Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

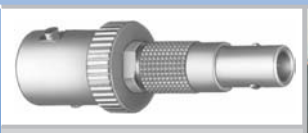
LEMO's Miniature Coaxial Connectors

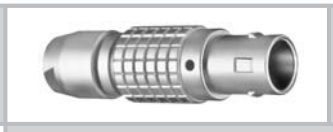
NIM-CAMAC NBS-549

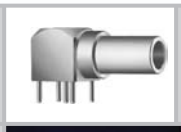
00 Series Connectors for

Test & Measurement and

Nuclear Applications







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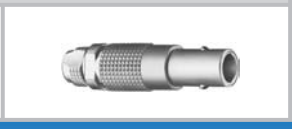
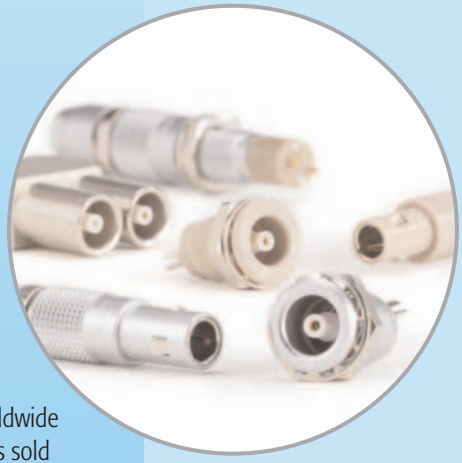


Expect Success. Spec LEMO®.



A Global Leader

Since its beginning in Switzerland in 1946, LEMO® has evolved into a worldwide leader in the design and manufacture of circular connectors, with products sold in more than 80 countries.

Today, LEMO offers a product line for almost any application, from medical equipment to test and measurement instrumentation.

LEMO Means "Quality"

The name LEMO has become synonymous with quality and customer service in the connector industry, setting standards that others strive to meet. Our connectors are designed in an ISO 9001:2000 business environment, ensuring the highest quality products for our customers.

LEMO – We Deliver Reliability

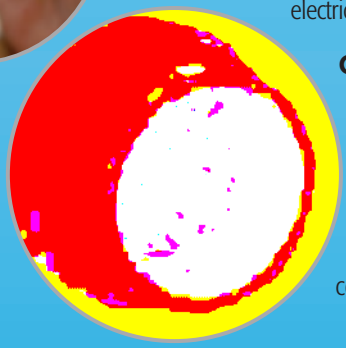
Ask for LEMO connectors for any application where quality, safety and ruggedness are essential; where reliability is critical or where connectors are frequently engaged and disengaged, even in the toughest environments.

LEMO Connectors offer a unique combination of benefits:

Original QUICK-LOK™ push-pull, self-latching system saves space and time while ensuring durable connections.

Precision construction from machined brass, stainless steel or aluminum ensures safety and uniform mating.

Gold plated contacts assure excellent electrical performance.



Collet-type strain relief securely grips circumference of any round cable, protecting connection even under extreme stress.

Bend relief option offers additional cable protection, including color-coding for easy identification.

Custom Design

If we don't have it, we'll build it. Although we offer the most extensive product line in the industry, we understand that some application needs are unique. If we don't have exactly what you need, LEMO will design and build a connector that's just right for your application.

Cable Assembly

Expand the quality of the connector to the cable assembly with our one-stop shop value-added service. LEMO's skilled technicians build and test assemblies to your specifications.

Customer Support

Customer Support when you need it. Only LEMO offers extended customer service hours so you get technical support when you need it. LEMO's Customer Support Team includes in-house Product Specialists, plus a nationwide network of sales representatives and distributors.

LEMO®

Table of Contents

LEMO's Product Line

● Connectors, accessories and tools found in this catalog.

Connectors

Single contact from 2 to 150 Amps
Coaxial 50 and 75 Ω
● Coaxial 50 Ω (NIM-CAMAC)
Coaxial 50 Ω for frequency → 12 GHz
Multicoaxial 50 and 75 Ω
Multicontact from 2 to 66 contacts
High Voltage 3, 5, 8, 10, 15, 30 and 50 kV cc
Multi High Voltage 3, 5, and 10 kV cc
Triaxial 50 and 75 Ω
Quadrax
Mixed: High Voltage (HV) + Low Voltage (LV)
Mixed: Coax + LV
Mixed: Triax + LV
Thermocouple
Multithermocouple
Fiber optic singlemode
Fiber optic multimode
Mixed: fiber optic + LV
Mixed: fiber optic + coax + LV
Fiber optic singlemode OPTABALL®
Fluidic
Multifluidic
Mixed: fluidic + LV
Subminiature
Miniature
Plastic
● Printed circuit board
Remote handling
● Watertight
● Sealed (pressure and/or vacuum)
● With plastic outer shell
● With aluminium outer shell
With stainless steel outer shell
● With special radiation resistant insulator material
With screw thread coupling for very high pressure
● With microswitch

Patch Panels

For audio-mono applications: triax
For audio-mono applications: 3 contacts
For audio-stereo applications: quadrax
For audio-stereo applications: 6 contacts
For video applications: coax 75 Ω

Patch Panels

For video HDTV applications: 3 coax 75 Ω + 2LV
For fiber optic applications

Adaptors

● For BNC, C, UHF, N, CINCH, GEN-RADIO connectors
For TNC, SMA connectors

Accessories

Insulator for crimp contacts
Crimp contacts
Coaxial contacts
Triaxial contacts
Fiber optic contacts
Fiber optic ferrules
● Caps and bend relief
Heatshrink boot
● Insulating washers
Double plastic panel washers
● Locking washers
● Tapered washers
● Hexagonal nuts
● Conical nuts
● Round nuts
Notched nuts
● Grounding washers
Lead-through with cable collet

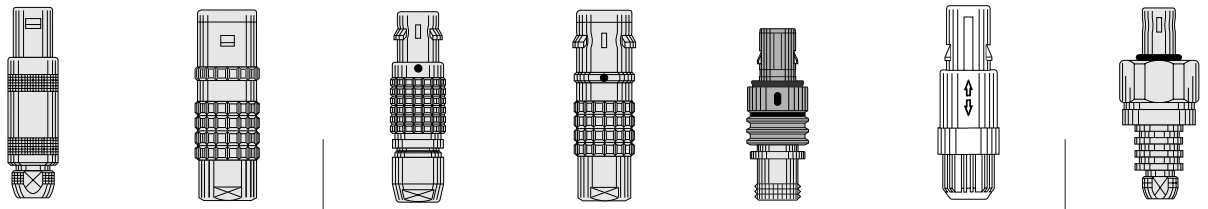
Tooling

● Wrenches
Wrenches for assembling plug
Assembly tool
Pliers
Tap
● Crimping tools
Positioners
● Crimping dies
Banding Tool
● Extractors
Insertion testing tool for crimp contacts
Fiber optic termination workstation
Fiber optic polishing tools

On request

Filtered connectors
Connectors with special alloy housing
Mixed special connectors
● Assembly onto cable

Characteristics of Primary Series



	STANDARD	WATERTIGHT	KEYED	KEYED WATERTIGHT		PLASTIC	SCREW
Series	01 (Minax)	0E to 6E	00 (multicontact)	0K to 5K	FF to 5F	REDEL® 1P	03
	00 (NIM-CAMAC)	3T	0B to 5B	2N to 5N		REDEL® 2P	0V to 5V
	00 (single contact)	4M	2G/5G			REDEL® 3P	0W to 5W
	05 / R0	REDEL® F					2U to 5U
	0S to 6S						
	0A / 4A						
	1D / 2C						
	1Y-3Y-6Y						
Latching	Push-Pull						Screw
Key	Stepped insert (Half-Moon)		Key (G) or other key-way code		Key (G) or other key-way code	Key (G) or other key-way code	Key (G) or stepped insert (Half-Moon)
Shell	Metal or plastic	Metal	Metal or plastic	Metal	Metal	Plastic	Metal
Insert	Hermaphroditic or cylindrical		Cylindrical				Hermaphroditic or cylindrical
Contact	Solder or printed circuit		Solder, crimp or printed circuit				Solder (crimp or PC)

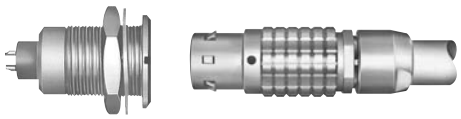
LEMO's Line of Series by Types

Note:

■ = included in this catalog
● = available but not included in this catalog.

	Series	Types																			
		Single contact	Coaxial 50 Ω	Coaxial 75 Ω	Multicontact	High Voltage	Triaxial 50 Ω	Triaxial 75 Ω	Quadrax	Multi HV	Multi Coaxial	Mixed HV+LV	Mixed Coax+LV	Mixed Triax+LV	Fiber Optic	Multi FO	Mixed FO+LV	Fluidic	Multi fluidic	Mixed fluidic+LV	Thermocouple
Hermaphroditic Keying	01		●																		
	00	●	■				●											●			
	05					●															
	R0		●																		
	0A		●	●																	
	0S	●	●		●	●	●														●
	1S	●	●	●	●	●	●														●
	2S	●	●	●	●	●	●	●				●									●
	3S	●	●	●	●	●	●	●		●		●	●								
	4S	●	●	●	●	●	●	●		●	●	●	●								
	5S	●	●	●	●					●	●	●	●								
	6S				●						●		●								
	1D								●												
	2C		●		●																
	4A							●													
	1Y-3Y-6Y					●															
Hermaphroditic Keying — Watertight	0E	●	●		●	●	●														●
	1E	●	●	●	●	●	●														●
	2E	●	●	●	●	●	●	●				●									●
	3E	●	●	●	●	●	●	●		●		●	●								
	4E	●	●	●	●		●	●				●	●								
	5E	●			●					●	●	●	●								
	6E				●						●		●								
	3T			●				●													
	4M						●	●													
Mechanical Keying	00				●										●						
	0B				●										●			●			●
	1B				●							●									●
	2B				●					●	●	●	●	●			●			●	●
	3B				●						●	●	●	●		●	●		●	●	
	4B				●					●	●	●	●	●		●	●		●	●	
	5B				●					●	●	●	●	●		●					
	2G				●																
	5G									●											
Mechanical Keying — Watertight	0K				●										●			●			●
	1K				●							●									●
	2K				●						●	●	●	●			●			●	●
	3K			●	●						●	●	●	●		●	●		●	●	
	4K				●					●	●	●	●	●		●	●		●	●	
	5K				●					●	●	●	●	●		●					
	FF to 5F				●																
	3N to 5N				●																
Plastic	1P to 3P				●							●	●	●	●		●	●			
Screw	03		●		●																
	0V	●	●		●		●													●	
	1V	●	●	●	●		●													●	
	2V	●	●	●	●		●	●				●								●	
	3V	●	●	●	●		●	●		●		●	●								
	4V	●	●	●	●		●	●				●	●								
	5V	●			●					●	●	●	●								
	0W to 5W				●						●	●	●	●			●			●	●
	2U to 5U				●										●	●	●				

QUICK-LOK™ Push-Pull Self-Latching System



LEMO's Original QUICK-LOK push-pull, 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, and offers unique advantages for all applications:

Speed – Engage connectors simply and quickly by pushing plugs axially into mating receptacles. Pull on outer shell to remove plug easily.

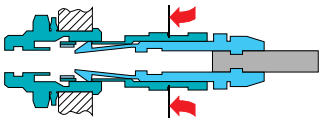
Space Savings – Just one finger clearance on two sides is needed to engage and disengage connectors, so there's no need to twist or turn a locking ring.

Reliability – Connections are reliable and assured when locking mechanism is engaged.

Ruggedness – Sturdy design, with sealed models to various IP levels.

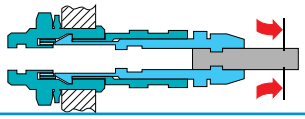
How QUICK-LOK™ Works

Latching Characteristics for 00 Series Connectors



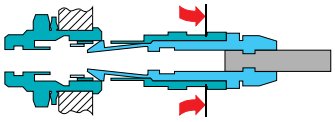
Engaging
QUICK-LOK allows the connector to be mated by simply pushing the plug straight into the receptacle.

Force (N)	00
Fv	9



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

Force (N)	00
Fa	120



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

Force (N)	00
Fd	7

Key:
Fv = average latching force.
Fd = average unmating force with axial pull on the outer release
Fa = average pull force with axial pull on the collet nut.

Notes: the forces were measured on outer shell not fitted with contacts. The mechanical endurance represents the number of cycles after which the latching system is still effective (1 cycle = 1 latching/unlatching – 300 cycles per hour).

Mechanical endurance: 5000 cycles.

The values were measured according to the standard MIL-STD-1344A method 2013.1.

1N = 0.102kg.

00 Series – General Characteristics

Materials and Surface Treatment

Outer Shell

Brass
LEMO series 00 connectors have a brass outer shell as standard, and this is suitable for most general purpose applications, including civilian and military. The brass outer shells have a nickel-plated surface which ensures very good protection against most environments. Alternative protective coatings available are:
– Nickel-chrome offering higher protection against salt air and most corrosive agents
– Nickel-gold
– Nickel-black chrome. After the black chrome treatment, the part is coated with a protective film.

Aluminum Alloy
Aluminum alloy outer shells find numerous applications where light weight is a predominant factor; such as in the aeronautics and space industries, and for portable and mobile equipment.
These materials have high mechanical strength and excellent resistance to corrosion. The shell surface is protected by anodizing which is available in six colors: blue, yellow, black, red, green, and natural.

Plastic Materials
A PEEK outer shell is available which offers excellent insulating properties and is mostly used in the medical industry. This material is suitable for gas or steam sterilization.

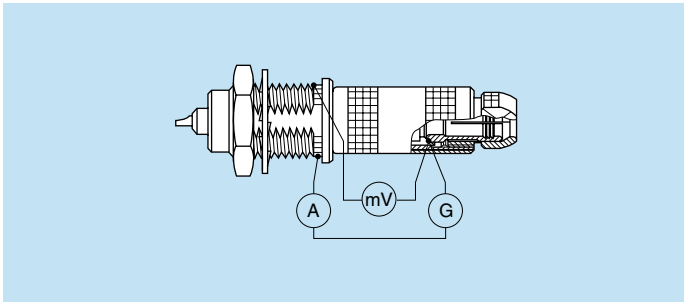
Other Metallic Components
In general, other components are manufactured from brass. However, bronze is used where good elasticity is required (for example: earthing crown). These parts are nickel or nickel-gold plated depending on the utilization.

Component	Material (Standard)	Surface Treatment (µm)										
		Nickel		Chrome			Gold			Black Chrome		
		Cu	Ni	Cu	Ni	Cr	Cu	Ni	Au	Cu	Ni	Cr
Outer shell, collet nut, conical nut	Brass (UNS C 38500)	0.5	3	0.5	3	0.3	0.5	3	0.5	–	1	2
	Al. alloy (AA 6012)	anodized										
	PEEK (MIL-P-46183)	beige colored										
Earthing crown	Cu-Be (UNS C 17300)	0.5	3	–	–	–	0.5	3	1.5	–	–	–
Latch sleeve	Special Brass	0.5	3	–	–	–	0.5	3	1.5	–	–	–
Crimp ferrule	Copper (UNS C 18700)	0.5	3	–	–	–	0.5	3	1.5	–	–	–
Locking washer	Bronze (UNS C 52100)	0.5	3	–	–	–	0.5	3	0.5	–	–	–
Hexagonal nut	Brass (UNS C 38500)	0.5	3	–	–	–	0.5	3	0.5	–	–	–
	Al. alloy (AA 6012) 1)	anodized										
Other metallic components	Brass (UNS C 38500)	0.5	3	–	–	–	0.5	3	0.5	–	–	–
Seals	Silicone or FPM	without treatment										

Notes: The surface treatment standards are as follows:
– nickel QQ-N-290A, or MIL-C-26074C
– chrome QQ-N-320B
– gold per ISO 4523
– black chrome MIL-C-14538C
1) supplied only with aluminum alloy free or fixed recep-tacles.

Electrical Characteristics

Screen continuity: according to test MIL-STD-1344A, method 3007.



R_1 Values with earthing crown and latch sleeve or inner-sleeve nickel plated.

R_2 Values with gold-plated earthing crown and nickel plated latch sleeve or inner-sleeve.

R_3 Values with earthing crown and gold-plated latch sleeve or inner-sleeve.

R_1 (mΩ)	R_2 (mΩ)	R_3 (mΩ)
3.5	2.8	2.0

Testing current: 1A
A = Ammeter
mV = Millivoltmeter
G = Generator

Insulator

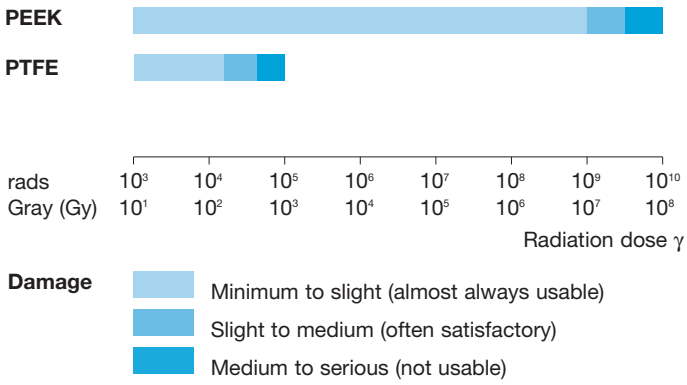
Plastic material used by LEMO for manufacturing insulators is selected according to the electric and thermal properties required for the various connector types. Characteristics examined for the two connector types are:

- Dielectric strength;
- Comparative tracking index;
- Surface and volume resistivity;
- Continuous service temperature;
- Water absorption;
- Radiation resistance;
- Flammability rating;
- Resistance to hydrocarbon.

Mechanical and Electrical Properties

LEMO uses PEEK (Polyether Etherketone) for the insulator material. The performance of this thermo-plastic material is enhanced by the addition of glass fibers in the resin to achieve very high mechanical strength, to increase dielectric strength and to reduce water absorption rate. The above features of PEEK, plus its excellent chemical and radiation resistance, make it ideal for most applications. Sealing grommets are molded from Viton®. Such polymer has inherently excellent electrical insulating properties which do not change when exposed to adverse environments.
Insulating resistance $>10^{12}\Omega$ (per MIL-STD-1344A method 3003.1).

Radiation resistance



Note: Technical data in this chapter provide general information on plastics used by LEMO as electrical insulators. LEMO reserves the right to propose new materials with better technical characteristics, and to withdraw, without notice, any material mentioned in the present catalog or any other publications edited by LEMO S.A. and/or its subsidiaries. LEMO SA and its subsidiaries use only plastic granules, powder or bars supplied by specialized companies, and thus cannot in any case take responsibility with regard to this material.

Technical Characteristics

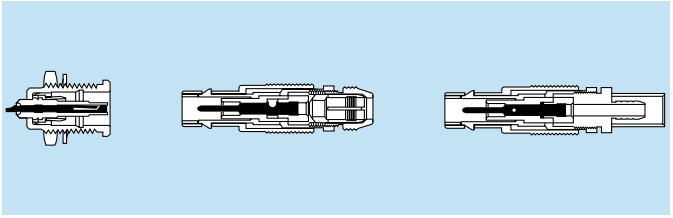
Property	Test method	Unit	PEEK	PTFE
Dielectric strength	ASTM D 149	kV/mm	19 - 25	17.2 - 24
Volume resistivity at 50% HR and 23°C	ASTM D 257	Ω · cm	10^{16}	10^{18}
Surface resistivity	ASTM D 257	Ω	10^{15}	10^{17}
Thermal conductivity	ASTM C 177	W/K · m	0.25	0.23
Comparative tracking index	IEC 112	V	CTI 150	CTI 500
Dielectric constant (10^6 Hz)	ASTM D 150	–	3.2 - 3.5	2 - 2.1
Dissipation factor (10^6 Hz)	ASTM D 150	–	< 0.005	< 0.0003
Continuous service temperature	–	°C	250	260
Water absorption in 24h at 23°C	ASTM D 570	%	< 0.3	< 0.01
Radiation resistance	–	Gy	10^7	$2 \cdot 10^2$
Flammability rating	UL 94	–	V 0	V 0

Electrical Contact

Technical Description

The secure reliable electromechanical connection achieved with LEMO female cylindrical contacts is mainly due to two important design features:

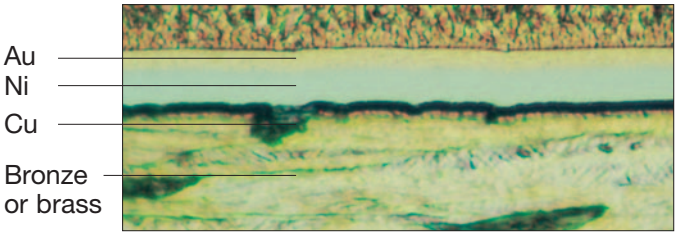
1. *Prod proof entry* on the mating side which ensures perfect concentric mating even with carelessly handled connectors; and
2. *The pressure spring*, with good elasticity, maintains a constant even force on the male contact when mated. The leading edge of the pressure spring preserves the surface treatment (gold-plated) and prevents undue wear.



Contact Material and Treatment

LEMO female contacts are made of bronze (UNS C 54400). This material is chosen because of its high modulus of elasticity, their excellent electrical conductivity and high mechanical strength.

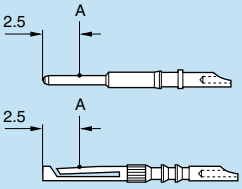
LEMO male solder and printed circuit contacts are made of brass (UNS C 38500). Male crimp contacts are made of brass (UNS C 34500) or annealed brass (UNS C 38500) with optimum hardness (HV) for crimping onto the wire.



Type	Material (Standard)	Surface treatment (µm)		
		Cu	Ni	Au
Male solder	Brass (UNS C 38500)	0.5	3	1.5
Male crimp	Brass (UNS C 34500)			
Male print	Brass (UNS C 38500)			
Female solder	Bronze (UNS C 54400)	0.5	3	2.0
Female crimp				
Female print				

Notes: The standard surface treatment are as follows:
Nickel: FS QQ-N-290A or MIL-C-26074C; and
Gold: ISO 4523.

Thickness comparison between the outside and the inside of female contacts



Gold thickness[1)]		
male (µm)	female	
	outside (µm)	inside (%)
1.5	2	60

Note: [1)] minimal thickness according to ISO 4523.
A = test point

Contact resistance with relation to the number of mating cyles

Corrosion according to MIL-STD-202, method 101D.

Contact resistance (mΩ)		
1000 cycles	3000 cycles	5000 cycles
5.6	5.7	6.1

Insulation resistance between the contacts and contact/shell

(measured according to IEC 60512-2 test 3a)

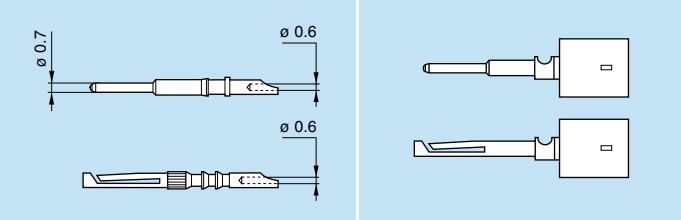
Insulating material	Multicontact
	PEEK
new	$> 10^{12}\ \Omega$
after humidity test[1)]	$> 10^{10}\ \Omega$

Note:
[1)] 21 days at 95% RH according to IEC 60068-2-3.

Electrical Contact

Solder Contacts

The conductor bucket of these contacts is machined at an angle to form a cup into which the solder can flow.



Crimp Contacts

The square form crimp method is used (MIL-C-22520F, type 2) (photo 1).

The crimp method requires a controlled compression to obtain a symmetrical deformation of the conductor strand and of the contact material. The inspection hole in the side of the contact verifies correct positioning of the conductor within the contact. A good crimping is characterized by a small conductor section reduction and by the quite closed free spaces.

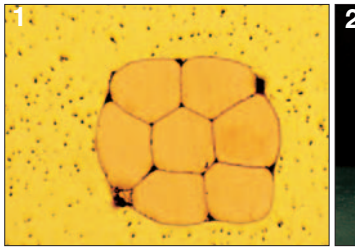
The LEMO crimp contacts are factory annealed to relieve internal stresses, and reduce the risk of the material work hardening during the crimping process. During this process, an induction heating machine designed by LEMO's Research and Development Department is used (photo 2).

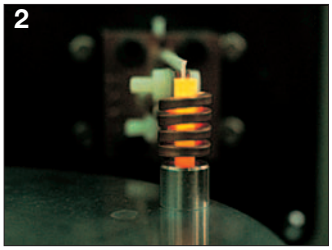
Advantages of Crimping

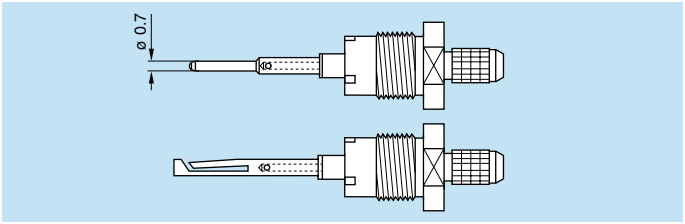
- practical, quick contact fixing outside the insulator
- possible use at high temperature
- no risk of heating the insulator during the conductor-contact fixing
- high tensile strength

Crimp contacts are available in standard version (figure 1) for mounting maximum size conductors.

For some dimensions, these crimp contacts can be produced with reduced crimp barrels (figure 2, below) for mounting reduced size conductors.



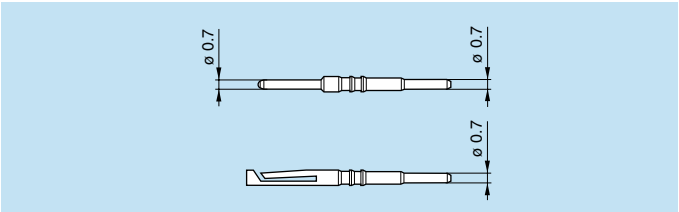




Printed Circuit Contacts

Printed circuit contacts are available in straight or elbow versions for certain connector types, mostly for straight and elbow receptacle models. Connection is made on flexible or rigid printed circuits by soldering.

Printed circuit contacts are gold-plated which guarantees optimum soldering, even after long-term storage. However for wave soldering, we recommend removal of the gold-plating from the contact end on the printed circuit side before soldering according to the assembly procedures.



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		

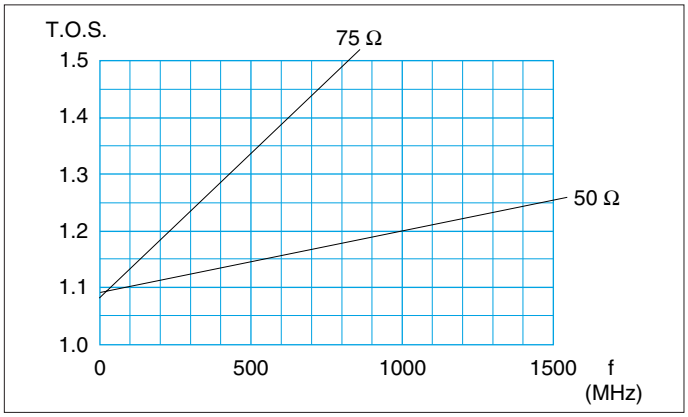
Note: 1) to seal both the watertight and vacuumtight models, LEMO uses an epoxy resin. The operating temperature is -20°C and +80°C for sealed models.

Electrical

Characteristics		Value	Standard	Method
Impedance		50 Ω		
Operating voltage (50 Hz)		0.7 kV AC	IEC 130-1 1ère ed.	§ 14.5
Test voltage (50 Hz)		2.1 kV AC	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

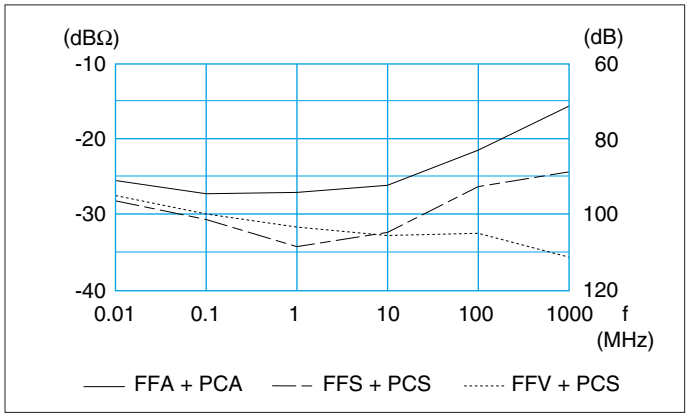
The VSWR (Voltage Standing Wave Ratio) is the value representing the power reflected in a connection. In most cases, the working frequency range is where VSWR ≤ 1.25



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

Screening Efficiency (EMC properties) in dB (transfer impedance in dBohm)

The screening efficiency is the ratio between the electro-magnetic 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.

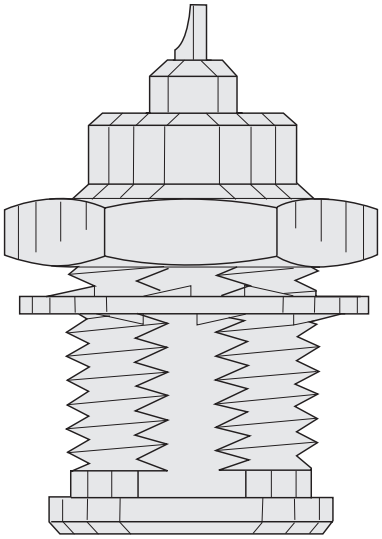
Recommended Cables

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

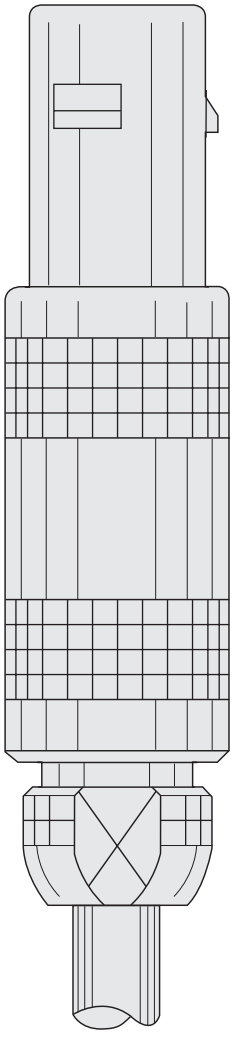
Color of connectors in anodized aluminum alloy

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

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



• NIM-CAMAC Connectors

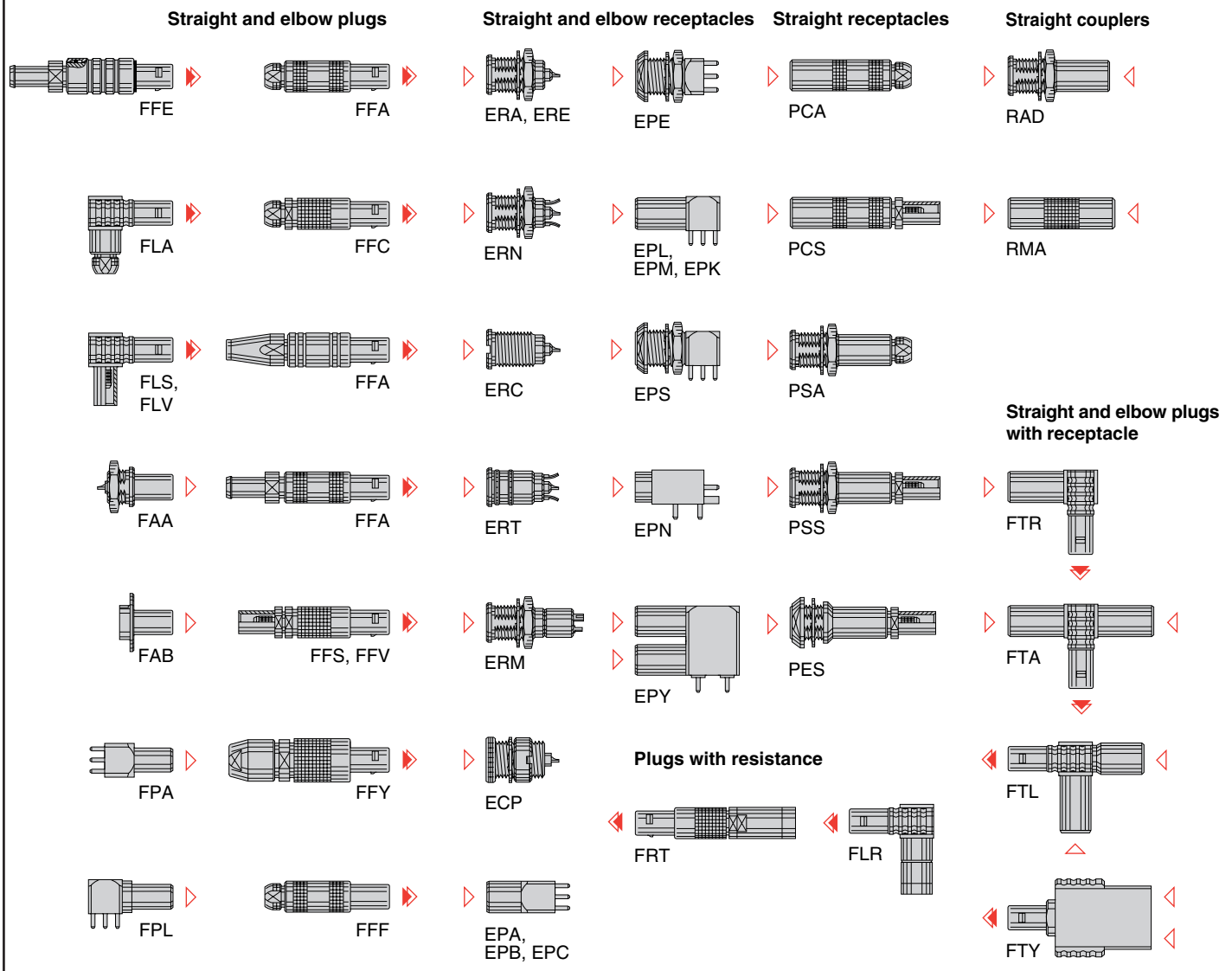


NIM-CAMAC Connectors

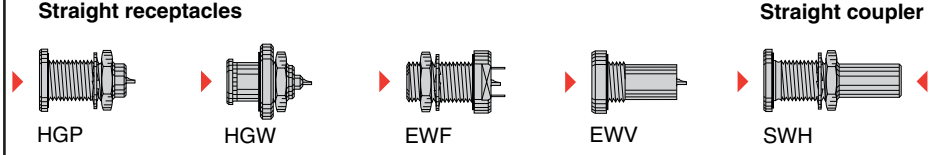
The 00 series is a range of 50 Ω coaxial connectors. They are suitable for a wide variety of applications particularly in measurement, control system and nuclear physics, having formed the basis for the NIM-CAMAC-CD/N 549 standard. LEMO 00 connectors offer customers many benefits including:

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

Interconnections



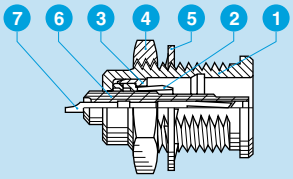
Watertight or vacuumtight models



Models Description

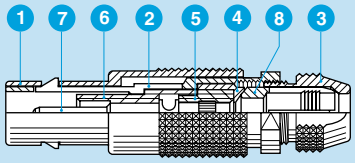
ABA Adapter from LEMO receptacle to BNC plug
ABB Adapter from LEMO fixed receptacle to BNC receptacle
ABC Adapter from LEMO receptacle to BNC receptacle
ABD Adapter from LEMO receptacle to BNC fixed receptacle
ABF Adapter from LEMO plug to BNC receptacle
ACA Adapter from LEMO receptacle to C plug
ACB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

Part Section Showing Internal Components



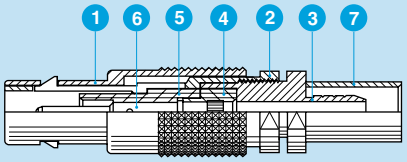
Fixed receptacle

1. outer shell
2. earthing crown
3. retaining ring
4. hexagonal nut
5. locking washer
6. insulator
7. female contact



Plug with cable clamping

1. outer shell
2. latch sleeve
3. collet nut
4. earthing sleeve
5. rear insulator
6. insulator
7. male contact
8. collet



Plug with cable crimping

1. outer shell
2. latch sleeve
3. crimp backnut
4. rear insulator
5. insulator
6. male contact
7. crimp ferrule

Models with collet nut for fitting a bend relief

To order models with a collet nut for fitting a bend relief, add a “Z” in the “variant” position (see page15) of the part number. Bend reliefs are available in nine colors and several sizes to accomodate different cable outside diameters. They are ordered separately as indicated in the “Accessories” section.

Watertight/Vacuumtight models

The fixed receptacles 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 V at the end of the part number (certificate on request). To seal both the watertight and vacuumtight models, LEMO uses an epoxy resin.

Available Models (series and types)

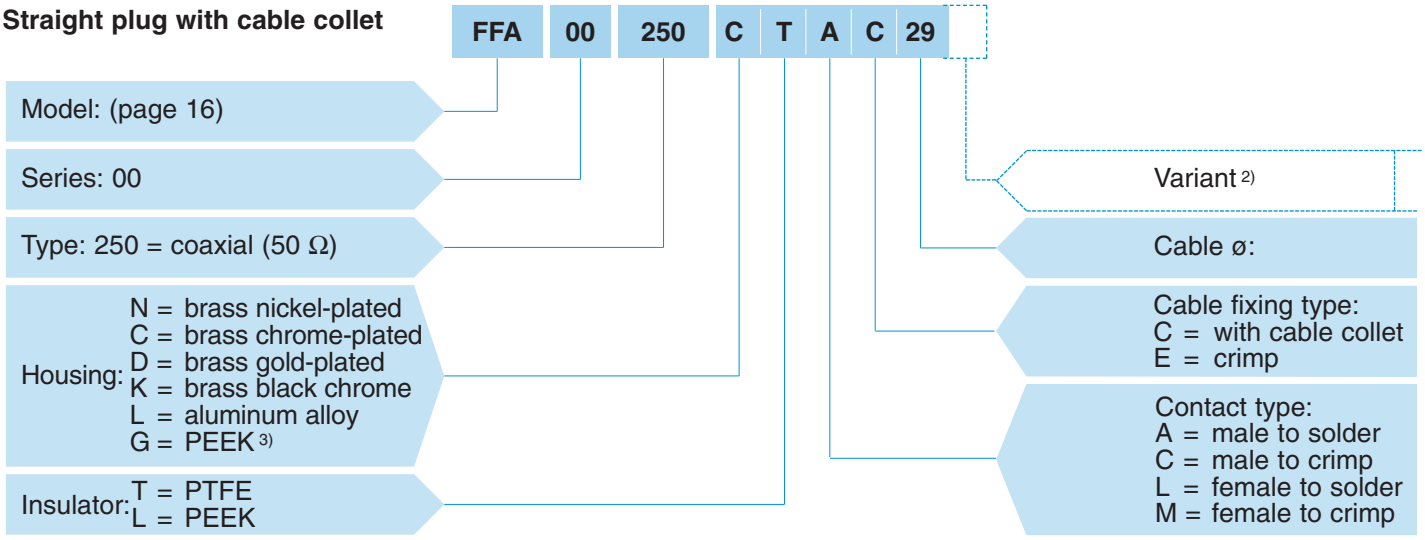
Model	00
ECP	●
EPA	●
EPB	●
EPC	●
EPE	●
EPK	●
EPL	●
EPM	●
EPN	●
EPS	●
EPY	●
ERA	●
ERC	●
ERE	●
ERM	●
ERN	●
ERT	●

Model	00
EWF	●
EWV	●
FAA	●
FAB	●
FFA	●
FFC	●
FFE	●
FFF	●
FFS	●
FFV	●
FFY	●
FLA	●
FLR	●
FLS	●
FLV	●
FPA	●
FPL	●

Model	00
FRT	●
FTA	●
FTL	●
FTR	●
FTY	●
HGP	●
HGW	●
PCA	●
PCS	●
PES	●
PSA	●
PSS	●
RAD	●
RMA	●
SWH	●

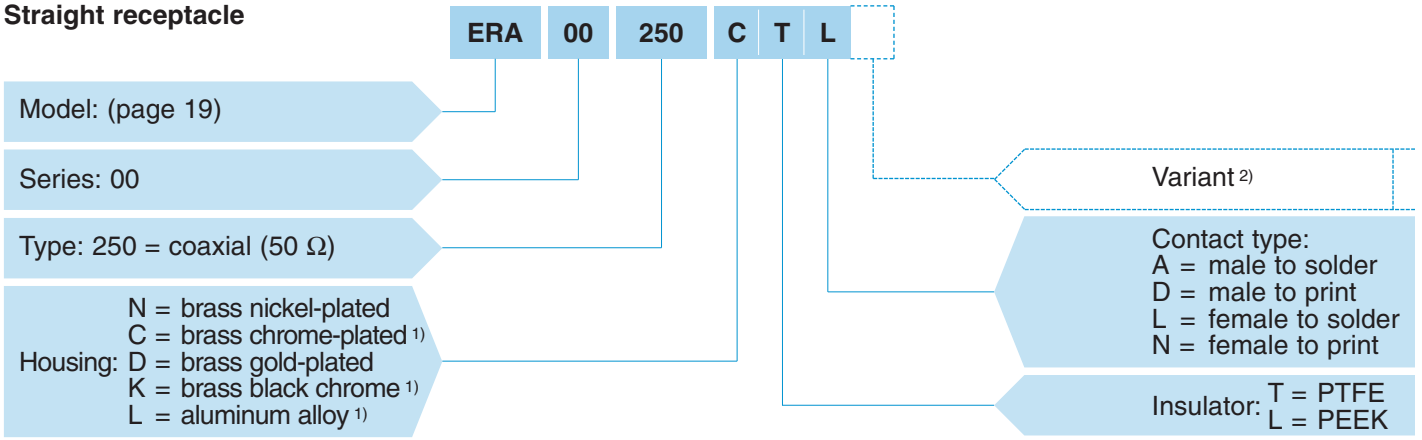
Part Number Example

Straight plug with cable collet



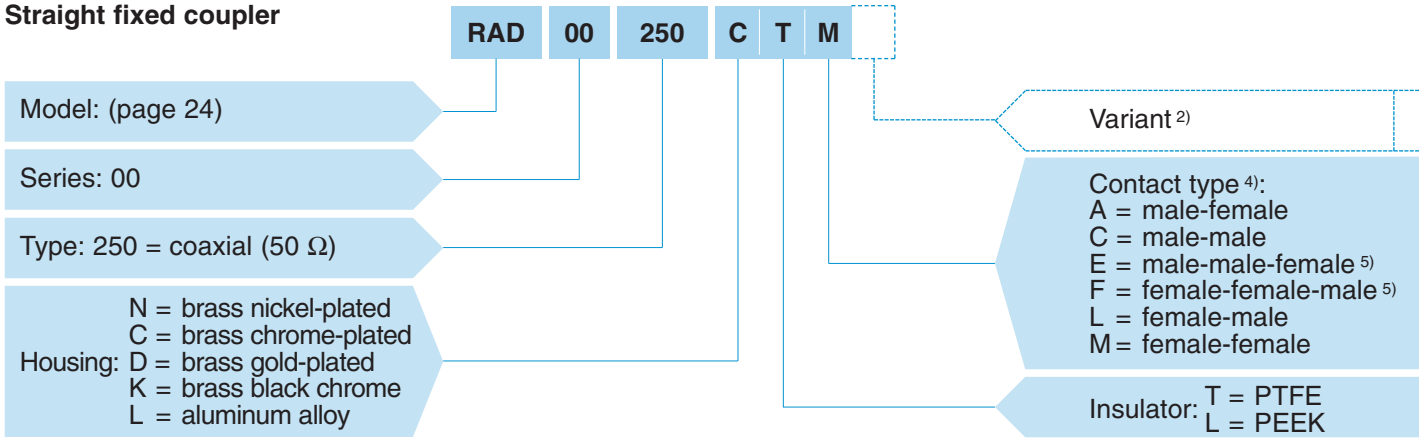
FFA.00.250.NTAC29 = straight plug with cable collet, series 00, coaxial type (50 Ω), outer shell in chrome-plated brass, PTFE insulator, male solder contact, C type collet of 2.9 mm diameter.

Straight receptacle



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

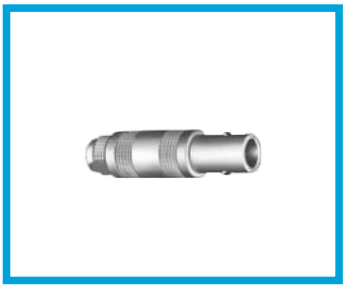
Straight fixed coupler

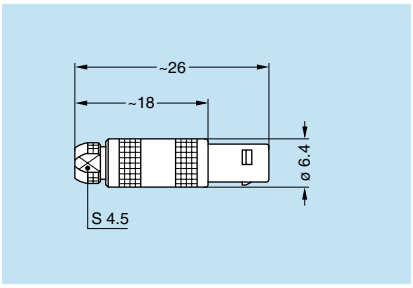


RAD.00.250.CTM = straight fixed coupler, nut fixing, series 00, coaxial type (50 Ω), outer shell in chrome-plated brass, PTFE insulator, female-female contact.

Note: 1) treatment not available for the printed circuit models
2) the "variant" position in the reference is used to specify the anodized color of the housing in aluminum alloy (page 9) or models with a collet nut for fitting a bend relief "Z". The bend 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

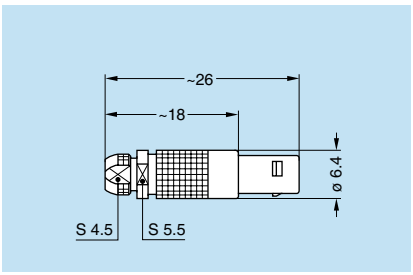




FFA Straight plug with cable collet

Part number	Cable group	Availability
FFA.00.250.CTAC22	1	●
FFA.00.250.CTAC29	2-3-4	●
FFA.00.250.CTAC31	8	●

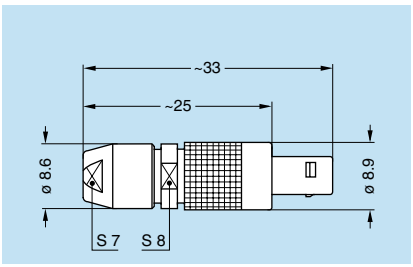
M1 Cable assembly



FFC Straight plug with flats on latch sleeve and cable collet

Part number	Cable group	Availability
FFC.00.250.CTAC22	1	○
FFC.00.250.CTAC27	2-4	●
FFC.00.250.CTAC31	3-8	●

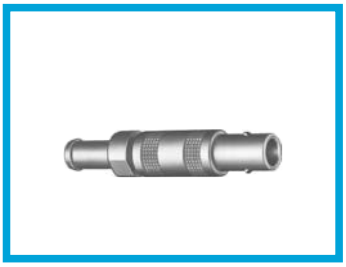
M3 Cable assembly

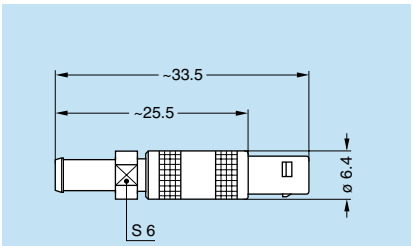


FFY Straight plug with cable collet

Part number	Cable group	Availability
FFY.00.250.CTAC52	6-7	○

M2 Cable assembly



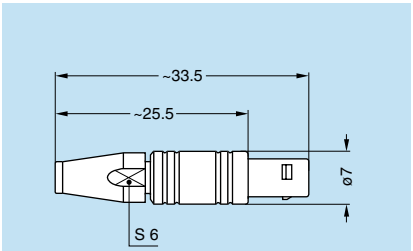


FFA Straight plug with cable collet and nut for fitting a bend relief

Part number	Cable group	Availability
FFA.00.250.CTAC22Z	1	●
FFA.00.250.CTAC29Z	2-3-4	●
FFA.00.250.CTAC31Z	8	●

Note: the bend relief must be ordered separately (see page 32).

M1 Cable assembly



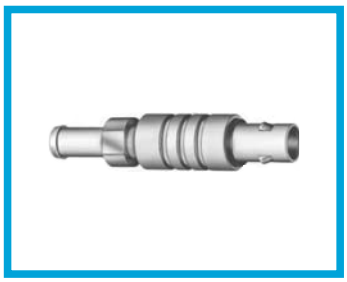
FFA Straight plug with cable collet, PEEK outer shell

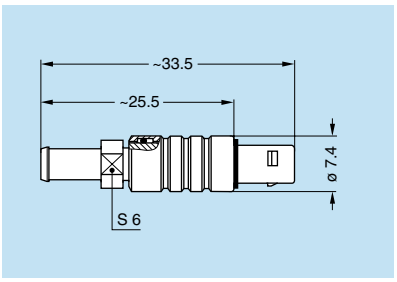
Part number	Cable group	Availability
FFA.00.250.GTAC22	1	○
FFA.00.250.GTAC29	2-3-4	○
FFA.00.250.GTAC31	8	○

M1 Cable assembly

Note: use with model ERN, available in PEEK outer shell (see page 19)

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.



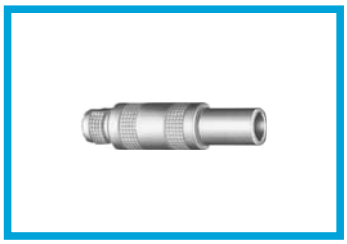


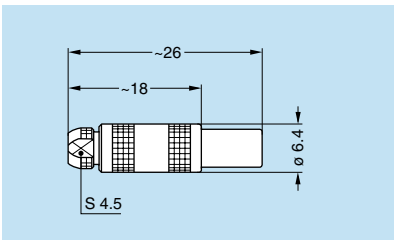
FFE Straight plug with front sealing ring, cable collet and nut for fitting a bend relief

Part number	Cable group	Availability
FFE.00.250.CTAC22Z	1	○
FFE.00.250.NTAC29Z	2-3-4	○
FFE.00.250.NTAC31Z	8	○

Note: the bend relief must be ordered separately (see page 32).

M1 Cable assembly

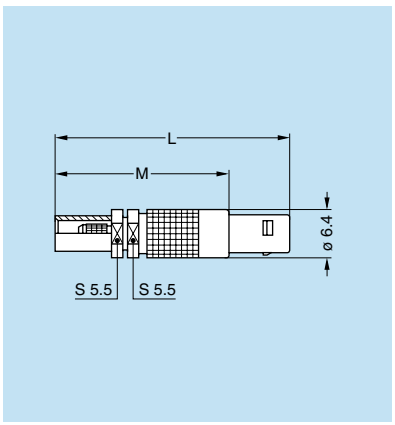




FFF Straight plug, non-latching, with cable collet

Part number	Cable group	Availability
FFF.00.250.CTAC22	1	○
FFF.00.250.CTAC29	2-3-4	○
FFF.00.250.CTAC31	8	○

M1 Cable assembly

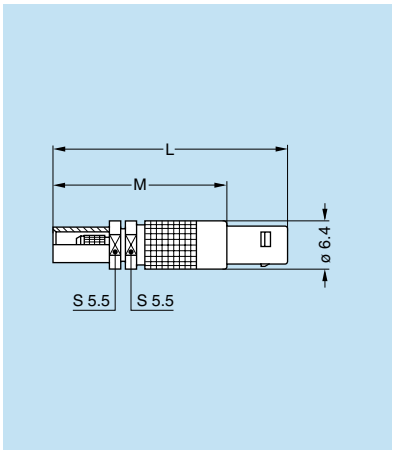


FFS Straight plug with cable crimping

Part number	Cable group	Dim. L	Dim. M	Availability
FFS.00.250.CTCE24	1	31	23	○
FFS.00.250.CTCE30	2	31	23	○
FFS.00.250.CTCE31	3-4	31	23	●
FFS.00.250.CTCE35	8	31	23	○
FFS.00.250.CTCE44	5	31	23	○
FFS.00.250.CTCE52	6	34	26	○
FFS.00.250.CTCE56	7	31	23	○

M4 Cable assembly, crimp contact

M5 Cable assembly, solder contact (on request)

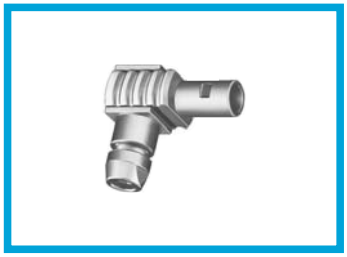


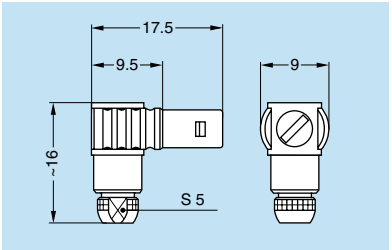
FFV Straight plug for cable crimping with improved screen efficiency

Part number	Cable group	Dim. L	Dim. M	Availability
FFV.00.250.NTCE24	1	31	23	○
FFV.00.250.NTCE30	2	31	23	○
FFV.00.250.NTCE31	3-4	31	23	○
FFV.00.250.NTCE35	8	31	23	○
FFV.00.250.NTCE44	5	31	23	○
FFV.00.250.NTCE52	6	34	26	○
FFV.00.250.NTCE56	7	31	23	○

M4 Cable assembly, crimp contact

M5 Cable assembly, solder contact (on request)



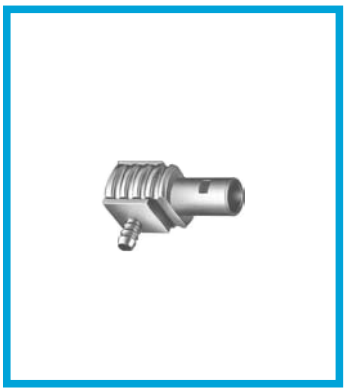


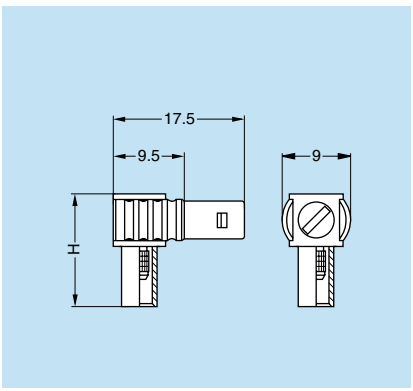
FLA Elbow plug (90°) with cable collet

Part number	Cable group	Availability
FLA.00.250.CTAC22	1	○
FLA.00.250.CTAC27	2-4	●
FLA.00.250.CTAC31	3-8	●

M6 Cable assembly

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.

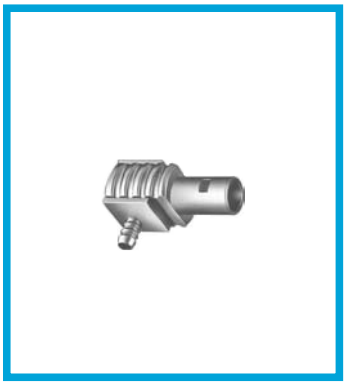


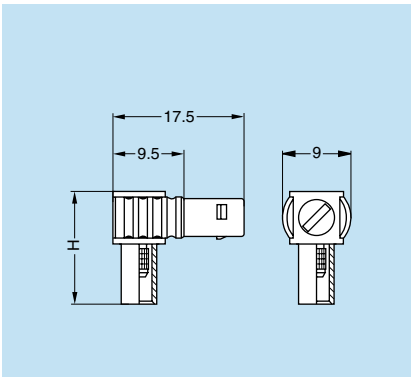


FLS Elbow plug (90°) cable crimping

Part number	Cable group	H (mm)	Availability
FLS.00.250.NTAE24	1	15	○
FLS.00.250.CTAE31	3-4	15	○
FLS.00.250.NTAE35	8	15	○
FLS.00.250.NTAE52	6	18	○
FLS.00.250.NTAE56	7	15	○

M7 Cable assembly

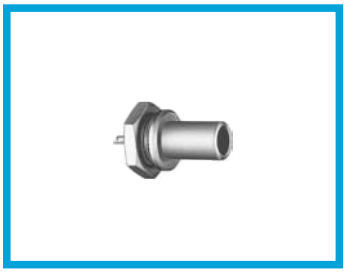


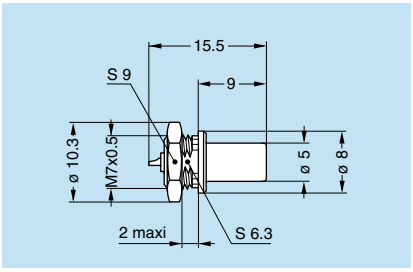


FLV Elbow plug (90°) cable crimping with improved screen efficiency

Part number	Cable group	H (mm)	Availability
FLV.00.250.NTAE24	1	15	○
FLV.00.250.NTAE30	2	15	○
FLV.00.250.NTAE31	3-4	15	○
FLV.00.250.NTAE35	8	15	○
FLV.00.250.NTAE52	6	18	○
FLV.00.250.NTAE56	7	15	○

M7 Cable assembly

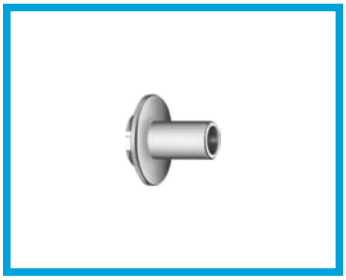


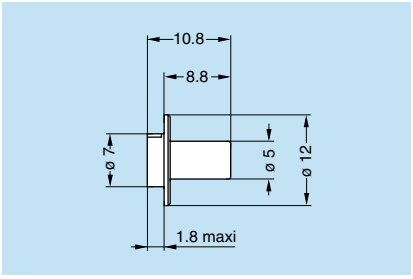


FAA Straight plug, non-latching, nut fixing

Part number	Weight (g)	Availability
FAA.00.250.NTA	2.5	○

P5 Panel cut-out

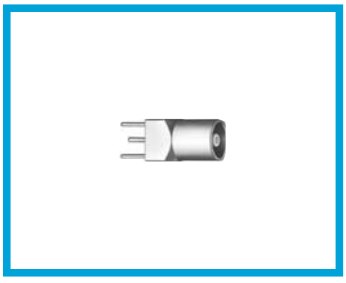


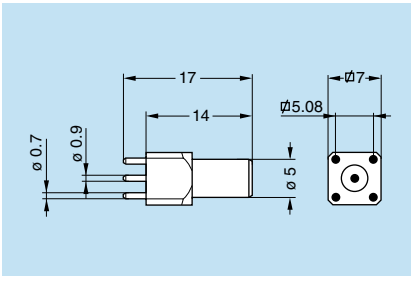


FAB Straight plug, non-latching, riveted fixing

Part number	Weight (g)	Availability
FAB.00.250.NTA	2.5	○

P1 Panel cut-out



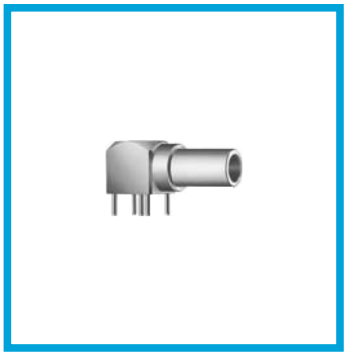


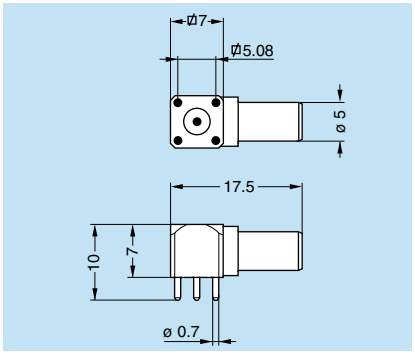
FPA Straight plug, non-latching, for printed circuit

Part number	Weight (g)	Availability
FPA.00.250.NTD	2.5	○

P11 PCB drilling pattern

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.

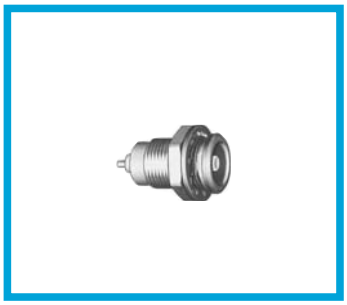


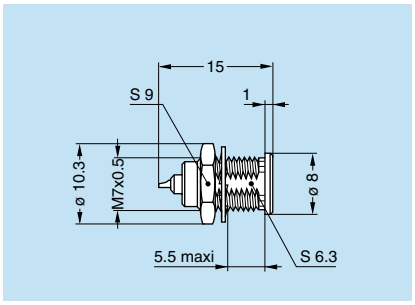


FPL Elbow plug (90°), non-latching for printed circuit

Part number	Weight (g)	Availability
FPL.00.250.NTD	2.5	○

P10 PCB drilling pattern

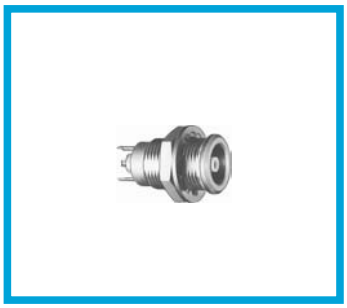


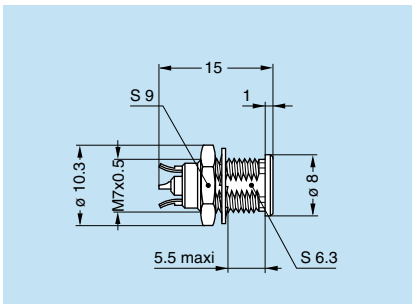


ERA Fixed receptacle, nut fixing

Part number	Weight (g)	Availability
ERA.00.250.CTL	2.8	●

P5 Panel cut-out



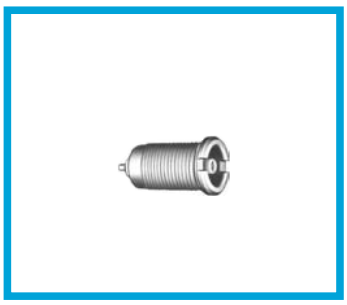


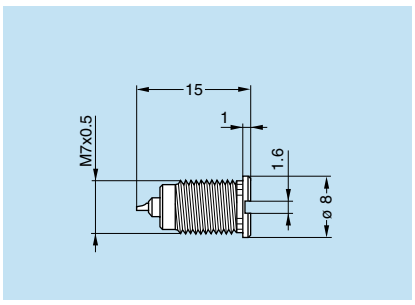
ERN Fixed receptacle, nut fixing, with earthing tags

Part number	Weight (g)	Availability
ERN.00.250.CTL	2.8	●

P5 Panel cut-out

Note: available in PEEK outer shell for use with model FFA with PEEK outer shell (see page 16)

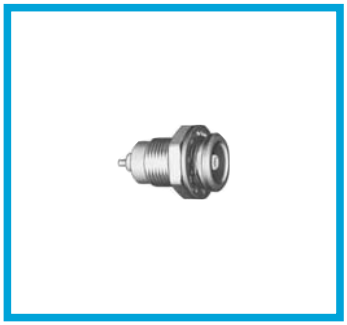


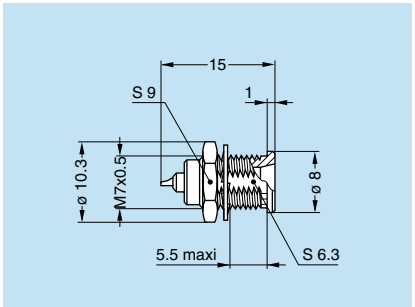


ERC Fixed receptacle, nut fixing, with slots in flange

Part number	Weight (g)	Availability
ERC.00.250.CTL	2.2	○

P3 Panel cut-out



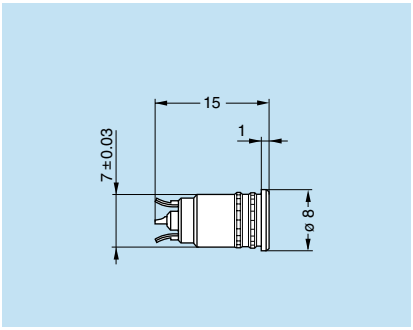


ERE Fixed receptacle, nut fixing, with conical lead-in

Part number	Weight (g)	Availability
ERE.00.250.CTL	2.8	○

P5 Panel cut-out

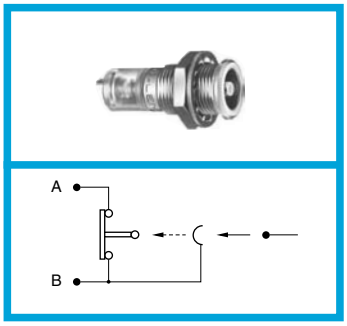
● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.

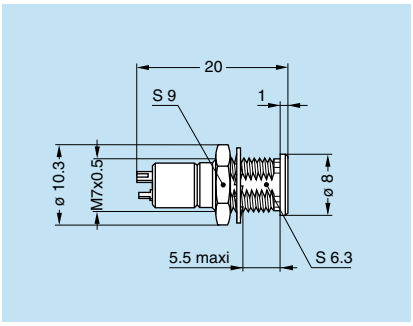


ERT Straight receptacle without thread, force or adhesive fit

Part number	Weight (g)	Availability
ERT.00.250.CTL	2.2	○

P4 Panel cut-out

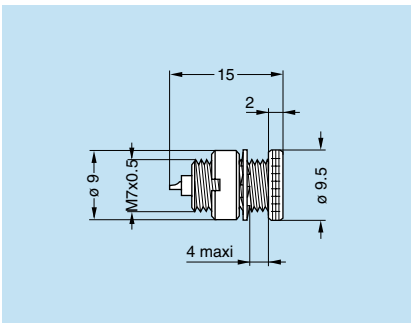




ERM Fixed receptacle, nut fixing, with microswitch

Part number	Weight (g)	Availability
ERM.00.250.CTL	3.0	○

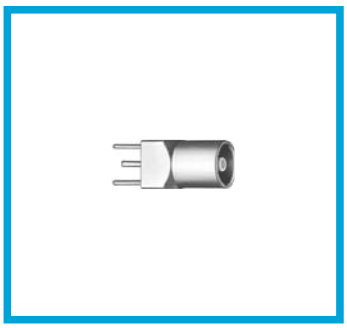
P5 Panel cut-out

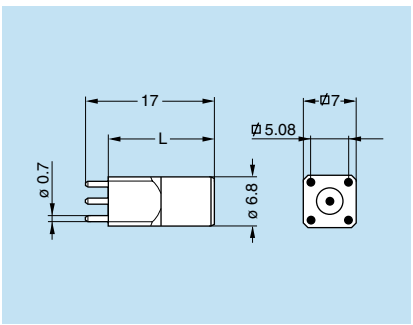


ECP Fixed receptacle with two nuts

Part number	Weight (g)	Availability
ECP.00.250.CTL	3.3	○

P1 Panel cut-out

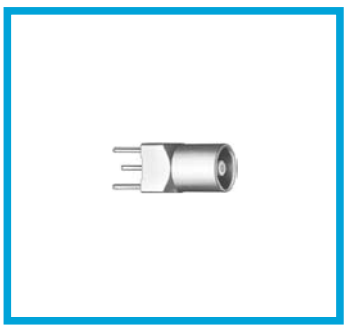


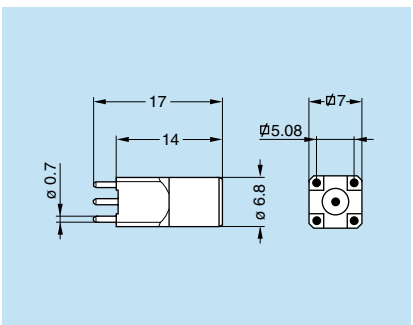


EPA-EPB Straight receptacle for printed circuit

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

P10 PCB drilling pattern



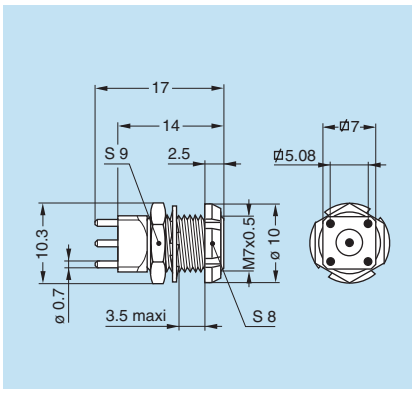


EPC Straight receptacle for printed circuit with clearance under the body

Part number	Weight (g)	Availability
EPC.00.250.NTN	3.3	○

P10 PCB drilling pattern

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.

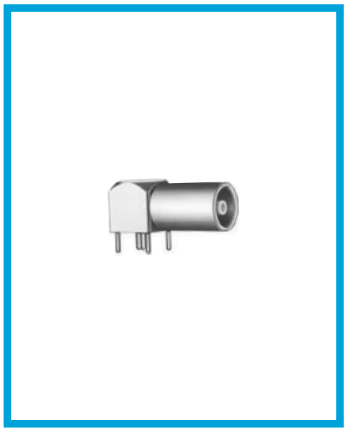


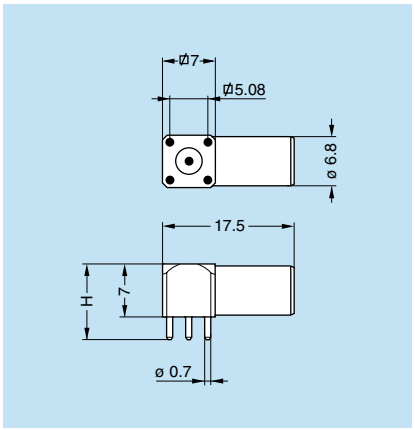
EPE Fixed receptacle with two nuts, for printed circuit

Part number	Weight (g)	Availability
EPE.00.250.NTN	4.2	○

P1 Panel cut-out

P12 PCB drilling pattern

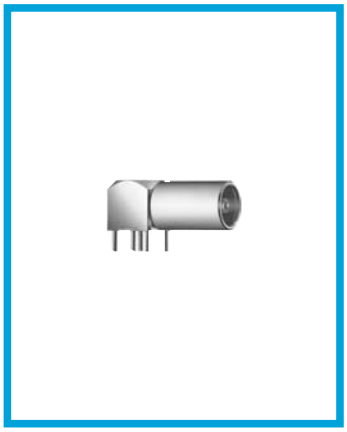


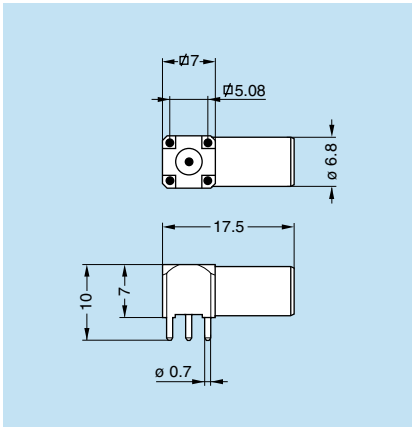


EPL-EPM Elbow receptacle (90°) for printed circuit

Part number	H (mm)	Weight (g)	Availability
EPL.00.250.NTN	10	4.3	●
EPM.00.250.NTN	13	4.5	○

P10 PCB drilling pattern

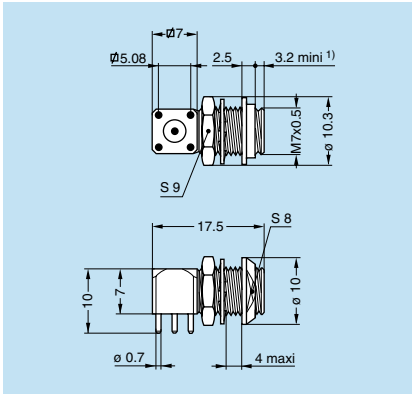




EPK Elbow receptacle (90°) for printed circuit with clearance under the body

Part number	Weight (g)	Availability
EPK.00.250.NTN	4.2	●

P10 PCB drilling pattern



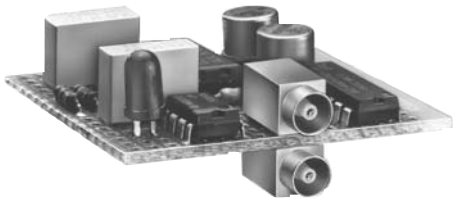
EPS Elbow receptacle (90°) with two nuts, for printed circuit

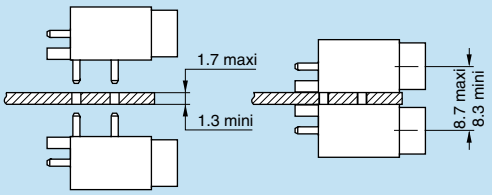
Part number	Weight (g)	Availability
EPS.00.250.NTN	5.3	●

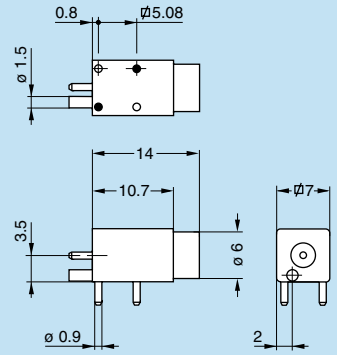
P1 Panel cut-out

P12 PCB drilling pattern

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.



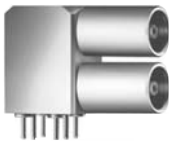


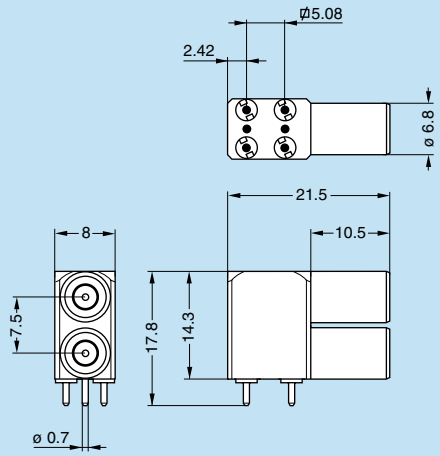


EPN Straight receptacle for press mounting in pair on printed circuit

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

P9 PCB drilling pattern

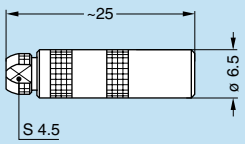




EPY Elbow receptacle (90°) for printed circuit, with two vertical receptacles

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

P13 PCB drilling pattern

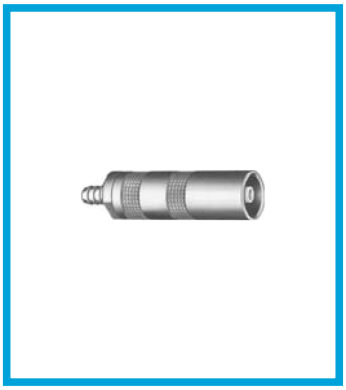


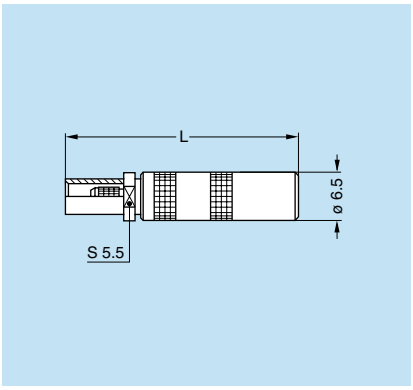
PCA Free receptacle with cable collet

Part number	Cable group	Availability
PCA.00.250.CTLC22	1	●
PCA.00.250.CTLC29	2-3-4	●
PCA.00.250.CTLC31	8	●

M1 Cable assembly

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.



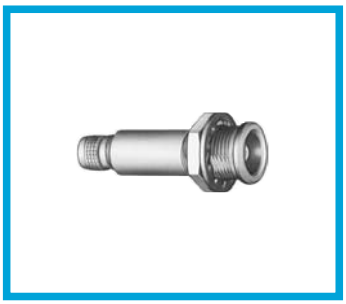


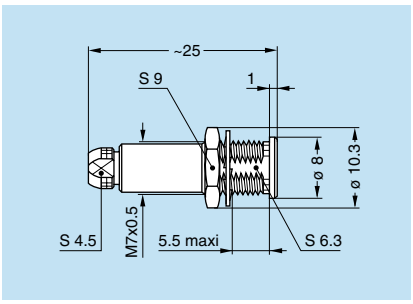
PCS Free receptacle with cable crimping

Part number	Cable group	Dim. L	Availability
PCS.00.250.CTME24	1	30	●
PCS.00.250.CTME30	2	30	●
PCS.00.250.CTME31	3-4	30	●
PCS.00.250.CTME35	8	30	○
PCS.00.250.CTME44	5	30	●
PCS.00.250.CTME52	6	33	●

M4 Cable assembly, crimp contact

M5 Cable assembly, solder contact (on request)



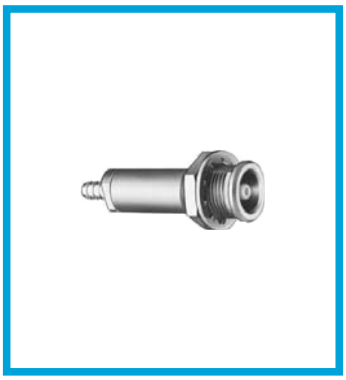


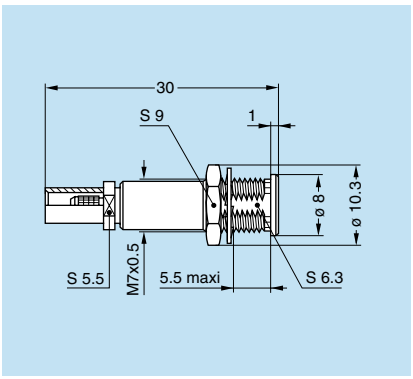
PSA Fixed receptacle, nut fixing, with cable collet

Part number	Cable group	Availability
PSA.00.250.CTLC22	1	●
PSA.00.250.CTLC29	2-3-4	●
PSA.00.250.CTLC31	8	●

M1 Cable assembly

P5 Panel cut-out





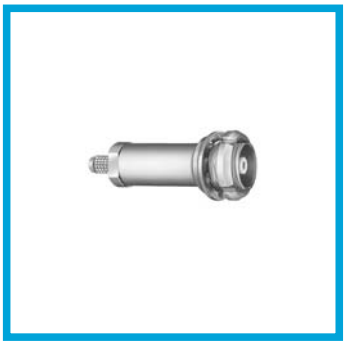
PSS Fixed receptacle, nut fixing, with cable crimping

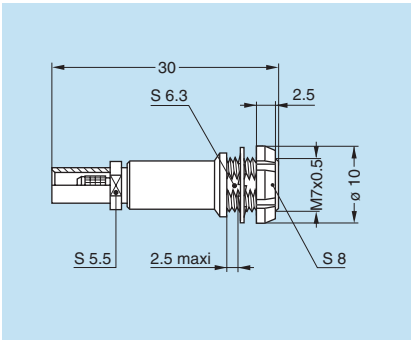
Part number	Cable group	Availability
PSS.00.250.CTME24	1	●
PSS.00.250.CTME30	2	●
PSS.00.250.CTME31	3-4	●
PSS.00.250.CTME35	8	○

M4 Cable assembly, crimp contact

M5 Cable assembly, solder contact (on request)

P5 Panel cut-out





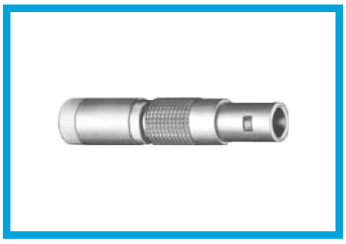
PES Fixed receptacle, nut fixing, with cable crimping (back panel mounting)

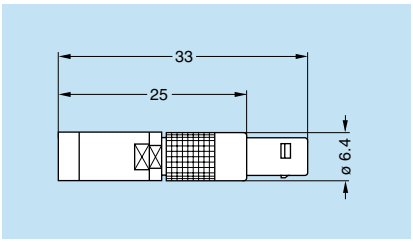
Part number	Cable group	Availability
PES.00.250.NTME31	3-4	○
PES.00.250.NTME35	8	○

M4 Cable assembly, crimp contact

M5 Cable assembly, solder contact (on request)

P5 Panel cut-out





FRT Straight plug with resistor or shorted

Part number	Resistor	Weight (g)	Availability
FRT.00.250.CTA00	shorted	4.4	○
FRT.00.250.CTA50	50 Ω 1/8W	4.4	○

● Standard, typically 0-6 weeks delivery for quantities of 250 or less.
○ Non-standard product, contact LEMO USA, typically 6-12 weeks delivery for quantities of 250 or less.
Non-standard product is defined as any product which contains one or more components which are not standard.