

## LEMO HEADQUARTERS

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**For more information on the Fusion Splicer,  
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**For more information about LEMO Connectors,  
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www.lemo.com

**Demos, Certification, Installation Services and  
On-Site Training are also available!**

## FIBER OPTIC CONNECTION SYSTEM WITH FUSION SPLICING TECHNOLOGY



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

LEMO has partnered with 3SAE Technologies, Inc., offering an exclusive breakthrough technology allowing for both factory and on-site termination by replacing the fiber optic connector polish process with a spliced fiber contact connector. This process removes the need for the fiber 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 fiber applications for years and is now available to benefit the broadcast industry. This proven technology greatly reduces the time and the level of expertise required for terminating the LEMO fiber optic hybrid

connectors. This termination process makes it much easier to attach or repair SMPTE connectors in the field due to the simplicity, portability, and reliability of fusion splicing.



3SAE S177A-HD



Spliced fiber 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 fiber connectors.

### Features and Applications:

- On-site fusion splicing eliminates the difficulty of polishing. The pre-polished fiber contacts are tested and inspected to ensure 100% compliance. Now every fiber termination has LEMO factory quality.
- Repair damaged LEMO fiber optic cables on site, eliminating costly down time and shipping charges.
- Use this system to splice other standard 125um fibers with 250um and 900um 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.



### S177A-HD Technical Specifications

Characteristic	Value
Splicing Method	Core-Alignment
Fiber Type	SMF, MMF, DSF, NZDSF, EDT, TW, LF, HI1060 & more
Cladding Diameter	80um – 220um
Coating Diameter	100um – 1000um
Average Loss	SMF: 0.02dB, MMF 0.01dB, DSF 0.04dB
Splice Time	9 seconds
Heat Time	37-second (40mm), 51-second (60mm)
Applicable Sleeves	20-60mm
Cleave Length	150-200: 5mm, 250um: 5-15mm, 400/900um: 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	0-4000m, -10 to +50C and 90% at 38C



### LEMO Connector Specifications

#### Optical

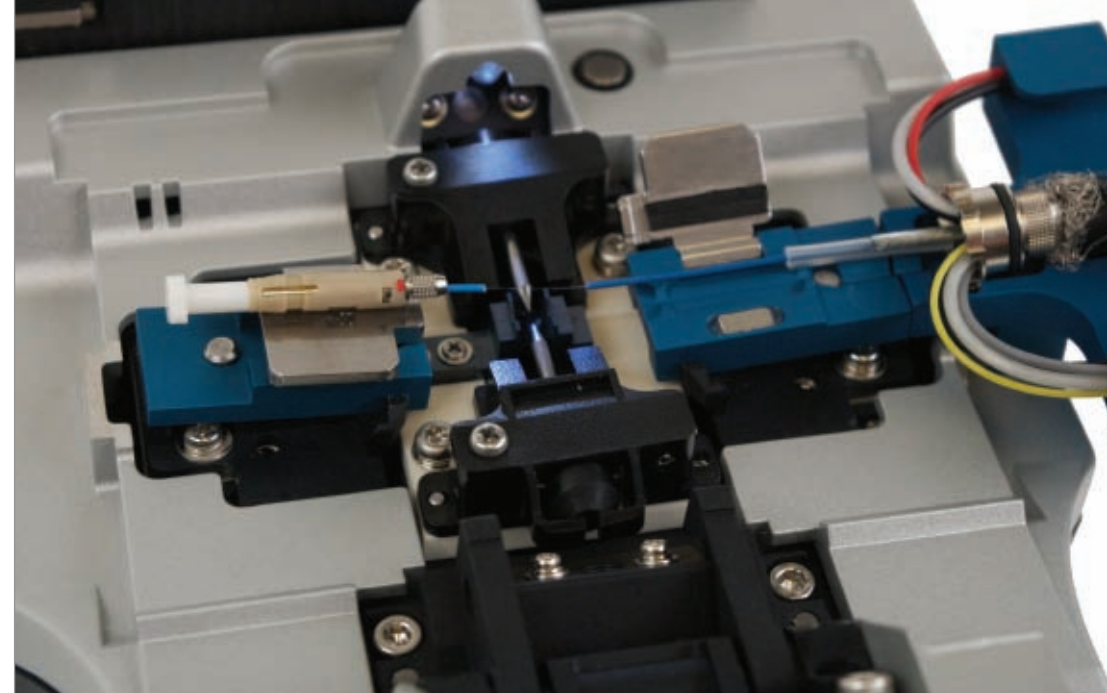
Characteristic	Value
Insertion loss, at 1300 nm	< 0.5 dBm
Return loss, at 1300 nm	≥ 45dBm
Fiber core/cladding Dia.	9/125 μm

#### Electrical

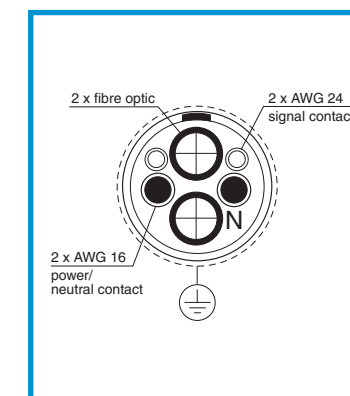
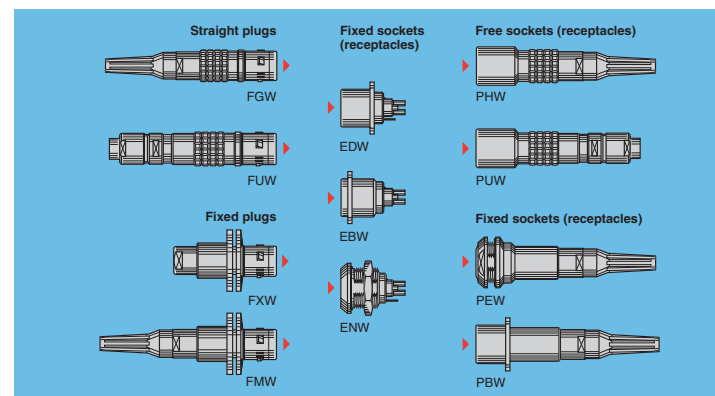
Characteristic	Value
Max Working Voltage – High Voltage Pins	> 600 Vrms
Low Voltage Pins	> 60 Vrms
Max Current, continuous High V. Pins	10 Amp
Low V. Pins	3 Amp
Shell to Shell Resistance	< 2mOhm

#### Environmental / Mechanical

Characteristic	Value
Durability	> 10,000 cycles
Stainless Steel Shell	> 10,000 cycles
Temperature	-40° C to +80° C
Humidity	> 90-95%
40° C for 96 hours	90-95%
Water Protection	IP 68: 1.8m, for 48 Hr.
Drop onto Concrete floor	2 m
Shock 10-5m mSec	100 g
6-9 mSec	20 g
Cable Retention	1000N



### SMPTE Shell Choices



Extended shell & midpiece for Fusion Splice Process

LEMO Part Number	Description
FUW.3K.93C.TLMC96	Straight Plug
PUW.3K.93C.TLCC96	Straight Receptacle
PBW.3K.93C.TLCC96Z	Panel Mount Receptacle
FMW.3K.93C.TLMC96Z	Panel Mount Plug
PEW.3K.93C.TLCC96Z	Panel Mount Receptacle
3K.93C.U0729	Extended shell and midpiece for Fusion Splice Process
F2.U0729	2x pre-terminated F2 contacts and clear sleeves
BRR.3K.200.PZSG	Spring loaded dust cap
BRF.3K.200.U0743A	SS cap - Plug w/ lanyards
BFW.3K.100.U0708A	SS cap - Receptacle w/ lanyards
WST.EL.93C.Plug	Repair Kit (Elec. parts for 3K.93C Plugs)
WST.EL.93C.RCPT	Repair Kit (Elec. parts for 3K.93C Receptacles)

