

**SMPTE COMPATIBLE  
HDTV CONNECTION SYSTEM  
3K.93C SERIES**



# LEMO pioneered and set the standard for HDTV

## The global standard for HDTV fibre connector

LEMO developed the 3K.93C Series connectors in the early stages of the introduction of HDTV, becoming the standard for high-definition TV. It is one of the only connectors being used worldwide that complies fully with SMPTE, ARIB and EBU standards for both signal and cable. LEMO's 3K.93C connectors are the standard in national and international broadcast companies.



## Fast transition to HDTV

Transition to HDTV is easier than ever with LEMO. The wide range of shell styles and termination procedures, for even non-fibre experts, makes it possible for everyone to be successful in HDTV. The LEMO 3K.93C connector uses two single-mode fibre contacts, two high voltage contacts, and two signal contacts. Cable drums and cable assemblies with standard lengths are available off the shelf.



## Over 20'000 stainless steel shells mating cycles offered

The rugged stainless steel outer shell of the LEMO 3K.93C connectors ensures a very long product life, when properly cleaned. The fibre optic contact can will last many years.

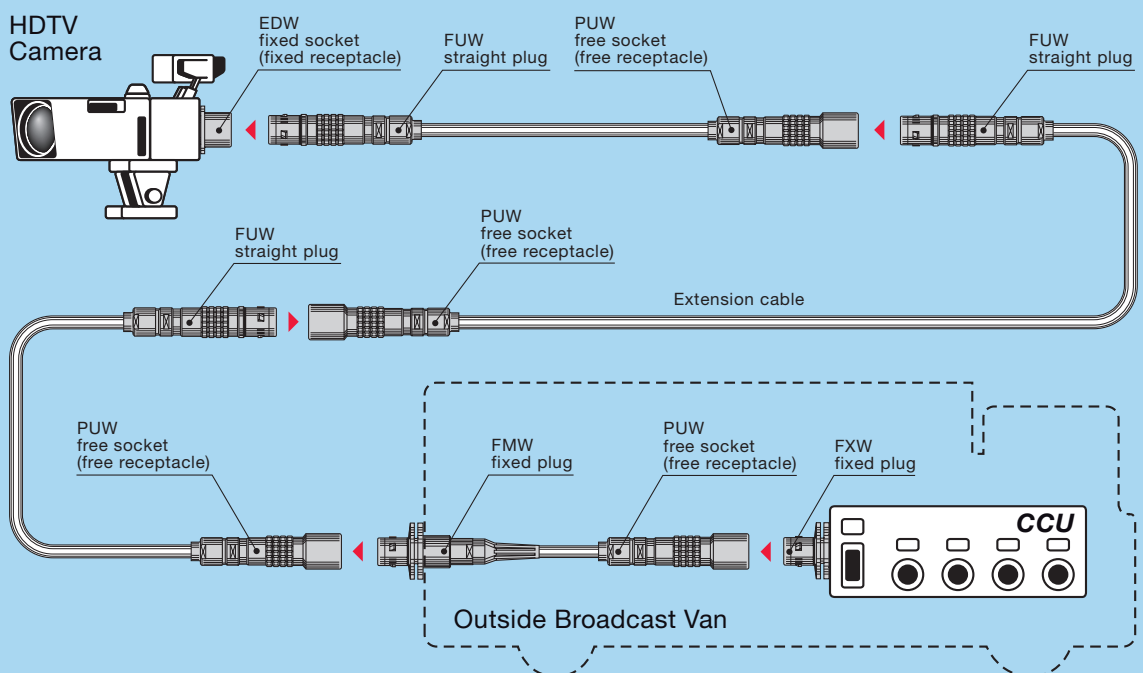
## Simple maintenance

The optical contacts are accessible for fast cleaning; an optional simple, lightweight and portable fibre inspection unit helps the user view the condition of the fibre optic contact to ensure reliable operation.

### Benefits

- Quick disconnect Push-Pull self latching system
- Over 11 shells to meet various application needs
- Stainless steel shell for rugged and harsh environment
- Optional pre-terminated F2 contacts for simple and rapid field assembly
- UL certified connectors
- ARIB (BTA S-1005B), ANSI/SMPTE (304 M-1998 and 311M-1998) and EBU (R100-1999) compatible

### Outside Broadcast Van Configuration



## Highest performance with LEMO standard F2 fibre contact

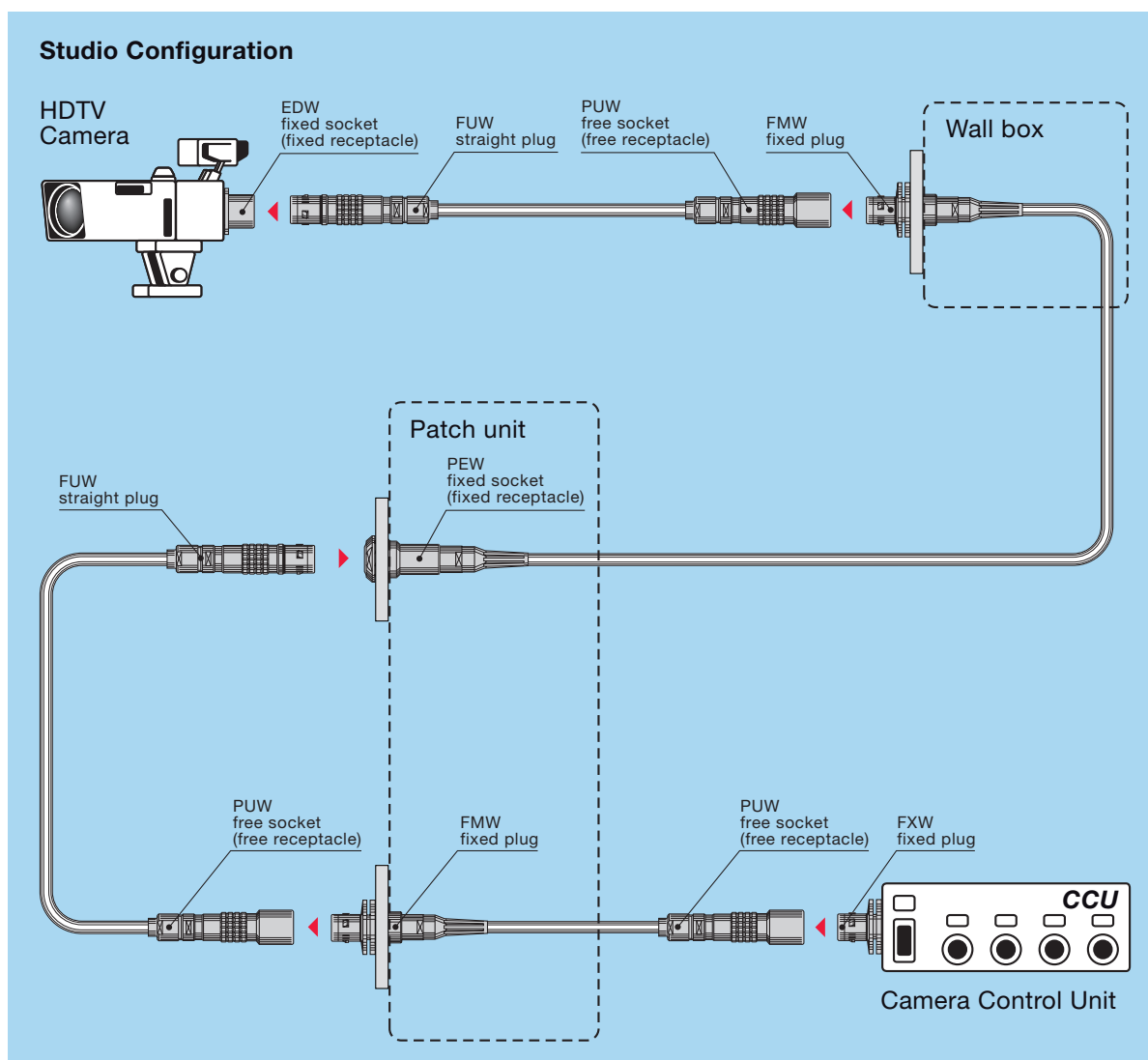
The advantage of using epoxy and polish contacts is the reliability of the termination and longevity of the connector to assure a quality signal transmission. These contacts are very robust and can withstand wide outdoor temperature variations.

## Extend the quality of your connection

LEMO offers quality assembly service for HDTV connection systems. The connector assembly is done in-house by qualified personnel.

## NEW pre-terminated F2 fibre optic contacts - offering a quick and easy field solution

The new pre-terminated contact provides the user with a contact that can be terminated without the use of epoxy, or polishing. It is intended for use in situations where it is critical that a cable be repaired quickly. They may be used indoors, in fixed installation environments, or in the field. Designed for use with the LEMO 3K.93C, this contact fits directly into any LEMO connector where the standard F2 contact is used.



# 3K.93C Series

## General characteristics

|                                     |                              |
|-------------------------------------|------------------------------|
| Cable retention force               | > 700 N                      |
| Endurance: Brass+Cr                 | > 10000 cycles               |
| Endurance: Stainless steel          | 20000 cycles                 |
| Drop test                           | 2 m                          |
| Shock                               | 100 g, 10-50 ms              |
| Vibration                           | 7 cycles (20-2000Hz)         |
| Standard F2 temperature range       | -40° C, +60° C               |
| Pre-terminated F2 temperature range | -20° C, +60° C               |
| Humidity                            | up to 95% at 60° C           |
| Water resistance                    | Depth of 1.8 m for 48 hours  |
| Corrosion                           | 48 hours, 5% salt water test |
| Index protection                    | IP 68                        |

## Electrical contacts

|   |   |   |
|---|---|---|
| Number of contacts<br>Male contact ø<br>Contact type<br>Conductor AWG min.<br>Conductor AWG max.<br>Working Voltage max.<br>Test Voltage<br>Rated current<br>Contact resistance<br>Shell to shell conductivity<br>Insulation resistance | Power   | Signal  |
|   | 2<br>1.3 mm<br>crimp<br>18<br>14<br>≤ 600 V rms<br>2250 V rms<br>10 A<br>< 4 mΩ | 2<br>0.9 mm<br>crimp<br>24<br>20<br>≤ 42 V rms<br>1000 V rms<br>3 A<br>< 5 mΩ |

## Fibre optic contacts

| Characteristics                 | Value                 | Standard      |
|---------------------------------|-----------------------|---------------|
| Number of contacts              | 2                     |               |
| Fibre core/cladding ø           | single mode 9/125 µm  |               |
| Ferrule bore inside ø           | 125 µm <sup>2)</sup>  |               |
| Mean insertion loss             | 0.10 dB <sup>1)</sup> | IEC 61300-3-4 |
| Return loss (machine polishing) | < -45 dB              | IEC 61300-3-6 |

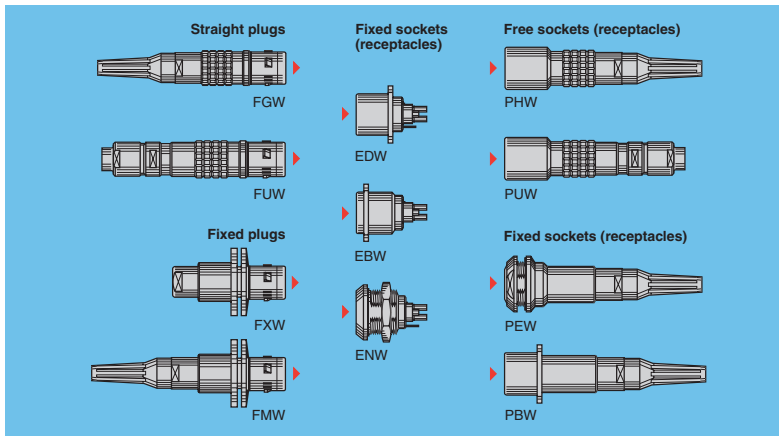
## Recommended cables

| Cable group     | Type         | Utilisation    | Sheath ø   |
|-----------------|--------------|----------------|------------|
| 2               | 2SM-9.2-37.5 | Standard       | 9.2 ± 0.3  |
| 3               | 2SM-12-15    | Long distances | 12.0 ± 0.4 |
| 4 <sup>1)</sup> | 2SM-16-37.5  | Studio         | 16.0 ± 0.5 |

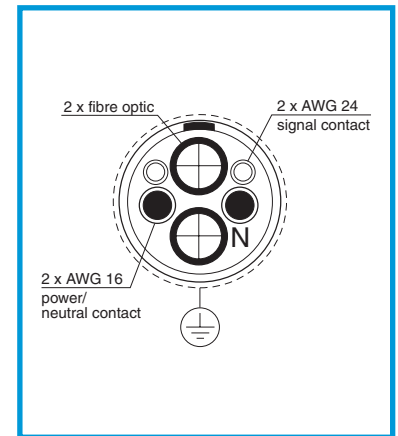
**Note:** <sup>1)</sup> tested at 1300 nm in accordance with IEC 61300-03-04 method B.  
<sup>2)</sup> other ferrule bore ø available (126 µm).

**Note:** <sup>1)</sup> The outer sheath shall be removed for assembly.

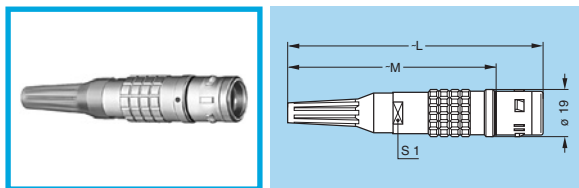
## Models



## Mixed contact type



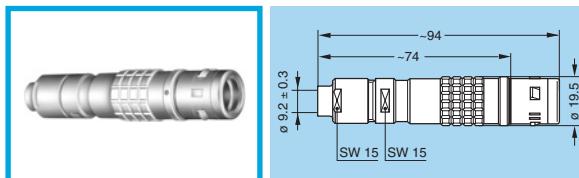
### FGW Straight plug, cable adapter, with bend relief



| Part Number        | Cable group | Dim. (mm) |     |    | Cable ø |      | Housing material |
|--------------------|-------------|-----------|-----|----|---------|------|------------------|
|                    |             | L         | M   | S1 | Max     | Min  |                  |
| FGW.3K.93C.CLMT96Z | 2-4         | 101       | 81  | 15 | 9.5     | 8.9  | Chr.-plat. brass |
| FGW.3K.93C.CLMT12Z | 3           | 135       | 115 | 20 | 12.5    | 11.6 |                  |

**Note:** The bend relief must be ordered separately (see page 8).  
Two female fibre optic contacts PSS.F2.BA2.LCT10 must be ordered separately.

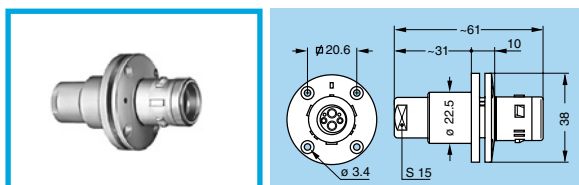
### FUW Straight plug, cable collet adapter and long shell for fitting a bend relief with cap



| Part Number       | Cable group | Cable ø |     | Housing material |
|-------------------|-------------|---------|-----|------------------|
|                   |             | Max     | Min |                  |
| FUW.3K.93C.TLMC96 | 2-4         | 9.5     | 8.9 | Stainless steel  |

**Note:** The bend relief with cap GMF.3K.085.EANZ must be ordered separately (see page 8).  
Two female fibre optic contacts PSS.F2.BA2.LCT10 must be ordered separately.

### FXW Fixed plug with round flange (4 holes mounting)

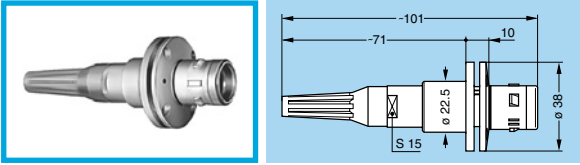


| Part Number    | Housing material    |
|----------------|---------------------|
| FXW.3K.93C.CLM | Chrome-plated brass |
| FXW.3K.93C.TLM | Stainless steel     |

**Note:** Two female fibre optic contacts PSS.F2.BA2.LCE30 must be ordered separately.

**Note:** all dimensions are in millimetre.

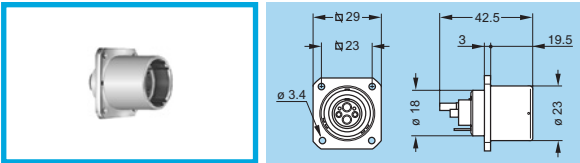
**FMW** Fixed plug with round flange (4 holes mounting), cable adapter, with bend relief



| Part Number        | Cable group | Cable $\phi$ |     | Housing material    |
|--------------------|-------------|--------------|-----|---------------------|
|                    |             | Max          | Min |                     |
| FMW.3K.93C.CLMT96Z | 2-4         | 9.5          | 8.9 | Chrome-plated brass |
| FMW.3K.93C.TLMT96Z | 2-4         | 9.5          | 8.9 | Stainless steel     |

**Note:** The bend relief must be ordered separately (see page 8).  
2 female fibre optic contacts PSS.F2.BA2.LCT10 must be ordered separately.

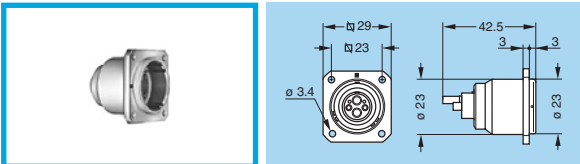
**EDW** Fixed socket (receptacle) with rear square flange (4 holes mounting), and earthing tag



| Part Number    | Housing material    |
|----------------|---------------------|
| EDW.3K.93C.CLC | Chrome-plated brass |
| EDW.3K.93C.TLC | Stainless steel     |

**Note:** 2 male fibre optic contacts FFS.F2.BA2.LCE30 must be ordered separately.

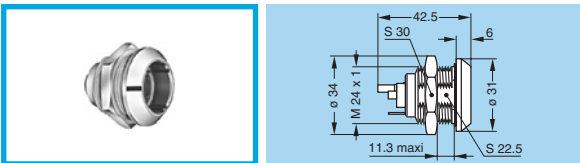
**EBW** Fixed socket (receptacle) with front square flange (4 holes mounting)



| Part Number    | Housing material    |
|----------------|---------------------|
| EBW.3K.93C.CLC | Chrome-plated brass |

**Note:** 2 male fibre optic contacts FFS.F2.BA2.LCE30 must be ordered separately.

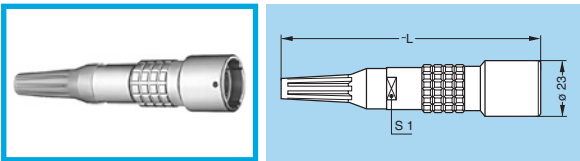
**ENW** Fixed socket (receptacle), nut fixing, and earthing tag



| Part Number    | Housing material    |
|----------------|---------------------|
| ENW.3K.93C.CLC | Chrome-plated brass |

**Note:** 2 male fibre optic contacts FFS.F2.BA2.LCE30 must be ordered separately.

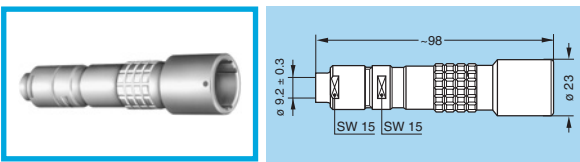
**PHW** Free socket (receptacle), cable adapter, with bend relief



| Part Number        | Cable group | Dim. (mm) |    | Câble $\phi$ |      | Housing material   |
|--------------------|-------------|-----------|----|--------------|------|--------------------|
|                    |             | L         | S1 | Max          | Min  |                    |
| PHW.3K.93C.CLCT96Z | 2-4         | 105       | 15 | 9.5          | 8.9  | Chrome-plat. brass |
| PHW.3K.93C.CLCT12Z | 3           | 139       | 20 | 12.5         | 11.6 |                    |

**Note:** The bend relief must be ordered separately (see page 8).  
2 male fibre optic contacts FFS.F2.BA2.LCT10 must be ordered separately.

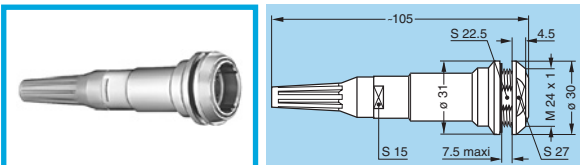
**PUW** Free socket (receptacle), cable collet adapter and long shell for fitting a bend relief with cap



| Part Number       | Cable group | Cable $\phi$ |     | Housing material |
|-------------------|-------------|--------------|-----|------------------|
|                   |             | Max          | Min |                  |
| PUW.3K.93C.TLCC96 | 2-4         | 9.5          | 8.9 | Stainless steel  |

**Note:** The bend relief with cap GMP.3K.085.EANZ must be ordered separately (see page 8).  
2 male fibre optic contacts FFS.F2.BA2.LCT10 must be ordered separately.

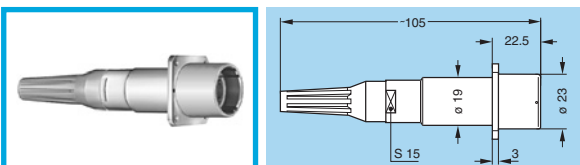
**PEW** Fixed socket (receptacle), nut fixing, cable adapter, with bend relief (back panel mounting)



| Part Number        | Cable group | Cable $\phi$ |     | Housing material    |
|--------------------|-------------|--------------|-----|---------------------|
|                    |             | Max          | Min |                     |
| PEW.3K.93C.CLCT96Z | 2-4         | 9.5          | 8.9 | Chrome-plated brass |
| PEW.3K.93C.TLCT96Z | 2-4         | 9.5          | 8.9 | Stainless steel     |

**Note:** The bend relief must be ordered separately (see page 8).  
2 male fibre optic contacts FFS.F2.BA2.LCT10 must be ordered separately.

**PBW** Fixed socket (receptacle) with rear square flange (4 holes mounting), cable adapter, with bend relief



| Part Number        | Cable group | Cable $\phi$ |     | Housing material    |
|--------------------|-------------|--------------|-----|---------------------|
|                    |             | Max          | Min |                     |
| PBW.3K.93C.CLCT96Z | 2-4         | 9.5          | 8.9 | Chrome-plated brass |

**Note:** The bend relief must be ordered separately (see page 8).  
2 male fibre optic contacts FFS.F2.BA2.LCT10 must be ordered separately.

## F2 fibre optic contacts

The standard F2 fibre contact is the highest performing solution on the market regarding thermal stability and very low signal loss. The F2 pre-terminated fibre optic contact was designed as repair

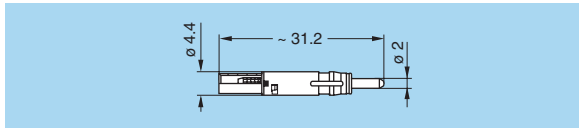
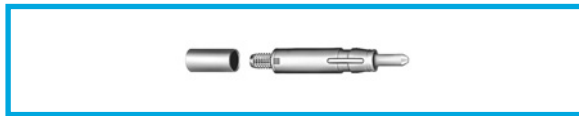
solution but may also be used for indoor fixed installations. These pre-terminated contacts enable simple and rapid on-site-terminations. The design eliminates the need to polish fibre

optic elements as well as preparing and using special epoxies for the fibre assembly.

### Optical characteristics

| Characteristics   | Contact model  | Value              | Standard                           |
|---|--|--------------------|------------------------------------|
| Average insertion loss fibre 9/125 µm<br>Return loss fibre 9/125 µm (UPC) | FFS, PSS (standard F2)<br>FFS, PSS (standard F2)             | 0.10 dB<br>≥ 45 dB | IEC 61300-03-04<br>IEC 61300-03-06 |
| Average insertion loss fibre 9/125 µm<br>Return loss fibre 9/125 µm (UPC) | FFT, PST (pre-terminated F2)<br>FFT, PST (pre-terminated F2) | 0.5 dB<br>≥ 45 dB  | IEC 61300-03-04<br>IEC 61300-03-06 |

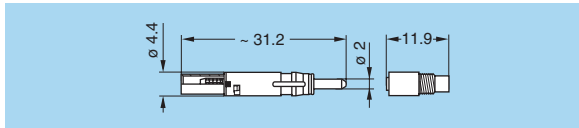
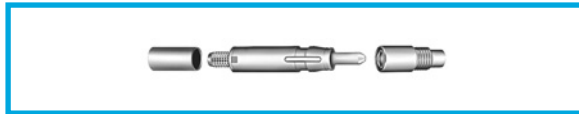
### FFS.F2 Standard F2 male fibre optic contact



| Part Number      | For connector models | Cable structure     | Cable ø     |
|------------------|----------------------|---------------------|-------------|
| FFS.F2.BA2.LCT10 | PHW, PEW, PBW, PUW   | Buffer coated fibre | 0.25 to 1.1 |
| FFS.F2.BA2.LCE30 | EDW, ENW, EBW        | Tight jacket cable  | 1.7 to 3.0  |

**Note:** The above contacts are fitted with a 125 µm bore ferrule

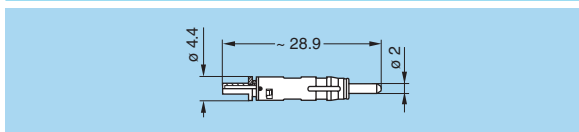
### PSS.F2 Standard F2 female fibre optic contact



| Part Number      | For connector models | Cable structure     | Cable ø     |
|------------------|----------------------|---------------------|-------------|
| PSS.F2.BA2.LCT10 | FGW, FMW, FUW        | Buffer coated fibre | 0.25 to 1.1 |
| PSS.F2.BA2.LCE30 | FXW                  | Tight jacket cable  | 1.7 to 3.0  |

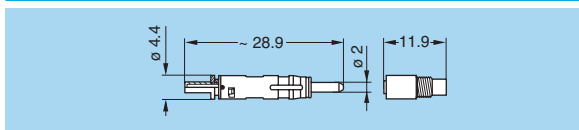
**Note:** The above contacts are fitted with a 125 µm bore ferrule

### FFT.F2 Pre-terminated F2 male fibre optic contact



| Part Number      | For connector models | Cable structure     | Cable ø     |
|------------------|----------------------|---------------------|-------------|
| FFT.F2.BA2.LCE10 | PHW, PEW, PBW, PUW   | Buffer coated fibre | 0.25 to 1.1 |

### PST.F2 Pre-terminated F2 female fibre optic contact



| Part Number      | For connector models | Cable structure     | Cable ø     |
|------------------|----------------------|---------------------|-------------|
| PST.F2.BA2.LCE10 | FGW, FMW, FUW        | Buffer coated fibre | 0.25 to 1.1 |

**Note:** all dimensions are in millimetre.

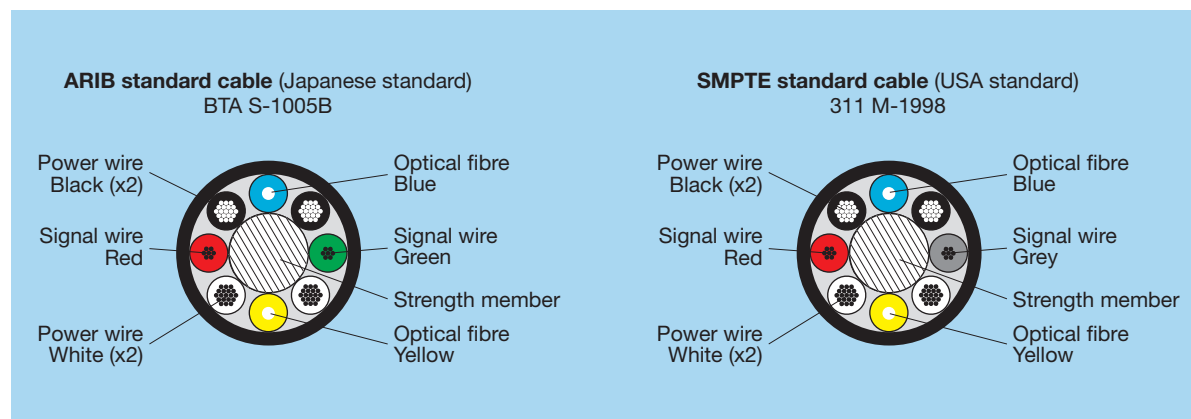
## Cables – ARIB, SMPTE & EBU mixed camera cables

Mixed camera cables have been specially designed for HDTV Broadcast requirements resulting in the primary standards in Japan and USA.

These standards are fairly similar, except for the colour coding of the control cores.

While the diameter of the central strength member is the same in

both standards (1.8 mm) some manufacturers use 1.6 mm only.



## Rugged HDTV camera cable

Cables in broadcast need to have high resistance against flexing and twisting,

which is a challenge for fragile fibre optic cables.

These cables require good

abrasion resistance, load bearing as well as tensile strength capabilities.

### SMPTE 311M-1998 (USA standard connector)

| Optical fibre         | Typical data |
|-----------------------|--------------|
| Attenuation (1300 µm) | 0.8 dB/km    |
| Core diameter         | 9.5 ± 1 µm   |
| Cladding diameter     | 125 ± 1 µm   |
| Buffer diameter       | 0.9 ± 0.05mm |

| Mechanical properties of cable | Typical data  |
|--------------------------------|---------------|
| Tensile strength               | 700N minimum  |
| Cyclic flexing                 | 15000 cycles  |
| Bend radius                    | 7 x diameters |

| Power conductor       | Typical data  |
|-----------------------|---------------|
| Conductor resistance  | < 43 Ω/km     |
| Insulation resistance | > 10000 MΩ/km |
| Withstand voltage     | 1750 Vrms     |

| Signal conductor      | Typical data  |
|-----------------------|---------------|
| Conductor resistance  | < 184 Ω/km    |
| Insulation resistance | > 10000 MΩ/km |
| Withstand voltage     | 1750 Vrms     |

### EBU R100-1999 (European standard connector)

| General specifications | Typical data                                       |
|------------------------|--|
| Temperature            | -40° C to +80° C                                   |
| Humidity               | 90-95% relative humidity at 40° C ± 2 for 96 hours |
| Durability             | 10000 cycles                                       |

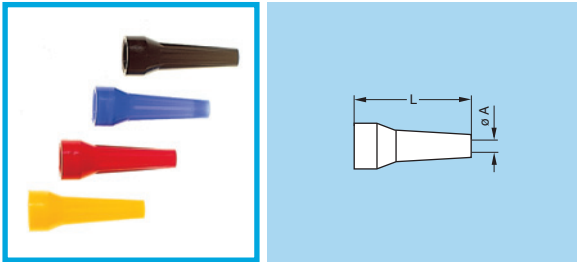
| Optical specifications | Typical data                             |
|------------------------|--|
| Fibre core/cladding ø  | 9/125 µm, single (SM) fibre              |
| Insertion loss         | less than 0.5 dB at 1300 nm <sup>2</sup> |
| Return loss            | better than -45 dB (machine polishing)   |

| Power conductor | Typical data                       |
|-----------------|------------------------------------|
| Voltage         | 600 Vrms (maximum working voltage) |
| Current         | 10 A (maximum working current)     |

| Signal conductor | Typical data                                 |
|------------------|--|
| Voltage          | 42 Vrms or 60 Vrms (maximum working voltage) |
| Current          | 3 A (maximum working current)                |

## Accessories

### GMA Bend relief



| Part Number   | Cable group | Dim. (mm) |    |
|---------------|-------------|-----------|----|
|               |             | A         | L  |
| GMA.3B.090.DN | 2-4         | 9         | 42 |
| GMA.4B.011.DN | 3           | 11        | 60 |

| Ref. | Colour | Ref. | Colour | Ref. | Colour |
|------|--------|------|--------|------|--------|
| A    | blue   | J    | yellow | R    | red    |
| B    | white  | M    | brown  | S    | orange |
| G    | grey   | N    | black  | V    | green  |

**Note:** The last letter «N» of the part number indicates the colour black of the bend relief. For others colour, refer to the adjacent table and replace letter «N» by the letter of the colour required.

### GMF Bend relief with cap



| Part Number    | For connector model |
|----------------|---------------------|
| GMF3K.085.EANZ | FUW                 |

Material: black EPDM

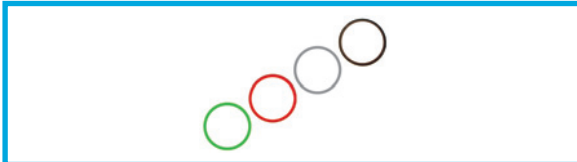
### GMP Bend relief with cap



| Part Number    | For connector model |
|----------------|---------------------|
| GMP3K.085.EANZ | PUW                 |

Material: black EPDM

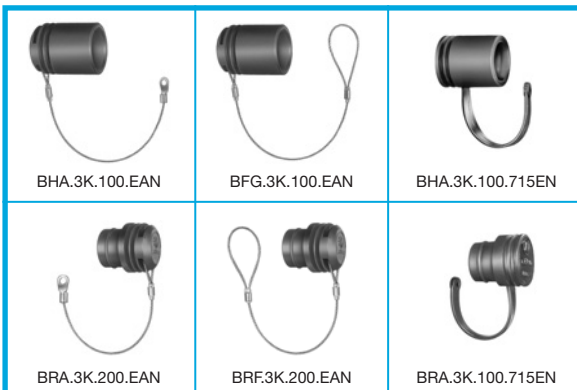
### GMF Coloured ring for bend relief with cap



| Part Number  | Colour |
|--------------|--------|
| GMF3K.265.RG | grey   |
| GMF3K.265.RN | black  |
| GMF3K.265.RR | red    |
| GMF3K.265.RV | green  |

Material: Silicone

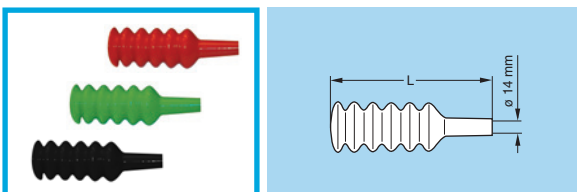
### B●● Blanking caps



| Part Number      | For connector model     |
|------------------|-------------------------|
| BHA.3K.100.EAN   | FMW, FXW                |
| BRA.3K.200.EAN   | EDW, PEW                |
| BFG.3K.100.EAN   | FMW, FXW                |
| BRF.3K.200.EAN   | PUW                     |
| BHA.3K.100.715EN | FMW, FXW                |
| BRA.3K.100.715EN | EBW, EDW, ENW, PBW, PEW |

Material: black EPDM

### GM● Gaiters

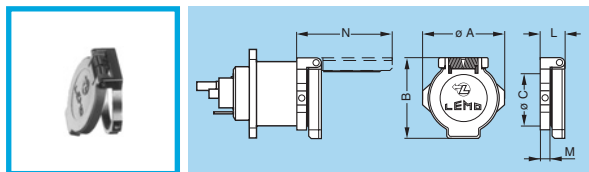


| Part Number      | Colour | Dimension L (mm) | For connector model |
|------------------|--------|------------------|---------------------|
| GMP3K.140.165PER | red    | 165              | PUW                 |
| GMP3K.140.165PEN | black  | 165              | PUW                 |
| GMF3K.140.156PEV | green  | 156              | FUW                 |
| GMF3K.140.156PEN | black  | 156              | FUW                 |

Material: PVC



## BRR Spring loaded dust cap for EDW and EBW



| Part Number     | Dimensions (mm) |    |    |     |   |      |
|-----------------|-----------------|----|----|-----|---|------|
|                 | A               | B  | C  | L   | M | N    |
| BRR.3K.200.PZSG | 29              | 29 | 23 | 8.1 | 3 | 33.2 |

**Note:** On request, this cap is available in black. If so replace the last letter «G» of the part number by «N».

Material: Polyoxymethylene (POM) grey (or black)

## Patch panels

### PB Patch panel



2U panel with one row of 6 or 10 plugs or sockets (receptacles) of the 3K.93C Series.

P B G . 3 K . 9 3 C . M W 9 6 0 6

| Ref. | Colour     |
|------|------------|
| C    | beige      |
| G    | grey       |
| N    | black      |
| T    | nat. anod. |

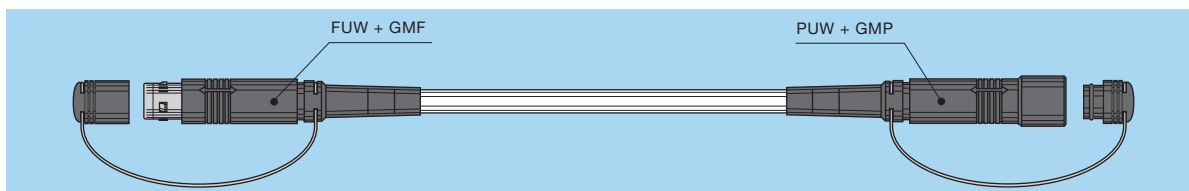
| Ref. | Front side connection   |
|------|-------------------------|
| MW   | Plug FMW                |
| EW   | Socket (receptacle) PEW |
| BW   | Socket (receptacle) PBW |

| Ref. | Cable ø (mm) | Nb of connectors |
|------|--------------|------------------|
| 9606 | 8.9 to 9.5   | 6                |
| 1206 | 11.6 to 12.4 | 6                |
| 9610 | 8.9 to 9.5   | 10               |
| 1210 | 11.6 to 12.4 | 10               |

## Cable assembly

### MFP Cable assembly

Assembly cable with one straight plug (FUW) and one straight socket (receptacle) (PUW), both complete with GMF/GMP bend relief with cap.

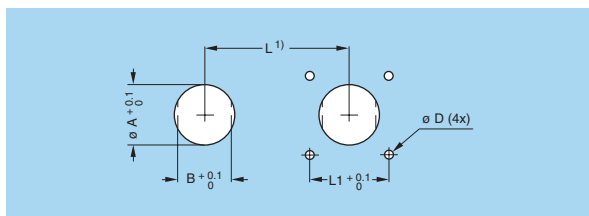


| Part Number        | Description      | Cable type   |
|--------------------|------------------|--------------|
| MFP.3K.93C.092M025 | 25 meter length  | 2SM-9.2-37.5 |
| MFP.3K.93C.092M050 | 50 meter length  | 2SM-9.2-37.5 |
| MFP.3K.93C.092M100 | 100 meter length | 2SM-9.2-37.5 |
| MFP.3K.93C.092M200 | 200 meter length | 2SM-9.2-37.5 |

| Part Number        | Description      | Cable type |
|--------------------|------------------|------------|
| MFP.3K.93C.120M025 | 25 meter length  | 2SM-12-15  |
| MFP.3K.93C.120M050 | 50 meter length  | 2SM-12-15  |
| MFP.3K.93C.120M100 | 100 meter length | 2SM-12-15  |
| MFP.3K.93C.120M200 | 200 meter length | 2SM-12-15  |

| Part Number        | Description      | Cable type  |
|--------------------|------------------|-------------|
| MFP.3K.93C.160M025 | 25 meter length  | 2SM-16-37.5 |
| MFP.3K.93C.160M050 | 50 meter length  | 2SM-16-37.5 |
| MFP.3K.93C.160M100 | 100 meter length | 2SM-16-37.5 |
| MFP.3K.93C.160M200 | 200 meter length | 2SM-16-37.5 |

## Panel cut-outs

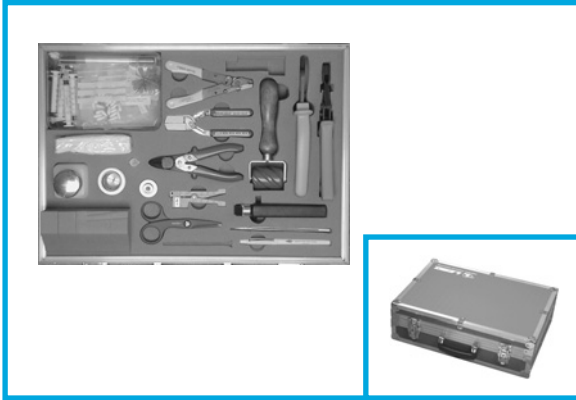


| Models   | Dimensions (mm) |      |           |    |      |
|----------|-----------------|------|-----------|----|------|
|          | A               | B    | D         | L  | L1   |
| FMW, FXW | 23.2            | -    | 3.2 or M3 | 39 | 20.6 |
| EBW      | 23.2            | -    | 3.2 or M3 | 30 | 23.0 |
| EDW      | 23.2            | -    | 3.2 or M3 | 30 | 23.0 |
| ENW, PEW | 24.2            | 22.6 | -         | 32 | -    |
| PBW      | 23.2            | -    | 3.2 or M3 | 30 | 23.0 |

**Note:** 1) Minimum distance between two neighbouring components.

## Tooling

### DRV Complete workstation for fibre optic contact



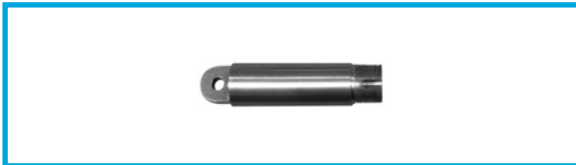
| Part Number   | Contact type |
|---------------|--------------|
| DRV.91.CF2.PN | F2           |

**Note:** other tools such as polishing machine and optical test instrument are also necessary.

| Part Number     | Description  |
|-----------------|--|
| DRV.91.CF2.PN   | Standard F2 contact termination workstation        |
| DPE.99.524.337K | Crimping tool for fibre optic contact              |
| DCS.91.F12.3LA  | Epoxy curing jig                                   |
| WST.FR.220.VA   | Epoxy curing oven (220 V)                          |
| WST.FR.110.VA   | Epoxy curing oven (110 V)                          |
| DCC.91.312.5LA  | Extractor for fibre optic contact (assembly house) |
| DCP.91.023.TN   | Spanner for tightening collet nut                  |

| Part Number    | Description   |
|----------------|---|
| DPD.99.010.5K  | Crimping tool for screen crimping on FUW and PUW                      |
| DPC.91.701.V   | Manual crimping tool (signal contacts $\varnothing$ 0.9)              |
| DPC.91.101.A   | Manual crimping tool (power contacts $\varnothing$ 1.3)               |
| DCC.91.090.5LA | Extraction tool, crimp cont. $\varnothing$ 0.9 (thumb operated model) |
| DCC.91.070.5LA | Extraction tool, crimp cont. $\varnothing$ 0.7 (thumb operated model) |
| DCF.91.093.5LT | Extraction tool, crimp cont. $\varnothing$ 0.9 (automatic model)      |
| DCF.91.073.5LT | Extraction tool, crimp cont. $\varnothing$ 0.7 (automatic model)      |

### DCS.3K.175.72LN Cable puller



The LEMO cable puller, is a pull through tool that allows passing the cable through narrow sections and protects the optical fibre during installation.

### •UW Parts for field repair with pre-terminated F2 contact



| Part Number (Repair kit for FUW plug)              | Content part number | Description                   | Quantity |
|--|---------------------|-------------------------------|----------|
| FUW.3K.93C.ZLMC96W                                 | EGW.3K.444.EL       | Insulator for plug            | 1        |
|  | EGG.3B.660.ZZM      | Contact for signal            | 2        |
|  | FGW.3K.565.ZZC      | Contact for power             | 2        |
|  | PST.F2.BA2.LCE10    | Pre-terminated F2 contact     | 2        |
|  | FGW.3K.146.ZZA      | Anchor with screws            | 1        |
|  | FFS.3K.130.LNV      | Earthing body with o-ring     | 1        |
|  | FFS.3K.160.DN       | Crimp ring                    | 1        |
|  | GDA.99.140.100VK    | O-ring for backshell          | 1        |
|  | GMA.32.018.RN       | heat shrink                   | 2        |
| Part Number (Repair kit for PUW socket/receptacle) | Content part number | Description                   | Quantity |
| PUW.3K.93C.ZLCC96W                                 | FGW.3K.344.EL       | Insulator for socket (recep.) | 1        |
|  | FGG.3B.560.ZZC      | Contact for signal            | 2        |
|  | EGW.3K.666.ZZM      | Contact for power             | 2        |
|  | FFT.F2.BA2.LCE10    | Pre-terminated F2 contact     | 2        |
|  | FGW.3K.146.ZZA      | Anchor with screws            | 1        |
|  | FFS.3K.130.LNV      | Earthing body with o-ring     | 1        |
|  | FFS.3K.160.DN       | Crimp ring                    | 1        |
|  | GDA.99.140.100VK    | O-ring for backshell          | 1        |
|  | GMA.32.018.RN       | heat shrink                   | 2        |

## Tooling for field termination

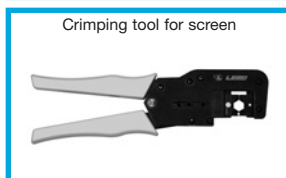
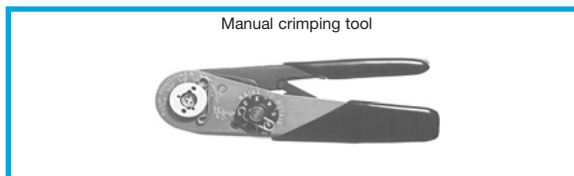
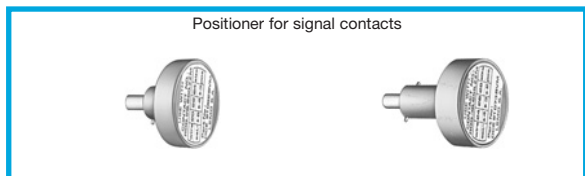
| Part Number     | Description  |
|-----------------|--|
| DCE.91.093.BVC  | Positioner for signal <sup>1)</sup> (male), 0.9 mm           |
| DCE.91.093.BVM  | Positioner for signal <sup>1)</sup> (female), 0.9 mm         |
| DCE.91.133.BVCW | Positioner for power <sup>2)</sup> (male and female), 1.3 mm |
| WST.OU.110.20PN | Fibre cleaver for pre-terminated contact                     |
| DPD.99.010.5K   | Crimping tool for screen crimping on FUW and PUW             |

| Part Number    | Description                                  |
|----------------|--|
| DPC.91.701.V   | Manual crimping tool (signal contacts ø 0.9) |
| DPC.91.101.A   | Manual crimping tool (power contacts ø 1.3)  |
| DPC.91.023.TN  | Spanner for tightening collet nut            |
| WST.PN.102.3CR | Primary coat stripper                        |

**Note:**

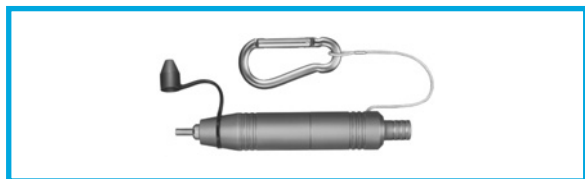
1) These positioners are suitable for use with both manual and pneumatic crimping tools according to the MIL-C-22520/7-01 standard.

2) These turrets can be used with manual crimping tool according to MIL-C-22520/1-01 standard. Power contacts are special with an oversized crimp barrel.



## Maintenance tools

### DCS.91.F23.LA Cleaning tool F2 contact



Used for maintenance cleaning. The tool is made with a sponge alcohol reservoir (supplied empty). 16 dry cotton buds are included. The threaded end allows extraction/reinstallation of the F2 contact alignment device.

### WST.KI.125.34 Cleaning kit F2 contact



Fibre optic cleaning kit of 2 cotton buds, 1 dry and 1 being soaked in IPA (Isopropyl Alcohol) used for cleaning the fibre optic contacts.

### DCS.F2.035.PN Alignment device tool



Simple tool with two threaded end for installation/extraction of the F2 contact alignment device. For use with WST.KI.125.34 kit above.

### DCT.F2.125.PA Fibre Optic ferrule cleaner



This cleaning tool comes with a bush for different cleaning configurations. More than 500 cleaning per cleaner. This cleaner is for on-site purposes only and should not replace regular maintenance cleaning with cotton buds and alcohol.

### WST.FB.C11.000F2 Video inspection viewer



A portable fibre optic viewer for F2 contact consisting of handset probe, LCD display, ferrule tips for LEMO contacts, USB capture device & software & AC power supply all in a rugged case.