

● LEMO's SMPTE Connector

3K.93C Series — Fiber Optic HDTV Interconnection System with code (W) keyway

LEMO's range of high performance fiber optic camera connectors have been developed to meet the needs of the new generation of digital TV cameras. The use of fiber optic contacts means that transmission using digital signals from the camera to the base station and at a much higher level of definition. The stability of the interconnection is critical for optimum performance.

The LEMO TV Camera connectors use the new F2 type Fiber Optic contact. This contact uses ceramic technology ferrule in order to achieve optical performance of the highest standard. Its main features are as follows:

- Ceramic ferrule with spherical end for high performance
- Simple and fast polishing ensuring physical contact of the fiber endfaces
- After termination, the contact is simple to install into the main connector insert
- The same basic contact is used in all of the connector models shown on the next page. When used within a plug insulator, the alignment device is simply clipped onto the front of the Fiber Optic contact
- The alignment device can be easily removed in order to clean the fiber endface.

FEATURES:

- Push-Pull self-latching system for quick & easy mating
- Compact design with: 2 fibers, 2 power contacts and 2 signal contacts
- Very low optical losses (< 0.10 dB)
- Tested to the requirements of IEC 61300
- Easy cleaning of fiber optic contacts
- Reliable design for outdoor application
- Sealed for environmental protection (IP 68)
- Unique 5 keys (code W) system allowing smooth and blind mating
- HEAVY DUTY line with stainless steel shell
- UL 498 recognition
- TÜV EC conformity
- Complies with standards: ARIB (Japan) - ANSI/SMPTE (USA) - EBU (Europe)
- In-line connectors for "daisy" chaining of cables
- Pre-terminated cables available
- Worldwide product support

Electrical characteristics / Electrical contacts

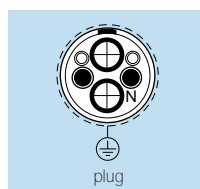
	Power	Signal
Number of contacts	2	2
Contact type for plugs	male	female
Male contact ø	1.3 mm	0.9 mm
Contact type	crimp	crimp
Conductor AWG min.	18	24
Conductor AWG max.	14	20
Working Voltage max.	≤ 600 V rms	≤ 42 V rms
Test Voltage	2250 V rms	1000 V rms
Rated current	10 A	3 A
Contact resistance	< 4 mΩ	< 5 mΩ
Shell to shell conductivity	< 5 mΩ	
Insulation resistance	> 10 ⁹ Ω	

Technical characteristics / fiber optic contacts

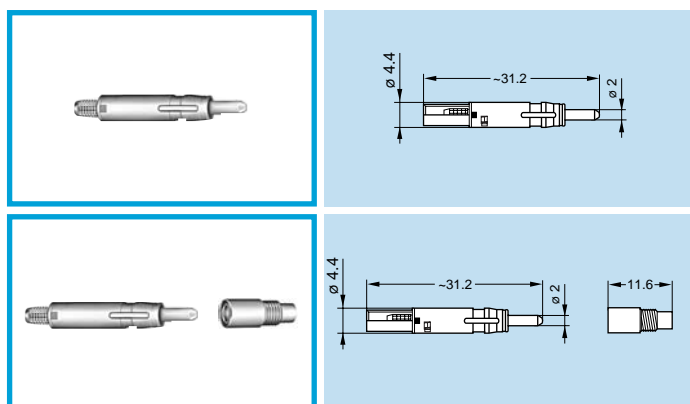
Number of contacts	2
Type of contact	F2
Fiber core/cladding ø	s.m. 9/125 µm
Ferrule bore inside ø	125 µm ⁴⁾
Mean insertion loss	0.10 dB ¹⁾
Return loss	< -45 dB ²⁾ , < -28 dB ³⁾

General characteristics

Cable retention force	> 1000 N
Endurance: Brass+Cr	10000 cycles
Endurance: St. steel	20000 cycles
Drop test	2 m
Shock	100 g, 10-50 ms
Vibration	7 cycles (20-2000Hz)
Temperature	-40° C, +80° C
Temperature cycling	-55° C, +90° 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



- 1) tested at 1300 nm in accordance with IEC 61300-03-04 method B.
- 2) super PC machine polishing.
- 3) hand polishing.
- 4) other ferrule bore diameters available



FFS Male F2 fiber optic contact

Part Number	For models
FFS.F2.BA2.LCT10	PHW, PEW, PBW, PUW
FFS.F2.BA2.LCE30	EDW, ENW, EBW

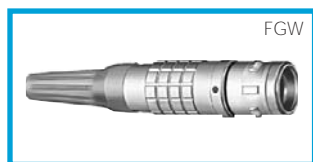
PSS Female F2 fiber optic contact

Part Number	For models
PSS.F2.BA2.LCT10	FGW, FMW, FUW
PSS.F2.BA2.LCE30	FXW

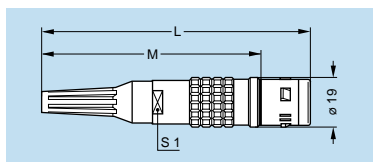
F.O. contacts must be ordered separately. See the table above for ordering information.

LEMO's SMPTE Connector 3K.93C Series — Fiber Optic HDTV Interconnection System with code (W) keyway

The (●) in the part number below is to be replaced by the chosen shell material code (C=chrome-plated brass; T=stainless steel).

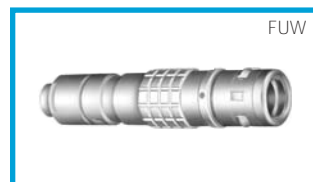


FGW

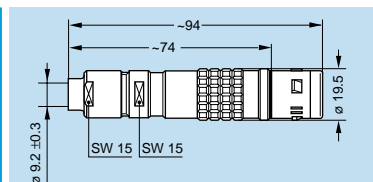


FGW Straight plug with key (code W), cable adapter and nut for fitting a bend relief

Part Number	Cable gr.	Dim. (mm)		
		L	M	S1
FGW.3K.93C.CLMT90Z	1	101	81	15
FGW.3K.93C.CLMT96Z	2-4	101	81	15
FGW.3K.93C.CLMT12Z	3	135	115	20

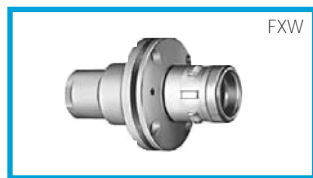


FUW

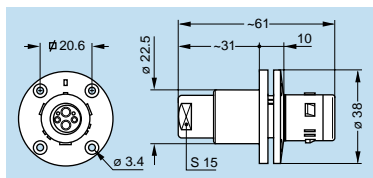


FUW Straight plug with key (code W), cable collet adapter and long shell for fitting a bend relief with cap (with enhanced screen efficiency)

Part Number	Cable group
FUW.3K.93C.●LMC96	2-4

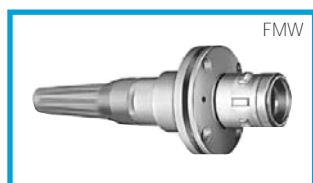


FXW

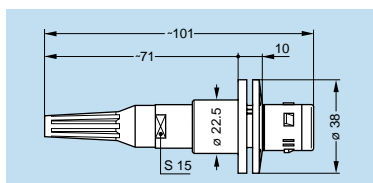


FXW Fixed plug with round flange (4 holes fixing), key (code W)

Part Number	Weight (g)
FXW.3K.93C.●LM	~120



FMW

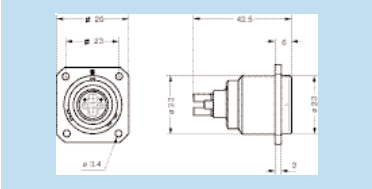


FMW Fixed plug with round flange (4 holes fixing), key (code W), cable adapter, nut for fitting a bend relief

Part Number	Cable group
FMW.3K.93C.CLMT90Z	1
FMW.3K.93C.●LMT96Z	2-4

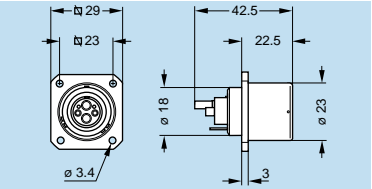
● LEMO's SMPTE Connector

3K.93C Series — Fiber Optic HDTV Interconnection System with code (W) keyway



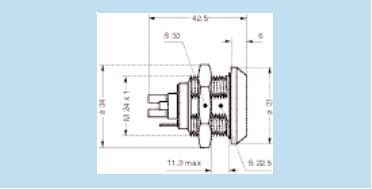
EBW Fixed receptacle with front square flange (4 holes fixing), keys (W)

Part Number
EBW.3K.93C.CLC



EDW Fixed socket with rear square flange (4 holes fixing), key (code W), and earthing tag

Part Number	Weight (g)
EDW.3K.93C.●LC	~47

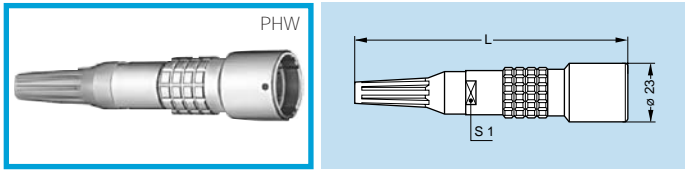


ENW Fixed receptacle, nut fixing, keys (W), and earthing tag

Part Number
ENW.3K.93C.CLC

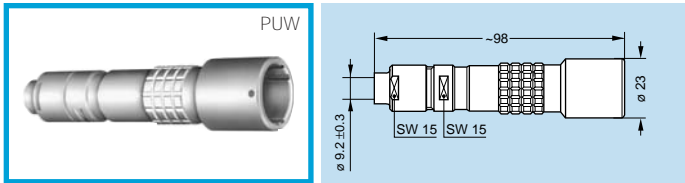
• LEMO's SMPTE Connector

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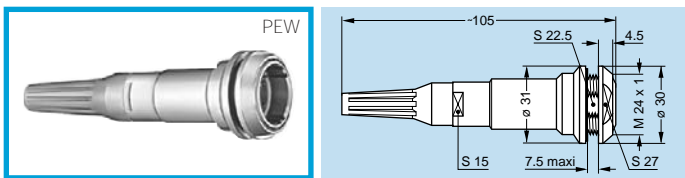
PHW Free socket with key (code W), cable adapter and nut for fitting a bend relief

Part Number	Cable gr.	Dim. (mm)	
		L	S1
PHW.3K.93C.CLCT90Z	1	105	15
PHW.3K.93C.CLCT96Z	2-4	105	15
PHW.3K.93C.CLCT12Z	3	139	20



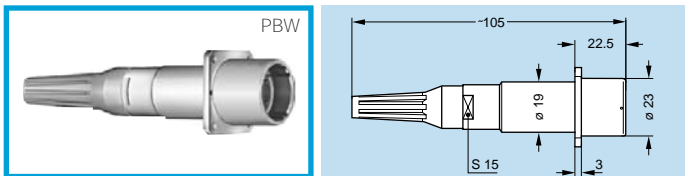
PUW Free socket with key (code W), cable collet adapter and long shell for fitting a bend relief with cap (with enhanced screen efficiency)

Part Number	Cable group
PUW.3K.93C.●LCC96	2-4



PEW Fixed socket, nut fixing, with key (code W), cable adapter and nut for fitting a bend relief (back panel mounting)

Part Number	Cable group
PEW.3K.93C.CLCT90Z	1
PEW.3K.93C.●LCT96Z	2-4



PBW Fixed socket with rear square flange (4 holes fixing), key (code W), cable adapter, nut for fitting a bend relief

Part Number	Cable group
PBW.3K.93C.CLCT90Z	1
PBW.3K.93C.CLCT96Z	2-4

The (●) in the part number below is to be replaced by the chosen shell material code (C= chrome-plated brass; T= stainless steel). For all collet nut connectors, adding a Z to the end of the part number means there is a collet nut for mounting the cable bend relief.

The last letter of the bend relief part number indicates the color (N= black). For the other colors, please refer to the page 37 table. The bend relief must be ordered separately.

Bend relief

Part Number	Cable group
GMA.3B.080.DN	1
GMA.3B.090.DN	2-4
GMA.4B.011.DN	3

Bend relief with cap

Part Number	For models	Cable group
GMF.3K.085.EANZ	FUW	2-4
GMP.3K.085.EANZ	PUW	
GMF.3K.265.RG/N/R/V	Colored ring	

Recommended cables

Cable group	Type	Utilisation	Sheath outer diameter
1	2SM-8.6-37.5	Standard	8.6 ± 0.3
2	2SM-9.2-37.5	Standard	9.2 ± 0.3
3	2SM-12-15	Long distances	12.0 ± 0.4
4 ¹⁾	2SM-16-37.5	Studio	16.0 ± 0.5

¹⁾ The outer jacket shall be removed for assembly.