, nut fixing



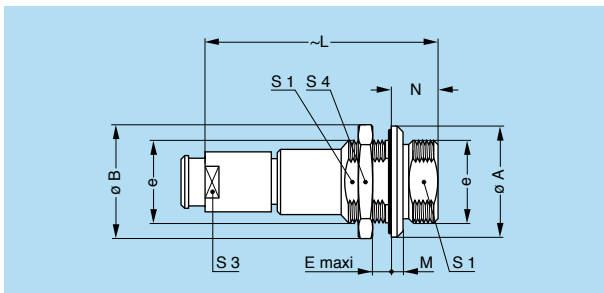
Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N	S1	S3	S4
PSN	0V	19	19.2	M14x1.0	5.5	34.0	2.0	8.0	12.5	8	17
PSN	1V	21	21.5	M16x1.0	10.5	46.0	2.0	8.0	14.5	9	19
PSN	2V	26	27.0	M20x1.0	11.0	54.0	2.5	9.0	18.5	12	24
PSN	3V	31	34.0	M24x1.0	15.0	65.0	3.0	9.5	22.5	15	30
PSN	4V	38	40.5	M30x1.0	14.5	75.5	3.5	10.0	28.5	19	36
PSN	5V	56	54.0	M45x1.5	15.5	95.0	4.5	12.5	42.5	30	—

Panel cut-out (page 15)

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



## PSN Fixed socket, cable collet, nut fixing and nut for fitting a bend relief <sup>1)</sup>

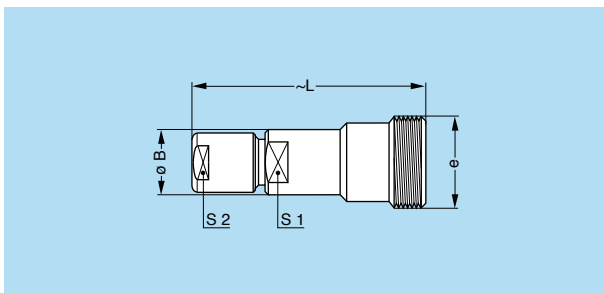


Reference		Dimensions (mm)									
Model	Series	A	B	e	E	L	M	N	S1	S3	S4
PSN	0V	19	19.2	M14x1.0	5.5	34.0	2.0	8.0	12.5	7	17
PSN	1V	21	21.5	M16x1.0	10.5	46.0	2.0	8.0	14.5	9	19
PSN	2V	26	27.0	M20x1.0	11.0	54.0	2.5	9.0	18.5	12	24
PSN	3V	31	34.0	M24x1.0	15.0	64.0	3.0	9.5	22.5	15	30
PSN	4V	38	40.5	M30x1.0	14.5	75.5	3.5	10.0	28.5	19	36

Panel cut-out (page 15)

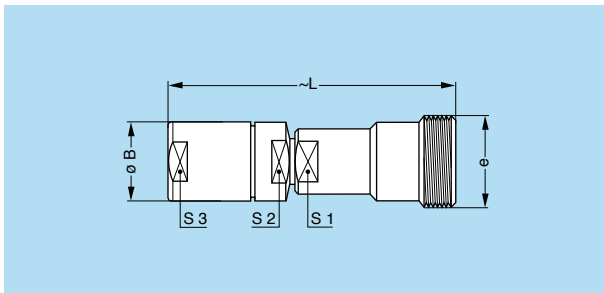
**Note:** <sup>1)</sup> to order, add a «Z» at the end of the reference. The bend relief must be ordered separately (see pages 141 and 142 of the unipole/multipole catalog).

## PVP Free socket with cable collet



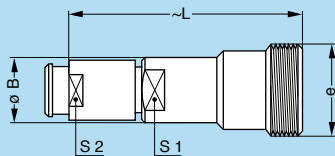
Reference		Dimensions (mm)					
Model	Series	B	e	L	S1	S2	S3
PVP	0V	10	M14x1.0	34.0	9	8	
PVP	1V	12	M16x1.0	45.0	10	9	
PVP	2V	16	M20x1.0	54.0	14	12	
PVP	3V	19	M24x1.0	65.0	16	15	
PVP	4V	24	M30x1.0	75.5	22	19	
PVP	5V	38	M45x1.5	95.0	34	30	

## PVP Free socket with oversize cable collet <sup>1)</sup>

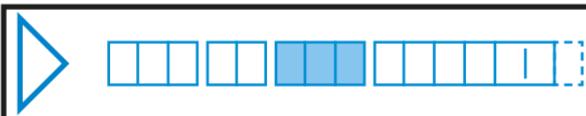


Reference		Dimensions (mm)						
Model	Series	B	e	L	S1	S2	S3	S4
PVP	1V	14.5	M16x1.0	58	10	12	12	
PVP	2V	17.0	M20x1.0	67	14	15	15	
PVP	3V	22.0	M24x1.0	84	16	19	19	
PVP	4V	36.0	M30x1.0	109	22	30	32	

**Note:** <sup>1)</sup> correspond to K type of collet, the fitting of oversize collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 13).

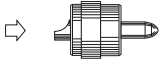
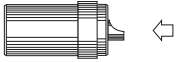







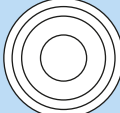

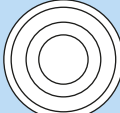
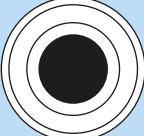
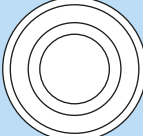


**Note:** <sup>1)</sup> to order, add a «Z» at the end of the reference.  
The bend relief must be ordered separately (see pages 141 and 142 of the unipole/multipole catalog).



## Insert configuration

### Unipole

Number of LV contacts	Solder contacts		Reference	Watertight	Contact ø (mm)	Solder	AWG solder (max.)	Test voltage (kV DC) <sup>1)</sup>	Rated current (A) <sup>1)</sup>
									
1			116	0V	1.6	● <sup>2)</sup>	18	2.1	12
			120	1V	2.0	● <sup>2)</sup>	16	2.7	18
			130	1V	3.0	●	12	2.1	25
				2V	3.0	●	12	3.0	30
			140	2V	4.0	●	10	2.4	40
				3V	4.0	●	10	3.3	43
			160	3V	6.0	●	8	2.4	65
				4V	6.0	●	8	3.9	70
			112	5V	12.0	●	0	2.1	230

**Note:** <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> also available with inversed contacts: plug = female, socket = male.

● First choice alternative    ○ Special order alternative

### Coaxial, Triaxial, Hybrid

A wide choice of those types is available, please consult us.

## Multipole

Number of LV contacts	<div>Solder contacts</div>				Reference	Watertight	Contact ø (mm)	Contact type				AWG		Test voltage (kV DC) <sup>1)2)</sup>	Rated current (A) <sup>1)</sup>	
	<div>Crimp contacts</div>							Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	Crimp			
													min.			max.
2			302	0V	0.9	●	●	●	●	22	32	20	1.6	10 <sup>3)</sup>		
	1V	1.3		●	●	●	●	20	26	18	1.8	15 <sup>3)</sup>				
	2V	1.6		●	○	○	○	18	22	14	2.4	20 <sup>4)</sup>				
	3V	2.0		●	–	○	–	16	–	–	4.2	23				
	4V	4.0		●	–	○	–	10	–	–	3.0	35				
	5V	6.0		●	–	–	–	8	–	–	5.2	50				
3			303	0V	0.7	●	○	●	●	26	32	22	1.5	7 <sup>3)</sup>		
	1V	0.9		●	○	●	●	22	32	20	1.8	10 <sup>3)</sup>				
	2V	1.3		●	○	●	○	20	26	18	2.1	15 <sup>4)</sup>				
	3V	2.0		●	–	○	–	16	–	–	2.1	20				
	4V	3.0		●	–	○	–	12	–	–	3.0	25				
	5V	1x6.0 2x4.0		●	–	–	–	8 10	–	–	5.2	50 35				
4			304	0V	0.7	●	●	●	●	26	32	22	1.5	7 <sup>3)</sup>		
	1V	0.9		●	●	●	●	22	32	20	1.8	10 <sup>3)</sup>				
	2V	1.3		●	○	●	●	20	26	18	2.4	15 <sup>4)</sup>				
	3V	2.0		●	–	○	–	16	–	–	2.1	18				
	4V	3.0		●	–	○	–	12	–	–	3.0	22				
	5V	4.0		●	–	–	–	10	–	–	5.2	35				
5			305	1V	2x0.9 3x0.7	●	○	●	●	22 26	32	20 22	2.1	10 <sup>3)</sup> 7 <sup>3)</sup>		
	2V	1.3		●	○	●	●	20	26	18	2.1	13 <sup>4)</sup>				
	3V	2x2.0 3x1.3		●	–	○	–	16 20	–	–	2.1	18 14				
	4V	2x3.0 3x2.0		●	–	○	–	12 16	–	–	3.0	22 16				
	5V	2x4.0 3x3.0		●	–	–	–	10 12	–	–	4.2	35 25				

**Note:** <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> lowest measured value; contact to contact or contact to shell.  
<sup>3)</sup> rated current = 6A for socket with elbow (90°) contacts for printed circuit. <sup>4)</sup> rated current = 12A for socket with elbow (90°) contacts for printed circuit.

● First choice alternative    ○ Special order alternative



## Multipole

Number of LV contacts	Solder contacts		Reference	Watertight	Contact ø (mm)	Contact type				AWG		Test voltage (kV DC) <sup>1)2)</sup>	Rated current (A) <sup>1)</sup>	
	Crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	Crimp			
											min.	max.		
6			306	1V	0.7	●	○	●	●	26	32	22	1.7	7 <sup>3)</sup>
				2V	1.3	●	● <sup>4)</sup>	●	●	20	26	18	2.1	12
				3V	1.3	●	—	●	—	20	—	—	3.0	14
				4V	2.0	●	—	○	—	16	—	—	3.0	16
				5V	3.0	●	—	—	—	12	—	—	4.2	25
7			307	2V	3x1.3 4x0.9	●	○	●	●	20 22	26 32	18 20	1.2	12 <sup>3)</sup> 9 <sup>3)</sup>
				3V	1.3	●	—	●	—	20	—	—	1.5	12
				4V	3x2.0 4x1.3	●	—	○	—	16 20	—	—	3.0	16 13
8			308	2V	0.9	●	○	●	●	22	32	20	1.2	9 <sup>3)</sup>
				3V	1.3	●	—	●	○	20	—	—	1.5	10
				4V	1.3	●	—	○	—	20	—	—	3.9	13
				5V	3.0	●	—	—	—	12	—	—	3.0	22
9			309	4V	1.3	●	—	○	—	20	—	—	3.0	12
10			310	2V	0.9	●	○	●	●	22	32	20	1.2	7 <sup>3)</sup>
				3V	1.3	●	—	●	●	20	—	—	1.5	9
10			310	4V	1.3	●	—	○	—	20	—	—	3.0	11
				5V	2.0	●	—	—	—	16	—	—	3.0	18

**Note:** <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> lowest measured value; contact to contact or contact to shell.

<sup>3)</sup> rated current = 6A for socket with elbow (90°) contacts for printed circuit. <sup>4)</sup> only for FFL model.

● First choice alternative    ○ Special order alternative

## Multipole

Number of LV contacts	Solder contacts		Reference	Watertight	Contact ø (mm)	Contact type				AWG		Test voltage (kV DC) <sup>1)2)</sup>	Rated current (A) <sup>1)</sup>	
	Crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	Crimp min. max.			
12			312											
				3V	0.9	●	–	●	●	22	–	–	2.1	8
12			312											
				4V	1.3	●	–	○	–	20	–	–	3.0	9
12			312											
				5V	2.0	●	–	–	–	16	–	–	3.0	18
13			313											
				3V	0.9	●	–	●	○	22	–	–	2.1	8
14			314											
				3V	0.9	●	–	●	●	22	–	–	2.1	7
14			314											
				4V	1.3	●	–	○	–	20	–	–	3.0	9
14			314											
				5V	2X3.0 12X2.0	●	–	–	–	12 16	–	–	2.4	20 15

**Note:** <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> lowest measured value; contact to contact or contact to shell.

● First choice alternative    ○ Special order alternative



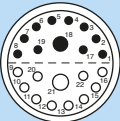
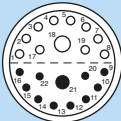
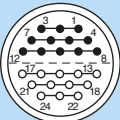

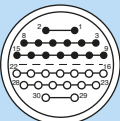
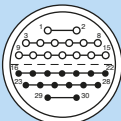
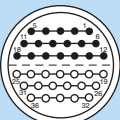
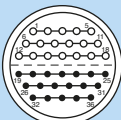
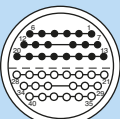
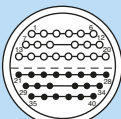
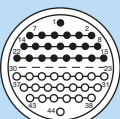
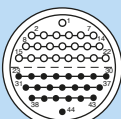
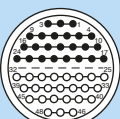
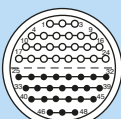
## Multipole

Number of LV contacts	Solder contacts		Reference	Watertight	Contact ø (mm)	Contact type				AWG		Test voltage (kV DC) <sup>1/2)</sup>	Rated current (A) <sup>1)</sup>	
	Crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	Crimp			
	min.	max.												
16			316											
				3V	0.9	●	—	●	●	22	—	—	1.5	7
				4V	0.9	●	—	○	—	22	—	—	3.0	7
16			316											
				5V	2.0	●	—	—	—	16	—	—	2.4	15
18			318											
				3V	0.9	●	—	●	○	22	—	—	1.5	6
				4V	0.9	●	—	○	—	22	—	—	3.0	7
18			318											
				5V	2x3.0 16x1.6	●	—	—	—	12 18	—	—	2.4	18 11
20			320											
				4V	0.9	●	—	○	—	22	—	—	3.0	7
20			320											
				5V	1.6	●	—	—	—	18	—	—	2.4	11
22			322											
				4V	0.9	●	—	○	—	22	—	—	3.0	7

Note: <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> lowest measured value; contact to contact or contact to shell.

● First choice alternative    ○ Special order alternative

## Multipole

Number of LV contacts	Solder contacts		Reference	Watertight	Contact ø (mm)	Contact type				AWG		Test voltage (kV DC) <sup>(1) (2)</sup>	Rated current (A) <sup>(1)</sup>	
	Crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Solder (max.)	Crimp min. max.			
22			322											
				5V	2x3.0 20x1.6	●	–	–	–	12 18	–	–	2.4	16 9
24			324											
				4V	0.9	●	–	○	–	22	–	–	3.0	7
				5V	1.6	●	–	–	–	18	–	–	3.9	9
30			330											
				5V	1.3	●	–	–	–	20	–	–	2.4	8
36			336											
				5V	1.3	●	–	–	–	20	–	–	2.4	7
40			340											
				5V	1.3	●	–	–	–	20	–	–	1.8	7
44			344											
				5V	1.3	●	–	–	–	20	–	–	1.8	6
48			348											
				5V	1.3	●	–	–	–	20	–	–	1.8	6

Note: <sup>1)</sup> see calculation method, caution and suggested standard. <sup>2)</sup> lowest measured value; contact to contact or contact to shell.

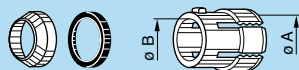
● First choice alternative    ○ Special order alternative



## Collets

### C and K type collets

0V, 1V, 2V and 3V series



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

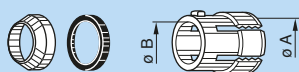
	Reference		Collet ø		Cable ø	
	Type	Code	ø A	ø B	max.	min.
2V	C	65	7.2	–	6.5	6.1
	C	70	7.2	–	7.0	6.6
	C	75	8.2	8.2	7.5	7.1
	C	80	8.2	8.2	8.0	7.6
	C	85	9.2	8.6	8.5	8.1
	K	90	9.2	–	9.0	8.6
	K	95	10.2	10.2	9.5	9.1
	K	10	10.2	10.2	10.0	9.6
	K	11	11.2	10.6	10.5	10.1
	K	12	13.8	13.8	12.8	12.1
3V	C	65	7.2	–	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
	C	12	13.8	13.8	12.8	12.1

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

<sup>1)</sup> the inner diameter of the smallest bend relief available is 2.5 mm (in TPU) / 1.7 mm (in silicone).

## C and K type collets

4V series



Reference		Collet ø		Cable ø	
Type	Code	ø A	ø B	max.	min.
4V	C 50	6.3	—	5.0	4.8
	C 55	6.3	—	5.5	5.1
	C 60	6.3	—	6.0	5.6
	C 65	7.3	—	6.5	6.1
	C 70	7.3	—	7.0	6.6
	C 75	8.3	—	7.5	7.1
	C 80	8.3	—	8.0	7.6
	C 85	9.3	—	8.5	8.1
	C 90	9.3	—	9.0	8.6
	C 95	10.8	—	9.5	9.1
	C 10	10.8	—	10.5	9.6
	C 11	12.3	—	12.0	10.6
	C 12	13.8	13.8	12.8	12.1
	C 13	13.8	13.8	13.5	12.9
	C 14	15.3	15.3	14.0	13.6
	C 15	15.3	15.3	15.0	14.1
	K 16	17.8	—	16.5	15.6
	K 17	17.8	—	17.5	16.6
	K 18	19.8	—	18.5	17.6
	K 19	19.8	—	19.5	18.6
	K 20	21.8	—	20.5	19.6
	K 21	21.8	—	21.5	20.6
	K 22	23.8	23.8	22.5	21.6
	K 23	23.8	23.8	23.5	22.6

5V series



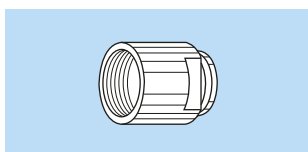
Reference		Collet ø		Cable ø	
Type	Code	ø A	ø B	max.	min.
5V	C 14	15.8	—	14.5	13.6
	C 15	15.8	—	15.5	14.6
	C 16	17.8	—	16.5	15.6
	C 17	17.8	—	17.5	16.6
	C 18	19.8	—	18.5	17.6
	C 19	19.8	—	19.5	18.6
	C 20	21.8	—	20.5	19.6
	C 21	21.8	—	21.5	20.6
	C 22	23.8	23.8	22.5	21.6
	C 23	23.8	23.8	23.5	22.6

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

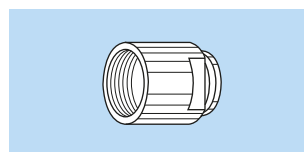


## Variant

### Bend relief for models with collet



	Ref.	Collet	
		Type	Code
<b>0V</b>	<b>z</b>	C	35 to 45
		K	50
<b>1V</b>	<b>z</b>	C	35 to 65
		K	70 to 85
<b>2V</b>	<b>z</b>	C	65 to 85
		K	90 to 10



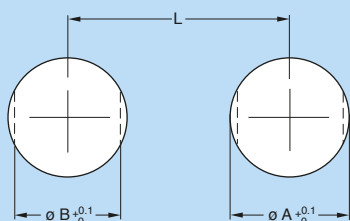
	Ref.	Collet	
		Type	Code
<b>3V</b>	<b>z</b>	C	65 to 10
		K	11 to 15
<b>4V</b>	<b>z</b>	C	65 to 15

**Note:** The bend relief must be ordered separately (see pages 141 and 142 of the unipole/multipole catalog). All dimensions are in millimetres.

## Panel cut-outs

### Panel Cut-outs

EVP, PSN



Series	Dimensions (mm)		
	A	B	L
<b>0V</b>	14.1	12.6	19.0
<b>1V</b>	16.1	14.6	21.0
<b>2V</b>	20.2	18.6	25.5
<b>3V</b>	24.2	22.6	30.0
<b>4V</b>	30.2	28.6	37.0
<b>5V</b>	45.2	42.6	53.0

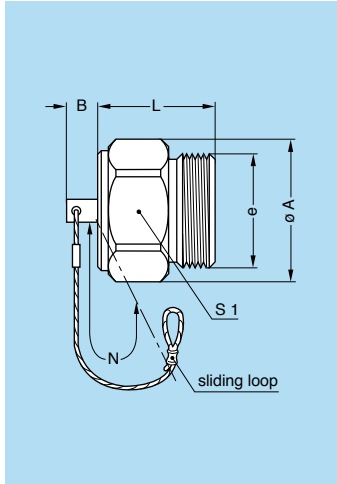
### Mounting nuts torque

Component	Torque (Nm)					
	0V	1V	2V	3V	4V	5V
Collet nut for F●● and P●●	0.7	0.8	2	3	5	8
Mounting hex nut for sockets	7	9	11	14	19	24
Coupling nut	5	7	9	12	17	22

1N = 0.102 kg

## Accessories

### BFA Plug caps (IP68 and resistance to hydrostatic pressure 30 bars)

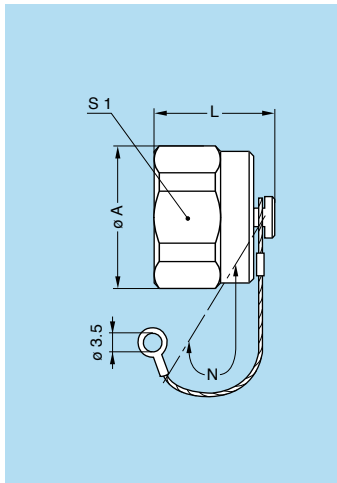


Part number	Series	Dimensions (mm)					
		A	B	e	L	N <sup>1)</sup>	S1
<b>BFA.0V.100.●AZ</b>	0V	17.2	6	M14x1.0	12.5	85	16
<b>BFA.1V.100.●AZ</b>	1V	19.3	6	M16x1.0	15.5	85	18
<b>BFA.2V.100.●AZ</b>	2V	23.5	6	M20x1.0	17.5	85	22
<b>BFA.3V.100.●AZ</b>	3V	27.8	6	M24x1.0	22.0	120	26
<b>BFA.4V.100.●AZ</b>	4V	34.3	10	M30x1.0	22.5	120	32
<b>BFA.5V.100.●AZ</b>	5V	50.0	10	M45x1.5	27.0	120	47

**Note:** 1) the tolerance on this dimension is  $\pm 5$  mm.

- Body material: ● = N, nickel-plated brass (Ni 3µm)  
● = S, stainless steel
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass

### BRE Blanking caps for fixed sockets (This cap is only IP68 when installed)

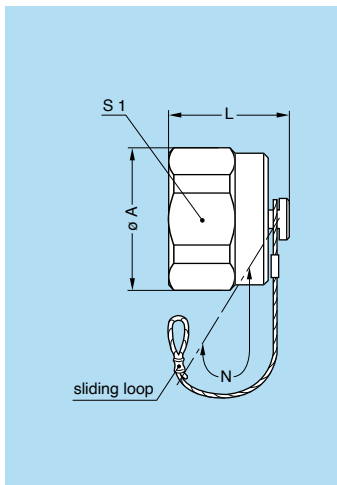


Part number	Series	Dimensions (mm)			
		A	L	N <sup>1)</sup>	S1
<b>BRE.0V.200.●AV</b>	0V	17.2	13.7	85	16
<b>BRE.1V.200.●AV</b>	1V	19.3	13.7	85	18
<b>BRE.2V.200.●AV</b>	2V	23.5	14.7	85	22
<b>BRE.3V.200.●AV</b>	3V	27.8	14.7	120	26
<b>BRE.4V.200.●AV</b>	4V	34.3	14.7	120	32
<b>BRE.5V.200.●AV</b>	5V	50.0	16.2	120	47

**Note:** 1) the tolerance on this dimension is  $\pm 5$  mm.

- Body material: ● = N, nickel-plated brass (Ni 3µm)  
● = S, stainless steel
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass
- O-ring: FPM (Viton®)

### BRF Blanking caps for free sockets (This cap is only IP68 when installed)

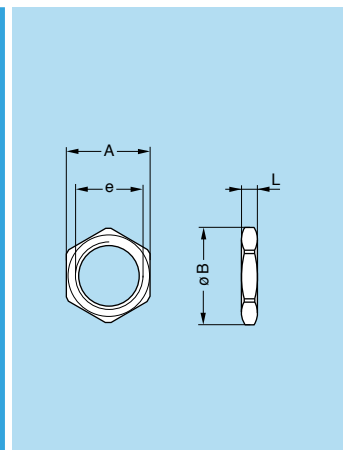


Part number	Series	Dimensions (mm)			
		A	L	N <sup>1)</sup>	S1
<b>BRF.0V.200.●AV</b>	0V	17.2	13.7	85	16
<b>BRF.1V.200.●AV</b>	1V	19.3	13.7	85	18
<b>BRF.2V.200.●AV</b>	2V	23.5	14.7	85	22
<b>BRF.3V.200.●AV</b>	3V	27.8	14.7	120	26
<b>BRF.4V.200.●AV</b>	4V	34.3	14.7	120	32
<b>BRF.5V.200.●AV</b>	5V	50.0	16.2	120	47

**Note:** 1) the tolerance on this dimension is  $\pm 5$  mm.

- Body material: ● = N, nickel-plated brass (Ni 3µm)  
● = S, stainless steel
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass
- O-ring: FPM (Viton®)

## GEA Hexagonal nuts

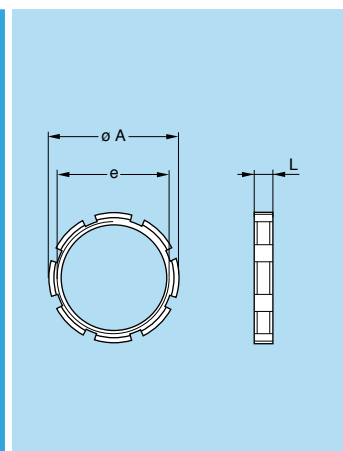


Part number	Series	Dimensions (mm)			
		A	B	e	L
<b>GEA.0E.240.LN</b>	0V	17	19.2	M14 x 1.00	2.5
<b>GEA.1E.240.LN</b>	1V	19	21.5	M16 x 1.00	3.0
<b>GEA.2E.240.LN</b>	2V	24	27.0	M20 x 1.00	4.0
<b>GEA.3E.240.LN</b>	3V	30	34.0	M24 x 1.00	5.0
<b>GEA.4E.240.LN</b>	4V	36	40.5	M30 x 1.00	7.0

**Note:** to order this part separately, use the above part numbers. The last letters «LN» of the part number refer to the nut material and treatment. If a nut in stainless steel is desired, replace the last letters of the part number by «AZ».

- Material:
  - Nickel-plated brass (3 µm)
  - Stainless steel

## GEB Round nuts

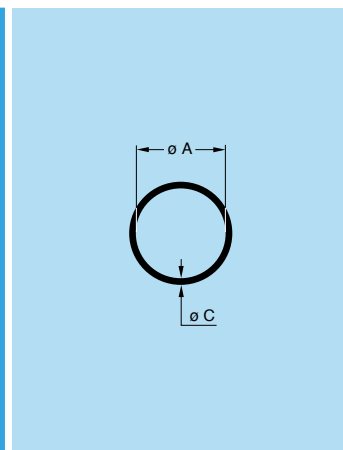
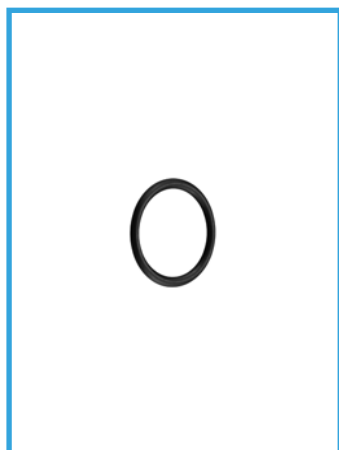


Part number	Series	Dimensions (mm)		
		A	e	L
<b>GEB.5E.240.LN</b>	5V	54	M45 X 1.5	8.0

**Note:** to order this part separately, use the above part numbers. The last letters «LN» of the part number refer to the nut material and treatment. If a nut in stainless steel is desired, replace the last letters of the part number by «AZ».

- Material:
  - Nickel-plated brass (3 µm)
  - Stainless steel

## GDA O-ring for plug



Part number	Series	Dim. (mm)	
		A	C
<b>GDA.99.080.100VK</b>	0V	8.0	1.0
<b>GDA.99.100.100VK</b>	1V	10.0	1.0
<b>GDA.99.130.150VK</b>	2V	13.0	1.5
<b>GDA.99.165.150VK</b>	3V	16.5	1.5
<b>GDA.99.210.200VK</b>	4V	21.0	2.0
<b>GDA.99.330.250VK</b>	5V	33.0	2.5

- Material: FPM (Viton®)

## Cable assembly

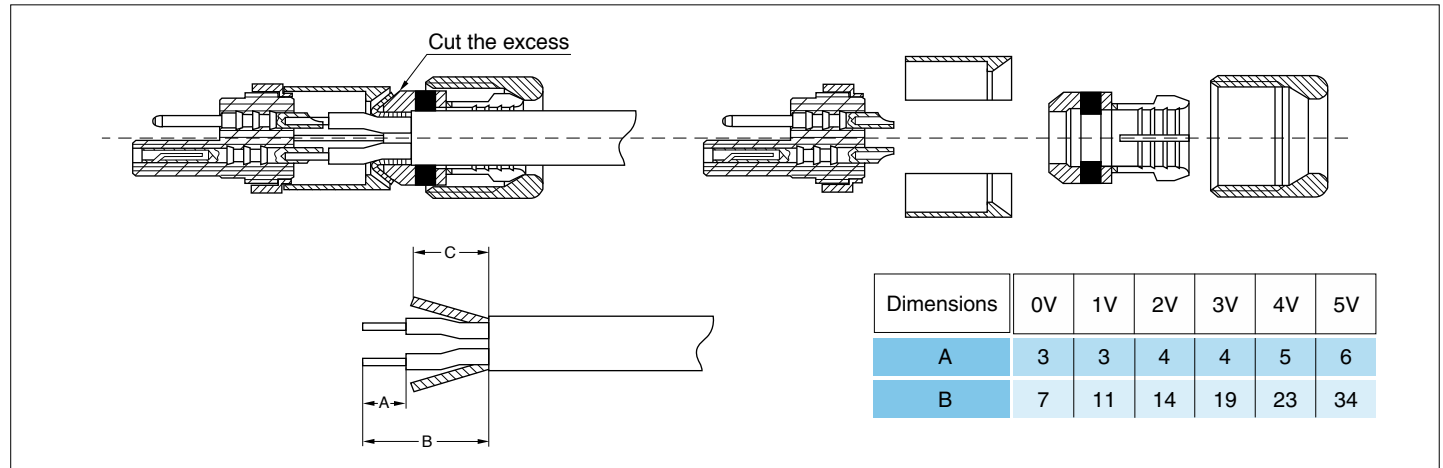
### Assembly instructions

In order to ensure the sealing of plugs and sockets on the cable side, it is imperatively necessary to complete their assembly by realizing it with an adapted technique.

We recommend the fitting of an heatshrink boot with inner melting coating of type ATUM (manufactured by the RAYCHEM company) or similar.

**This heatshrink boot is not provided with the connector.**

For multiconductors cables, the assembly instructions are the followings:



- 1) Preparation and stripping of cable (see above).
- 2) Slide the heatshrink boot over the cable; types and dimensions to have are:

Series	0V	1V	2V	3V	4V	5V
Type of heatshrink boot	12/3-0	12/3-0	19/6-0	19/6-0	24/6-0	40/13-0
Length of the boot	30	35	40	45	50	65
Oversize collet	–	16/4-0	19/6-0	24/8-0	40/13-0	–
Length of the boot for oversize collet	–	–	70	–	–	–

- 3) After having soldered the conductors on the contacts of the plug/socket insulator, bring the earthing cone against the centre-piece. Cut the excess of screen.
- 4) Locate the insulator, the centre-piece, the earthing cone, the gland, the compression ring and the collet in the plug/socket shell.
- 5) Screw the collet nut at the recommended torque value.
- 6) Remove all grease left on plug/socket shells with acetone.
- 7) Place the heatshrink boot of the correct dimensions onto the rear end of the plug/socket against the coupling nut.
- 8) Heat the heatshrink boot until the melting coating totally melts and adheres perfectly onto the cable jacket.

## Product safety notice

**PLEASE READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY AND CONSULT ALL RELEVANT NATIONAL AND INTERNATIONAL SAFETY REGULATIONS FOR YOUR APPLICATION. IMPROPER HANDLING, CABLE ASSEMBLY, OR WRONG USE OF CONNECTORS CAN RESULT IN HAZARDOUS SITUATIONS.**

### 1. SHOCK AND FIRE HAZARD

Incorrect wiring, the use of damaged components, presence of foreign objects (such as metal debris), and / or residue (such as cleaning fluids), can result in short circuits, overheating, and / or risk of electric shock. Mated components should never be disconnected while live as this may result in an exposed electric arc and local overheating, resulting in possible damage to components.

### 2. HANDLING

Connectors and their components should be visually inspected for damage prior to installation and assembly. Suspect components should be rejected or returned to the factory for verification.

Connector assembly and installation should only be carried out by properly trained personnel. Proper tools must be used during installation and / or assembly in order to obtain safe and reliable performance.

### 3. USE


Connectors with exposed contacts should never be live (or on the current supply side of a circuit). Under general conditions voltages above 30 VAC and 42 VDC are considered hazardous and proper measures should be taken to eliminate all risk of transmission of such voltages to any exposed metal part of the connector.


### 4. TEST AND OPERATING VOLTAGES

The maximum admissible operating voltage depends upon the national or international standards in force for the application in question. Air and creepage distances impact the operating voltage; reference values are indicated in the catalog however these may be influenced by PC board design and / or wiring harnesses.

The test voltage indicated in the catalog is 75% of the mean breakdown voltage; the test is applied at 500 V/s and the test duration is 1 minute.

### 5. 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.**

### 6. PRODUCT IMPROVEMENTS

The LEMO Group reserves the right to modify and improve to our products or specifications without providing prior notification.

### 7. **WARNING (Prop 65 State of California)**

Proposition 65 requires businesses to provide warnings to Californians about significant exposures to chemicals that cause cancer, birth defects or other reproductive harm. LEMO products are exempt from proposition 65 warnings because they are manufactured, marketed, and sold solely for commercial and industrial use. For further information, please visit <https://www.lemo.com/quality/LEMO-Prop-65-compliance-declaration.pdf>.

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HEADQUARTERS  
Switzerland

LEMO SA  
Tel: +41 21 695 16 00  
info@lemo.com

Subsidiaries & distributors



Online catalogue



lemo.com

