

TRIAxIAL CONNECTORS FOR BROADCASTING BBC STANDARD 4M SERIES



4M Series (50 Ω / 75 Ω) for video applications

The 4M Series have been especially designed for triaxial video cameras in harsh environments.

These connector models are triaxial and available with either 50 Ω or 75 Ω contact. The connector outershell has a mechanical keying to avoid both connector/contact rotation and signal interruption.

Being equipped with a rugged housing, the 4M series have a high index protection of IP66. The 4M.650 (50 Ω version) has been adopted by the BBC as its standard for studio and outside broadcast cameras.



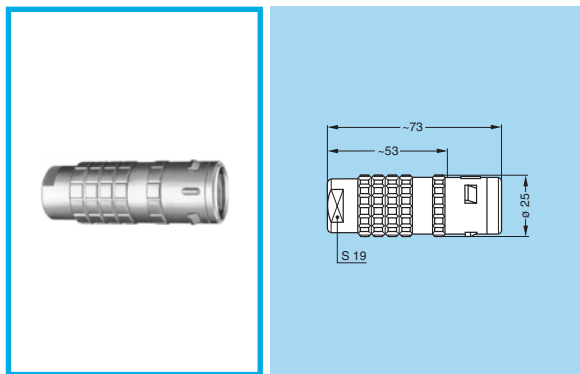
Technical Characteristics

| Characteristics | Triax | |
|------------------------------------|---------------|---------------|
| | 50 Ω | 75 Ω |
| Impedance | 50 Ω | 75 Ω |
| Operating frequency | 0.5 GHz | 1.2 GHz |
| VSWR (f= GHz) | 1.01 + 0.38 f | 1.01 + 0.14 f |
| Contact resistance | < 2.5 m Ω | < 3 m Ω |
| Contact resistance internal screen | < 0.5 m Ω | < 1 m Ω |
| Watertightness (IEC 60529) | IP66 | IP66 |

Recommended cables

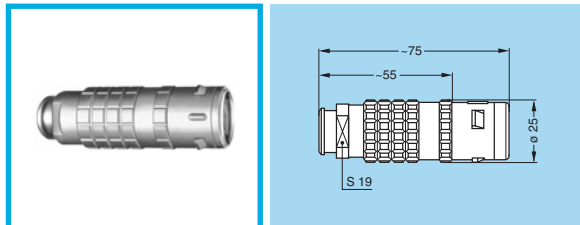
| Reference | Basic coaxial cable | Imp. (Ω) | Cable groupe |
|------------------|---------------------|----------|--------------|
| Amphenol 21.204 | | 50±2Ω | 2 |
| Belden 8232A | RG.59/U | 75±3Ω | 3 |
| Belden 8233A | RG.11/U | 75±3Ω | 7 |
| Belden 9222 | RG.58A/U | 50±2Ω | 1 |
| Belden 9192-9232 | RG.11/U | 75±3Ω | 9 |
| Belden 9267 | RG.59/U | 75±3Ω | 4 |
| Belden 9888 | RG.8/U | 50±2Ω | 8 |
| Dätwyler HF-2318 | | 50±2Ω | 5 |
| Dätwyler HF-2426 | RG.59/U | 75±3Ω | 3 |
| Filotex 11820 | | 50±2Ω | 2 |
| NEK 63990 | | 75±3Ω | 6 |
| NEK 23860 | | 75±3Ω | 4 |
| NOKIA Triax 8 | | 75±3Ω | 4 |
| NOKIA Triax 11 | | 75±3Ω | 6 |
| NOKIA Triax 14 | | 75±3Ω | 0 |

Models



FGG Straight plug with cable collet

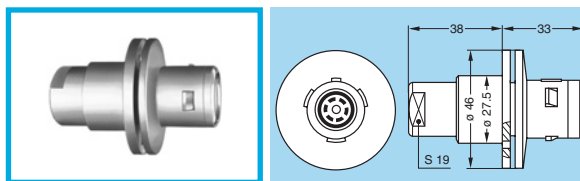
| Part Number | Imp. (Ω) | Cable groupe | Cable ø | |
|-------------------|----------|--------------|---------|------|
| | | | Max | Min |
| FGG.4M.650.CTLC65 | 50 | 1 | 6.5 | 6.1 |
| FGG.4M.650.CTLC75 | 50 | 2 | 7.5 | 7.1 |
| FGG.4M.650.CTLC90 | 50 | 4 | 9.0 | 8.6 |
| FGG.4M.650.CTLC10 | 50 | 5 | 10.5 | 9.6 |
| FGG.4M.650.CTLC12 | 50 | 8 | 12.8 | 12.1 |
| FGG.4M.675.CTAC80 | 75 | 3 | 8.0 | 7.6 |
| FGG.4M.675.CTAC90 | 75 | 4 | 9.0 | 8.6 |
| FGG.4M.675.CTAC11 | 75 | 6 | 12.0 | 10.6 |
| FGG.4M.675.CTAC12 | 75 | 7 | 12.8 | 12.1 |
| FGG.4M.675.CTAC13 | 75 | 9 | 13.5 | 12.9 |
| FGG.4M.675.CTAC15 | 75 | 0 | 15.0 | 14.1 |



FGG Straight plug, cable collet and nut for fitting a bend relief

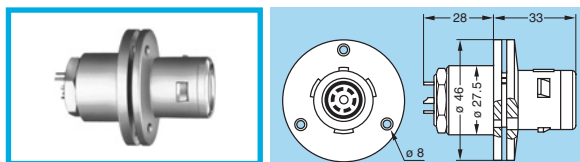
| Part Number | Imp. (Ω) | Cable groupe | Cable ø | |
|--------------------|----------|--------------|---------|------|
| | | | Max | Min |
| FGG.4M.650.CTLC85Z | 50 | 4 | 8.5 | 8.1 |
| FGG.4M.650.CTLC90Z | 50 | 4 | 9.0 | 8.6 |
| FGG.4M.650.CTLC11Z | 50 | 6 | 12.0 | 10.6 |
| FGG.4M.675.CTAC80Z | 75 | 3 | 8.0 | 7.6 |
| FGG.4M.675.CTAC90Z | 75 | 4 | 9.0 | 8.6 |

Note: The bend relief must be ordered separately.



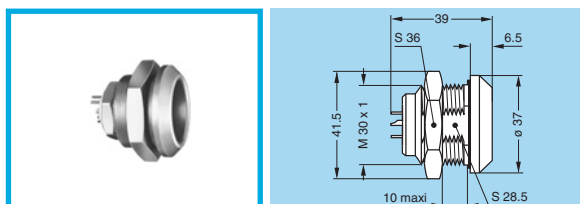
FBB Fixed plug with round flange (screw fixing)

| Part Number | Imp. (Ω) | Weight (g) |
|-------------------|----------|------------|
| FBB.4M.650.CTLC11 | 50 | 240 |
| FBB.4M.650.CTLC80 | 50 | 240 |
| FBB.4M.650.CTLC85 | 50 | 240 |



FBD Fixed plug with round flange (screw fixing)

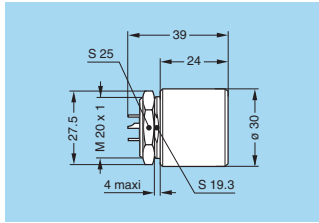
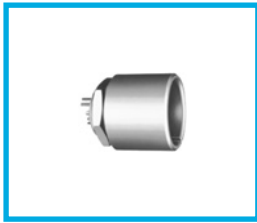
| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| FBD.4M.650.CTL | 50 | 230 |
| FBD.4M.675.CTA | 75 | 230 |



ENG Fixed socket with tag, nut fixing

| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| ENG.4M.650.CTA | 50 | 100 |
| ENG.4M.675.CTL | 75 | 100 |

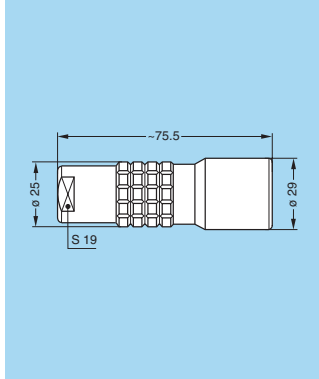
Note: all dimensions are in millimetres.



EHM Fixed socket with tag, visible shell

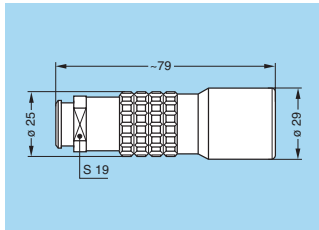
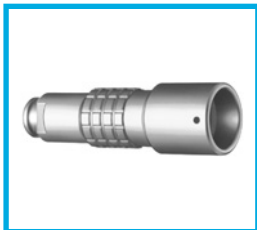
| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| EHM.4M.650.CTA | 50 | 80 |
| EHM.4M.675.CTL | 75 | 80 |

Note: all dimensions are in millimetres.



PHG Straight socket with cable collet

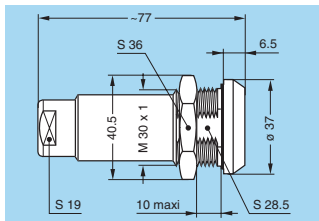
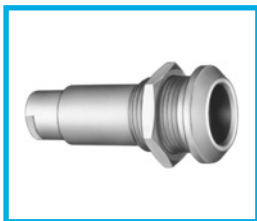
| Part Number | Imp. (Ω) | Cable groupe | Cable ø | |
|-------------------|----------|--------------|---------|------|
| | | | Max | Min |
| PHG.4M.650.CTAC65 | 50 | 1 | 6.5 | 6.1 |
| PHG.4M.650.CTAC75 | 50 | 2 | 7.5 | 7.1 |
| PHG.4M.650.CTAC90 | 50 | 4 | 9.0 | 8.6 |
| PHG.4M.650.CTAC10 | 50 | 5 | 10.5 | 9.6 |
| PHG.4M.650.CTAC12 | 50 | 8 | 12.8 | 12.1 |
| PHG.4M.675.CTLC80 | 75 | 3 | 8.0 | 7.6 |
| PHG.4M.675.CTLC90 | 75 | 4 | 9.0 | 8.6 |
| PHG.4M.675.CTLC11 | 75 | 6 | 12.0 | 10.6 |
| PHG.4M.675.CTLC12 | 75 | 7 | 12.8 | 12.1 |
| PHG.4M.675.CTLC13 | 75 | 9 | 13.5 | 12.9 |
| PHG.4M.675.CTLC15 | 75 | 0 | 15.0 | 14.1 |



PHG Straight socket, cable collet and nut for fitting a bend relief

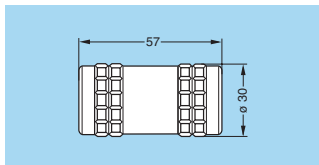
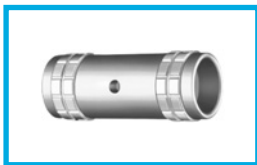
| Part Number | Imp. (Ω) | Cable groupe | Cable ø | |
|--------------------|----------|--------------|---------|------|
| | | | Max | Min |
| PHG.4M.650.CTAC85Z | 50 | 4 | 8.5 | 8.1 |
| PHG.4M.650.CTAC90Z | 50 | 4 | 9.0 | 8.6 |
| PHG.4M.650.CTAC11Z | 50 | 6 | 12.0 | 10.6 |
| PHG.4M.675.CTLC80Z | 75 | 3 | 8.0 | 7.6 |
| PHG.4M.675.CTLC90Z | 75 | 4 | 9.0 | 8.6 |

Note: The bend relief must be ordered separately.



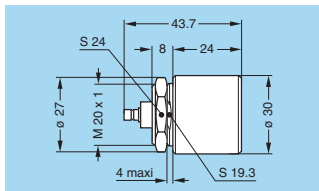
PKG Fixed socket, nut fixing and cable collet

| Part Number | Imp. (Ω) | Cable groupe | Cable ø | |
|-------------------|----------|--------------|---------|------|
| | | | Max | Min |
| PKG.4M.650.CTAC11 | 50 | 6 | 12.0 | 10.6 |
| PKG.4M.650.CTAC14 | 50 | - | 14.0 | 13.6 |



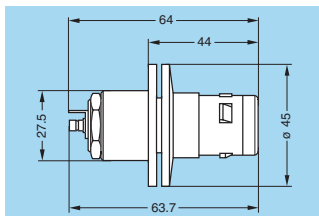
RMA Straight coupler

| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| RMA.4M.675.CTM | 75 | 148 |



AZA Adapter, nut fixing, consisting of a LEMO socket and a triax SMZ socket

| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| AZA.4M.650.CTA | 50 | 83 |



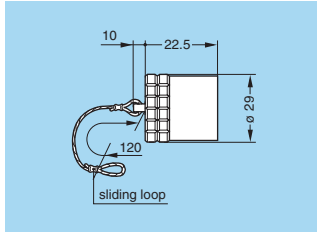
AZF Adapter, consisting of a LEMO plug with round flange, screw fixing and a triax SMZ socket

| Part Number | Imp. (Ω) | Weight (g) |
|----------------|----------|------------|
| AZF.4M.650.CTL | 50 | 224 |

Note: all dimensions are in millimetres.



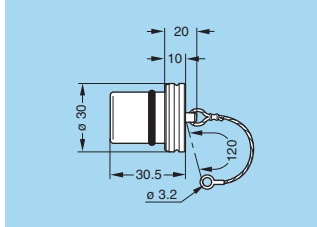
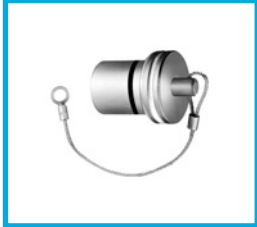
Accessories



BFG Plug cap

| Part Number | Weight (g) |
|----------------|------------|
| BFG.4K.100.NAS | 37 |

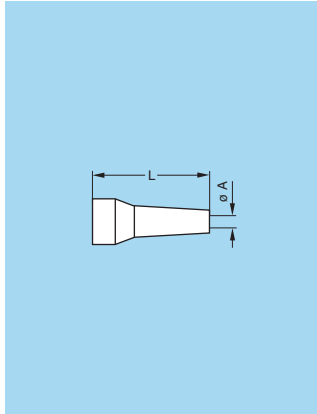
Note:
Body material: Nickel-plated brass (Ni 3µm)
Lanyard material: Stainless steel
Watertightness: IP68 according to IEC 60529



BRE Blanking caps for fixed and free sockets

| Part Number | Weight (g) |
|----------------|------------|
| BRE.4K.200.NAS | 51 |

Note:
Body material: Nickel-plated brass (Ni 3µm)
Lanyard material: Stainless steel
Watertightness: IP68 according to IEC 60529



GMA Bend relief for FGG and PHG models with nut for fitting a bend relief

| Part Number | Dimensions (mm) | | | |
|---------------|-----------------|----|---------|------|
| | Bend relief | | Cable ø | |
| | A | L | max. | min. |
| GMA.4B.080.DG | 8.0 | 60 | 9.0 | 8.0 |
| GMA.4B.010.DG | 10.0 | 60 | 10.9 | 10.0 |
| GMA.4B.011.DG | 11.0 | 60 | 11.9 | 11.0 |
| GMA.4B.012.DG | 12.0 | 60 | 13.0 | 12.0 |
| GMA.4B.013.DG | 13.5 | 60 | 14.5 | 13.5 |

| Ref. | Colour |
|------|--------|
| A | blue |
| B | white |
| G | grey |

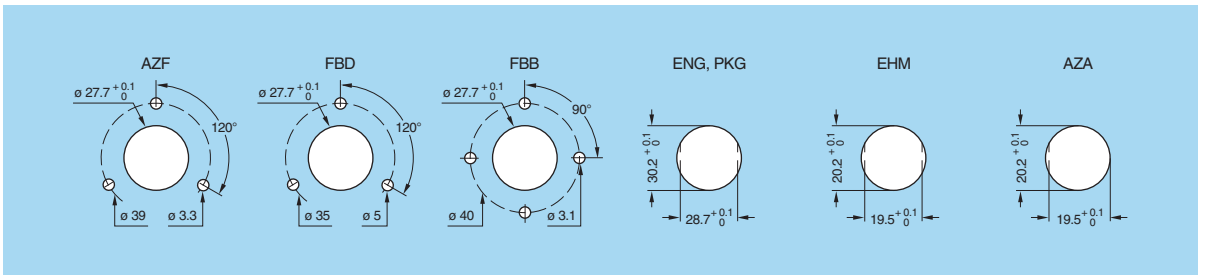
| Ref. | Colour |
|------|--------|
| J | yellow |
| M | brown |
| N | black |

| Ref. | Colour |
|------|--------|
| R | red |
| S | orange |
| V | green |

Note:
Material: Polyurethane elastomer
Temperature range in dry atmosphere: -40°C +80°C

Note: The last letter «G» of the part number indicates the colour grey of the bend relief. For others colour, refer to the above table and replace letter «G» by the letter of the colour required.

Panel cut-outs



Note: all dimensions are in millimetres.

LEMO HEADQUARTERS

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