



FIBRE OPTIC TOOLS & TEST EQUIPMENT

OPTICAL TIME-DOMAIN REFLECTORMETER

PRODUCT SPECIFICATIONS

An optical time-domain reflectometer (OTDR) is an optoelectronic instrument used to characterize an optical fibre. The LXMOTDR series OTDR is specially designed for tough outdoor jobs. IP65 protection level, lightweight, easy operation, low-reflection LCD and more than 12 hours working period make it perfect in field testing. Meanwhile, optional PCB board with water-proof coating helps FHO5000 series OTDR get better protection performance.



ALL-IN-ONE SOLUTION

LXMOTDR series OTDR is a highly integrated platform that features with four module slots, with a large 7-inch colour screen (with a touchscreen option), a high capacity Lithium-Ion battery, an optional microscope (through universal serial bus (USB) port), and built-in optical test functions, such as PON test module, visual fault locator (VFL), optional power meter, and laser source, making it qualified in the installation, turn-up, and maintenance of FTTx/Access optical networks

MAIN FUNCTIONS

Multi-mode OTDR

Besides standard single-mode (1310/1550nm), LXMOTDR series OTDR supports multi-mode (850/1300nm) test mode for option to analyse the multi-mode fibre network.

VFL (visual fault locator)

The VFL, available as an standard module in LXMOTDR series OTDR, Offers built in 650nm visual faulty location on a FC/UPC connector

PON ONLINE TEST

LXMOTDR series OTDR uses 1625nm wavelength to scan and analyse the access point, and proceed online testing with optician filter and will not disturb the service.

PM (power meter)

LXMOTDR series OTDR comes with optional built-in power metre that lets technicians easily verify the presence of a signal.

LS (laser source)

LXMOTDR series OTDR comes with optional built-in laser source through OTDR1 Port that let technicians easily verify the total loss of the local network with a power meter.

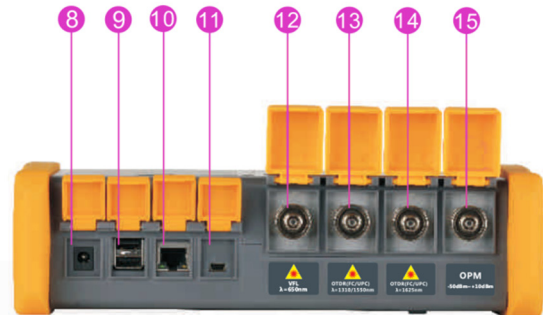
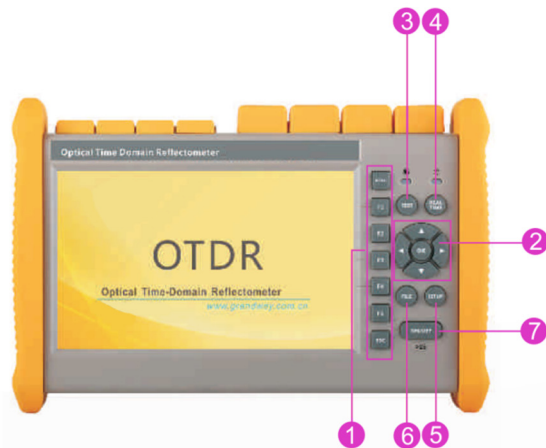
FM (fibre microscope)

The optional fibre inspection probe facilitates the inspection of a component before connection. LXMOTDR series OTDR offers the capability through a USB port connection, which allows quick and easy inspection of connector end faces for contamination and also enables it to capture and storage of the image



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- | | | |
|--------------------------|--------------------|------------------------|
| ① Menu selection Button | ⑦ Power Switch | ⑬ OTDR1 Port |
| ② Navigation Button | ⑧ Charging Port | ⑭ OTDR2 Port(Optional) |
| ③ AVG test Button | ⑨ USB(A Type) Port | ⑮ PM Port(Optional) |
| ④ RT test Button | ⑩ RJ45 Port | ⑯ Battery Compartment |
| ⑤ Test setup Button | ⑪ USB(B Type) Port | ⑰ Supporting Plate |
| ⑥ File management Button | ⑫ VFL Port | ⑱ Crash Pad |
| | | ⑲ Safety belt buckle |

Model

1	LXMOTDR-M 850/1300nm	4	LXMOTDR-T 1310/1550/1625nm
2	LXMOTDR-MD 850/1300/1310/1550nm	5	LXMOTDR-TC 1310/1550/1650nm
3	LXMOTDR-D 1310/1550nm	6	LXMOTDR-TP 1310/1490/1550nm



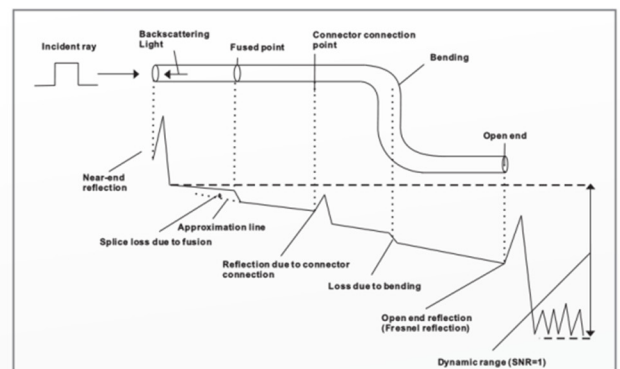
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LXMOTDR series OTDR can display Splice loss, Connector loss, fibre attenuation, Reflection of points, Link optical return loss and distance to fibre events etc. With test information in a smart way, users can get detailed information immediately.

INTELLIGENT SCALING

Simplified display style and structured menus help to give important information at a glance.

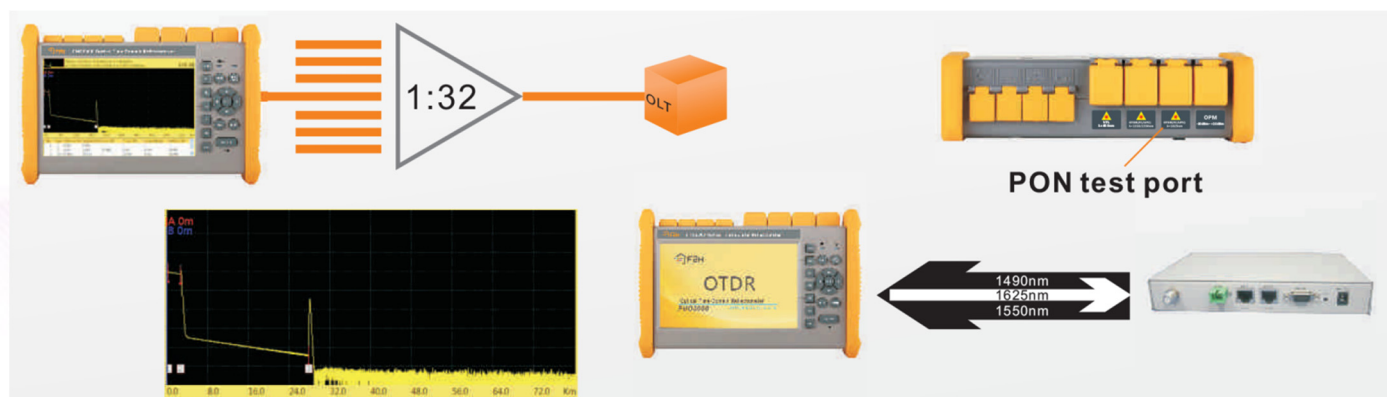


FTTH TEST WITHIN PON NETWORKS

LXMOTDR series OTDR models, like T40F and T43F, are dedicated to the testing of PON network maintenance and troubleshooting without service disruption.

LAST MILE MASTER

LXMOTDR series OTDR could easily test through 1*32 PLC splitter in PON test (Model: LXMOTDR-T43F).





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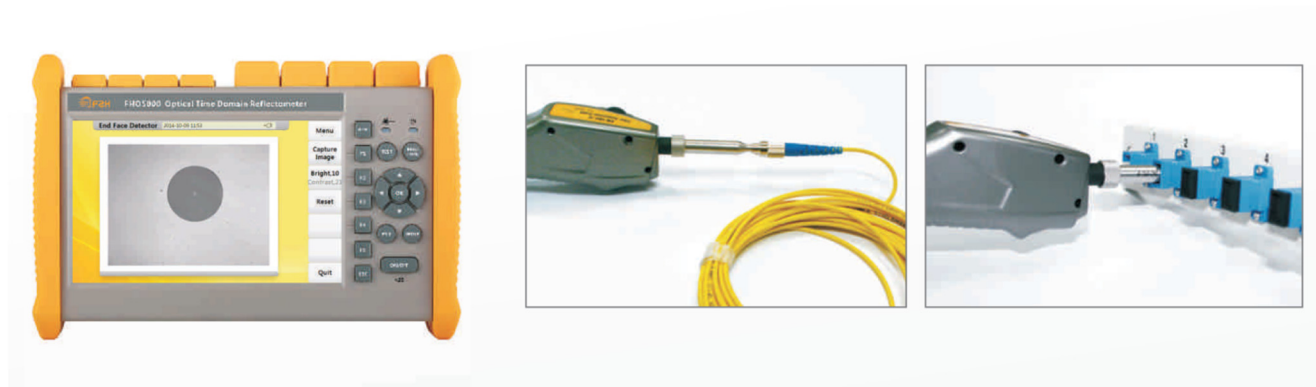
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FIBRE MICROSCOPE

Microscope is optional for LXMOTDR series OTDR. 400X amplification and variety of accessories ensure perfect terminal condition before test.

THE ESSENTIAL FIRST STEP

Taking time to properly inspect connector end faces can prevent slew of problems down the line, saving you time, money and headaches.



RESULT TRANSFER

Check test result on PC or PDA through USB; 4GB large internal memory space could store more than 40,000 groups of result

LINK IN LINE

- Download reference traces and settings from database
- Send measurement result via e-mail
- Ask for remote help

LXMOTDR-PC



LXMOTDR-PDA





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DATA MANAGER

Use Data manager to elaborate and print out result files on upper computer within a few steps.

HIGH COMPATIBILITY

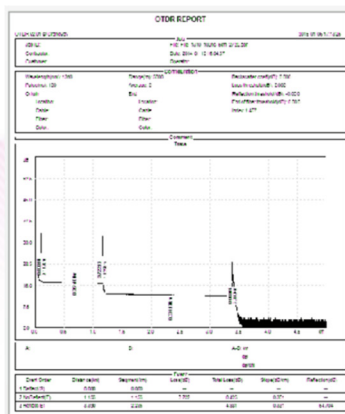
Support:

- Windows Vista (32/64 bit system)
- Windows 7 (32/64 bit system)
- Windows 8 (32/64 bit system)
- Microsoft Office Excel 2007
- Microsoft Office Excel 2010
- Microsoft Office Excel 2013

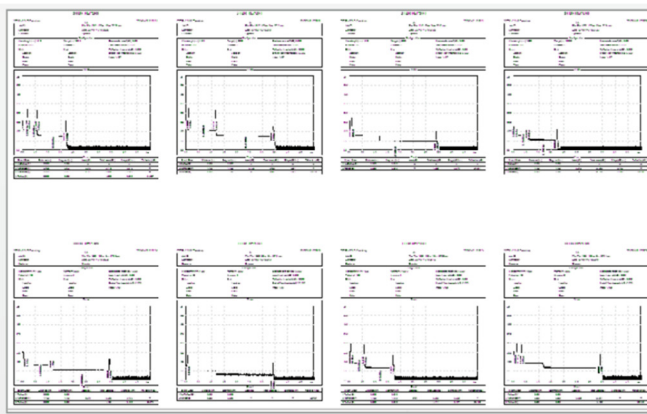


DELICATE REPORT

Simplified display style easy to read, support multi-result printing.



1 in 1



8 in 1



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General Specifications

Dimension	253x168x73.6mm 1.5kg (battery included)
Display	7 inch TFT-LCD with LED backlight (touch screen function is optional)
Interface	1xRJ45, 3xUSB port(USB2.0, Type A USBx2, Type B USBx1)
Power Supply	10v(dc), 100V(ac) to 240V(ac), 50~60hz
Battery	7.4V(dc)/4.4Ah lithium battery (with air traffic certification) Operating Time: 12 hours(1), Telecordia GR-196-CORE Charging time: <4 hours (power off)
Power Saving	Backlight off: Disable/1 to 99minutes Auto shutdown: Disable/1 to 99minutes
Data Storage	Internal memory: 4GB (about 40,000 groups of curves)
Language	User selectable (English, Simplified Chinese, traditional Chinese, French, Korean, Russian, Spanish and Portuguese –contact us for availability of others)
Environmental Conditions	Operating temperature and humidity: -10°C ~ +50°C, ≤95% (non-condensation) Storage Temperature and humidity: -20°C ~ +75°C, ≤95% (non-condensation) Proof: IP65(IEC 60529)
Accessories	Standard: Main unit, power adapter, Lithium battery, FC adapter, USB cord, User guide, CD disk, carrying case Optional: SC/ST/LC adapter, Bare fibre adapter

TECHNICAL SPECIFICATIONS

Type (2)	Testing wavelength (MM:±20nm, SM:±10nm)	Dynamic range (dB)(3)	Event/Attenuation dead-zone (m) (4)
LXMOTDR-M21	850/1300	19/21	1.5/8
LXMOTDR-MD21	850/1300	19/21	1.5/8
	1310/1550	35/33	1.5/8
LXMOTDR-MD22	850/1300	19/21	1.5/8
	1310/1550	40/38	1.75/11
LXMOTDR-D26	1310/1550	26/24	1.5/8
LXMOTDR-D32	1310/1550	32/30	1.5/8
LXMOTDR-D35	1310/1550	35/33	1.5/8
LXMOTDR-D40	1310/1550	40/38	1.75/11
LXMOTDR-D43	1310/1550	43/41	2/14
LXMOTDR-T40F	1310/1550/1625	40/38/38	1.75/11
LXMOTDR-T43F	1310/1550/1625	43/41/41	2/14
LXMOTDR-T45F	1310/1550/1625	45/43/43	2/14
LXMOTDR-TC35F	1310/1550/1650	35/33/31	1.5/8
LXMOTDR-TP35	1310/1490/1550	35/33/33	1.5/8



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Test Parameter	
Pulse width	Single mode: 3ns, 5ns, 10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs, 5μs, 10μs, 20μs Multi-mode: 3ns, 5ns, 10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs
Distance Range	Single mode: 100m, 500m, 2km, 5km, 10km, 20km, 40km, 80km, 120km, 160km, 240km Multi-mode: 500m, 2km, 5km, 10km, 20km, 40km
Sampling Resolution	Minimum 25cm
Sampling Point	Maximum 128,000 points
Linearity	≤ 0.05dB/dB
Scale Indication	X axis: 4m~70m/div, Y axis: Minimum 0.09dB/div
Distance Resolution	0.01m
Distance Accuracy	± (1m+measuring distance x 3x10 ⁻⁵ + sampling resolution) (excluding IOR uncertainty)
Reflectance Accuracy	Single-Mode: ±2dB, multi-mode: ±4dB
IOR Setting	1.4000~1.7000, 0.0001 step
Units	Km, miles, feet
OTDR Trace Format	Telcordia universal, SOR, Issue 2 (SR-4731) OTDR: User selectable automatic or manual set-up
Testing Modes	Visual fault locator: visible red light for fibre identification and troubleshooting Light Source: Stabilized Light Source (CW, 270Hz, 1kHz, 2kHz output) Field microscope probe
Fibre Event Analysis	Auto or manual operation, displayed in table format User defined PASS/FAIL thresholds: - Reflective and non-reflective events 0.01 to 1.99dB (0.01dB steps) - Reflective: 0.01 to 32dB (0.01dB steps) - Fibre end/break: 3 to 20dB (1dB steps)
Other Functions	Real time sweep: 1Hz Averaging Modes: Timed (1 to 3600 sec.) Live Fibre detect: Verifies presence communication light in optical fibre Trace overlay and comparison

VFL Module (Visual Fault Locator, as Standard Function)

Wavelength (±20nm)	650nm
Power	10mW, CLASSIII B
Range	12km
Connector	FC/UPC
Launching Mode	CW/2Hz



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PM Module (Power Meter, as optional function)

Wavelength Range	800~1700nm
Calibrated Wavelength(±10nm)	850/1300/1310/1490/1550/1625/1650nm
Test Range	TypeA: -65~+5dBm (standard); TypeB: -40~+23dBm (optional)
Resolution	0.01dB
Accuracy	±0.35dB ±1nW
Modulation identification	270/1k/2k Hz, P _{input} ≥ -40 dBm
Connector	

LS Module (Laser Source, as optional function)

Working wavelength (±10nm)	1310/1550/1625nm(5)
Output power	Adjustable -25 ~ 0dBm
Accuracy	± 0.5dB
Connector	FC/UPC

FM Module (Fibre Microscope, as optional function)

Magnification	400X
Resolution	1.0μm
View of Field	0.40 x 0.31 mm
Storage/working Condition	-18°C ~ 35°C
Dimension	235x95x30mm
Sensor	1/3 inch 2 million of pixel
Weight	150g
USB	1.1/2.0
Adapter(6)	Standard: SC-PC-F (For SC/PC adapter) FC-PC-F (For FC/PC adapter) LC-PC-F (For LC/PC adapter) 2.5PC-M (For 2.5mm connector, SC/PC, FC/PC, ST/PC)

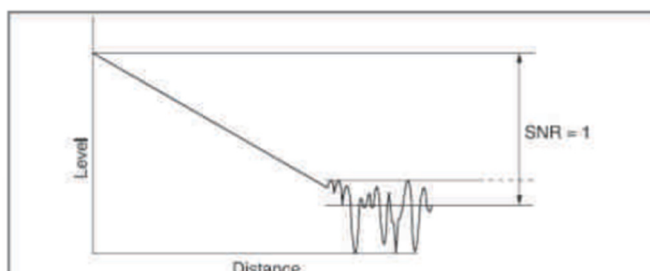


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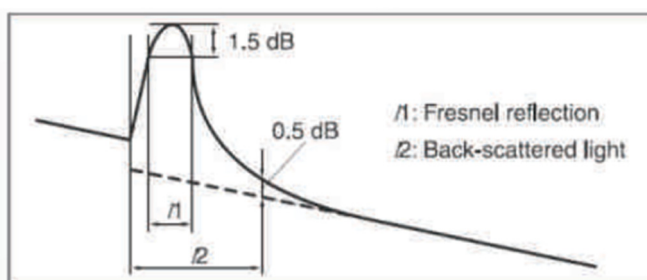
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NOTES

1. Typical, backlight off, sweeping halted at 25°C, 12 hours typical continuous testing.
2. Model T40F/T43F are integrated with optical filter, which allow them to test PON network online (by using 1625nm wavelength) and will not interrupt the fibre signal.
3. Dynamic range is measured with maximum pulse width, averaging time is 3 minutes, SNR=1; The level difference between the RMS noise level and the level where near end back-scattering occur

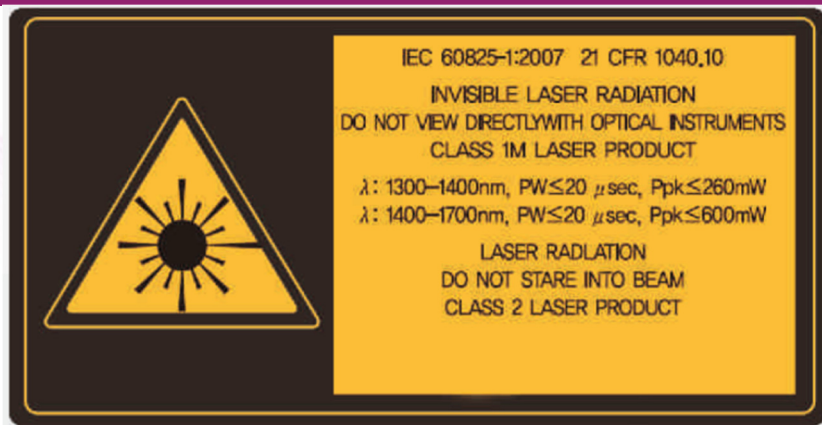


4. Event dead zone is measured with pulse width of 3ns; attenuation dead zone is measured with pulse width of 5ns.



5. 1310/1550nm laser source uses OTDR1 port, and 1625nm or 850/1300nm uses OTDR2 port.
6. For more adapters please contact us.

CAUTION!



VIEWING THE LASER OUTPUT WITH CERTAIN OPTICAL INSTRUMENTS (FOR EXAMPLE: MONOCLES, MAGNIFIERS AND MICROSCOPES) WITHIN A DISTANCE OF 100 MM MAY POSE HAZARD TO YOUR VISION.



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ORDERING INFORMATION

LXMOTDR -XX-XX-XX-XX-XX-XX-XX-XX

Model

- M** 850/1300nm
- MD** 850/1300/1310/1550nm
- D** 1310/1550nm
- T** 1310/1550/1625nm
- TC** 1310/1550/1650nm
- TP** 1310/1490/1550nm

Dynamic Range

- 21** 19/21dB for Model M or 19/21/35/33dB for Model MD
- 22** 19/21/40/38dB for Model MD
- 26** 26/24dB for Model D
- 32** 32/30 dB for Model D
- 35** 35/33dB for Model D or 35/33/33 for Model TP
- 40** 40/38dB for Model D
- 43** 43/41dB for Model D
- 35F** 35/33/31dB for Model TC with filter
- 40F** 40/38/38dB for Model T with filter
- 43F** 43/41/41dB for Model T with filter

Laser Source

- /** Without laser source
- LS** With laser source

Connector

- /** FC/UPC(default)
- SC** SC/UPC
- ST** ST/UPC

Water Proof

- /** Without water proof
- WP** With water proof

Fiber Microscope

- /** Without fiber microscope
- FM** With fiber microscope

Touch Screen

- /** Without touchscreen
- TS** With touchscreen

Power Meter

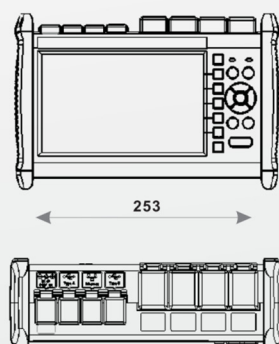
- /** Without power meter
- PMA** With power meter TYPE A
- PMB** With power meter TYPE B

Product Code

LXMOTDR-M-21-LS-PMA-TS-FM-WP-SC

Description

Linxcom-OTDR-Model M w/laser source, fibre microscope, touch screen, power meter ,type A with SC connector ,Water proof



168

Unit:mm

Except where noted, tolerance default as:±3%

(if size<10mm, tolerance:±0.3mm)

253

73.50