

Series 00 (NIM-CAMAC-CD/N 549)

Introduction

The 00 series is a range of 50 Ω coaxial connectors. They are suitable for a wide variety of applications particularly in measurement, control system and nuclear physics, having formed the basis for the NIM-CAMAC-CD/N 549 standard. LEMO 00 connectors offer customers many benefits including:

- Self-latching push-pull system
- High packing density
- Low weight
- Aesthetically pleasing appearance
- Rugged construction
- Reliable performances
- Small size
- Ease of use
- Wide choice to suit application

Interconnections

Straight and elbow plugs		Straight and elbow sockets		Straight sockets	Straight couplers
 FFE	 FFA	 ERA, ERE	 EPE	 PCA	 RAD
 FLA	 FFC	 ERN	 EPL, EPM, EPK	 PCS	 RMA
 FLS, FLV	 FFA	 ERC	 EPS	 PSA	
 FAA	 FFA	 ERT	 EPN	 PSS	 FTR
 FAB	 FFS, FFV	 ERM	 EPY	 PES	 FTA
 FPA	 FFY	 ECP	Plugs with resistance FRT FLR		 FTL
 FPL	 FFF	 EPA, EPB, EPC			 FTY

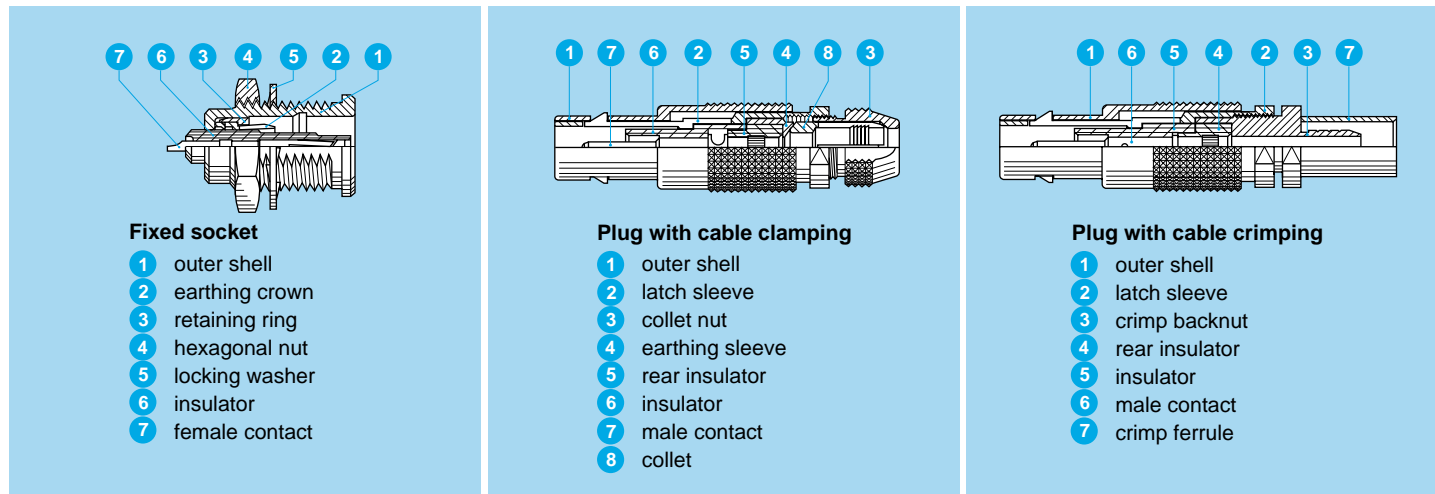
Watertight or vacuumtight models

Sraight sockets				Straight coupler
 HGP	 HGW	 EWF	 EWW	 SWH

Models Description

ABA Adaptor from LEMO socket to BNC plug	EPK Elbow socket (90°) for printed circuit with clearance under the body	FFF Straight plug, non-latching, with cable collet
ABB Adaptor from LEMO fixed socket to BNC socket	EPL Elbow socket (90°) for printed circuit	FFS Straight plug with cable crimping
ABC Adaptor from LEMO socket to BNC socket	EPM Elbow socket (90°) for printed circuit (long studs)	FFY Straight plug with cable collet
ABD Adaptor from LEMO socket to BNC fixed socket	EPN Straight socket for press mounting in pair on printed circuit,	FFV Straight plug for cable crimping with improved screen efficiency
ABF Adaptor from LEMO plug to BNC socket	EPS Elbow socket (90°) with two nuts for printed circuit	FLA Elbow plug (90°) with cable collet
ACA Adaptor from LEMO socket to C plug	EPY Elbow socket (90°) for printed circuit with two vertical sockets	FLR Elbow plug (90°) with resistor
ACB Adaptor from LEMO socket to C socket	ERA Fixed socket, nut fixing	FLS Elbow plug (90°) for cable crimping
AGG Adaptor from LEMO socket to General-Radio socket type 874	ERC Fixed socket, nut fixing, with slots in flange	FLV Elbow plug (90°) for cable crimping with improved screen efficiency
AGH Adaptor from LEMO socket to UHF plug	ERE Fixed socket, nut fixing, with conical lead in	FPA Straight plug, non-latching, for printed circuit
ANA Adaptor from LEMO socket to N plug	ERM Fixed socket, nut fixing, with microswitch	FPL Elbow plug (90°) non-latching for printed circuit
ANB Adaptor from LEMO socket to N socket	ERN Fixed socket, nut fixing, with tags	FRT Straight plug with resistor or shorted
ANC Adaptor from LEMO socket to N fixed socket	ERT Straight socket without thread, force or adhesive fit	FTA T-plug with two sockets in line
APF Adaptor from LEMO plug to CINCH socket	EWF Fixed socket, nut fixing, with tags, vacuumtight, (back panel mounting)	FTL T-plug with two sockets (90°)
ASA Adaptor from LEMO socket to SMA plug	EWV Fixed socket, vacuumtight	FTR Elbow plug (90°) with one socket
ASB Adaptor from LEMO socket to SMA socket	FAA Straight plug, non-latching, nut fixing	FTY Straight plug with two parallel sockets
ASF Adaptor from LEMO plug to SMA socket	FAB Straight plug, non-latching, riveted fixing	HGP Fixed socket, nut fixing, watertight
ASG Adaptor from LEMO plug to SMA plug	FFA Straight plug with cable collet	HGW Fixed socket, nut fixing, with rear sealing ring
ECP Straight socket with two nuts	FFA Straight plug with cable collet PEEK outer shell	PCA Free socket with cable collet
EPA Straight socket for printed circuit	FFA Straight plug with cable collet and nut for fitting a strain relief	PCS Free socket with cable crimping
EPB Straight socket for printed circuit (long studs)	FFC Straight plug with flats on latch sleeve and cable collet	PES Fixed socket, nut fixing, with cable crimping (back panel mounting)
EPC Straight socket for printed circuit with clearance under the body	FFE Straight plug with front sealing ring, cable collet and nut for fitting a strain relief	PSA Fixed socket, nut fixing, with cable collet
EPE Straight socket with two nuts for printed circuit		PSS Fixed socket, nut fixing, with cable crimping
		RAD Fixed coupler, nut fixing
		RMA Free coupler
		SWH Fixed coupler, nut fixing, vacuumtight

Part Section Showing Internal Components



Models with collet nut for fitting a strain relief

To order models with a collet nut for fitting a strain relief, add a "Z" in the "variant" position (see page 12) of the part number. Strain reliefs are available in nine colours and several sizes to accommodate different cable outside diameters. They are ordered separately as indicated in the "Accessories" section.

Watertight/Vacuumtight models

The fixed sockets and couplers, models HGP, HGW, EWF, EWV, SWH allow the device on which they are

fitted to reach a protection index of IP66 as per IEC 529 (unmated). They are fully compatible with the non watertight models of the same series and are widely used for portable radios, ship installations and in aircraft.

Specially prepared & tested versions of these models are available for vacuumtight applications guaranteeing a leakage level of less than 10^{-6} mbar.l.s⁻¹ (as per MIL-STD-1344A standard method 1008). A vacuumtight model is identified by the letter at the end of the part number (certificate on request).

To seal both the watertight and vacuumtight models, LEMO uses an epoxy resin.

Technical Characteristics

Mechanical and climatical

Characteristics	Value	Standard	Method
Contact retention force	> 18 N	MIL-STD-1344A	2007.1
Cable pull off force	> 100 N	MIL-STD-1344A	2009.1
Connector pull off force	> 90 N		
Endurance	> 1000 cycles	MIL-STD-1344A	2016
Operating temperature ¹⁾	- 55°C + 260°C		

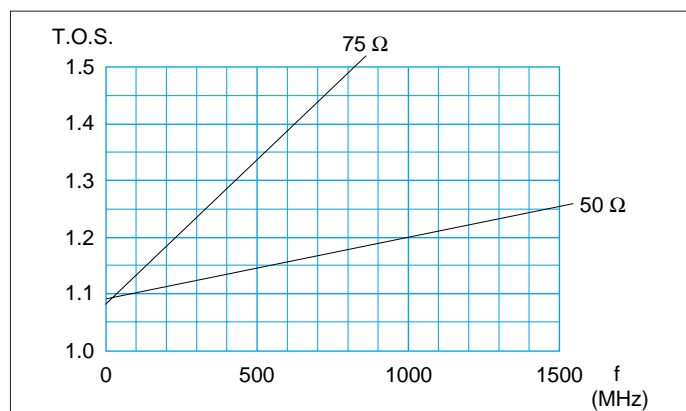
Note: 1) to seal both the watertight and vacuumtight models, LEMO uses and epoxy resin. The operating temperature is limited between -20°C and +80°C.

Electrical

Characteristics	Value	Standard	Method
Impedance	50 Ω		
Operating voltage (50 Hz)	0.7 kV rms	IEC 130-1 1 st ed.	§ 14.5
Test voltage (50 Hz)	2.1 kV rms	MIL-STD-1344A	3001.1
Rated current	4 A	IEC 512-3	
Contact resistance	< 6 mΩ	MIL-STD-202 F	307
Screen resistance	< 3.5 mΩ	MIL-STD-1344A	3007
Insulating resistance	> 10 ¹² Ω	MIL-STD-1344A	3003.1
VSWR (f. in GHz)	50 Ω	1.09+0.11f	IEC 169-1-1
	75 Ω	1.08+0.51f	IEC 169-1-1

Voltage Standing Wave Ratio

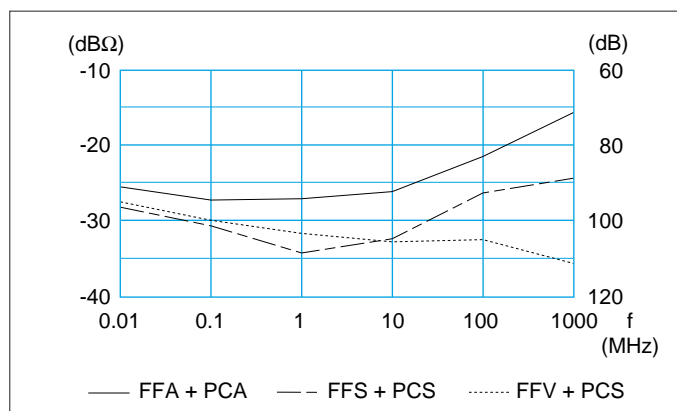
The VSWR (Voltage Standing Wave Ratio) is the value representing the power reflected in a connection. In most cases, the working frequency range is where $VSWR \leq 1.25$



Note: value for FFS plug and PCS socket mated (with PTFE insulator). Impedance measured under 50 Ω with a RG-174 A/U cable or under 75 Ω with a RG-179 B/U cable.

Screening efficiency (EMC properties) in dB (transfer impedance in dBΩ)

The screening efficiency is the ratio between the electromagnetic field inside the connector and a power source at the outside of the connector (or vice versa).



Note: measured according to IEC-169-1-3 standard.

Recommended cables

Cable group	Standard			Other cable	Imp. (Ω)
	MIL-C-17	IEC 96-2	CCTU 10-01A		
6	RG.58 C/U	50.3.1	KX 15	Belden 8262	50 ± 2 Ω
7	RG.142 B/U				50 ± 2 Ω
3	RG.174 A/U	50.2.1	KX 3A	Belden 8216	50 ± 2 Ω
				Lemo CCH.99.281.505	50 ± 2 Ω
1	RG.178 B/U	50.1.1	KX 21A	Belden 83265	50 ± 2 Ω
2	RG.179 B/U	75.2.1			75 ± 3 Ω
5	RG.180 B/U				95 ± 5 Ω
2	RG.187 A/U	75.2.2			75 ± 3 Ω
4	RG.188 A/U	50.2.3		Belden 83269	50 ± 2 Ω
1	RG.196 A/U	50.1.2			50 ± 2 Ω
4	RG.316 /U	50.2.2	KX 22A	Belden 83284	50 ± 2 Ω
3				Dätwyler HF-2114	50 ± 2 Ω
8				Storm 421 099	50 ± 2 Ω
8				H+S G02232D-60	50 ± 2 Ω

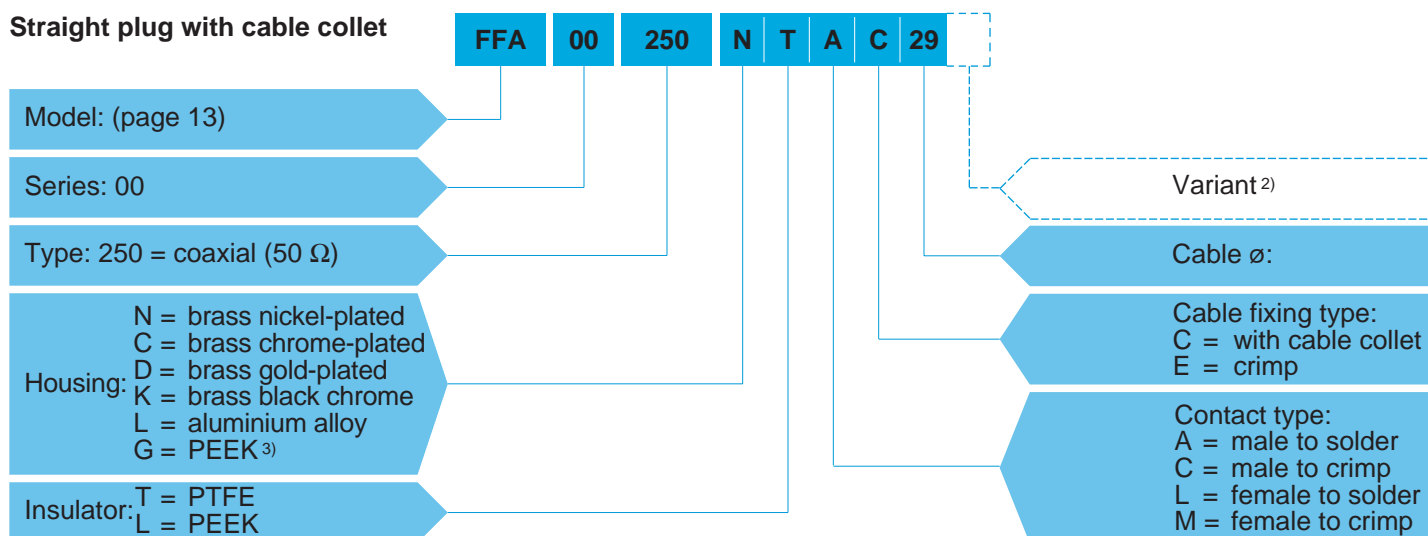
Colour of connectors in anodized aluminium alloy

When ordering a connector with an aluminium alloy, the outer shell colour must be chosen from the table variant listed below and included in the position of the part number.

Reference	Colour
A	blue
J	yellow
N	black
R	red
T	natural
V	green

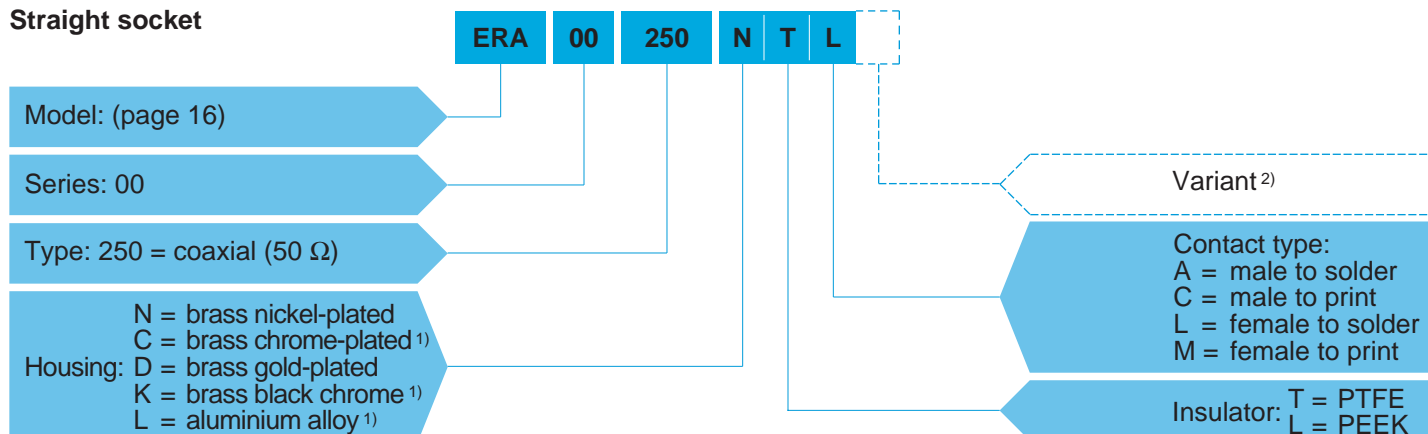
Part Number Example

Straight plug with cable collet



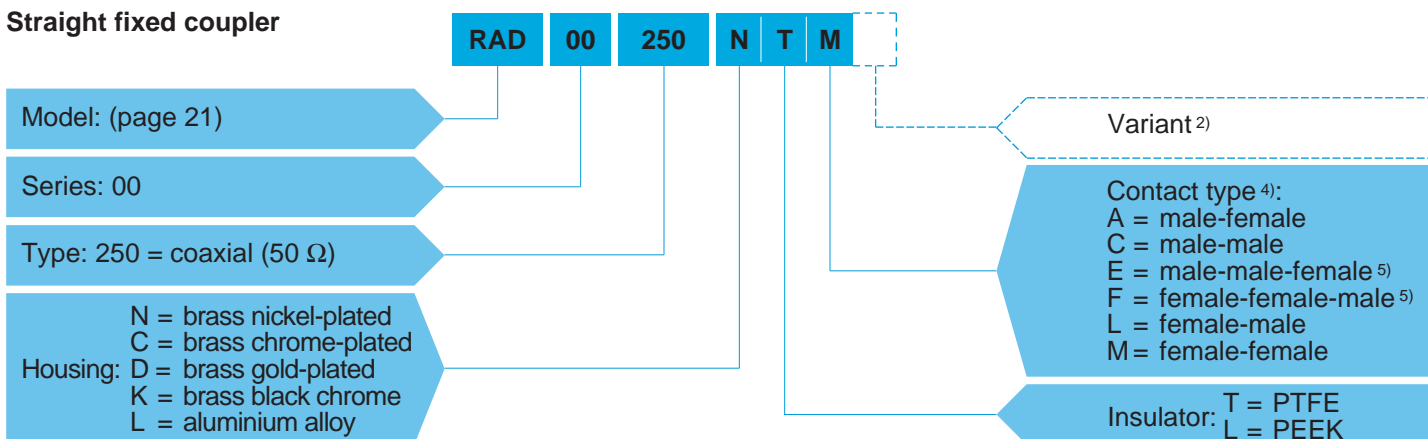
FFA.00.250.NTAC29 = straight plug with cable collet, series 00, coaxial type (50 Ω), outer shell in nickel-plated brass, PTFE insulator, male solder contact, C type collet of 2.9 mm diameter.

Straight socket



ERA.00.250.NTL = fixed socket, nut fixing, series 00, coaxial type (50 Ω), outer shell in nickel-plated brass, PTFE insulator, female solder contact.

Straight fixed coupler



RAD.00.250.NTM = straight fixed coupler, nut fixing, series 00, coaxial type (50 Ω), outer shell in nickel-plated brass, PTFE insulator, female-female contact.

Note: 1) treatment not available for the printed circuit models

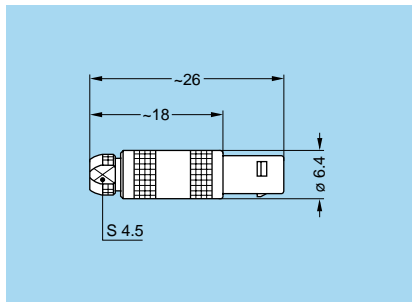
2) the "variant" position in the reference is used to specify the anodized colour of the housing in aluminium alloy (page 11) or models with a collet nut for fitting a strain relief "Z". The strain relief can be ordered separately as indicated in the "Accessories" section.

3) available for the FFA model only

4) concerning the straight fixed couplers with nut fixing RAD and SWH, the first contact type mentioned is always the contact at the flange end.

5) used only for models: FTA, FTL and FTY.

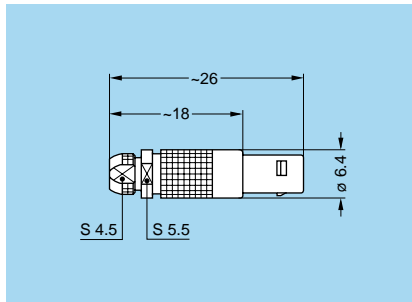
Models



FFA Straight plug with cable collet

Part number	Cable group	Note
FFA.00.250.NTAC22	1	●
FFA.00.250.NTAC29	2-3-4	●
FFA.00.250.NTAC31	8	●

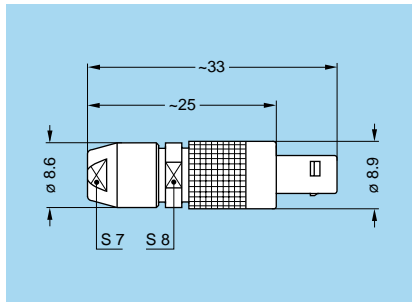
M1 Cable assembly



FFC Straight plug with flats on latch sleeve and cable collet

Part number	Cable group	Note
FFC.00.250.NTAC22	1	●
FFC.00.250.NTAC27	2-4	●
FFC.00.250.NTAC31	3-8	●

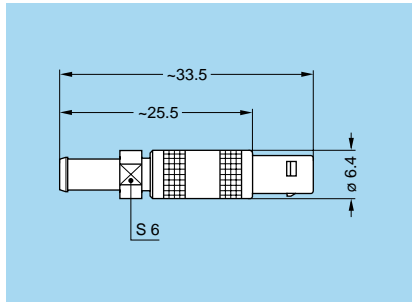
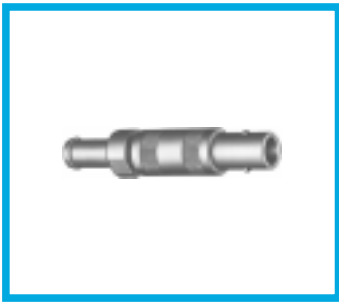
M3 Cable assembly



FFY Straight plug with cable collet

Part number	Cable group	Note
FFY.00.250.NTAC52	6-7	●

M2 Cable assembly

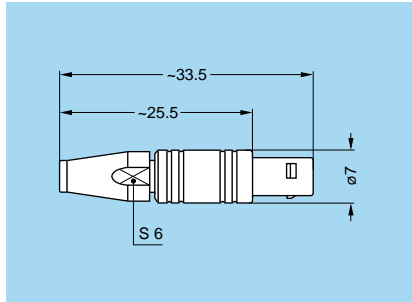


FFA Straight plug with cable collet and nut for fitting a strain relief

Part number	Cable group	Note
FFA.00.250.NTAC22Z	1	●
FFA.00.250.NTAC29Z	2-3-4	●
FFA.00.250.NTAC31Z	8	●

Note: the strain relief must be ordered separately (see page 29).

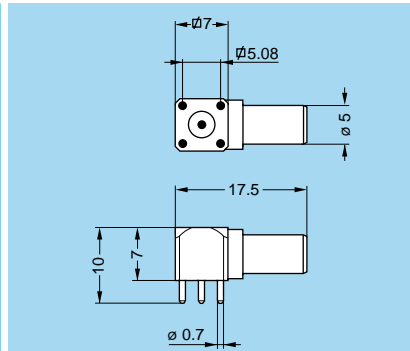
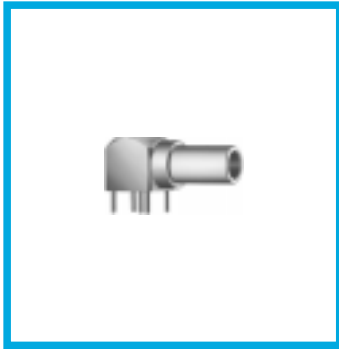
M1 Cable assembly



FFA Straight plug with cable collet, PEEK outer shell

Part number	Cable group	Note
FFA.00.250.GTAC22	1	●
FFA.00.250.GTAC29	2-3-4	●
FFA.00.250.GTAC31	8	●

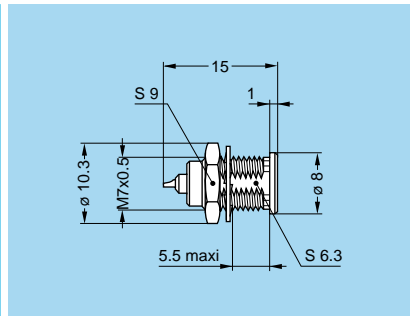
M1 Cable assembly ● Available ○ On request



FPL Elbow plug (90°), non-latching for printed circuit

Part number	Weight (g)	Note
FPL.00.250.NTD	2.5	●

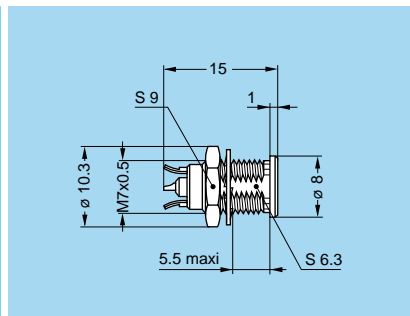
P10 PCB drilling pattern



ERA Fixed socket, nut fixing

Part number	Weight (g)	Note
ERA.00.250.NTL	2.8	●

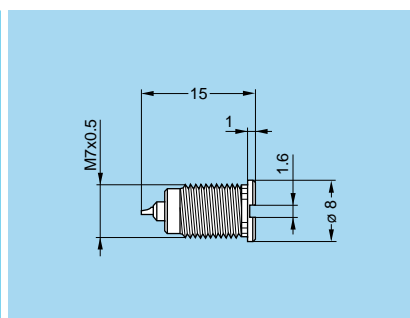
P5 Panel cut-out



ERN Fixed socket, nut fixing, with earthing tags

Part number	Weight (g)	Note
ERN.00.250.NTL	2.8	●

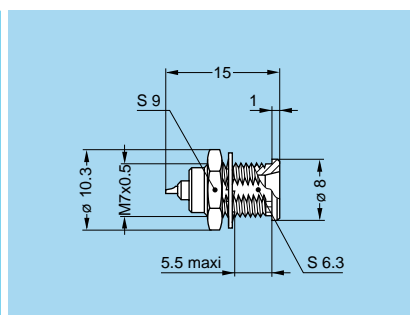
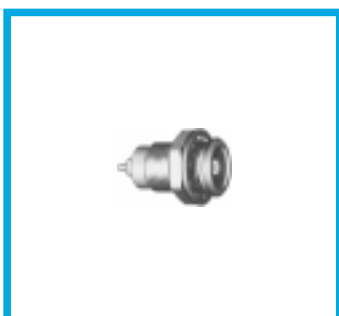
P5 Panel cut-out



ERC Fixed socket, nut fixing, with slots in flange

Part number	Weight (g)	Note
ERC.00.250.NTL	2.2	●

P3 Panel cut-out

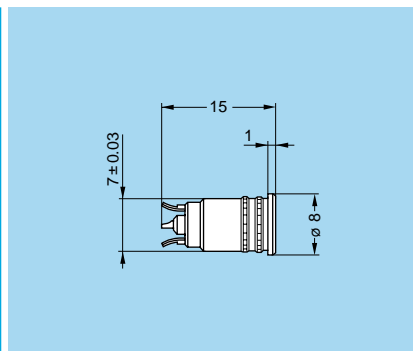


ERE Fixed socket, nut fixing, with conical lead-in

Part number	Weight (g)	Note
ERE.00.250.NTL	2.8	●

P5 Panel cut-out

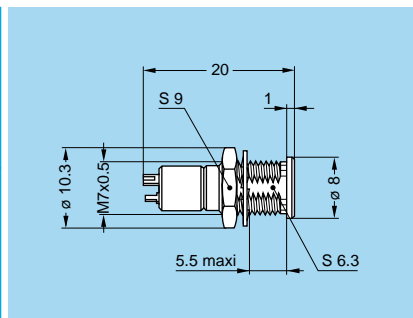
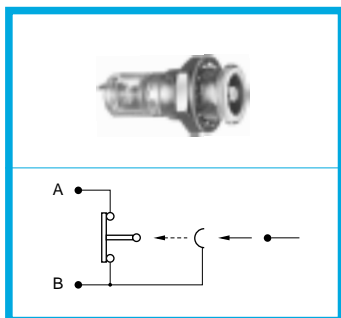
● Available ○ On request



ERT Straight socket without thread, force or adhesive fit

Part number	Weight (g)	Note
ERT.00.250.NTL	2.2	●

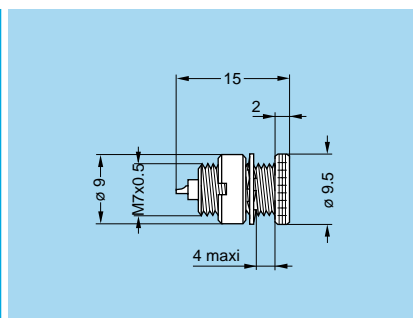
P4 Panel cut-out



ERM Fixed socket, nut fixing, with microswitch

Part number	Weight (g)	Note
ERM.00.250.NTL	3.0	●

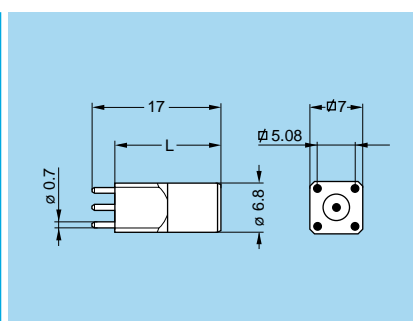
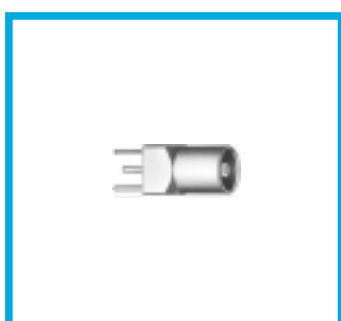
P5 Panel cut-out



ECP Fixed socket with two nuts

Part number	Weight (g)	Note
ECP.00.250.NTL	3.3	●

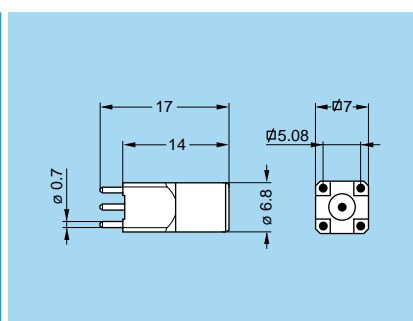
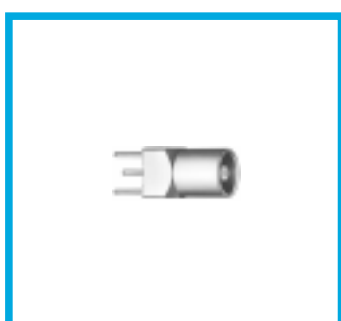
P1 Panel cut-out



EPA-EPB Straight socket for printed circuit

Part number	L (mm)	Weight (g)	Note
EPA.00.250.NTN	14	3.4	●
EPB.00.250.NTN	12	3.3	●

P10 PCB drilling pattern

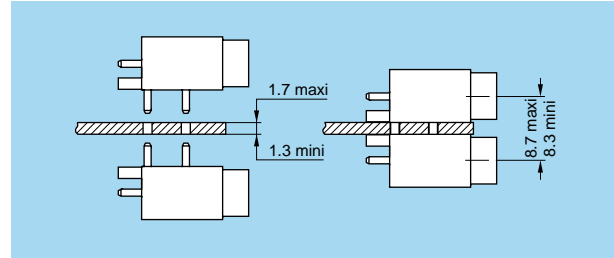
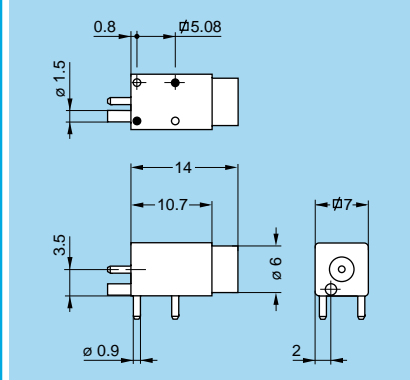
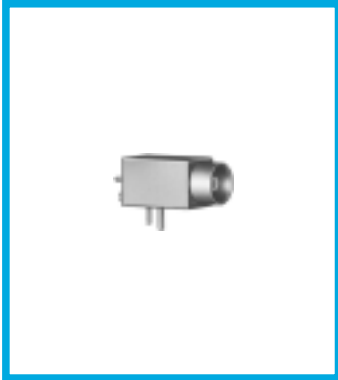
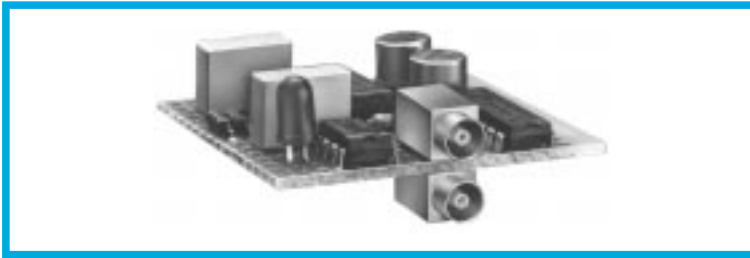


EPC Straight socket for printed circuit with clearance under the body

Part number	Weight (g)	Note
EPC.00.250.NTN	3.3	●

P10 PCB drilling pattern

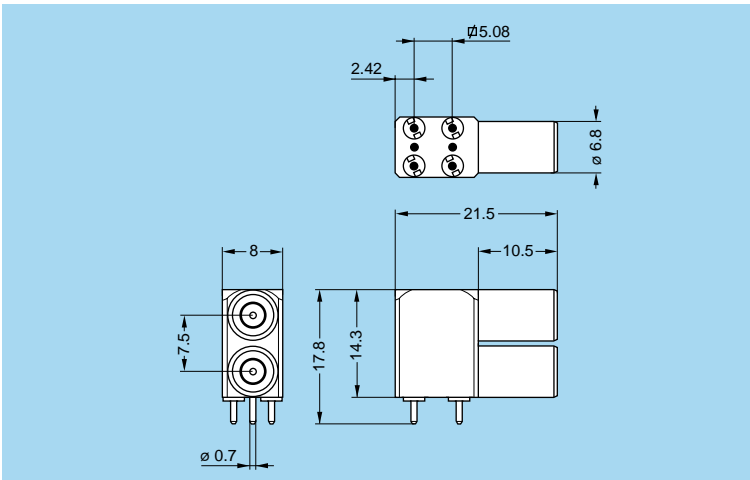
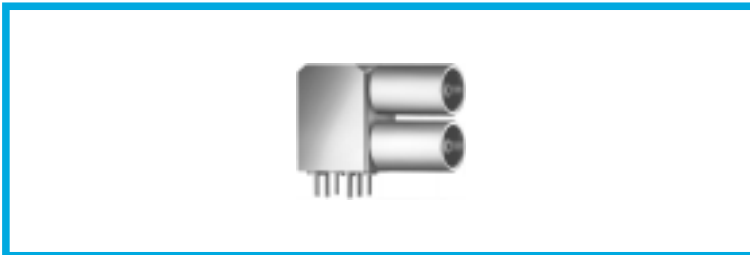
● Available ○ On request



EPN Straight socket for press mounting in pair on printed circuit

Part number	Weight (g)	Note
EPN.00.250.NTN	3.6	●

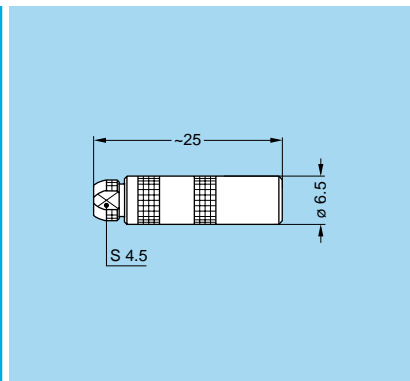
P9 PCB drilling pattern



EPY Elbow socket (90°) for printed circuit, with two vertical sockets

Part number	Weight (g)	Note
EPY.00.250.NTN	12.8	●

P13 PCB drilling pattern

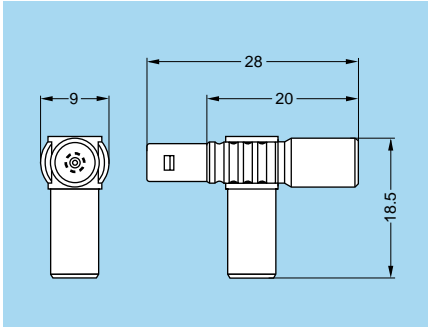


PCA Free socket with cable collet

Part number	Cable group	Note
PCA.00.250.NTLC22	1	●
PCA.00.250.NTLC29	2-3-4	●
PCA.00.250.NTLC31	8	●

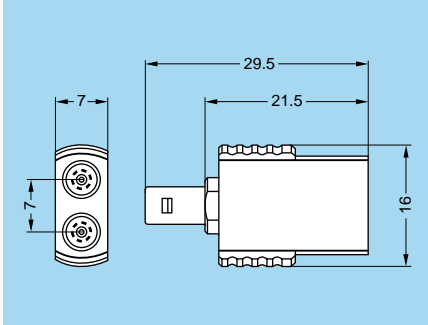
M1 Cable assembly

● Available ○ On request



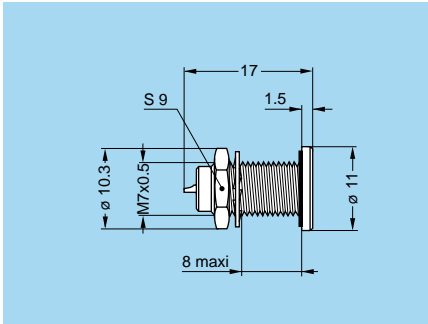
FTL T-plug with two sockets (90°)

Part number	Weight (g)	Note
FTL.00.250.NTF	7.1	●



FTY Straight plug with two parallel sockets

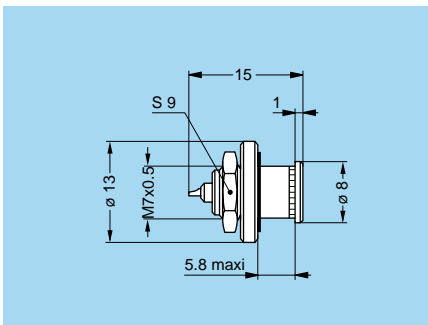
Part number	Weight (g)	Note
FTY.00.250.NTF	12.5	●



HGP Fixed socket, nut fixing, watertight

Part number	Weight (g)	Note
HGP.00.250.NTLP	4.2	●

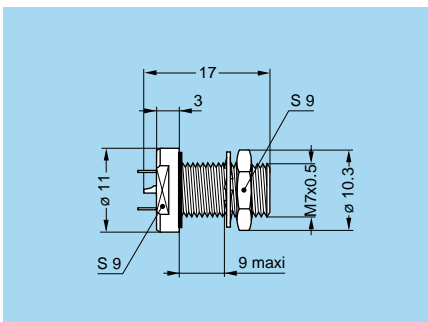
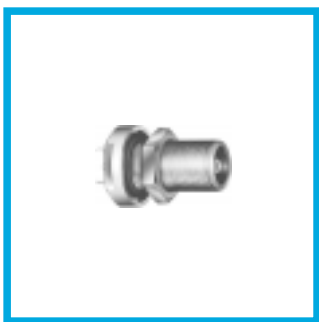
P1 Panel cut-out



HGW Fixed socket, nut fixing, with rear sealing ring

Part number	Weight (g)	Note
HGW.00.250.NTLP	4.2	●

P1 Panel cut-out

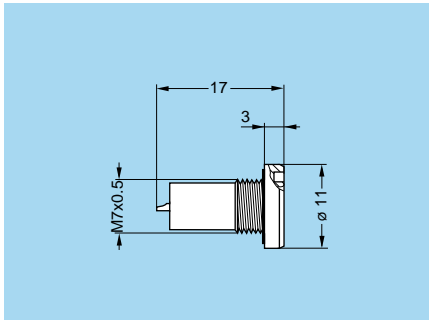
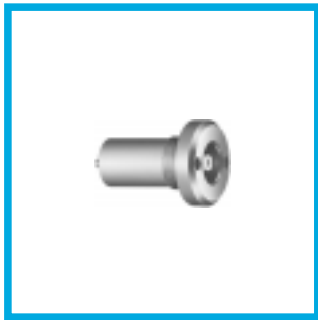


EWF Fixed socket, nut fixing, vacuumtight (back panel mounting)

Part number	Weight (g)	Note
EWF.00.250.NTLPV	4.2	●

P1 Panel cut-out

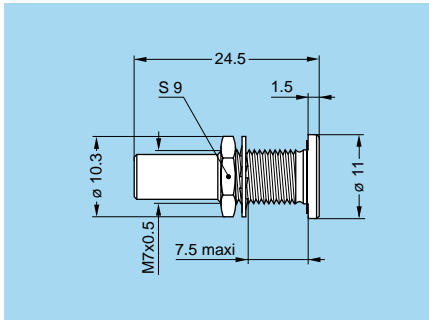
● Available ○ On request



EWV Fixed socket, vacuumtight

Part number	Weight (g)	Note
EWV.00.250.NTLPV	3.7	●

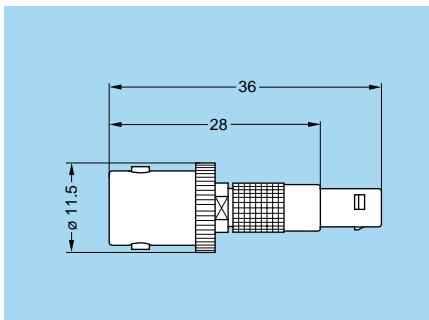
P2 Panel cut-out



SWH Fixed coupler, nut fixing, vacuumtight

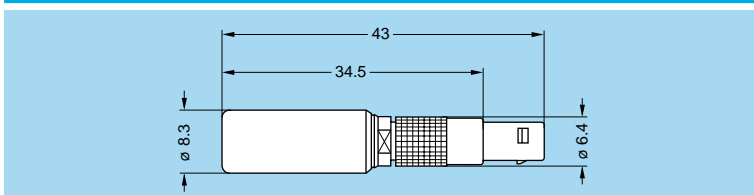
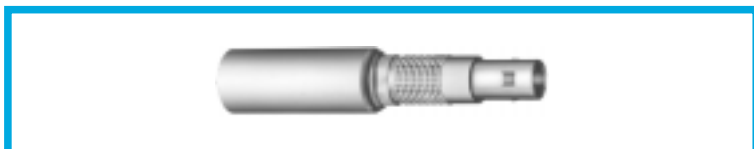
Part number	Weight (g)	Note
SWH.00.250.NTMV	5.2	●

P1 Panel cut-out



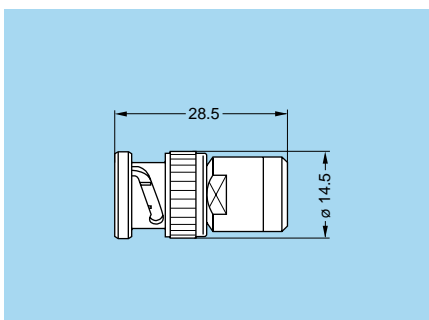
ABF Adaptor from LEMO plug to BNC socket

Part number	Weight (g)	Note
ABF.00.250.NTA	8.3	●



APF Adaptor from LEMO plug to CINCH socket

Part number	Colour of the ring	Weight (g)	Note
APF.00.250.DTAB	white	7	●
APF.00.250.DTAR	red	7	●



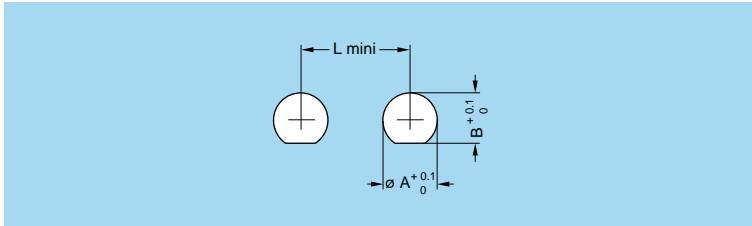
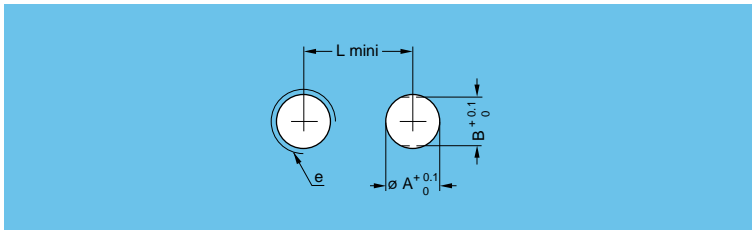
ABA Adaptor from LEMO socket to BNC plug

Part number	Weight (g)	Note
ABA.00.250.NTL	18.7	●

● Available ○ On request

Cut-Out

Panel cut-out

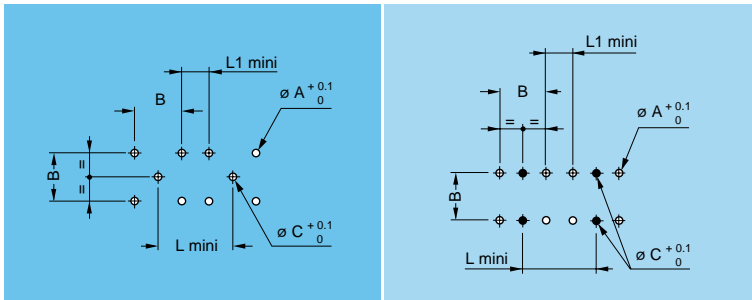


Cut-out	Model	Dimensions			
		A	B	L	e
P1	HGP-HGW-SWH-ECP EPE-EPS-FAB-EWF	7.1	-	14.5	-
P2	EWV	-	-	12.0	M7x0.5
P3	ERC	-	-	9.0	M7x0.5
P4	ERT	7.0 _{-0.02}	-	-	-
P5	Other models ¹⁾	7.1	6.5	14.5	-
P6	ABB	9.7	9.0	15.0	-
P7	ABD	12.9	11.7	20.5	-
P8	ANC	16.1	13.7	24.0	-

Note: 1) If these models are used with a tapered washer GBB, the panel cut-out must be according P1.

Recommended mounting nut torque: 2.5 Nm.

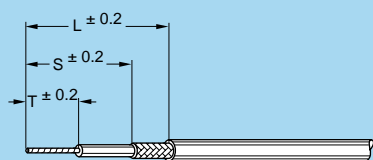
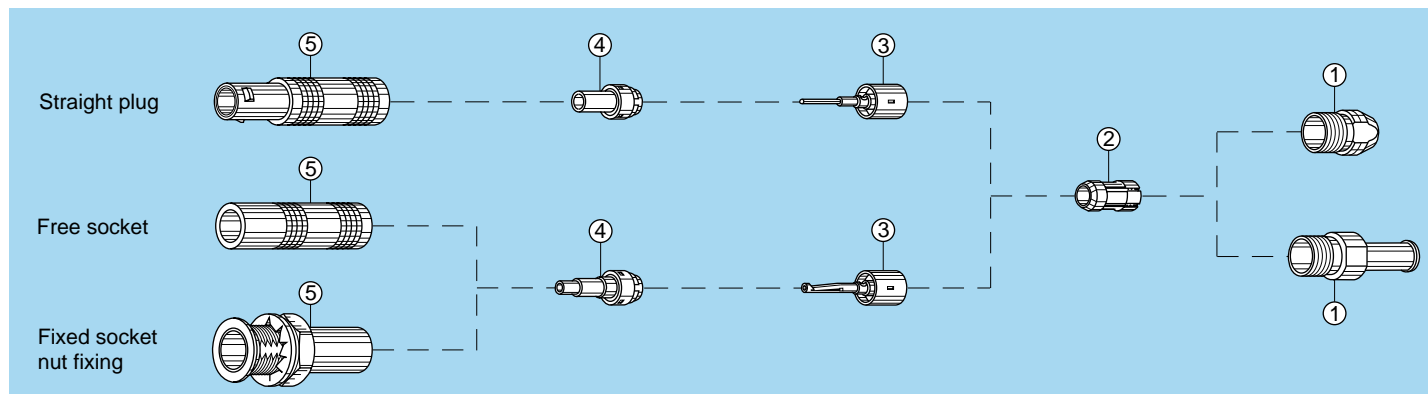
PCB drilling pattern



Cut-out	Model	Dimensions				
		A	B	L	L1	C
P9	EPN	0.9	5.08	-	2.0	-
P10	Other models	0.8	5.08	8.0	2.9	0.8
P11	FPA	0.8	5.08	8.0	2.9	1.0
P12	EPE-EPS	0.8	5.08	14.5	9.4	0.8
P13	EPY	0.8	5.08	9.0	3.9	0.8

Terminated Instructions

Terminating of plugs and straight sockets with cable collet M1 M2 M3



1. Cable preparation

First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M1			M2			M3		
	T	S	L	T	S	L	T	S	L
1-2-3-4-8	4	4.5	8	-	-	-	5	5	8
6-7	-	-	-	7.5	8.5	13	-	-	-

2. Cable termination

2.1 Place the collet nut ① and the collet ② on the cable. Fold back the shield braid onto the conical part of the collet, and trim to the outer edge of the collet

2.2 Slide the subassembly ③ to trap the shield braiding and solder the central conductor into the contact.

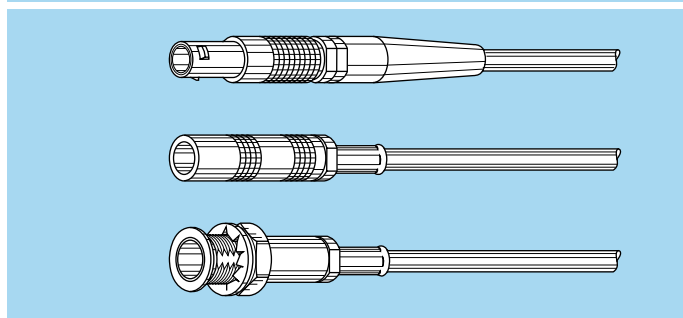
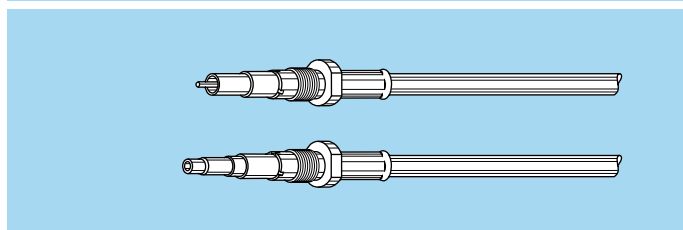
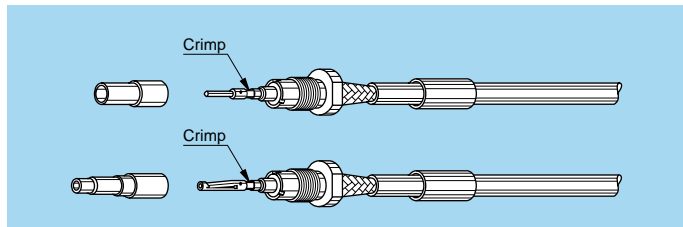
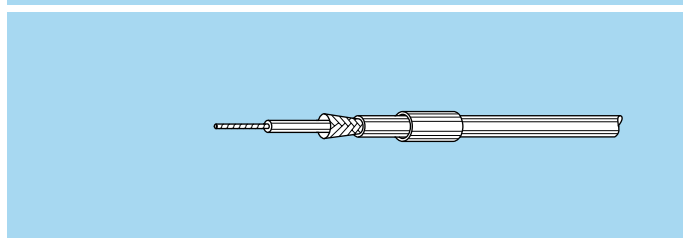
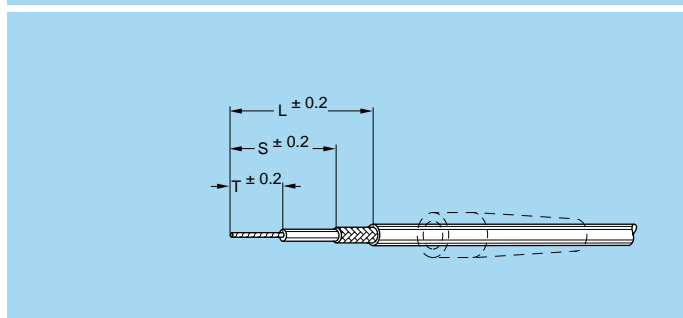
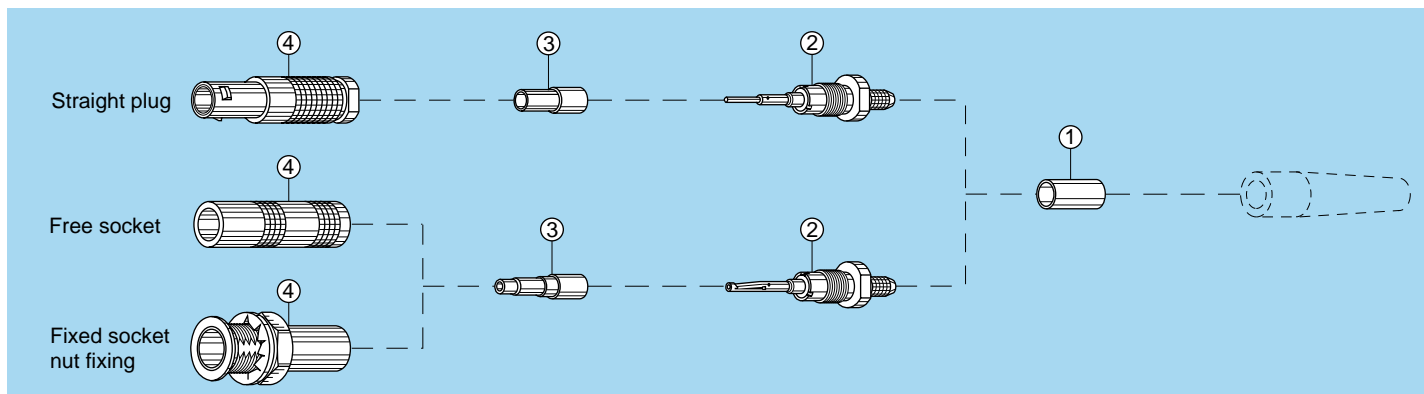
2.3 Slide the insulator ④ onto the subassembly ③ until it rests against the earthing sleeve of the subassembly ③.

2.4 Slide the assembly into the connector outer shell ⑤. Screw the collet nut ① into the connector outer shell ⑤ using the appropriate tool and tighten to a torque of 0.25 Nm (see "Tooling" on page 31 and 32). Push the strain relief (if used) onto the collet nut.

Note: these terminating instructions apply to the following models:

- M1 = FFA, FFE, FFF, PCA, PSA
- M2 = FFY
- M3 = FFC

Terminating of plugs and straight sockets with cable crimping (crimp contact) M4



1. Cable preparation

First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M4		
	T	S	L
1-2-3-4-5-8	7	15	19.5
6-7	7	15	21.5

2. Cable termination

2.1 Place crimp ferrule ① on the cable. Widen the shield braid. Slide the subassembly ② into the cable until the insulator rests against the dielectric and the cable conductor is visible through the contact inspection hole.

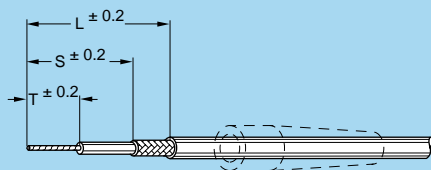
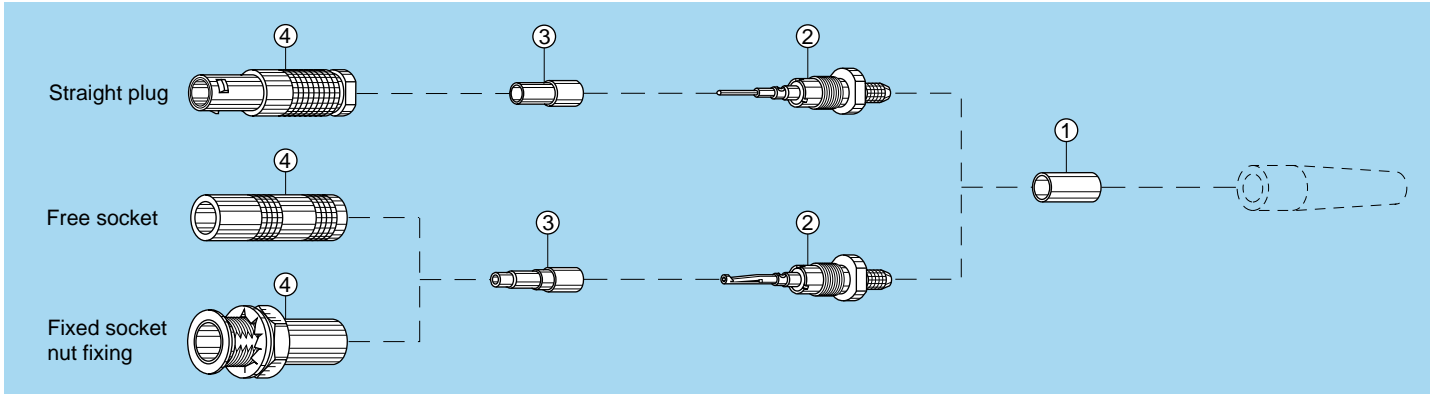
2.2 Crimp the contact with the LEMO crimping tool using the square hole (see "Tooling" on page 32). Gently pull the cable in order to check the crimping.

2.3 Slide the crimp ferrule ① onto the shield until it rests against the crimp backnut of the subassembly ②. Crimp with the same LEMO crimping tool using the hexagonal opening. Slide the insulator ③ onto the subassembly ②.

2.4 Slide the assembly into the connector shell ④ and screw it onto the subassembly ②. Tighten using the appropriate tool to a torque of 0.25 Nm (see "Tooling" on page 31 and 32). Push the strain relief (if used) onto the crimp ferrule ①.

Note: these terminating instructions apply to the following models:
M4 = FFS, FFV, PCS, PSS, PES

Terminating of plugs and straight sockets with cable crimping (solder contact) M5



1. Cable preparation

First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M5		
	T	S	L
1-2-3-4-5-8	5	12	17
6-7	5	12	19

2. Cable terminating

2.1 Place the crimp ferrule ① on the cable. Widen the shield braid. Slide the subassembly ② over the cable until the insulator rests against the dielectric and the cable conductor is visible through the contact solder hole.

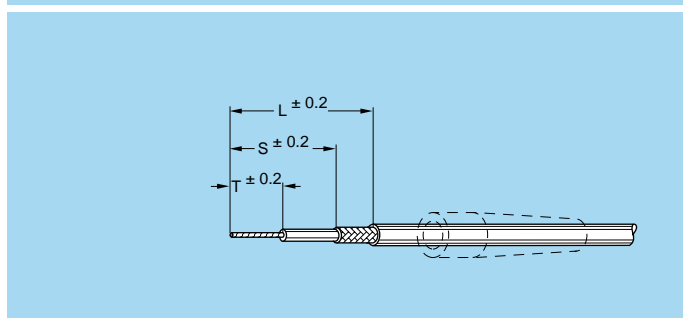
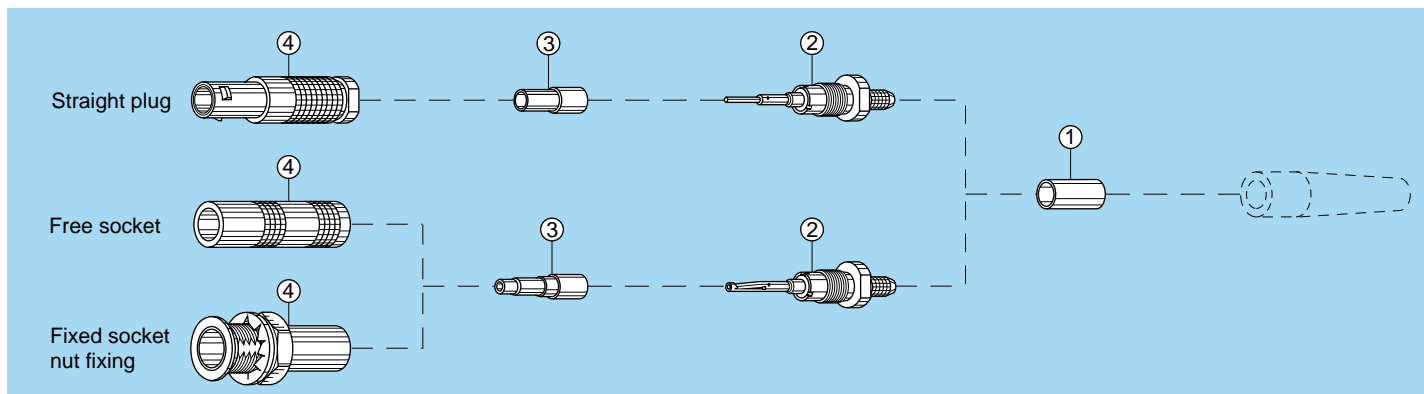
2.2 Solder the conductor through the hole.

2.3 Slide the crimp ferrule ① onto the shield until it rests against the crimp backnut of the subassembly ②. Crimp with the LEMO crimping tool using the hexagonal opening (see "Tooling" on page 32). Slide the insulator ③ onto the subassembly ②.

2.4 Slide the assembly into the connector shell ④ and screw it onto the subassembly ②. Tighten using the appropriate tool to a torque of 0.25 Nm (see tooling on pages 31 and 32). Push the strain relief (if used) onto the crimp ferrule.

Note: these terminating instructions apply to the following models:
M5 = FFS, FFV, PCS, PSS, PES

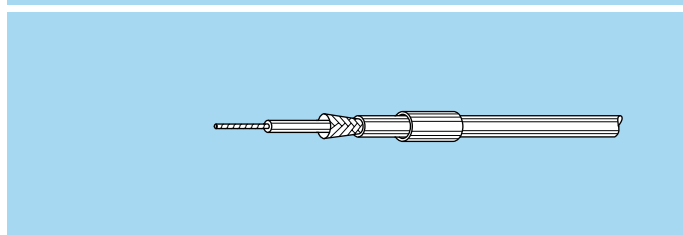
Terminating of plugs and straight sockets with cable crimping (crimp contact) M4



1. Cable preparation

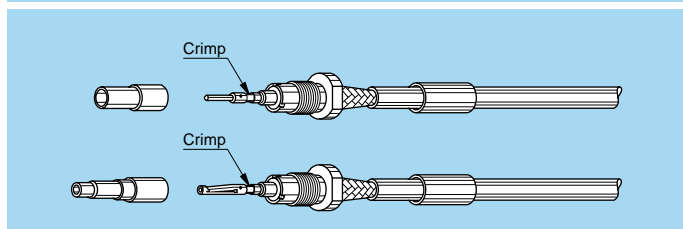
First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M4		
	T	S	L
1-2-3-4-5-8	7	15	19.5
6-7	7	15	21.5

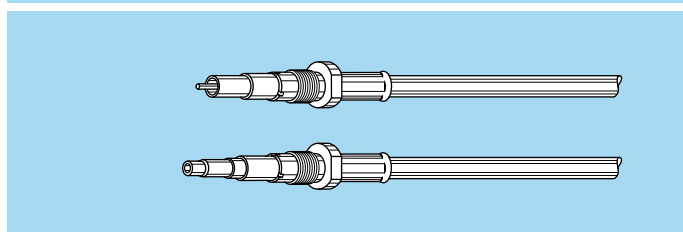


2. Cable termination

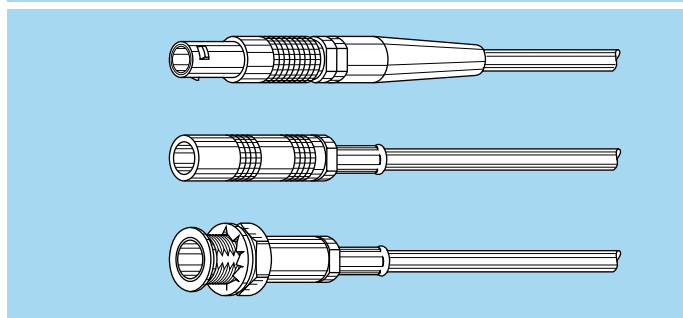
2.1 Place crimp ferrule ① on the cable. Widen the shield braid. Slide the subassembly ② into the cable until the insulator rests against the dielectric and the cable conductor is visible through the contact inspection hole.



2.2 Crimp the contact with the LEMO crimping tool using the square hole (see "Tooling" on page 32). Gently pull the cable in order to check the crimping.



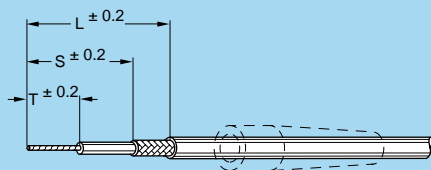
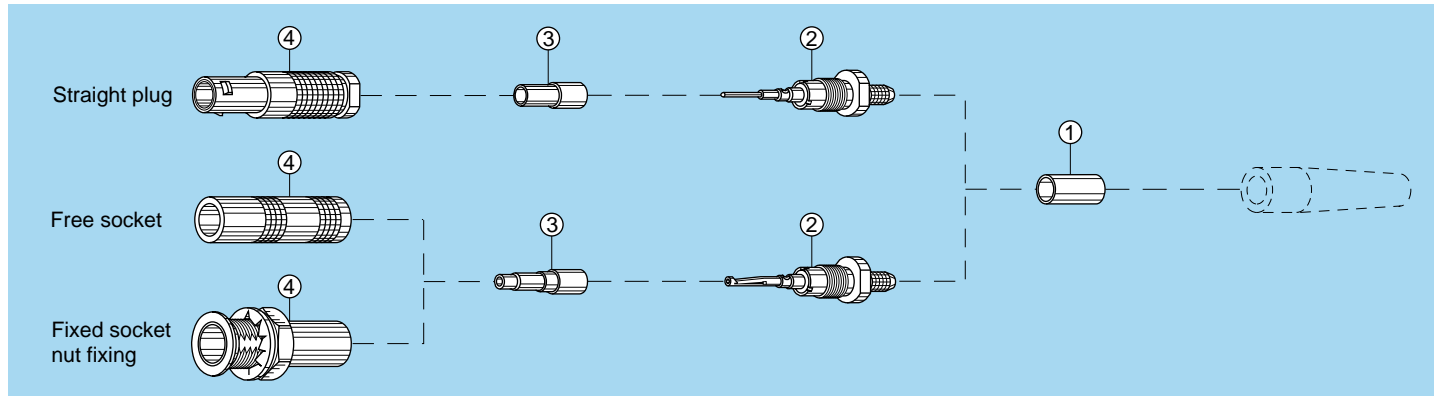
2.3 Slide the crimp ferrule ① onto the shield until it rests against the crimp backnut of the subassembly ②. Crimp with the same LEMO crimping tool using the hexagonal opening. Slide the insulator ③ onto the subassembly ②.



2.4 Slide the assembly into the connector shell ④ and screw it onto the subassembly ②. Tighten using the appropriate tool to a torque of 0.25 Nm (see "Tooling" on page 31 and 32). Push the strain relief (if used) onto the crimp ferrule ①.

Note: these terminating instructions apply to the following models:
M4 = FFS, FFV, PCS, PSS, PES

Terminating of plugs and straight sockets with cable crimping (solder contact) M5



1. Cable preparation

First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M5		
	T	S	L
1-2-3-4-5-8	5	12	17
6-7	5	12	19

2. Cable terminating

2.1 Place the crimp ferrule ① on the cable. Widen the shield braid. Slide the subassembly ② over the cable until the insulator rests against the dielectric and the cable conductor is visible through the contact solder hole.

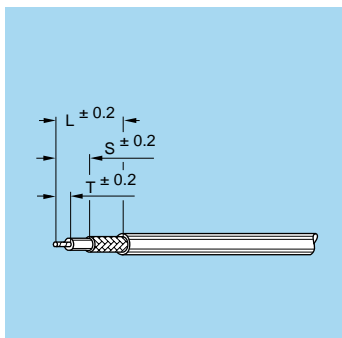
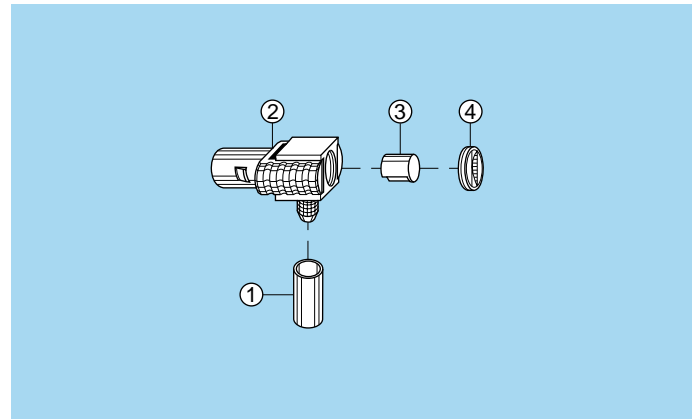
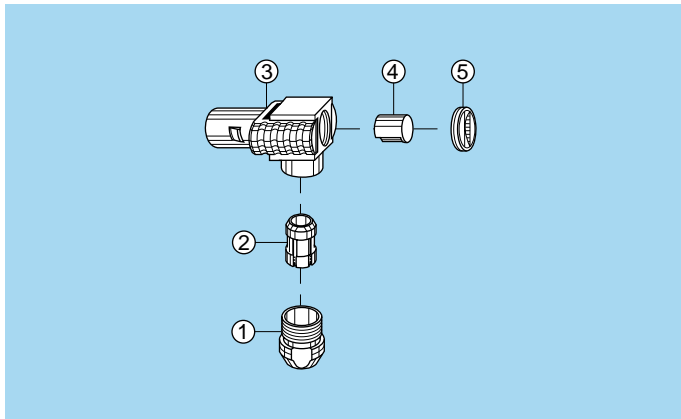
2.2 Solder the conductor through the hole.

2.3 Slide the crimp ferrule ① onto the shield until it rests against the crimp backnut of the subassembly ②. Crimp with the LEMO crimping tool using the hexagonal opening (see "Tooling" on page 32). Slide the insulator ③ onto the subassembly ②.

2.4 Slide the assembly into the connector shell ④ and screw it onto the subassembly ②. Tighten using the appropriate tool to a torque of 0.25 Nm (see tooling on pages 31 and 32). Push the strain relief (if used) onto the crimp ferrule.

Note: these terminating instructions apply to the following models:
M5 = FFS, FFV, PCS, PSS, PES

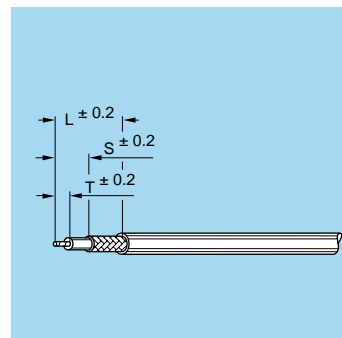
Terminating of elbow plugs (90°) with cable collet **M6** and cable crimp **M7**



1. Cable preparation

First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

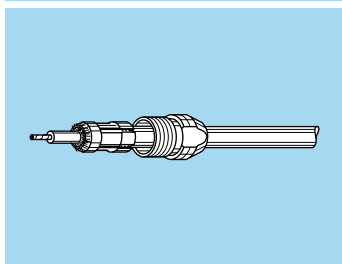
Cable group	M6		
	T	S	L
1-2-3-4-8	1	3.5	6.5



1. Cable preparation

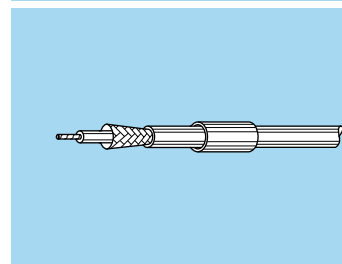
First place the strain relief (if to be used) on the cable. Strip the cable according to dimensions below.

Cable group	M7		
	T	S	L
1-2-3-4-8	1	4.5	9
6-7	3	4.5	11



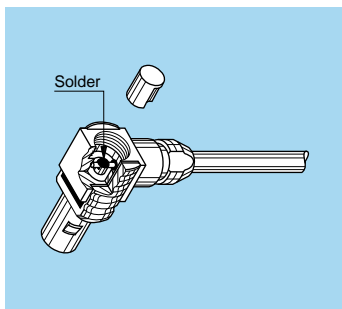
2. Cable terminating

2.1 Place the crimp ferrule ① and collet ② on the cable. Fold back the shield braid onto the conical part of the collet, and trim to outer edge of the collet.

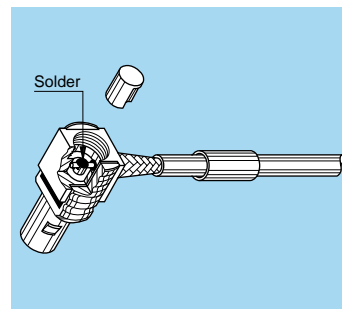


2. Cable terminating

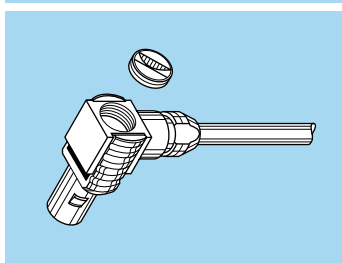
2.1 Place the cable crimp ferrule ① on the cable and widen the braiding.



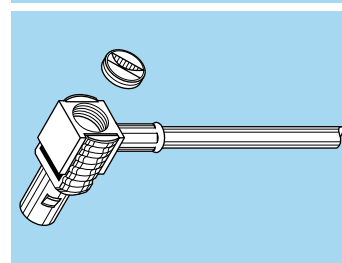
2.2 Slide the assembly into the connector shell ③ and tighten the collet nut ① using the appropriate tool to a torque of 0.25 Nm (see "Tooling" on page 31 and 32). Check that the cable conductor rests in the contact slot, solder the conductor through the hole.



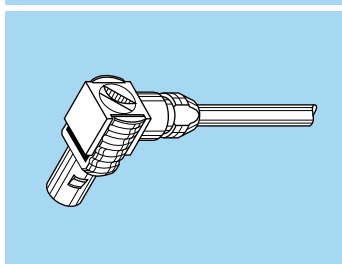
2.2 Slide the cable into the connector shell ②. Check that cable conductor rests in the contact slot, tin solder the conductor through the hole. Slide the crimp ferrule ① over the braiding until it reaches the connector shell ②. Crimp with the LEMO crimp tool using the hexagonal opening (see "Tooling" on page 32).



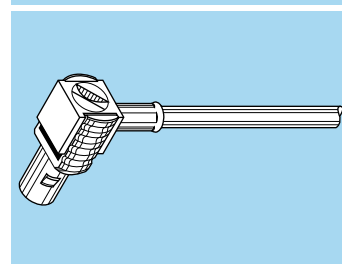
2.3 Place the insulating sleeve ④ over the soldered contact.



2.3 Place the insulating sleeve ③ over the soldered contact.



2.4 Close the access hole with the flat screw ⑤. Push the strain relief (if used) onto the collet nut ①.



2.4 Close the connector hole with the flat screw ④. Push the strain relief (if used) onto the crimping tube ①.

Note: these terminating instructions apply to the following models:

M6 = FLA

Note: these terminating instructions apply to the following models:

M7 = FLS, FLV

Recommended coaxial cables

Dimensions and characteristics

Standard / Part number (supplier)			Imp. (Ω)	Construction and dimensions								Weight kg/100 m	
				Conductor			Dielectric		Shield		Sheath		
Construction	Mat.	∅		Mat.	∅	Mat.	∅	Mat.	∅				
RG.58C/U	KX 15	50-3-1	50 ± 2 Ω	19x0.18	CuSn	0.90	PE	2.95	CuSn	3.60	PVC*	4.95	3.80
RG.142B/U		-	50 ± 2 Ω	solid	CuStAg	0.95	PTFE	2.95	CuAg CuAg	2 nd : 4.20	FEP	4.95	6.60
RG.174A/U	KX 3A	50-2-1	50 ± 2 Ω	7x0.16	CuSt	0.48	PE	1.50	CuSn	2.00	PVC*	2.60	1.10
RG.178B/U	KX 21A	50-1-1	50 ± 2 Ω	7x0.10	CuStAg	0.30	PTFE	0.87	CuAg	1.40	FEP	1.80	0.85
RG.179B/U		75-2-1	75 ± 3 Ω	7x0.10	CuStAg	0.30	PTFE	1.50	CuAg	2.00	FEP	2.50	1.50
RG.180B/U		-	95 ± 5 Ω	7x0.10	CuStAg	0.30	PTFE	2.60	CuAg	3.10	FEP	3.60	3.20
RG.187A/U		75-2-2	75 ± 3 Ω	7x0.10	CuStAg	0.30	PTFE	1.50	CuAg	2.00	PTFE	2.60	1.60
RG.188A/U		50-2-3	50 ± 2 Ω	7x0.18	CuStAg	0.54	PTFE	1.50	CuAg	2.00	PTFE	2.60	1.60
RG.196A/U		50-1-2	50 ± 2 Ω	7x0.10	CuStAg	0.30	PTFE	0.87	CuAg	1.37	PTFE	2.10	1.10
RG.316/U	KX 22A	50-2-2	50 ± 2 Ω	7x0.18	CuStAg	0.54	PTFE	1.50	CuAg	2.10	FEP	2.50	1.60
8216	(Belden)	50-2-1	50 ± 2 Ω	7x0.16	CuSt	0.48	PE	1.52	CuSn	-	PVC	2.55	-
8262	(Belden)	50-3-1	50 ± 2 Ω	19x0.18	CuSn	0.90	PE	2.95	CuSn	-	PVC	4.95	-
83265	(Belden)	50-1-1	50 ± 2 Ω	7x0.10	CuStAg	0.30	PTFE	0.86	CuAg	-	FEP	1.85	-
83269	(Belden)	-	50 ± 2 Ω	7x0.17	CuStAg	0.51	PTFE	1.52	CuAg	-	PTFE	2.60	-
83284	(Belden)	50-2-2	50 ± 2 Ω	7x0.17	CuStAg	0.51	PTFE	1.52	CuAg	-	FEP	2.50	-
HF-2114	(Dätwyler)	-	50 ± 2 Ω	7x0.16	Cu	0.48	PE	1.32	Cu	1.9	PVC	2.70	1.15
CCH.99.281.505	(Lemo) ¹⁾	50-2-1	50 ± 2 Ω	7x0.18	Cu	0.54	PE	1.50	Cu	2.2	PoF	2.80	1.30
421.099	(Storm)	-	50 ± 2 Ω	7x0.16	CuStAg	0.50	PTFE	1.52	CuAg CuAg	1 st : 2.00 2 nd : 2.50	FEP	3.05	1.95
G02232D-60	(H+S)	-	50 ± 2 Ω	7x0.16	Cu	0.50	PE	1.50	CuAg CuSn	1 st : 1.95 2 nd : 2.50	PVC	3.10	2.10

Notes: all dimensions are in millimeters.
¹⁾ Fire resistant according IEC 332-1.

Cu	Bare copper	FEP	Extruded Fluorethylenpropylen	PVC	Polyvinylchlorid
CuAg	Silver-plated copper	PE	Polyethylen	PVC*	Polyvinylchlorid
CuSn	Tinned copper	PoF	Polyolefin		(Qual.lla MIL-C-17)
CuSt	Copper-plated steel	PTFE	Wrapped or extruded		
CuStAg	Silvered copper plated steel		Polytetrafluorethylen		

Technical tables

VSWR effect on transmitted power

VSWR	VSWR (dB)	Return loss (dB)	Transmiss. loss (dB)	Reflected voltage coefficient	Transmit. power (%)	Reflected power (%)
1.00	0		0.000	0.00	100.0	0.0
1.01	0.1	46.1	0.000	0.00	100.0	0.0
1.02	0.2	40.1	0.000	0.01	100.0	0.0
1.03	0.3	36.6	0.001	0.01	100.0	0.0
1.04	0.3	34.2	0.003	0.03	100.0	0.0
1.05	0.4	32.3	0.003	0.02	99.9	0.1
1.06	0.5	30.7	0.004	0.03	99.9	0.1
1.07	0.6	29.4	0.005	0.03	99.9	0.1
1.08	0.7	28.3	0.006	0.04	99.9	0.1
1.09	0.7	27.3	0.008	0.04	99.8	0.2
1.10	0.8	26.4	0.010	0.05	99.8	0.2
1.11	0.9	25.7	0.012	0.05	99.7	0.3
1.12	1.0	24.9	0.014	0.06	99.7	0.3

VSWR	VSWR (dB)	Return loss (dB)	Transmiss. loss (dB)	Reflected voltage coefficient	Transmit. power (%)	Reflected power (%)
1.13	1.1	24.3	0.016	0.06	99.6	0.4
1.14	1.1	23.7	0.019	0.07	99.6	0.4
1.15	1.2	23.1	0.021	0.07	99.5	0.5
1.16	1.3	22.6	0.024	0.07	99.5	0.5
1.17	1.4	22.1	0.027	0.08	99.4	0.6
1.18	1.4	21.7	0.030	0.08	99.3	0.7
1.19	1.5	21.2	0.033	0.09	99.2	0.8
1.20	1.6	20.8	0.036	0.09	99.2	0.8
1.21	1.7	20.4	0.039	0.10	99.1	0.9
1.22	1.7	20.1	0.043	0.10	99.0	1.0
1.23	1.8	19.7	0.046	0.10	98.9	1.1
1.24	1.9	19.4	0.050	0.11	98.9	1.1
1.25	1.9	19.1	0.054	0.11	98.8	1.2