

FIBRE OPTIC CONNECTION SYSTEM WITH FUSION SPLICING TECHNOLOGY



Exclusive Fusion Splicing Technology for LEMO's Fibre Optic HDTV Connectors and Cables

LEMO has partnered with 3SAE Technologies, Inc., offering a technology that removes the need for the epoxy and polish process, allowing for a quicker and simpler termination process for build-to-order, installation, or field repair applications.

Fusion splice equipment has been used in field fibre applications for years and is now available to benefit the broadcast industry. This proven technology greatly reduces the level of expertise required for terminating the LEMO fibre optic hybrid connectors.



S177A-HD Technical specifications

Characteristics	Value
Splicing method	Core-Alignment
Fibre type	SMF, MMF, DSF, NZDSF, EDT, TW, LF, HI1060 & more
Cladding diameter	80 µm - 220 µm
Coating diameter	100 µm - 1000 µm
Average loss	SMF 0.02 dB, MMF 0.01 dB, DSF 0.04 dB
Splice time	9 seconds
Heat time	37-second (40 mm), 51-second (60 mm)
Applicable sleeves	20-60 mm
Cleave length	150-200: 5 mm, 250 µm: 5-15 mm, 400/900 µm: 10-16 mm
Magnification	Up to 608X
Dimensions	130W x 260D x 137H
Power AC input	85-264VAC (50/60Hz)
DC input	11 to 17VDC, battery: Li-ion
Battery	Internal battery – 70 splice cycles
Splice memory	2000 splices
Operating environment	0-4000 m, -10 to + 50°C and 90% at 38°C



Spliced fibre connections, protected by LEMO's 3K.93C connector shells, have negligible insertion loss, and are not affected by temperature extremes. Fusion splices combine the best of pre-terminated contacts and continuous fibre connectors.

Features and Applications:

- On-site fusion splicing eliminates the difficulty of polishing. The pre-polished fibre contacts are tested and inspected to ensure 100% compliance. Now every fibre termination has LEMO factory quality.
- Repair damaged LEMO fibre optic cables on site, eliminating costly down time and shipping charges.
- Use this system to splice other standard 125µm fibres with 250µm and 900µm coatings.
- Use splicing technology with cables, patch panels and bulkhead mounted connectors.
- Pull cable through conduit to required lengths and terminate on-site rather than pre-ordering complete cable assemblies with estimated lengths.
This eliminates waste and the potential for damaged connectors.

LEMO Connector Specifications

Optical

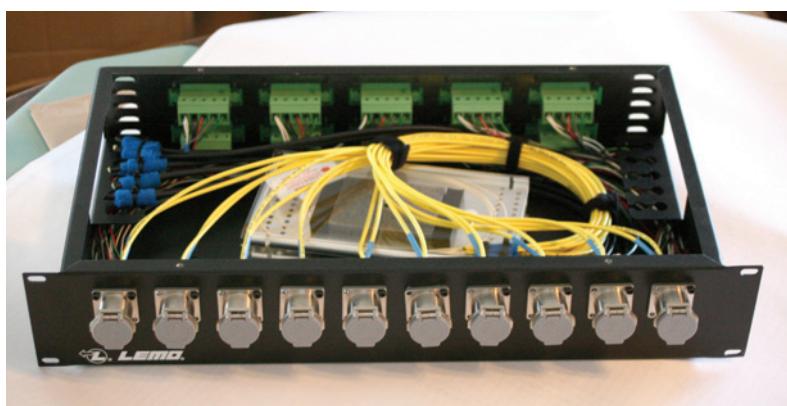
Characteristics	Value
Insertion loss, at 1300 nm	< 0.5 dBm
Return loss, at 1300 nm	≥ 45 dBm
Fibre core/cladding diameter	9/125 µm

Electrical

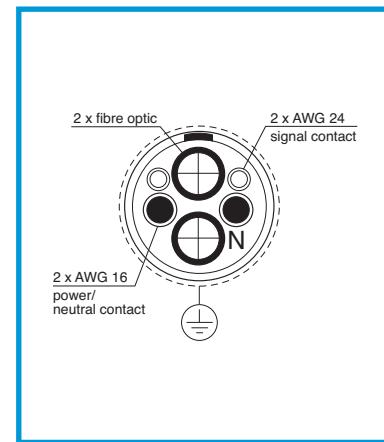
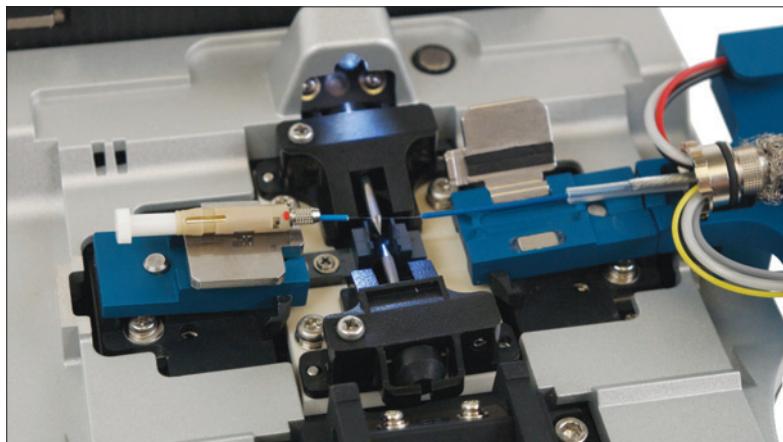
Characteristics	Value
Max. working voltage: high voltage pins	> 600 Vrms
Max. working voltage: low voltage pins	> 60 Vrms
Max. current, continuous: high voltage pins	10 Amp
Max. current, continuous: low voltage pins	3 Amp
Shell to shell resistance	< 2 mOhm

Environmental / Mechanical

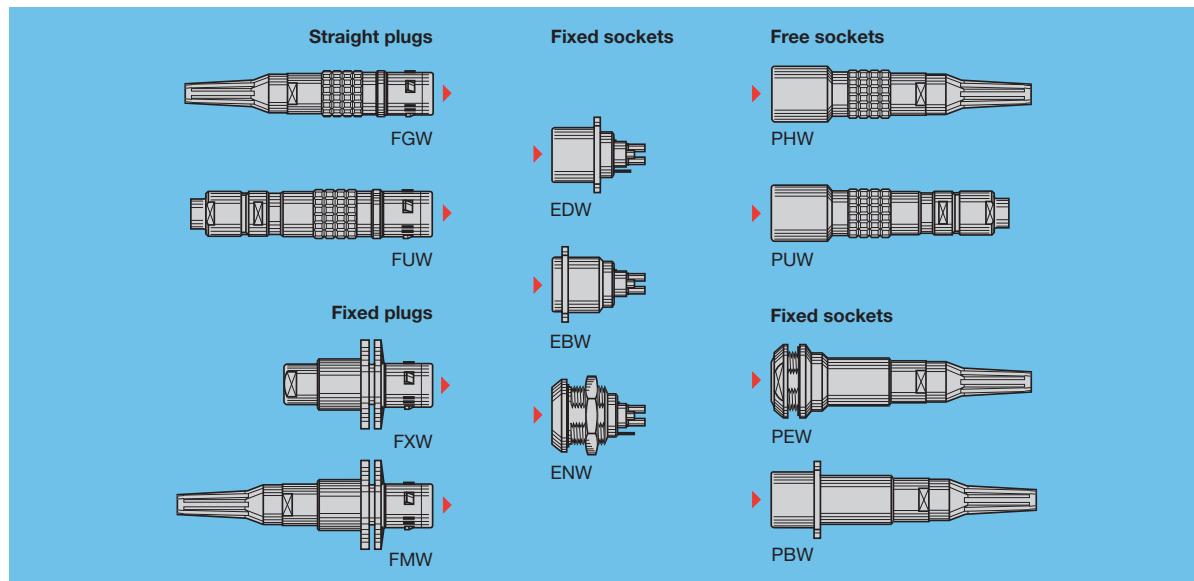
Characteristics	Value
Durability stainless steel shell	> 10'000 cycles
Temperature	-40°C to +80°C
Humidity 40°C for 96 hours	90-95%
Water protection	IP 68: 1.8 m, for 48 hours
Drop onto concrete floor	2 m
Shock 10-5m mSec	100 g
Shock 6-9 mSec	20 g
Cable retention	1000 N



3SAE S177A-HD



SMPTE Shell Choices



LEMO part number

LEMO part number	Description
FUW.3K.93C.TLMC96	Straight plug
PUW.3K.93C.TLCC96	Straight socket
PBW.3K.93C.TLCC96Z	Panel mount socket
FMW.3K.93C.TLMC96Z	Panel mount plug
PEW.3K.93C.TLCC96Z	Panel mount socket



Extended shell & midpiece for fusion splice process

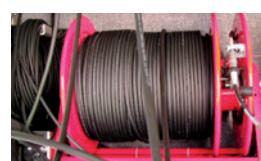
Part number

Kit description	For plug connector (FUW or FMW types)	For socket connector (PUW, PBW or PEW types)
Fusion splice for 3K.93C (first mount)	FUW.3K.93C.ZZZFS	PUW.3K.93C.ZZZFS
Repair kit for standard 3K.93C EMC	FUW.3K.93C.ZLMC9FS	PUW.3K.93C.ZLCC9FS
Repair kit for previously fusion spliced 3K.93C	FUW.3K.93C.ZLMC9FR	PUW.3K.93C.ZLCC9FR

Bend relief part number

Bend relief with cap	
For FUW plug	For PUW free socket
GMF.3K.085.EANF	GMP.3K.085.EANF

Spares parts	For plug connector (FUW or FMW types)	For socket connector (PUW, PBW or PEW types)
F2 to F2 patchcord	FFS.F2.BA2.BD20952	FFS.F2.BA2.BD20952
Splice protector	GMA.14.C22.RTR	GMA.14.C22.RTR
Alignment device	PSS.F2.290.NZZ	Not applicable
1.3 mm power contact	FGW.3K.565.ZZC	EGW.3K.666.ZZM
0.9 mm signal contact	EGG.3B.660.ZZM	FGG.3B.560.ZZC
Extended mechanical parts	FUW.3K.139.AZZ	FUW.3K.139.AZZ



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