

**HIGH PRESSURE
CONNECTORS
W SERIES**



W Series

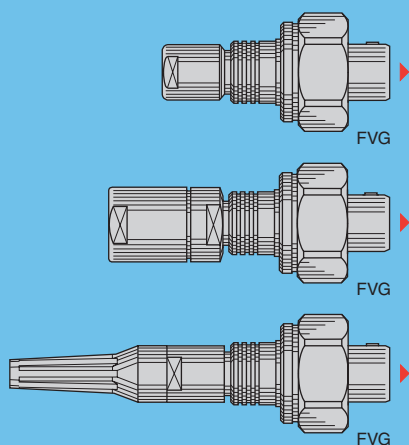
W Series connectors have been developed for utilisation where protection must be guaranteed under high pressures of liquids. The basic elements, insulators, contacts and clamping system are from the B series. The push-pull latching system has been replaced by a screw coupling system with watertightness maintained by compression of an O-ring in FPM (Viton®) according to the triangular shaped cavity principle.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

- multipole types from 2 to 64 contacts
- fibre optic or mixed types available upon request
- solder or crimp contacts
- keying system («G» key standard) for connector alignment
- multiple key options to avoid cross mating of similar connectors
- 360° screening for full EMC shielding
- rugged housing for extreme working conditions.

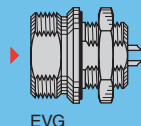
Interconnections

Models (page 3)

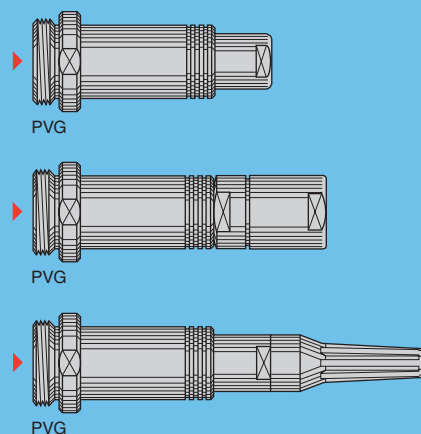
Straight plugs



Fixed socket

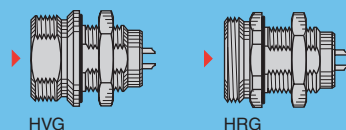


Free sockets



Vacuumtight models (page 6)

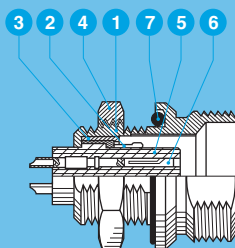
Fixed sockets



Part Section Showing Internal Components

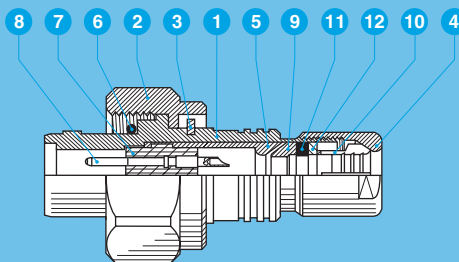
Fixed socket

- 1 outer shell
- 2 earthing crown
- 3 retaining ring
- 4 hexagonal nut
- 5 insulator
- 6 female contact
- 7 O-ring



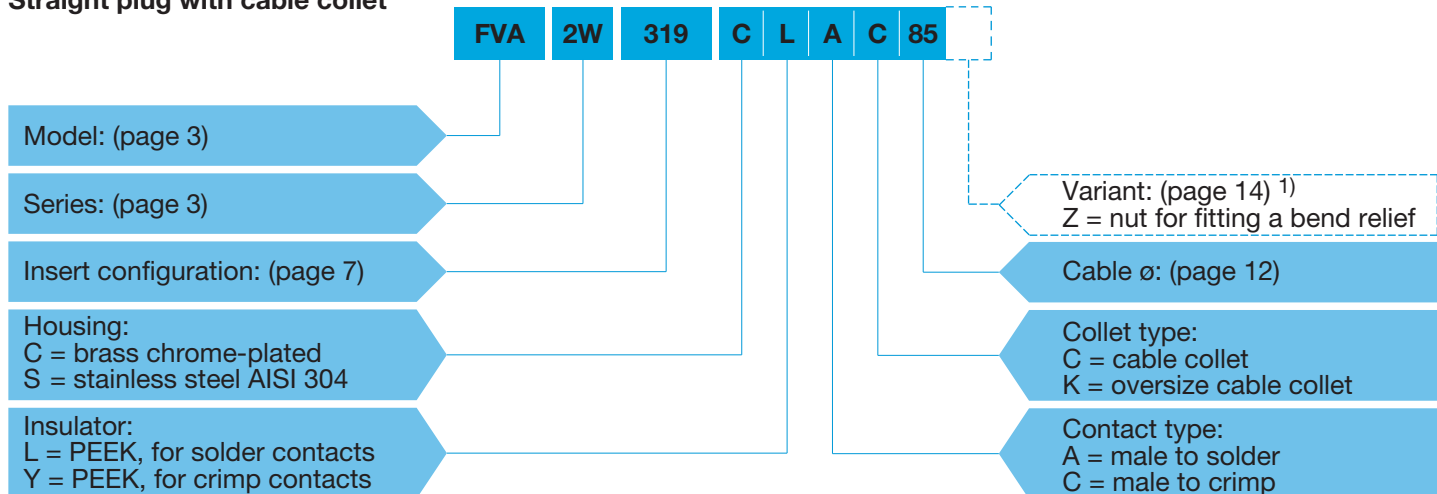
Straight plug

- 1 outer shell
- 2 coupling nut
- 3 circlip
- 4 collet nut
- 5 split insert carrier
- 6 o-ring
- 7 insulator
- 8 male contact
- 9 earthing cone
- 10 collet
- 11 gasket
- 12 washer



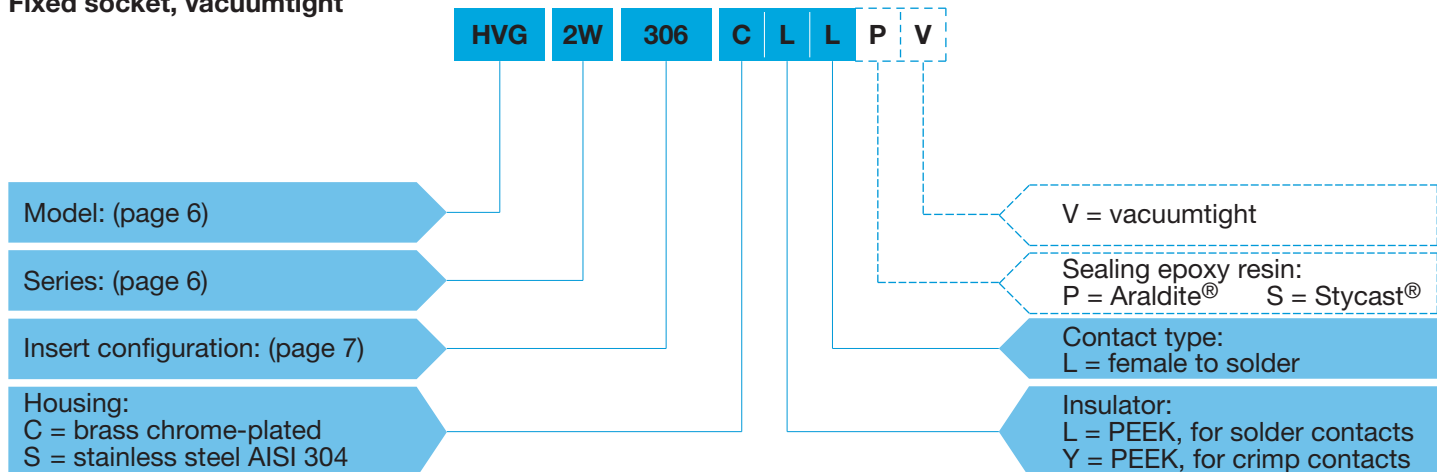
Part Number Example

Straight plug with cable collet



FVA.2W.319.CLAC85 = straight plug with key (A), 2W series, multipole type with 19 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, C type collet for 8.5 mm diameter cable.

Fixed socket, vacuumtight



HVG.2W.306.CLLPV = fixed socket, nut fixing, key (G), 2W series, multipole type with 6 contacts, outer shell in chrome-plated brass, PEEK insulator, female solder contacts, potted with Araldite® epoxy resin, vacuumtight.

Note: ¹⁾ 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.

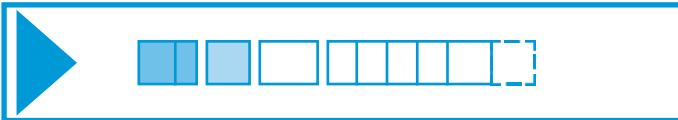


Alignment Key and Polarized Keying System

W series connector model part numbers are composed of three letters. The LAST LETTER indicates the key position and the contact type (male or female).

Front view of a socket 	Model	Nb of keys	Angles	Series	Contact type		Note
				0W-5W	Plug	Socket	
	G	1		0°	male	female	●
	A	2	α	30°	male	female	●
	B	2		45°	male	female	●
	L	2	γ	75°	female	male	○

● Available
○ On request



Models

Technical Characteristics

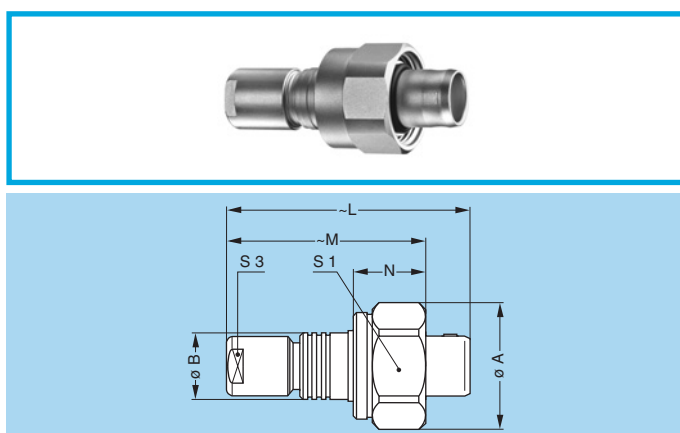
Mechanical and Climatical

Characteristics	Value	Standard
Endurance	> 1000 cycles	IEC 60512-5 test 9a
Temperature range	-20° C, +200° C	
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Protection index (mated)	> IP 68	IEC 60529
Resistance to hydrostatic pressure (mated)	~ 30 bars ¹⁾	IEC 60512-7 test 14d
Climatical category	20/200/21	IEC 60068-1

Electrical

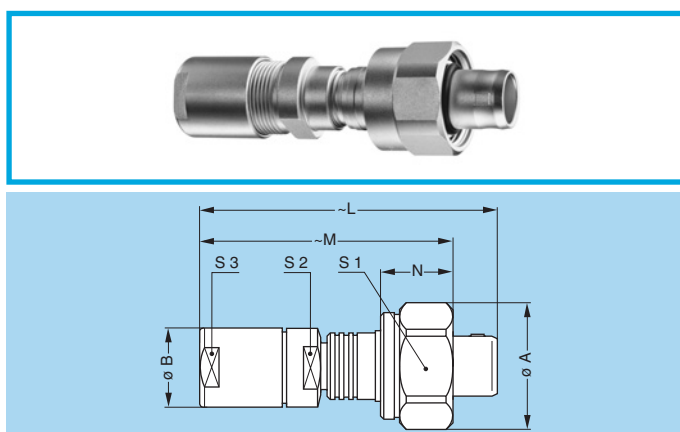
Characteristics	Value	Standard
Shielding efficiency	at 10 MHz	> 95 dB
	at 1 GHz	> 80 dB
		IEC 60169-1-3
		IEC 60169-1-3

Note: ¹⁾ in order to perform correctly and withstand the pressure, cable assembly shall be made according to instruction we recommend. See page 16.



FVG Straight plug, key (G) or keys (A, B or L), cable collet

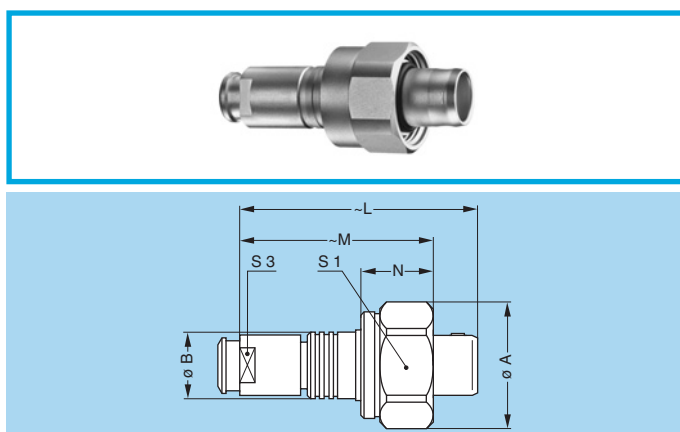
Reference		Dimensions (mm)						
Model	Series	A	B	L	M	N	S1	S3
FVG	0W	17.2	8.9	35.0	29.8	13.5	16	8
FVG	1W	19.3	11.0	43.5	35.3	14.0	18	9
FVG	2W	23.5	14.0	52.5	43.0	15.5	22	12
FVG	3W	27.8	17.0	61.5	48.0	16.5	26	15
FVG	4W	34.3	22.0	71.5	57.5	17.5	32	19
FVG	5W	50.0	34.0	100.0	83.0	21.0	47	32



FVG Straight plug, key (G) or keys (A, B or L), oversized cable collet ¹⁾

Reference		Dimensions (mm)							
Model	Series	A	B	L	M	N	S1	S2	S3
FVG	1W	19.3	14.5	56.5	48.3	14.0	18	12	12
FVG	2W	23.5	17.0	65.5	56.0	15.5	22	15	15
FVG	3W	27.8	22.0	80.5	67.0	16.5	26	19	19
FVG	4W	34.3	36.0	105.5	91.5	17.5	32	30	32

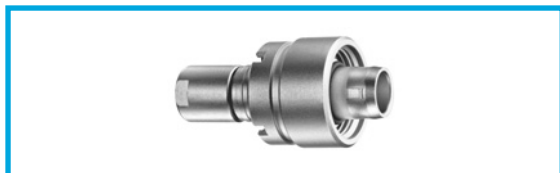
Note: ¹⁾ correspond to K type of collet, the fitting of oversized collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 12).



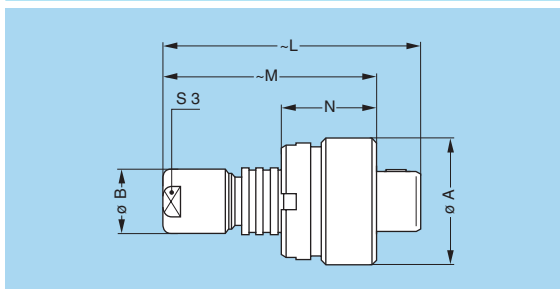
FVG Straight plug, key (G) or keys (A, B or L), cable collet and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)						
Model	Series	A	B	L	M	N	S1	S3
FVG	0W	17.2	8.9	35.0	29.8	13.5	16	7
FVG	1W	19.3	11.0	43.5	35.3	14.0	18	9
FVG	2W	23.5	14.0	52.5	43.0	15.5	22	12
FVG	3W	27.8	17.0	60.5	46.9	16.5	26	15
FVG	4W	34.3	22.0	71.5	57.5	17.5	32	19

Note: ¹⁾ 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).

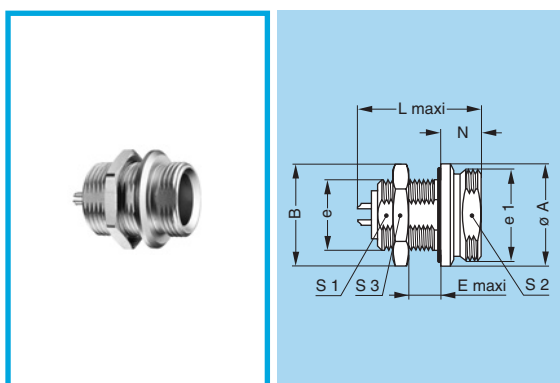


FVG Straight plug, key (G) or keys (A, B or L), cable collet with special coupling nut ¹⁾



Reference		Dimensions (mm)					
Model	Series	A	B	L	M	N	S3
FVG	0W	17	8.9	35.0	29.8	13.5	8

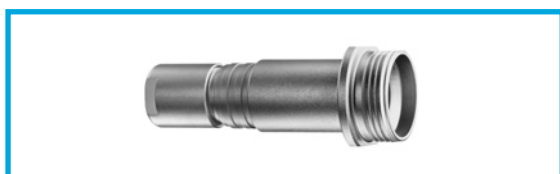
Note: ¹⁾ to order, add a «Y» at the end of the reference.



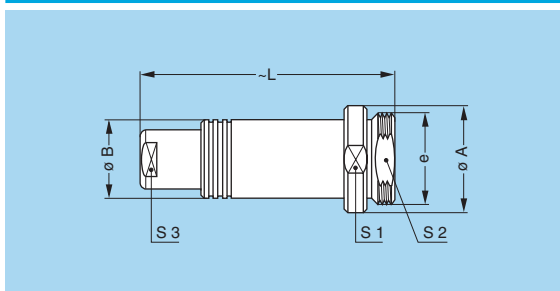
EVG Fixed socket, nut fixing, key (G) or keys (A, B or L),

Reference		Dimensions (mm)									
Model	Series	A	B	e	e1	E	L	N	S1	S2	S3
EVG	0W	16.2	16.0	M12x1.0	M14x1.0	4.0	21.7	8.0	10.5	12.5	14
EVG	1W	18.3	19.5	M14x1.0	M16x1.0	8.0	27.0	8.0	12.5	14.5	17
EVG	2W	22.5	21.8	M16x1.0	M20x1.0	9.0	30.7	9.0	14.5	18.5	19
EVG	3W	26.6	27.5	M20x1.0	M24x1.0	13.0	36.2	9.5	18.5	22.5	24
EVG	4W	32.8	34.2	M24x1.0	M30x1.0	15.0	40.2	9.5	22.5	28.5	30
EVG	5W	48.0	53.0	M38x1.5	M45x1.5	18.0	47.5	12.5	35.5	42.5	46

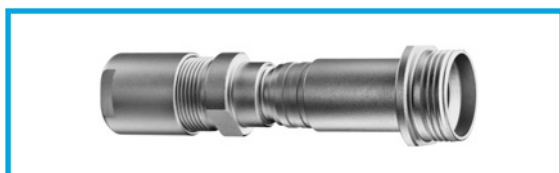
Panel cut-out (page 16)



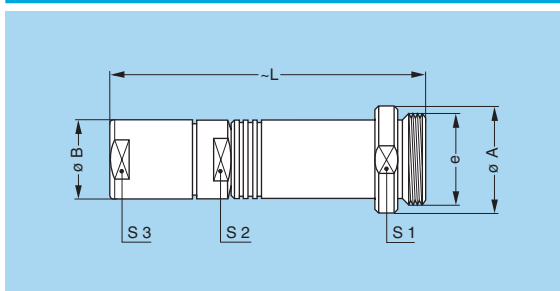
PVG Free socket, key (G) or keys (A, B or L), cable collet



Reference		Dimensions (mm)						
Model	Series	A	B	e	L	S1	S2	S3
PVG	0W	16.2	8.9	M14x1.0	34.0	14	13.5	8
PVG	1W	18.3	11.0	M16x1.0	45.0	16	14.5	9
PVG	2W	22.5	14.0	M20x1.0	54.0	20	18.5	12
PVG	3W	26.6	17.0	M24x1.0	65.0	24	22.5	15
PVG	4W	32.8	22.0	M30x1.0	75.5	30	28.5	19
PVG	5W	48.0	34.0	M45x1.5	103.0	45	42.5	32

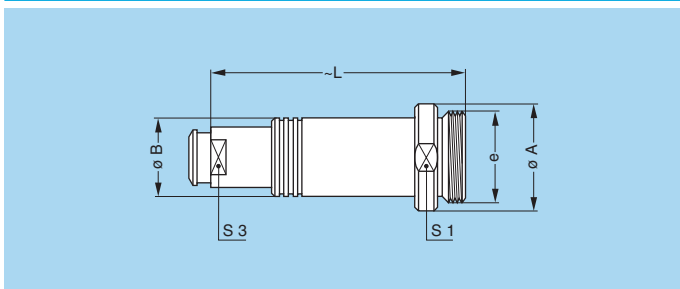
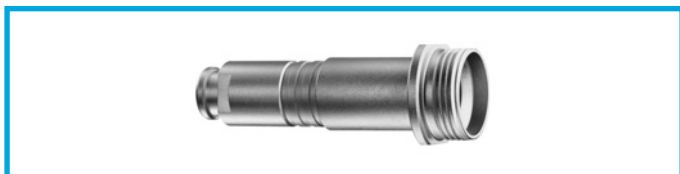


PVG Free socket, key (G) or keys (A, B or L), oversized cable collet ¹⁾



Reference		Dimensions (mm)						
Model	Series	A	B	e	L	S1	S2	S3
PVG	1W	18.3	11.0	M16x1.0	58.0	16	12	12
PVG	2W	22.5	14.0	M20x1.0	67.0	20	15	15
PVG	3W	26.6	17.0	M24x1.0	84.0	24	19	19
PVG	4W	32.8	22.0	M30x1.0	109.5	30	30	32

Note: ¹⁾ correspond to K type of collet, the fitting of oversized collets onto this model allows them to be fitted to the cables that can be accommodated by the next housing size up (see page 12).



PVG Free socket, key (G) or keys (A, B or L), cable collet and nut for fitting a bend relief ¹⁾

Reference		Dimensions (mm)					
Model	Series	A	B	e	L	S1	S3
PVG	0W	16.2	8.9	M14x1.0	34.0	14	7
PVG	1W	18.3	11.0	M16x1.0	45.0	16	9
PVG	2W	22.5	14.0	M20x1.0	54.0	20	12
PVG	3W	26.6	17.0	M24x1.0	64.0	24	15
PVG	4W	32.8	22.0	M30x1.0	75.5	30	19

Note: ¹⁾ 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).

Vacuumtight models

HRG and HVG socket models allow the device on which they are fitted to reach a protection index of IP68 as per IEC 60529. They are fully compatible with plugs of the same series and are widely used for portable radios, military, laboratory equipment, aviation, etc. These models are made in a vacuumtight version. They are identified by an additional letter «V» at the end of the part number (certificate on request).

Epoxy resin is used to seal these models and we are offering 2 different resins:

- a) Epoxy Araldite®, for general purpose use, identify with letter «P»
- b) Epoxy Stycast®, for oil and petrol industry, identify with the letter «S».

Part number example:

Vacuumtight socket potted with Araldite® epoxy: HVG.0W.304.CLLPV

Vacuumtight socket potted with Stycast® epoxy: HVG.0W.304.CLLSV

Technical Characteristics

Mechanical and Climatical

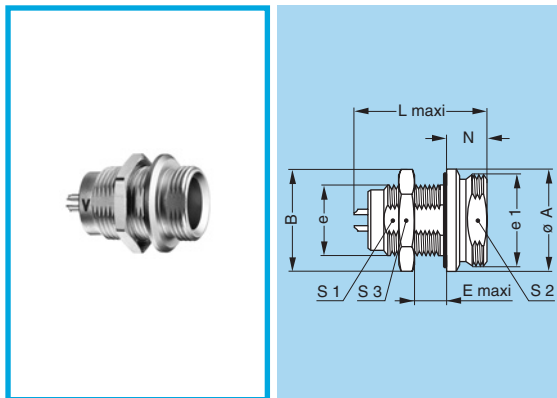
Characteristics	Value	Standard
Endurance	> 1000 cycles	IEC 60512-5 test 9a
Humidity	up to 95% at 60° C	
Temperature range (0W-1W)	-20° C/+100° C	
Temperature range (2W to 5W)	-20° C/+80° C	
Salt spray corrosion test	> 144h	IEC 60512-6 test 11f
Climatical category	20/80/21	IEC 60068-1
Leakage rate (He) ¹⁾	< 10 ⁻⁷ mbar.l.s ⁻¹	IEC 60512-7 test 14b

Characteristics	Value	Standard
Maximum operating pressure ²⁾	0W	60 bars
	1W	60 bars
	2W	40 bars
	3W	30 bars
	4W	15 bars
	5W	5 bars

IEC 60512-7 test 14d

Note:¹⁾ For vacuumtight models.

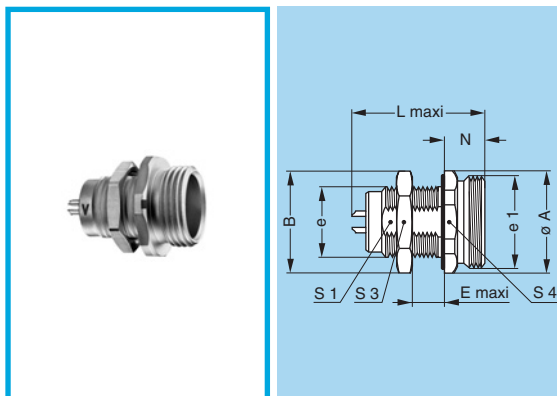
²⁾ this value corresponds to the maximum allowed pressure difference for the assembled socket if used in the unmated condition.



HVG Fixed socket, nut fixing, key (G) or keys (A, B or L), vacuumtight

Reference		Dimensions (mm)									
Model	Series	A	B	e	e1	E	L	N	S1	S2	S3
HVG	0W	16.2	16.0	M12x1.0	M14x1.0	5.5	21.7	8.0	10.5	12.5	14
HVG	1W	18.3	19.5	M14x1.0	M16x1.0	11.5	27.0	8.0	12.5	14.5	17
HVG	2W	22.5	21.8	M16x1.0	M20x1.0	12.0	30.7	9.0	14.5	18.5	19
HVG	3W	26.6	27.5	M20x1.0	M24x1.0	17.5	36.2	9.5	18.5	22.5	24
HVG	4W	32.8	34.2	M24x1.0	M30x1.0	20.0	40.2	9.5	22.5	28.5	30
HVG	5W	48.0	53.0	M38x1.5	M45x1.5	22.0	47.5	12.5	35.5	42.5	46

Panel cut-out (page 16)



HRG Fixed socket, nut fixing, key (G) or keys (A, B or L), hexagonal flange, vacuumtight

Reference		Dimensions (mm)									
Model	Series	A	B	e	e1	E	L	N	S1	S3	S4
HRG	0W	18	16	M12x1.0	M14x1.0	5.5	21.7	8	10.5	14	17

Panel cut-out (page 16)

Insert configuration

Other like fibre optic of mixed are available, please consult us.

Multipole

	Male solder contacts Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ¹⁾
	Solder	Crimp				Print (straight)	Print (elbow)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell			
0W			302	2	0.9	●	●	●	●	1.30	1.05	1.45	1.20	10.0 ²⁾
			303	3	0.9	●	●	●	●	1.20	0.90	1.70	1.60	8.0 ²⁾
			304	4	0.7	●	●	●	●	0.85	0.70	1.35	1.10	7.0 ²⁾
			305	5	0.7	●	●	●	●	1.00	0.70	1.25	1.20	6.5 ²⁾
			306	6	0.5	●	○ ⁴⁾	●	●	0.85	0.65	1.40	1.20	2.5
			307	7	0.5	●	○ ⁴⁾	●	●	0.80	0.70	1.40	1.20	2.5
			309	9	0.5	●	○ ⁴⁾	●	○	0.60	0.50	1.00	0.85	2.0
1W			302	2	1.3	●	●	●	●	1.50	1.35	1.70	1.45	15.0 ³⁾
			303	3	1.3	●	●	●	●	1.30	1.55	1.60	1.85	12.0
			304	4	0.9	●	●	●	●	1.35	1.45	1.70	1.80	10.0 ²⁾
			305	5	0.9	●	●	●	●	1.25	1.15	1.30	1.55	9.0 ²⁾
			306	6	0.7	●	●	●	●	1.05	1.20	1.35	1.45	7.0 ²⁾
			307	7	0.7	●	●	●	●	0.95	1.05	1.45	1.45	7.0 ²⁾
			308	8	0.7	●	●	●	●	0.95	1.15	1.30	1.30	5.0
			310	10	0.5	●	○ ⁴⁾	●	●	0.90	1.50	1.20	1.80	2.5
			314	14	0.5	●	○ ⁴⁾	●	●	0.80	1.20	0.95	1.60	2.0
			316	16	0.5	●	○ ⁴⁾	●	○	0.80	1.25	0.95	1.60	1.5

● First choice alternative ○ Special order alternative

Note: 1) see calculation method, caution and suggested standard.
 2) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 3) rated current = 12A for socket with elbow (90°) contact for printed circuit.
 4) available only for connectors fitted with male contacts.

Multipole

	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	
2W					302	2	2.0	●	●	●	●	2.10	1.75	2.85	2.70	30.0 ³⁾
					303	3	1.6	●	●	●	●	2.40	1.85	1.90	1.90	17.0 ³⁾
					304	4	1.3	●	●	●	●	1.85	1.85	2.20	2.20	15.0 ³⁾
					305	5	1.3	●	●	●	●	1.75	1.60	2.15	2.15	14.0 ³⁾
					306	6	1.3	●	●	●	●	1.35	1.45	2.00	2.35	12.0
					307	7	1.3	●	●	●	●	1.75	1.60	1.95	2.15	11.0
					308	8	0.9	●	●	●	●	1.50	1.25	1.95	1.95	10.0 ²⁾
					310	10	0.9	●	●	●	●	1.45	1.30	1.80	2.10	8.0 ²⁾
					312	12	0.7	●	●	●	●	1.25	1.35	1.65	2.00	7.0 ²⁾
					314	14	0.7	●	●	●	●	1.15	1.35	1.55	1.95	6.5 ²⁾
					316	16	0.7	●	●	●	●	0.95	1.25	1.55	1.75	6.0
					318	18	0.7	●	●	●	●	0.85	1.20	1.45	2.10	5.5
					319	19	0.7	●	●	●	●	0.95	1.25	1.55	1.65	5.0
					326	26	0.5	●	—	●	○	0.95	1.30	1.20	1.80	2.0
					332	32	0.5	●	—	●	○	0.80	1.2	0.95	1.60	1.5

● First choice alternative ○ Special order alternative

Note: 1) see calculation method, caution and suggested standard.

2) rated current = 6A for socket with elbow (90°) contact for printed circuit.

3) rated current = 12A for socket with elbow (90°) contact for printed circuit.



Multipole

	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type				Solder contact		Crimp contact		Rated current (A) ⁽¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Print (elbow)	Test voltage (kV rms) ⁽¹⁾ Contact-contact	Test voltage (kV rms) ⁽¹⁾ Contact-shell	Test voltage (kV rms) ⁽¹⁾ Contact-contact	Test voltage (kV rms) ⁽¹⁾ Contact-shell	
3W					302	2	3.0	●	●	○	-	2.10	1.55	2.30	1.80	35.0
					303	3	2.0	●	●	●	○	1.90	1.50	3.20	2.65	25.0
					304	4	2.0	●	●	●	○	1.45	1.25	2.50	2.20	19.0
					305	5	1.6	●	●	●	○	1.90	1.25	2.40	1.75	19.0
					306	6	1.6	●	●	●	○	1.60	1.15	1.90	1.80	17.0
					307	7	1.6	●	●	●	○	1.70	1.25	2.00	2.05	15.0
					308	8	1.3	●	●	●	●	1.65	1.15	1.85	1.75	13.0
					309	8 1	1.3 2.0	●	●	●	-	1.35 1.35	1.05 1.05	1.10 1.10	1.05 1.05	6.0 15.0
					310	10	1.3	●	●	●	○	1.25	0.90	1.50	1.80	12.0
					312	12	0.9	●	●	●	●	1.45	1.00	1.65	1.85	9.0
					314	14	0.9	●	●	●	●	1.20	1.20	1.80	1.65	9.0 ⁽²⁾
					316	16	0.9	●	●	●	●	1.20	0.85	1.80	1.50	8.0
					318	18	0.9	●	●	●	●	1.20	1.05	1.85	1.60	7.0
					320	20	0.7	●	●	●	●	1.00	0.90	1.35	1.55	6.0
					322	22	0.7	●	●	●	○	1.00	0.90	1.70	1.45	5.5
					324	24	0.7	●	●	●	●	0.95	0.80	1.35	1.35	4.0
					326	26	0.7	●	●	●	○	0.95	0.70	1.50	1.30	4.0
					330	30	0.7	●	●	●	●	0.80	0.70	1.35	1.20	3.5

● First choice alternative ○ Special order alternative

Note: 1) see calculation method, caution and suggested standard.
2) rated current = 6A for socket with elbow (90°) contact for printed circuit.

Multipole

4W

	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type			Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	
					304	4	3.0	●	●	○	2.10	1.50	1.80	1.20	30.0
					306	6	2.0	●	●	○	2.00	1.75	2.75	2.40	24.0
					307	7	2.0	●	●	○	2.00	1.80	1.50	1.35	20.0
					310	10	1.6	●	●	○	1.85	1.30	1.90	1.95	17.0
					312	12	1.3	●	●	○	1.45	1.60	1.90	1.85	12.0
					316	16	0.9	●	●	●	1.35	1.50	2.30	2.10	10.0
					320	20	0.9	●	●	●	1.35	1.00	1.05	0.95	8.0
					324	24	0.9	●	●	●	1.20	1.45	1.80	2.05	7.0
					330	30	0.9	●	●	●	0.95	0.85	1.75	1.45	5.0
					340	40	0.7	●	●	●	0.90	0.90	1.30	1.30	2.0
					348	48	0.7	●	●	●	0.70	0.70	1.00	1.00	1.5

● First choice alternative ○ Special order alternative Note: ¹⁾ see calculation method, caution and suggested standard.



Multipole

	Male solder contacts		Female solder contacts		Reference	Number of contacts	ø A (mm)	Contact type			Solder contact		Crimp contact		Rated current (A) ¹⁾
	Male crimp contacts		Female crimp contacts					Solder	Crimp	Print (straight)	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	Test voltage (kV rms) ¹⁾ Contact-contact	Test voltage (kV rms) ¹⁾ Contact-shell	
5W					302	2	6.0	●	-	-	3.60	2.95	-	-	50.0
					304	4	4.0	●	●	○	2.95	2.65	3.20	2.40	35.0
					310	10	3.0	●	●	○	2.35	2.30	2.65	3.20	20.0
					314	14	2.0	●	●	○	2.10	2.00	2.85	2.95	18.0
					316	16	2.0	●	●	○	1.85	1.95	2.45	3.05	12.0
					320	20	1.6	●	●	○	1.90	1.70	2.20	2.40	10.0
					330	30	1.3	●	●	○	1.45	1.60	2.05	2.45	8.0
					340	40	1.3	●	●	○	1.30	1.45	2.00	1.95	7.0
					348	48	1.3	●	●	○	1.20	1.10	2.00	1.55	6.0
					350	50	0.9	●	●	●	1.30	1.60	1.20	1.45	6.0
					354	54	0.9	●	●	●	1.15	1.55	2.00	2.10	5.0
					364	64	0.9	●	●	●	1.30	1.55	1.35	1.85	3.0

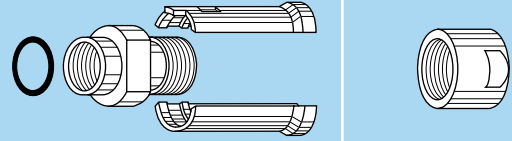
● First choice alternative ○ Special order alternative

Note: 1) see calculation method, caution and suggested standard .



Collets

C and K type collets



Reference	Collet \varnothing		Cable \varnothing		Part number of the collet system ¹⁾	Part number of the oversize collet and of the two split centre-pieces ²⁾	Part number of the collet nut ²⁾		
	Type	\varnothing	$\varnothing A$	$\varnothing B$				max.	min.
0W	C	10	1.6	–	1.2	1.0	FFA.0E.710.CNS	–	FFA.0E.130.LC
	C	15	1.6	–	1.5	1.3	FFA.0E.715.CNS	–	FFA.0E.130.LC
	C	20	2.1	–	2.0	1.6	FFA.0E.720.CNS	–	FFA.0E.130.LC
	C	25	3.1	–	2.5	2.1	FFA.0E.725.CNS	–	FFA.0E.130.LC
	C	30	3.1	–	3.0	2.6	FFA.0E.730.CNS	–	FFA.0E.130.LC
	C	35	4.2	4.2	3.5	3.1	FFA.0E.735.CNS	–	FFA.0E.130.LC
	C	40	4.2	4.2	4.0	3.6	FFA.0E.740.CNS	–	FFA.0E.130.LC
	C	45	5.2	5.2	4.5	4.1	FFA.0E.745.CNS	–	FFA.0E.130.LC
C	50	5.2	5.2	5.0	4.6	FFA.0E.750.CNS	–	FFA.0E.130.LC	
1W	C	15	1.6	–	1.5	1.3	FFA.1E.715.CNS	–	FFA.1E.130.LC
	C	20	2.2	–	2.0	1.6	FFA.1E.720.CNS	–	FFA.1E.130.LC
	C	25	3.2	–	2.5	2.1	FFA.1E.725.CNS	–	FFA.1E.130.LC
	C	30	3.2	–	3.0	2.6	FFA.1E.730.CNS	–	FFA.1E.130.LC
	C	35	4.2	–	3.5	3.1	FFA.1E.735.CNS	–	FFA.1E.130.LC
	C	40	4.2	–	4.0	3.6	FFA.1E.740.CNS	–	FFA.1E.130.LC
	C	45	5.2	–	4.5	4.1	FFA.1E.745.CNS	–	FFA.1E.130.LC
	C	50	5.2	–	5.0	4.6	FFA.1E.750.CNS	–	FFA.1E.130.LC
	C	55	6.2	6.2	5.5	5.1	FFA.1E.755.CNS	–	FFA.1E.130.LC
	C	60	6.2	6.2	6.0	5.6	FFA.1E.760.CNS	–	FFA.1E.130.LC
	C	65	7.2	6.7	6.5	6.1	FFA.1E.765.CNS	–	FFA.1E.130.LC
	K	70	7.2	–	7.0	6.6	FFA.2E.770.CNS	FFA.1K.137.LCN	FFA.2E.130.LC ²⁾
K	75	8.2	8.2	7.5	7.1	FFA.2E.775.CNS	FFA.1K.137.LCN	FFA.2E.130.LC ²⁾	
K	80	8.2	8.2	8.0	7.6	FFA.2E.780.CNS	FFA.1K.137.LCN	FFA.2E.130.LC ²⁾	
K	85	9.2	8.6	8.5	8.1	FFA.2E.785.CNS	FFA.1K.137.LCN	FFA.2E.130.LC ²⁾	
2W	C	15	2.2	–	1.5	1.3	FFA.2E.715.CNS	–	FFA.2E.130.LC
	C	20	2.2	–	2.0	1.6	FFA.2E.720.CNS	–	FFA.2E.130.LC
	C	25	3.2	–	2.5	2.1	FFA.2E.725.CNS	–	FFA.2E.130.LC
	C	30	3.2	–	3.0	2.6	FFA.2E.730.CNS	–	FFA.2E.130.LC
	C	35	4.2	–	3.5	3.1	FFA.2E.735.CNS	–	FFA.2E.130.LC
	C	40	4.2	–	4.0	3.6	FFA.2E.740.CNS	–	FFA.2E.130.LC
	C	45	5.2	–	4.5	4.1	FFA.2E.745.CNS	–	FFA.2E.130.LC
	C	50	5.2	–	5.0	4.6	FFA.2E.750.CNS	–	FFA.2E.130.LC
	C	55	6.2	–	5.5	5.1	FFA.2E.755.CNS	–	FFA.2E.130.LC
	C	60	6.2	–	6.0	5.6	FFA.2E.760.CNS	–	FFA.2E.130.LC
	C	65	7.2	–	6.5	6.1	FFA.2E.765.CNS	–	FFA.2E.130.LC
	C	70	7.2	–	7.0	6.6	FFA.2E.770.CNS	–	FFA.2E.130.LC
	C	75	8.2	8.2	7.5	7.1	FFA.2E.775.CNS	–	FFA.2E.130.LC
	C	80	8.2	8.2	8.0	7.6	FFA.2E.780.CNS	–	FFA.2E.130.LC
	C	85	9.2	8.6	8.5	8.1	FFA.2E.785.CNS	–	FFA.2E.130.LC
	K	90	9.2	–	9.0	8.6	FFA.3E.790.CNS	FFA.2K.137.LCN	FFA.3E.130.LC ²⁾
	K	95	10.2	10.2	9.5	9.1	FFA.3E.795.CNS	FFA.2K.137.LCN	FFA.3E.130.LC ²⁾
	K	10	10.2	10.2	10.0	9.6	FFA.3E.710.CNS	FFA.2K.137.LCN	FFA.3E.130.LC ²⁾
K	11	11.2	10.6	10.5	10.1	FFA.3E.711.CNS	FFA.2K.137.LCN	FFA.3E.130.LC ²⁾	

Note:

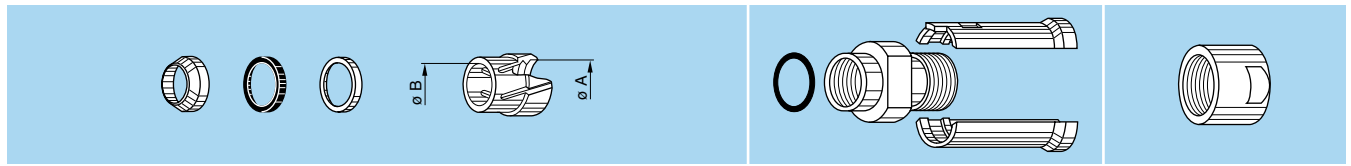
¹⁾ for ordering the collet system separately.

²⁾ for ordering the K type collet, the oversize collet and the split centre-pieces, as well as the corresponding collet nut should also be ordered.

All dimensions are in millimetres.



C and K type collets



Reference		Collet \varnothing		Cable \varnothing		Part number of the collet system ¹⁾	Part number of the oversize collet and of the two split centre-pieces ²⁾	Part number of the collet nut ²⁾	
Type	\varnothing	$\varnothing A$	$\varnothing B$	max.	min.				
3W	C	30	3.2	-	3.0	2.6	FFA.3E.730.CNS	-	FFA.3E.130.LC
	C	35	4.2	-	3.5	3.1	FFA.3E.735.CNS	-	FFA.3E.130.LC
	C	40	4.2	-	4.0	3.6	FFA.3E.740.CNS	-	FFA.3E.130.LC
	C	45	5.2	-	4.5	4.1	FFA.3E.745.CNS	-	FFA.3E.130.LC
	C	50	5.2	-	5.0	4.6	FFA.3E.750.CNS	-	FFA.3E.130.LC
	C	55	6.2	-	5.5	5.1	FFA.3E.755.CNS	-	FFA.3E.130.LC
	C	60	6.2	-	6.0	5.6	FFA.3E.760.CNS	-	FFA.3E.130.LC
	C	65	7.2	-	6.5	6.1	FFA.3E.765.CNS	-	FFA.3E.130.LC
	C	70	7.2	-	7.0	6.6	FFA.3E.770.CNS	-	FFA.3E.130.LC
	C	75	8.2	-	7.5	7.1	FFA.3E.775.CNS	-	FFA.3E.130.LC
	C	80	8.2	-	8.0	7.6	FFA.3E.780.CNS	-	FFA.3E.130.LC
	C	85	9.2	-	8.5	8.1	FFA.3E.785.CNS	-	FFA.3E.130.LC
	C	90	9.2	-	9.0	8.6	FFA.3E.790.CNS	-	FFA.3E.130.LC
	C	95	10.2	10.2	9.5	9.1	FFA.3E.795.CNS	-	FFA.3E.130.LC
	C	10	10.2	10.2	10.0	9.6	FFA.3E.710.CNS	-	FFA.3E.130.LC
C	11	11.2	10.6	10.5	10.1	FFA.3E.711.CNS	-	FFA.3E.130.LC	
K	11	12.3	-	12.0	10.6	FFA.4E.711.CNS	FFA.3K.137.LCN	FFA.4E.130.LC ²⁾	
K	12	13.8	13.8	12.8	12.1	FFA.4E.712.CNS	FFA.3K.137.LCN	FFA.4E.130.LC ²⁾	
K	13	13.8	13.8	13.5	12.9	FFA.4E.713.CNS	FFA.3K.137.LCN	FFA.4E.130.LC ²⁾	
K	14	15.3	15.3	14.0	13.6	FFA.4E.714.CNS	FFA.3K.137.LCN	FFA.4E.130.LC ²⁾	
K	15	15.3	15.3	15.0	14.1	FFA.4E.715.CNS	FFA.3K.137.LCN	FFA.4E.130.LC ²⁾	
4W	C	50	6.3	-	5.0	4.8	FFA.4E.750.CNS	-	FFA.4E.130.LC
	C	55	6.3	-	5.5	5.1	FFA.4E.755.CNS	-	FFA.4E.130.LC
	C	60	6.3	-	6.0	5.6	FFA.4E.760.CNS	-	FFA.4E.130.LC
	C	65	7.3	-	6.5	6.1	FFA.4E.765.CNS	-	FFA.4E.130.LC
	C	70	7.3	-	7.0	6.6	FFA.4E.770.CNS	-	FFA.4E.130.LC
	C	75	8.3	-	7.5	7.1	FFA.4E.775.CNS	-	FFA.4E.130.LC
	C	80	8.3	-	8.0	7.6	FFA.4E.780.CNS	-	FFA.4E.130.LC
	C	85	9.3	-	8.5	8.1	FFA.4E.785.CNS	-	FFA.4E.130.LC
	C	90	9.3	-	9.0	8.6	FFA.4E.790.CNS	-	FFA.4E.130.LC
	C	95	10.8	-	9.5	9.1	FFA.4E.795.CNS	-	FFA.4E.130.LC
	C	10	10.8	-	10.5	9.6	FFA.4E.710.CNS	-	FFA.4E.130.LC
	C	11	12.3	-	12.0	10.6	FFA.4E.711.CNS	-	FFA.4E.130.LC
	C	12	13.8	13.8	12.8	12.1	FFA.4E.712.CNS	-	FFA.4E.130.LC
	C	13	13.8	13.8	13.5	12.9	FFA.4E.713.CNS	-	FFA.4E.130.LC
	C	14	15.3	15.3	14.0	13.6	FFA.4E.714.CNS	-	FFA.4E.130.LC
	C	15	15.3	15.3	15.0	14.1	FFA.4E.715.CNS	-	FFA.4E.130.LC
	K	16	17.8	-	16.5	15.6	FFA.4K.716.CNS	FFA.4K.137.LCN ³⁾	FFA.4K.136.LC ²⁾
	K	17	17.8	-	17.5	16.6	FFA.4K.717.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
	K	18	19.8	-	18.5	17.6	FFA.4K.718.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
	K	19	19.8	-	19.5	18.6	FFA.4K.719.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
	K	20	21.8	-	20.5	19.6	FFA.4K.720.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
	K	21	21.8	-	21.5	20.6	FFA.4K.721.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
	K	22	23.8	23.8	22.5	21.6	FFA.4K.722.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾
K	23	23.8	23.8	23.5	22.6	FFA.4K.723.CNS	FFA.4K.137.LCN	FFA.4K.136.LC ²⁾	

Note:

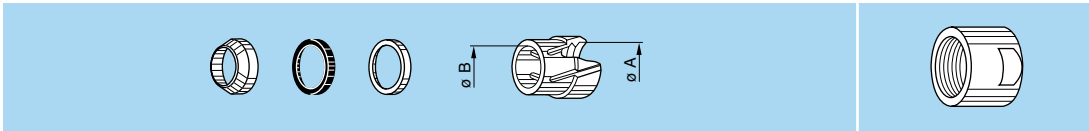
¹⁾ for ordering the collet system separately.

²⁾ for ordering the K type collet, the oversize collet and the split centre-pieces, as well as the corresponding collet nut should also be ordered.

³⁾ in 4K series, the centre-piece is made of one piece.

All dimensions are in millimetres.

C type collets



5W

Reference		Collet ø		Cable ø		Part number of the collet system ¹⁾	Part number of the collet nut
Type	ø	ø A	ø B	max.	min.		
C	10	11.8	-	10.5	9.6	FFA.5K.710.CNS	FFA.5K.130.LC
C	11	11.8	-	11.5	10.6	FFA.5K.711.CNS	FFA.5K.130.LC
C	12	13.8	-	12.5	11.6	FFA.5K.712.CNS	FFA.5K.130.LC
C	13	13.8	-	13.5	12.6	FFA.5K.713.CNS	FFA.5K.130.LC
C	14	15.8	-	14.5	13.6	FFA.5K.714.CNS	FFA.5K.130.LC
C	15	15.8	-	15.5	14.6	FFA.5K.715.CNS	FFA.5K.130.LC
C	16	17.8	-	16.5	15.6	FFA.5K.716.CNS	FFA.5K.130.LC
C	17	17.8	-	17.5	16.6	FFA.5K.717.CNS	FFA.5K.130.LC
C	18	19.8	-	18.5	17.6	FFA.5K.718.CNS	FFA.5K.130.LC
C	19	19.8	-	19.5	18.6	FFA.5K.719.CNS	FFA.5K.130.LC
C	20	21.8	-	20.5	19.6	FFA.5K.720.CNS	FFA.5K.130.LC
C	21	21.8	-	21.5	20.6	FFA.5K.721.CNS	FFA.5K.130.LC
C	22	23.8	23.8	22.5	21.6	FFA.5K.722.CNS	FFA.5K.130.LC
C	23	23.8	23.8	23.5	22.6	FFA.5K.723.CNS	FFA.5K.130.LC

Note: ¹⁾ for ordering the collet system separately.



Variant

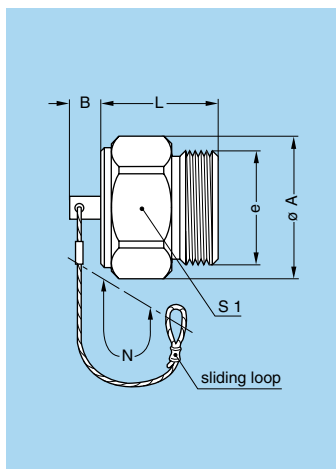
Bend relief for W series models with collet

	Ref.	Collet		Need to be ordered separately		Ref.	Collet		Need to be ordered separately
		Type	Code				Type	Code	
0W	Z	C	10 to 50	GMA.0B.●●●●●●	3W	Z	C	30 to 10	GMA.3B.●●●●●●
1W	Z	C	15 to 65	GMA.1B.●●●●●●	Z	K	11 to 15	GMA.4B.●●●●●●	
		K	70 to 85	GMA.2B.●●●●●●					
2W	Z	C	15 to 85	GMA.2B.●●●●●●	4W	Z	C	50 to 15	GMA.4B.●●●●●●
		K	90 to 10	GMA.3B.●●●●●●					

Note: ¹⁾ The bend relief must be ordered separately (see pages 141 and 142 of the unipole/multipole catalog). All dimensions are in millimetres.

Accessories

BFG Plug caps with key (G)

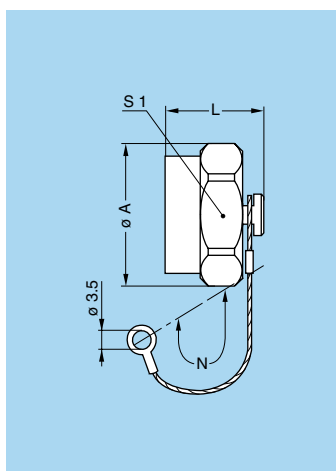


Part number	Series	Dimensions (mm)					
		A	B	e	L	N	S1
BFG.0W.100.●AZ	0W	17.2	6	M14x1.0	12.5	85	16
BFG.1W.100.●AZ	1W	19.3	6	M16x1.0	15.5	85	18
BFG.2W.100.●AZ	2W	23.5	6	M20x1.0	17.5	85	22
BFG.3W.100.●AZ	3W	27.8	6	M24x1.0	22.0	120	26
BFG.4W.100.●AZ	4W	34.3	10	M30x1.0	22.5	120	32
BFG.5W.100.●AZ	5W	50.0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

- 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

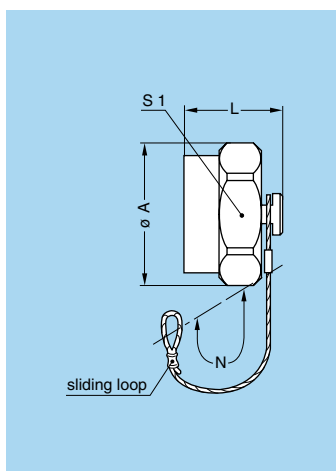


Part number	Series	Dimensions (mm)			
		A	L	N	S1
BRE.0V.200.●AV	0W	17.2	13.7	85	16
BRE.1V.200.●AV	1W	19.3	13.7	85	18
BRE.2V.200.●AV	2W	23.5	14.7	85	22
BRE.3V.200.●AV	3W	27.8	14.7	120	26
BRE.4V.200.●AV	4W	34.3	14.7	120	32
BRE.5V.200.●AV	5W	50.0	16.2	120	47

- 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®)

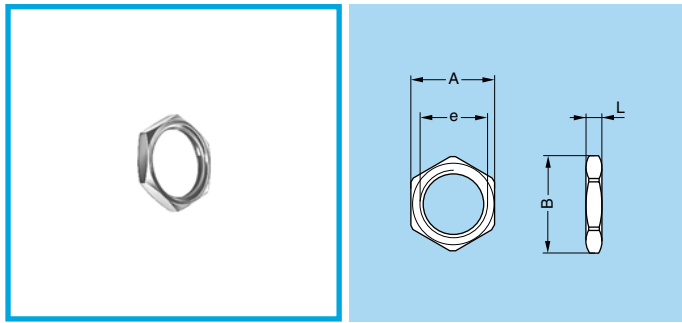
BRF Blanking caps for free sockets

This cap is only IP68 when installed



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

- 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®)

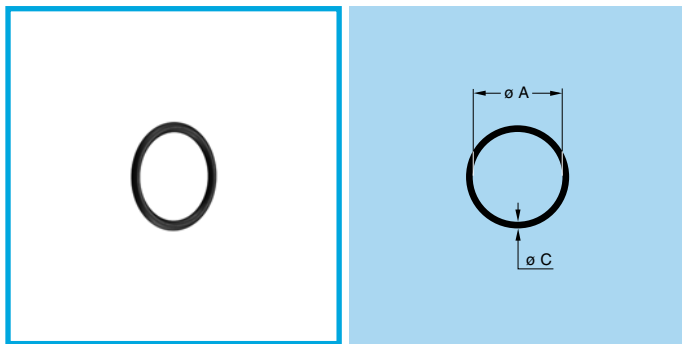


- Material:
 - Nickel-plated brass (3 μm)
 - Stainless steel

GEA Hexagonal nuts

Part number	Series	Dimensions (mm)			
		A	B	e	L
GEA.1S.240.LN	0W	14	15.8	M12 x 1.00	2.5
GEA.0E.240.LN	1W	17	19.2	M14 x 1.00	2.5
GEA.1E.240.LN	2W	19	21.5	M16 x 1.00	3.0
GEA.2E.240.LN	3W	24	27.0	M20 x 1.00	4.0
GEA.3E.240.LN	4W	30	34.0	M24 x 1.00	5.0
GEA.5W.240.LN	5W	46	53.0	M38 x 1.50	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».



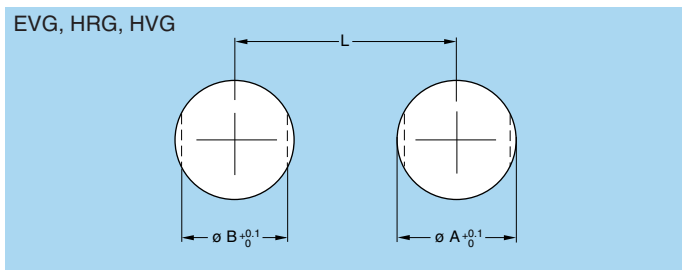
GDA O-ring for plug

Part number	Series	Dim. (mm)	
		A	C
GDA.99.070.100VK	0W	7.0	1.00
GDA.99.090.125VK	1W	9.0	1.25
GDA.99.120.150VK	2W	12.0	1.50
GDA.99.150.150VK	3W	15.0	1.50
GDA.99.190.200VK	4W	19.0	2.00
GDA.99.310.250VK	5W	31.0	2.50

- Material: FPM (Viton®)

Panel cut-outs

Panel Cut-outs



Series	Dimensions (mm)		
	A	B	L
0W	12.1	10.6	19.0
1W	14.1	12.6	21.0
2W	16.1	14.6	25.5
3W	20.2	18.6	30.0
4W	24.2	22.6	37.0
5W	38.2	35.6	53.0

Mounting nuts torque

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

1N = 0.102 kg

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. Please consult us.