MFIS Multi-Fibre Identification System

Features

- Easy to use
- Powered by common batteries
- One-hand operation
- Hand-held and lightweight
- Three-year calibration interval

Applications

- Multi-fibre network continuity assurance
- Various fan-out connectors for easy application
- Optimised for use on 250 µm, 900 µm and ribbon fibre
- Fibre identification on both Power Meter and MFI
- Multi-fibre network for FTTx deployment

Multi-Fibre network construction is time consuming, complicated, and often built by more than one contractor with mixed sets of documentation. However carefully the build-out is done, mistakes such as mislabeling can happen. How can the network operator have full confidence in their network continuity? AFL's Multi-Fibre Identification System (or MFIS) can provide 100% multi-fibre network continuity assurance and senior management peace-of-mind. MFIS test system is a simple user-friendly way to verify network construction quickly, correctly, and efficiently.

MFT — Multi-Fibre Tracer

The MFT is a single power (MTP), twelve-fibre source. It is designed around 12 discrete laser sources (1550 nm single-mode) with an MTP fan-out connector. It is packaged in a light and sturdy case. One single button operation is designed to quickly sending signals down the network for MFI (Multi-Fibre Identifier) and MFP (Multi-Fibre Power Meter) to provide automatic fibre identification.

MFI — Multi-Fibre Identifier

MFI is designed to detect the presence of digitally coded laser light in optical fibre ribbon as used in FTTx deployments. The unit is activated by inserting the ribbon under test into the clamp and pulling the trigger, located on the underside of the MFI. The LCD displays the fibre identification number.

MFI detects the digitally coded data bursts transmitted by the MFT when the MFI is clamped on the ribbon fibre under test.

MFP — Multi-Fibre Power Meter

MFP is designed to detect the presence of digitally coded laser light emitted from MFT while in Fibre ID mode. It is also designed to use as a regular power meter.

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MFIS Multi-Fibre Identification System

MFT Multi-Fibre Tracer Specifications [a]

OPTICAL	
Wavelength	1550 ±20 nm
Spectral Width	5 nm (maximum)
Output Power	+1.75 dBm ±1 dB peak into 9/125 µm fibre @ +25 °C
GENERAL	
Power Supply	2 X 1.5 V AA alkaline batteries
Battery Life (Alkaline)	@ +25 °C: 40 hours (minimum); 50 hours (typical)
Connectors	SM: MTP/MPO-APC (unpinned) 12-fibre connector.
Size (without boot) (W x L x H)	96 x 145 x 35 mm (3.8 x 5.7 x 1.4 in)
Weight	307 g (0.676 lb) without boot; 458 g (1.01 1b) with boot
Operational Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)

MFI Multi-Fibre Identifier Specifications [a, b]

FIBRE TYPE	PARAMETER	WAVELENGTH, SIGNAL	DETECTABLE SIGNAL
250 µm ribbon fibre, SMF28e+	Minimum data detect level (peak power, typical)	1550 nm, Data – Fibre ID	-35 dBm (typical)
	Insertion loss (typical/maximum)	1550 nm	2.5 dB/3.0 dB

OPTICAL	
Detector Type	InGaAs
Calibrated Fibre Size and Wavelength	250 µm @1550 nm (SMF-28/28E) ribbon fibre
Working Fibre Size	250 µm ribbon fibre
Data Detection Range	+2 to -35 dBm
GENERAL	
Display Type	Multi 7-segment LCD, 3 LEDs
Power Supply	2 X 1.5 V AAA, alkaline batteries
Battery Life (backlight off)	>10,000 operations [c]
Operation Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)
Dimensions (H x W x D)	22 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)
Weight	168 g (6 oz)

Notes:

a. All specifications valid at 25 °C unless otherwise specified.

b. All specs are typical unless otherwise noted. Actual results can vary by several dB depending on fibre type, coating material, jacket color, jacket hardness, active fibre position, and other factors.

c. Operation is defined as turning unit on by taking 1 reading in a 10 second period.

MFIS Multi-Fibre Identification System

MFT Multi-Fibre Tracer Specifications [a]

OPTICAL	
Detector Type	InGaAs
Detector Size	1 mm
OPM MODE	
Calibrated Wavelength	850, 1300, 1310, 1490, 1550, 1625 nm
Measurement Range	+10 to -75 dBm
Accuracy [b]	±0.25 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW
FIBRE ID MODE [E]	
Wavelength	1550 nm
Measurement Range [c]	+10 to -35 dBm
Accuracy [d]	±0.5 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW
GENEREAL	
Power	2 x AA batteries, accepts standard mini-USB power adapter
Adapter Caps	Order with one: 1.25 mm Universal, 2.5 mm Universal, FC, SC, ST, LC. Other connector adapters available
Battery Life	300 hours
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.26 kg (0.58 lb)

Notes:
a. All specifications valid at 25 °C unless otherwise specified.
b. Accuracy measured at 25 °C and -10 dBm per N.I.S.T. standards.
c. Measured using MFT (Multi-Fibre Tracer) as the light source.
d. Accuracy measured at 25 °C with MFT (Multi-tiber Tracer).
e. Subject to change.

Ordering Information

PART NUMBER	DESCRIPTION
MFI1-00-0900MR	Multi-Fibre Identifier, no case
MFP1-12-0900MR	Multi-Fibre Power Meter, no case
MFTI-12-BAS	Multi-Fibre Tracer & Identifier with soft case
MFTP1-12-BAS	Multi-Fibre Tracer & Power Meter with soft case
MFTIP1-12-BAS	Multi-Fibre Tracer, Identifier, & power meter with soft case
ACCESSORIES	
8700-00-0198MR	Cable, MPO/APC(M)-SC/APC, 12-fibre, SM, fan-out, 3 meters
8700-00-0200MR	Cable, MPO/APC (M) - SC/UPC, 12-fibre, SM, fan-out, 3 meters
8700-00-0201MR	Cable, MPO/APC (M) - LC/UPC, 12-fibre, SM, fan-out, 3 meters
8500-05-0030MZ	One-Click Cleaner MPO (500+ cleans)
8500-05-0005MZ	One-Click Cleaner Mini-100 SC, ST, FC (100+ cleans)