

NOYES® M200 Hand-held OTDR



M200 OTDR with new User Interface



M200 OTDR iwith DFS1 Digital FiberScope

The NOYES M200 OTDR from AFL combines ease of use (Touch and Test™) and functionality in a field-rugged, hand-held package. With single-mode dynamic ranges of up to 26 dB and multimode dynamic ranges of 22 dB, the M200 is ideal for testing and troubleshooting enterprise, LAN/WAN, metro, and service provider networks. Testing at 1310 and 1550 nm is normally sufficient to certify single-mode point-to-point fibers and allows the detection of macrobends. The M200 supports Full Auto, Expert (manual) and Real-Time OTDR test modes, precision event analysis, and multi-wavelength testing.

The M200 new User Interface, version 2.0, enables the user to set Pass/Fail thresholds compliant with TIA/ISO/user-defined values to alert test operators of failing or marginal events. Version 2.0 features improved file management and results review via Results Manager and a New Job creation editor with detailed job/file naming. General settings improvements include Date/Time/Number format options and an Auto Off feature. OTDR settings improvements include enhanced event measurements with various manual LSA methods available in Expert mode. The addition of a simple toggle function enables fast and logical storage of trace results from both ends of a fiber/cable. These capabilities simplify the user experience, reduce training time and testing errors enabling even novices to get the job done quickly and accurately.

The M200 with new User Interface supports visual inspection per IEC 61300-3-35 using the DFS1 Digital FiberScope allowing users the ability to view and document connector end-face images with their OTDR traces.

Thousands of OTDR test results may be saved as standard .SOR files, which can be stored internally or on the supplied USB drive. Test results are transferable via a USB cable or USB drive to a computer for viewing, printing, and analyzing with the supplied Windows® compatible software, Test Results Manager (TRM™). Acceptance reports generated using TRM can include OTDR traces with summary and event information with or without pass/fail indication, Event maps, and end-face images. With a full set of testing and troubleshooting tools including OTDR, VFL and end-face inspection capability, the M200 is a complete solution for fiber network owners and installers.

Features

- Hand-held, lightweight - 0.9 kg (2 lb)
- 22 dB (MM), 26 dB (SM) dynamic range
- Inspection capable with DFS1
- Integrated VFL (650 nm)
- >8 hours battery life
- Touch and Test™ user interface
- TRM™ reporting software
- Automatic Pass/Fail analysis (TIA/ISO)
- Internal and USB storage (1000s of tests)
- USB host and function ports

Applications

Test, troubleshoot, Tier 2 certify:

- Full Auto OTDR - document installation and fault locate
- Expert OTDR - document and fault locate using Auto or Auto Once
- Real-Time OTDR - locate faults and verify splices
- Visibly Fault Locate - locate bends and breaks and verify polarity

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Specifications ^a

OTDR	MULTIMODE	SINGLE-MODE
Emitter Type	Laser	Laser
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11; IEC 60825-1:2007-03	Class I FDA 21 CFR 1040.10 and 1040.11; IEC 60825-1:2007-03
Center Wavelengths	850/1300 nm	1310/1550 nm
Wavelength Tolerance	±20/±30 nm	±20/±30 nm
Dynamic Range (SNR = 1)	22 dB	26 dB
Event Dead Zone ^b	1.5 m	1.5 m
Attenuation Dead Zone ^c	9 m	9 m
Pulse Widths ^d	10, 30, 100, 300 ns, 1, 3 μs	10, 30, 100, 300 ns, 1, 3, 10 μs
Range Settings	250 m to 32 km	250 m to 208 km
Sampling Points	Up to 16,000	Up to 16,000
Minimum Data Point Spacing	0.25 m	0.25 m
Group Index of Refraction (GIR)	1.4000 to 1.6000	1.4000 to 1.6000
Distance Uncertainty (m) ^e	±(1 + 0.005 % x distance + data point spacing)	±(1 + 0.005 % x distance + data point spacing)
Linearity ^f	±0.05 dB/dB (typical)	±0.05 dB/dB (typical)
Loss Threshold	0.02 dB	0.02 dB
Loss Resolution	0.01 dB	0.01 dB
Reflectance Resolution	0.01 dB	0.01 dB
Reflectance Accuracy ^g	±2 dB	±2 dB
Trace File Format	Bellcore GR-196 Version 1.1	
Trace File Storage Medium	Internal non-volatile memory, removable CompactFlash Card (not included), and USB Flash Drive	
Trace File Storage Capacity	>100 internal; thousands on CompactFlash or USB Flash Drive	
Trace File Transfer to PC	USB Flash Drive Type 1.1, CompactFlash or Mini USB Cable with ActiveSync	
VISUAL FAULT LOCATOR		
Emitter Type	Laser	
Safety Class	Class II FDA 21 CFR 1040.10 and 1040.11; IEC 825-1:1993, 60825-1:2007-03	
Wavelength	650 nm ±20 nm	
Output Power (nominal)	0.8 mW	
GENERAL		
Size (in boot)	23 x 11 x 7 cm (8.8 x 4.3 x 2.8 in)	
Weight	0.9 kg (2 lb)	
Operating Temperature	-10 °C to +50 °C	
Storage Temperature	-20 °C to +60 °C	
Relative Humidity	0 to 95 % RH (non-condensing)	
Power	Removable Li-Ion or 110/220 VAC power adapter	
Battery Life ^h	8 hours	
Recharge Time ^j	3 hours	

Notes:

- All specifications valid at 23 °C ±2 °C (73.4 °F ±3.6 °F) unless otherwise specified.
- Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -40 dB (multimode) or -45 dB (single-mode) event using 10 ns pulse width.
- Typical distance from event location to point where trace is within 0.5 dB of backscatter.
- 3 μs pulse width not available at 850 nm.
- Does not include GIR uncertainty.
- Typical.
- For a non-saturated event.
- New battery.
- Typical, from fully discharged to fully charged state, unit may be operating.



M200 OTDR in a soft case



M200 OTDR in a hard case

NOYES® M200 Hand-held OTDR

Ordering Information

The M200 OTDR with new User Interface works with the DFS1 Digital FiberScope.

The M200 hand-held OTDR comes with a soft carry case, USB Flash drive, trace analysis software - TRM™, AC adapter, and UCI switchable test port adapters.

The NOYES M200 OTDR is also available in a tough injection molded ABS carry case (available as an option - HC). The rugged transit case has a full length hinge, padlock loops, secure snap latches and an O-ring seal to protect the contents from dust and water. In addition to the OTDR, the custom case has room for cleaning products, launch and receive rings, documentation and more.

M200 Models

WAVELENGTHS (NM)				DYNAMIC RANGE (DB)	INCLUDED OTDR PORT ADAPTERS	POWER, INTERNAL CHARGING	TRACE STORAGE		AFL NO.
850	1300	1310	1550				CF*	USB	
		◆	◆	26/26	SC, FC	Li-ion, AC	◆	◆	M200-20
◆	◆			22/22	SC, ST	Li-ion, AC	◆	◆	M200-22
◆	◆	◆	◆	22/22/26/26	(2) SC, FC, ST	Li-ion, AC	◆	◆	M200-25

* CompactFlash memory card.

When placing an order, select options as follows:

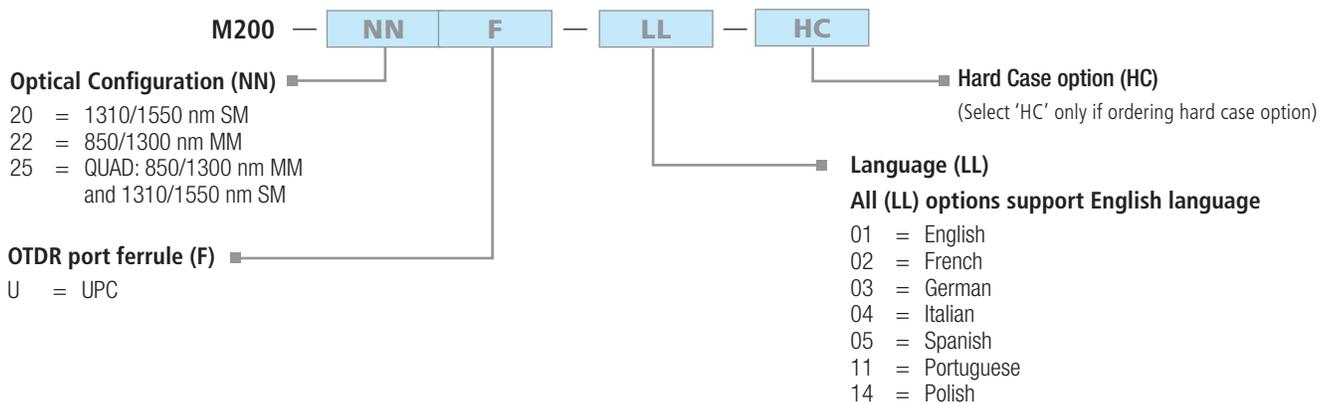
Optical Configuration (NN), OTDR port ferrule (F), and Language (LL).

Select (HC) only if ordering the hard case option.

Example:

M200-25U-01 -> this model number indicates M200 QUAD with UPC OTDR port ferrule and English language option in soft case.

M200-25U-01-HC -> this model number indicates M200 QUAD with UPC OTDR port ferrule and English language option in hard case.





M200 OTDR Hard Case Kit for Mining

NOYES® M200 Hand-held OTDR

M200 OTDR Hard Case Kit for Mining

For ordering information, refer to the table below.

DESCRIPTION	AFL NO.
850/1300 nm multimode and 1310/1550 nm single-mode M200 OTDR in Hard Case	M200-MNG
Wet Cleaning Kit (shown) for SC/FC/ST/LC connectors. Includes: 8500-10-0016MZ, Cletop-SB CCTS-25-0900MZ, Connector Cleaning Tips for 2.5 mm ferrule in adapters or sockets (SC, FC, ST in adapters). Blue (40 sticks per tube). Qty = 1 tube CCTS-12-0900MZ, Connector Cleaning Tips for 1.25 mm ferrule in adapters or sockets (LC, MU in adapters). Green (40 sticks per tube). Qty = 1 tube FCC2-00-0900, optical quality Cleaning Fluid for fiber connector end faces	
One-Click Cleaner SC	
One-Click Cleaner LC/MU	
SC-ST 150 m SM Fiber Ring	
SC-ST 150 m 62.5 μm Fiber Ring	
ST/SC mating adapter	



DFS1-00-04XU

One-Click Mini-100
SC, ST, FC and LC/MU



One-Click Cleaner
SC, ST, FC and LC/MU

One-Click Cleaner Ultra
2.5 SC, ST, FC

OTDR, Inspection, and Cleaning Accessories

DESCRIPTION	AFL NO.
DFS1 Digital FiberScope PC/UPC Inspection Kit	DFS1-00-04XU
DFS1 Digital FiberScope APC Inspection Kit	DFS1-00-04XA
DFS1 USB Digital Fiber Inspection Kit without Adapters	DFS1-00-04XN
M200 Software upgrade from v 1.X to v 2.0.X	M200-001-LL ^a
Fiber Ring, standard, 1 fiber, 50/125 μm multimode, 150 m	FR1-M5-150-x1-x2 ^b
Fiber Ring, standard, 1 fiber, Laser Optimized, 50 μm multimode, 150 m	FR1-L5-150-x1-x2 ^b
Fiber Ring, standard, 1 fiber, 62.5/125 mm multimode, 150 m	FR1-M6-150-x1-x2 ^b
Fiber Ring, standard, 1 fiber, single-mode, 150 m	FR1-SM-150-y1-y2 ^b
Wet Cleaning Kit (shown) for SC/FC/ST/LC connectors	8500-20-0900
Dry Cleaning Kit	8500-20-0901
One-Click Cleaner SC, ST, FC (500+ cleans)	8500-05-0001MZ
One-Click Cleaner LC/MU (500+ cleans)	8500-05-0002MZ
One-Click Mini-100 SC, ST, FC (100+ cleans)	8500-05-0005MZ
One-Click Mini-100 LC/MU (100+ cleans)	8500-05-0006MZ
One-Click Cleaner Ultra 2.5 SC, ST, FC (enlarged cleaning)	8500-05-0007MZ

Note:

- a. See language options (LL) on page 3.
- b. When ordering Fiber Rings, specify connector types (x1, x2, y1, y2).

Authorized Channel Partner



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