



M100 Handheld OTDR

The new Noyes M100 OTDR is the world's first handheld, singlemode and multimode, four-wavelength Optical Time Domain Reflectometer with integrated VFL (visual fault locator). Using "PDA" technology the M100 reaches a new level of value and portability. By combining a simple user interface with the features of a mini-OTDR in a "micro" package, the M100 is ideal for premises network Tier 2 fiber link certification and fault-location measurements including: connection loss and reflectance, splice loss, and fiber loss slope (attenuation rate). The M100 is also suited for broadband service providers looking for a highly portable OTDR to document and trouble-shoot fiber links in their access and FTTx (fiber to the home/curb/office) networks.

Both the multimode and singlemode OTDR ports are equipped with tool-free, switchable adapter mounts. ST, SC, and FC adapters are provided. The VFL port is equipped with a universal adapter that accepts any standard 2.5 mm connector.

features

- Hand-held size and < 2.7 lb (1.2 kg)
- 850/1300/1310/1550 nm
- Integrated Visual Fault Locator (650 nm)
- Tool-free, switchable adapters (ST/SC/FC)
- Bellcore (GR-196) file format
- Compact Flash™ memory card
- PC software for trace analysis and printing
- TFT color display

applications

- Premises network "Tier 2" certification
- Broadband/access network testing
- Baseline tracing
- Fault-location
- Connection loss and reflectance
- Splice verification

ordering information

Model Number:

Model	Description
M100-K-QUAD	850/1300 nm multimode and 1310/1550 nm singlemode OTDR
M100-K-MM	850/1300 nm multimode OTDR
M100-K-SM	1310/1550 nm singlemode OTDR

Standard Equipment: M100 OTDR, (2) ST, (2) SC, and (1) FC OTDR port adapters, 16 MB CompactFlash™ memory card, 110/220 VAC AC power adapter, soft carry case.



M100 Multimode/Singlemode OTDR

specifications

OTDR	Multimode	Singlemode
Emitter type	Laser	Laser
Safety class	Class I FDA 21 CFR 1040.10 & 1040.11	Class I FDA 21 CFR 1040.10 & 1040.11
Center wavelengths	850/1300 nm	1310/1550 nm
Wavelength tolerance	± 20 / ± 30 nm	± 30 / ± 30 nm
Dynamic range (SNR = 1)	21/23 dB @ 1 µs, 3 min. test	26/ 26 dB @ 10 µs, 3 min. test
Event dead zone ¹	10 m	10 m
Attenuation dead zone ²	20 m	20 m
Pulse width	30 ns, 100 ns, 300 ns, 1 µs	30 ns, 100 ns, 300 ns, 1 µs, 3 µs, 10 µs
Distance ranges	300 m to 20 km at 850 nm 300 m to 40 km at 1300 nm	300 m to 160 km
Group Index of Refraction adjustment range	1.4000 to 1.6000	
Trace file format	Bellcore GR-196, Version 1.1	
Trace file storage medium	CompactFlash™ Type 1 memory card	
Trace file storage capacity	> 200 per 16 MB CF memory card	
Distance accuracy	$\Delta L = \pm (dl + L \cdot \Delta n / n + 5 \cdot 10^{-5}L)$, where: dl = 3 m at the 20 km range, 6 m at 40 and 80 km, and 12 m at 160 km L = length of fiber under test in meters n = fiber group index of refraction (GIR) Δ n = GIR setting error	

Visual Fault Locator

Emitter type	Laser
Safety class:	Class II FDA 21 CFR 1040.10 & 1040.11 IEC 825-1: 1993, EN60825-1: 1994
Wavelength	650 nm
Output power (nominal)	1 mW into 9/125 µm singlemode or multimode optical fiber

General

Size (H x W x D)	190 x 100 x 70 mm (7.5 x 4 x 2.75 inches)
Weight	1.2 kg (2.7 lb)
Operating temperature	0 °C to + 40 °C
Storage temperature	-10 °C to + 60 °C
Relative humidity	0 to 95%, non-condensing
Power	Rechargeable NiMH or 110/220 VAC adapter
Battery life	2 hours

¹ 1.5 dB down from peak, -40 dB reflective event, 30 ns pulse width
² To within 0.5 dB of backscatter, -40 dB reflective event, 30 ns pulse width
 All specifications subject to change.

For more information about the Noyes M100 OTDR or our other fiber optic test products, please contact the Sales or Technical Support Group at:

voice: 800-321-5298 (USA only) or 603-528-7780 Noyes Fiber Systems
 e-mail: noyes.sales@alcoa.com 16 Eastgate Park Road
 web: www.AFLtele.com or www.noyes-fiber.com Belmont, NH 03220 USA