AXS-110 All-Fiber OTDR

FTTX PON AND LAN/WAN INSTALLATION AND TROUBLESHOOTING UNIT

FROST & SULLIVAN
2011 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET SHARE LEADERSHIP AWARD

A powerful handheld OTDR unit designed for splitter characterization in FTTx networks; can be configured as a quad unit with both singlemode and multimode wavelengths.

SPEC SHEET

KEY FEATURES

- Event dead zone: 0.8 m
- Wavelengths: 850/1300/1310/1490/1550/1625 nm
- Dynamic range: up to 37 dB
- Battery autonomy: 8 hours

APPLICATIONS

- FTTx/MDU PON network testing
- LAN/WAN testing
- Private network testing

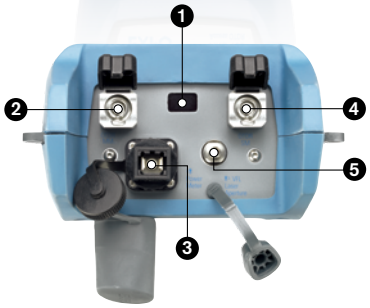
COMPLEMENTARY PRODUCTS AND OPTIONS

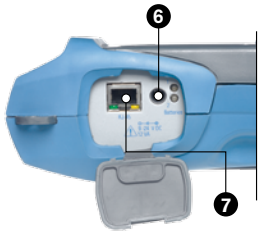
Fiber Inspector Probe
FIP-400

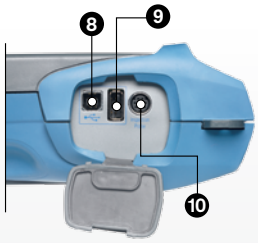
Data Post-Processing Software
FastReporter

Soft Pulse Suppressor Bag
SPSB

EXFO | Assessing Next-Gen Networks







1. **Infrared Printer Interface**
2. **OTDR Port** | Multimode testing.
3. **Power Meter Detector Port** | Compatible with almost every connector on the market. Manually and efficiently perform power and loss testing. Accurately measure power up to 26 dBm.
4. **OTDR Port** | Singlemode testing.
5. **VFL Port** | Built-in 650 nm visual fault location on a universal 2.5 nm connector.
6. **AC Adapter**
7. **RJ-45** | TCP/IP testing.
8. **USB B** | Data transfer using ActiveSync or remote control.
9. **USB A** | Data transfer using memory stick.
10. **Fiber Inspection Probe Port**

TECHNICAL SPECIFICATIONS [a]

Wavelengths (nm)	850/1300/1310/1490/1550/1625
Dynamic range [b] (dB)	24/25/37/33/35/37
Pulse width (ns)	Multimode: 5, 10, 30, 100, 275, 1000 Singlemode: 5, 10, 30, 100, 275, 1000, 2500, 10 000
Event dead zone [c] (m)	0.8
Attenuation dead zone [c] (m)	3.5/4.5/4/4.5/4.5/4.5
Linearity (dB/dB)	±0.03
Loss threshold (dB)	0.01
Loss resolution (dB)	0.01
Sampling resolution (m)	Multimode: 0.08 to 2.5; singlemode: 0.08 to 5.0
Sampling points	Up to 64 000
Distance uncertainty [d] (m)	±(0.75 + 0.0025 % x distance + sampling resolution)
Distance range (km)	Multimode: 0.1 to 40; singlemode: 0.65 to 260
Typical real-time refresh (Hz)	4
Memory capacity	500 traces
Measurement time	User-defined
Stable source output power [e] (dBm)	Multimode: –1.5; singlemode: –7.5
Visual fault locator (optional)	Laser, 650 nm ± 10 nm CW typical P_{out} of 1.4 mW open beam

OPTIONAL POWER METER [f]

Calibrated wavelengths (nm)	850, 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625
Power range (dBm)	26 to –64 (GeX 2 mm)
Uncertainty	±5 % ± 0.4 nW (up to 5 dBm)
Display resolution (dB)	0.01 (–54 dBm to P_{max}) 0.1 (–54 dBm to –64 dBm) 1 (–64 dBm to min)
Automatic offset nulling range [g]	Maximum power to –38 dBm
Tone detection (Hz)	270/1000/2000

GENERAL SPECIFICATIONS

Size (H x W x D)		250 mm x 125 mm x 75 mm (9 $^{7}/_{8}$ in x 4 $^{15}/_{16}$ in x 3 in)
Weight		1 kg (2.2 lb)
Temperature	operating	–18 °C to 50 °C (14 °F to 122 °F)
	storage	–40 °C to 70 °C (–40 °F to 158 °F)
Relative humidity		0 % to 95 % non-condensing
Power		Li-ion batteries; 8 hours of continuous operation as per Bellcore TR-NWT-001138
Warranty (years)		1

LASER SAFETY

21 CFR 1040.10 AND IEC 60825-1:2007
CLASS 1M WITHOUT VFL OPTION
CLASS 3R WITH VFL OPTION

Notes

a. All specifications valid at 23 °C ± 2 °C (73.4 °F ± 3.6 °F) with an FC/PC connector, unless otherwise specified.

b. Typical dynamic range with longest pulse and three-minute averaging at SNR = 1. Multimode dynamic range is specified for 62.5 µm fiber; a 3 dB reduction is seen when testing 50 µm fiber. AXS-11-12CD-23B is 24/25/32/30.

c. Typical dead zone for multimode reflectance below –35 dB and singlemode reflectance below –45 dB, using shortest pulse.

d. Does not include uncertainty due to fiber index.

e. Typical output power is given at 1300 nm for multimode output and 1550 nm for singlemode output.

f. At 23 °C ± 1 °C, 1550 nm and with FC connector. With OTDR in idle mode, battery operated.

g. For ±0.05 dB, from 18 °C to 28 °C.

ORDERING INFORMATION

AXS-110-XX-XX-XX-XX-XX-XX-XX

Model
AXS-110-023B = Dual-wavelength SM OTDR 1310/1550 nm (9/125 µm)
AXS-110-12CD = Dual-wavelength MM OTDR 850/1300 nm (50/125 µm, 62.5/125 µm)
AXS-110-12CD-23B = Four-wavelength MM/SM all-fiber OTDR 850/1300 nm (50/125 µm, 62.5/125 µm) and 1310/1550 nm (9/125 µm)
AXS-110-023B-04B = Tri-wavelength SM and SM live OTDR 1310/1550 nm and 1625 nm live port (9/125 µm)
AXS-110-000-04B = Single wavelength SM live OTDR 1625 live port (9/125 µm)
AXS-110-236B = Tri-wavelength SM OTDR 1310/1490/1550 nm (9/125 µm)

Connector [a]
EA-EUI-28 = APC/DIN 47256 [b]
EA-EUI-89 = APC/FC, narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC, narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000

Power meter
00 = Without power meter
PM2X = With GeX power meter

Software summary kit
SK1 = SmartKit including macrobending detection, pass/fail and fault finder
SK2 = IP testing
SK3 = Fiber inspection probe software [c]

Probe option
00 = Without probe
FP4S = Inspection probe (400x)
FP4D = Inspection probe (200x/400x)

VFL
00 = Without visual fault locator
VFL = With visual fault locator

Connector adapter
FOA-12 = Biconic
FOA-14 = D4, D4/PC
FOA-16 = SMA/906
FOA-22 = FC, FC (PC/SPC/UPC/APC), NEC-D3
FOA-28 = DIN 47256 (LSA): DIN 47256 (PC/APC)
FOA-32 = ST, ST (PC/SPC/UPC)
FOA-54 = SC (PC/SPC/UPC/APC)
FOA-78 = Radiall EC
FOA-96B = E-2000/APC
FOA-98 = LC
FOA-99 = MU

Example: AXS-110-12CD-23B-EA-EUI-89-EI-EUI-95-PM2X-FOA-22-VFL-FP4S-SK1-SK2-SK3

Notes

a. Refer to the example. First select the singlemode connector, and then the multimode connector or the live port connector.

b. Singlemode only.

c. Mandatory with FP4S or FP4D.

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