M90 Series 6000 Fusion Splicer

A LANscape® Solutions Product

Corning
Cable Systems

Applications

- For the lowest splice loss commercially available
- Enterprise networks, data centers, telco and CATV systems
- System maintenance and restoration
- Custom attenuators: programmable splice loss (up to 10 dB)
- Best for splicing old, dissimilar or specialty fibers

Description

The Corning Cable Systems Model M90 Fusion Splicer remains the ideal machine for long-haul telephone and CATV single-mode fiber splicing where accuracy is imperative. The LID-SYSTEM® Unit (Local Injection and Detection System) monitors light injected into the core of the fibers and provides the lowest splice loss possible with the most accurate loss readings in the industry. The recent addition of patented maintenance-free electrodes provides even more value by eliminating the time spent cleaning and replacing electrodes.

The accuracy of the LID-SYSTEM Unit and its power-through splice loss measurement method eliminate the time-consuming task of evaluating splices with an OTDR. The 1300 nm LID-SYSTEM Unit first optimizes core alignment in each of the X, Y, and Z axes. When the fusion process begins, the M90's unique Auto Fusion Time Control monitors the power level through the splice and completes the fusing process when splice loss is a minimum – ensuring the best splice possible. Finally, the LID-SYSTEM Unit measures splice loss by comparing power levels before and after the fusion process. Over 1,000 splice loss results may be stored in memory and then printed directly from the M90 or downloaded to a PC for network management records. A newly added PCMCIA slot allows for extended memory and future upgrades.

The unit also precisely evaluates the cleaved fiber ends – a basic prerequisite for good splices. By clamping on fiber coating, high-strength splices can be made. Messages and splice loss results are shown on the M90's high-contrast, large 5.5-in color LCD. Fixed lenses magnify the X and Y views of the fibers 100 times and project the images simultaneously on the screen or to an external monitor.

The M90's new Series 6000 software stores 50 programs with user-defined splicing parameters for different types of fibers. It also has 13 fixed programs for standard and specialty single-mode fibers and multimode fiber, and an automatic fiber type detection feature that will inform you if you are attempting to use the wrong program for your fiber type. Splice losses up to 10.0 dB can be programmed for an in-line attenuator with the characteristic non-reflectance of a fusion splice. With the new software upgrade tool, a customer's M90 can be upgraded with the latest software via a printer cable and PC connected to an e-mail system.

M90 Series 6000 Fusion Splicer | Photo SEH110

In the fully automatic mode, the lighter and smaller M90 Series 6000 provides a typical average splice loss better than 0.02 dB for both single-mode fibers and multimode fibers.

Features / Benefits

- Accurate loss estimation
- Proven excellence – 12 years of field reliability
- LID-SYSTEM Unit and fast Profile Alignment System (PAS) in one
- AutoFusion Time Control ensures lowest splice loss possible under a variety of splicing conditions and environments
- Automatic cleaning, X, Y and Z fiber positioning and fusing with one button operation
- Maintenance-free Precise and Durable (P&D) electrodes

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Product Specifications

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Specifications

Parameter	Specification
Principle Operation	Direct Core Alignment LID-SYSTEM® Unit, 3-axis alignment
Fiber Coatings	250 µm to 900 µm
Fiber Types	Single-mode, specialty SM, multimode (50 µm and 62.5 µm)
Typical Splice Loss	
Lab	< 0.02 dB for identical single-mode fiber
Field	< 0.05 dB for single-mode fiber
Estimator Accuracy	± 0.05 dB for 100% of the single-mode splices
Monitor	Color LCD, 100x 5.5-in diagonal; external jack for PAL compatible monitor
Splice Protection	Heat-Shrink or Crimp & Go® Splice Protection Crimping Device
Power	
AC	95-260 V AC, automatic voltage range selection; 50 to 60 Hz; 100 W maximum
DC	12 V DC rechargeable batteries provide splices fully charged (two batteries equals 80 splices with heater), recharge time, approximately 8 hours; external 12 V DC supply
Operating Temperature	-5 to +45°C
Dimensions (H x W x D)	18 x 26 x 24 cm (7.1 x 10.2 x 9.6 in)
Weight	8.5 kg (18.7 lb)

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Ordering Information

Part Number	Description
M90-0SM-T-H	M90 Fusion Splicer with FBC-005 high-precision cleaver, heat-shrink oven and transit case
M90-XSM-T-H	M90 Fusion Splicer with heat-shrink oven and transit case

All M90 splicers are shipped with AC power cord, instruction manual, maintenance tool kit, splice tray holder and worklight.

Accessories

Part Number	Description
M67-003	Fusion Splicing Tool Kit
M90-EXT	Heavy-Duty Transit Case with wheels (for units with serial number > 6000)
M90-002	Sealed Battery Pack (Replacement for units with serial number < 6000)
A0398057	Camcorder Battery (Replacement for serial number ≥ 6000)
OFT-000	Optical Fiber Access Tool for midspan access

Splice Protection

Part Number	Description
FSA-004-03	Heat-Shrink Oven for M90 (Serial number ≥ 6000)
FSA-010-03	Crimp Device for M90 (Serial number ≥ 6000)
FSA-012	Crimp & Go® Splice Protection Parts (package of 150)
2806031-01	Heat-Shrink Splice Protection Parts (package of 50; 60 mm long)
X75-010	Crimp & Go Splice Protector Crimping Device with mounting bracket
X7-TRANSFER	Splice Pak™ Protector Crimp Adapter with transfer arms
A0276859	Splice Pak Protector, yellow, 250/250 µm (package of 25)
A0295149	Splice Pak Protector, blue, 250/900 µm (package of 25)
A0295150	Splice Pak Protector, green, 900/900 µm (package of 25)

Spare Parts

Part Number	Description
M67-023	Replacement Worklight Bulb
M90-006-01	Replacement Fusion Splicer Worklight (Serial number > 3000)
OFT-001	Replacement Blades for OFT-000 (package of 4)
FSA-005	Consumables for M90 Tool Kit
FSA-014	Spare Electrodes (one set) (for serial number < 6000)
X75-026	Spare Electrodes (one set) (for serial number > 6000)
FSA-021	Precise and Durable (PD) Electrodes for M90

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