

**4M SERIES TRIAX  
CAMERA CONNECTORS**



# 4M Series TRIAX Camera Connectors

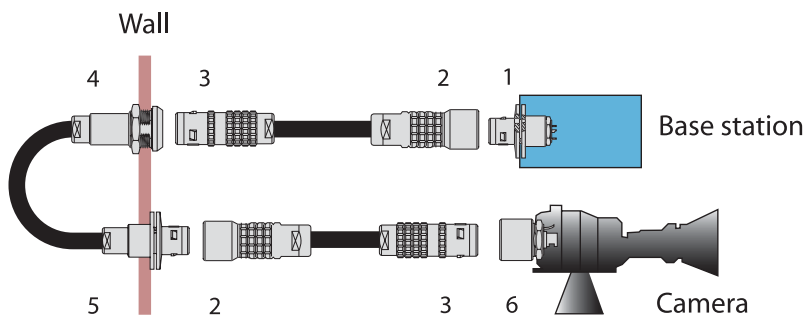
The LEMO 4M series of triaxial connectors are equipped with housings developed for use in harsh environments. The wide range of models is designed to meet the varied requirements of the television and entertainment industries. Similar in construction to the E series, 4M connectors have a high degree of protection rated at IP66 in accordance with standard IEC 529 for mated connectors (up to IP68 if assembled to special instructions). In addition the outer shells are provided with a mechanical guide to prevent any connector rotation thereby avoiding any interruption of signals. The 4M.650 is a BBC standard connector for studio and outside broadcast cameras.

## Features/Benefits

- 4M.650 is a UK industry standard TRIAX connector for broadcast cameras
- Designed for harsh environments
- Rated to IP66/8 standard
- Outer shells designed to prevent any connector or contact rotation
- Quick connect/release system
- Range of housings
- Outstanding reliability >1000 mating cycle capability

## TYPICAL LAYOUT

### Studio

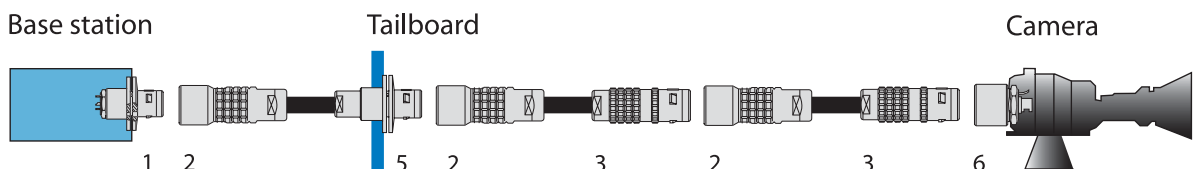


#### KEY\*

- 1 FBD.4M.650.CTL
- 2 PHG.4M.650.CTAC11Z + GMA.4B.010.DR
- 3 FGG.4M.650.CTLC11Z + GMA.4B.010.DJ
- 4 PKG.4M.650.CTAC 11
- 5 FBB.4M.650.CTLC11
- 6 EHM.4M.650.CTA

\* These part numbers are the most common for 11mm Triax

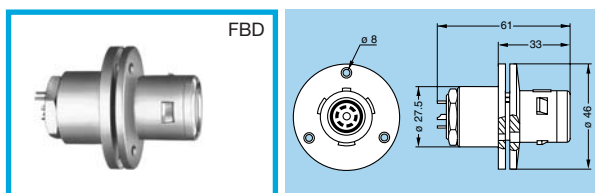
### OB Van



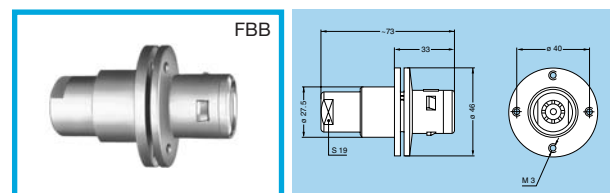
## CONNECTOR STYLES

All dimensions are in mm

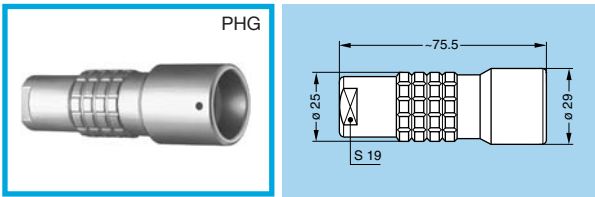
**FBD** Straight plug with round flange (screw fixing)



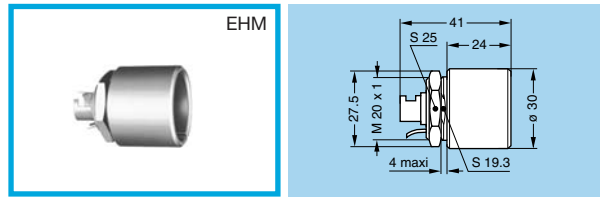
**FBB** Straight plug with round flange & collet (screw fixing)



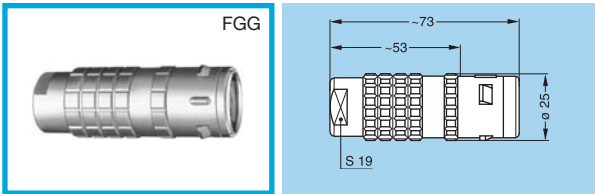
**PHG** Free socket with cable collet



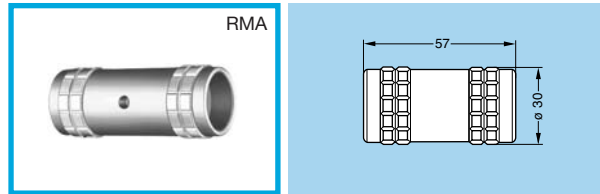
**EHM** Fixed socket with tag, visible shell



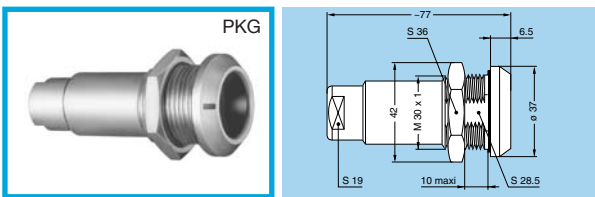
**FGG** Straight plug with cable collet



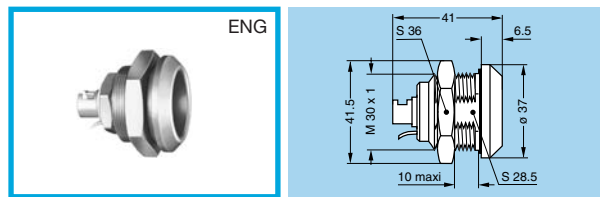
**RMA** Free coupler



**PKG** Fixed socket, nut fixing with cable collet



**ENG** Fixed socket with tag, nut fixing



## ACCESSORIES

### Strain relief



The cable entry of plug and socket models with cable collets can be protected by a sleeve made of polyurethane. This accessory can be supplied according to the part numbers opposite.

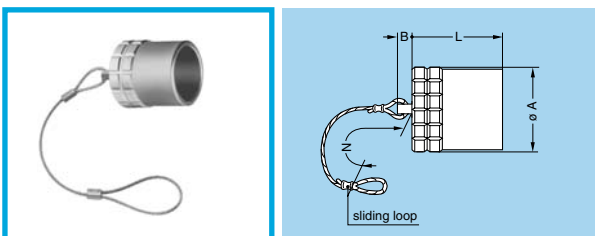
Note: Material is Polyurethane (Desmopan 786) and has a working temperature of  $-40^{\circ}\text{C} + 80^{\circ}\text{C}$  ( $-40^{\circ}\text{F} + 176^{\circ}\text{F}$ )

Part number <sup>1</sup>	Strain relief (mm)		Cable dia. (mm)		Ref.	Colour
	A	L	max.	min.		
GMA.4B.080.D-	8.0	60	9.0	8.0	A	Blue
GMA.4B.010.D-	10.0	60	10.9	10.0	B	White
GMA.4B.011.D-	11.0	60	11.9	11.0	G	Grey
GMA.4B.012.D-	12.0	60	13.0	12.0	J	Yellow
GMA.4B.013.D-	13.5	60	14.5	13.5	M	Brown
					N	Black
					R	Red
					S	Orange
					V	Green

<sup>1</sup>Select colour of strain relief by adding letter from table on right to the end of the part number.

! Remember to add a 'Z' in the variant position of your connector code to accommodate the strain relief (see page 4).

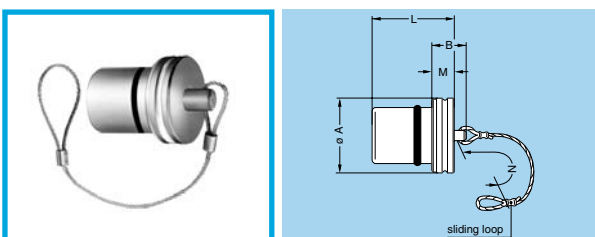
### Plug cap



Part number	'O' ring material	Dimensions (mm)				Weight (g)
		A	B	L	N	
BFG.4K.100.NAS	Silicone rubber	29.0	10	24.5	120	37
BFG.4K.100.NAV	FPM (Viton®)	29.0	10	24.5	120	37

Note: Body material: Brass (UNS C 38500), nickel plated (Ni 3µm)

### Blanking cap for fixed sockets



Part number	'O' ring material	Dimensions (mm)				Weight (g)
		A	B	L	N	
BFG.4K.100.NAS	Silicone rubber	29.0	10	24.5	120	37
BFG.4K.100.NAV	FPM (Viton®)	29.0	10	24.5	120	37

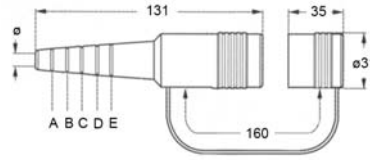
Note: Body material: Brass (UNS C 38500), nickel plated (Ni 3µm)

## Accessories continued

### Protective Boots

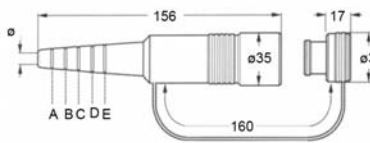
#### FGG Style Protective boot

All dimensions are in mm



Part number	Connector style	Section	Cable dia.	
			Min.	Max.
GMF.4K.080.EANZ	FGG	--	8.0	8.9
		A	9.0	9.9
		B	10.0	11.4
		C	11.5	12.9
		D	13.0	14.9
E	15.0	16.5		

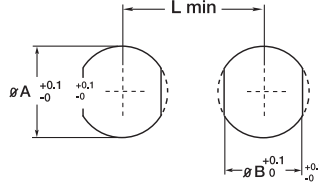
#### PHG Style Protective boot



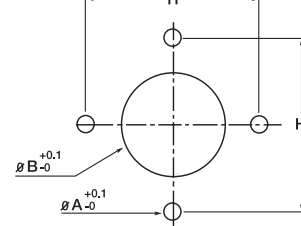
Part number	Connector style	Section	Cable dia.	
			Min.	Max.
GMP.4K.080.EANZ	PHG	--	8.0	8.9
		A	9.0	9.9
		B	10.0	11.4
		C	11.5	12.9
		D	13.0	14.9
E	15.0	16.5		

### PCB cut-outs

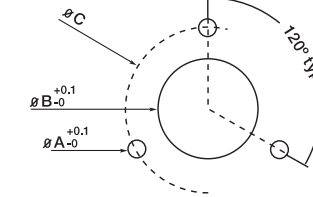
#### P1



#### P2



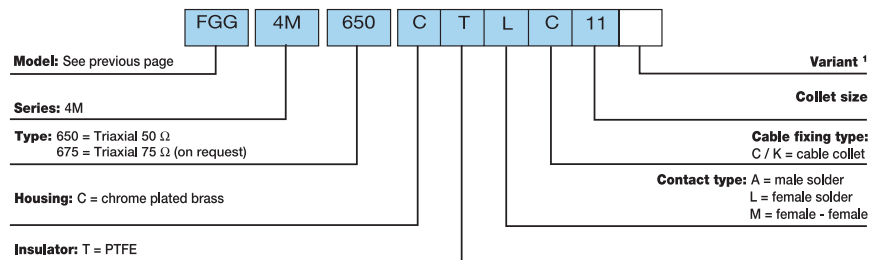
#### P3



All dimensions are in mm

Model	P1			P2			P3		
	A	B	L	A	B	H	A	B	C
EHM	20.2	19.5	32.0						
ENG-PKG	30.2	28.7	43.0						
FBB				3.1	27.7	40.0			
FBD							5.0	27.7	35.0

### Part number example



Note: As a Broadcast standard, plugs are fitted with female contacts and sockets with male contacts. On request all plugs can be fitted with male contacts and sockets with female. Sockets have gold plated earthing crown.

1 'A' 'Z' in the variant position of the part number indicates the model is fitted with a nut for accommodating a strain relief. The strain relief is ordered separately (see 'Accessories' section for part number).

#### FGG.4M.650.CTLC11

Straight plug with key (G) and cable collet, series 4M, triaxial 50 Ω type, chrome plated brass shell, PTFE Insulators, female solder contact, C type collet for a group 11 cable.

## LEMO UK

12 North Street, Worthing, West Sussex BN11 1DU.  
Tel: 01903 234543 Fax: 01903 206231  
e-mail: [uksales@lemo.com](mailto:uksales@lemo.com)

[www.lemo.co.uk](http://www.lemo.co.uk)