OTDR
HD4102F

Overview:

OTDR402F series Optical Time Domain Reflectometer (OTDR) is an intelligent meter of a newgenerationforthedetection of fiber communications systems. With the popularization of optical network constructionincitiesandcountrysides, the measurement of optical network becomes short and disperse; OTDR402Fis speciallydesignedfor that kind of application. It's economic, having outstanding performance.

OTDR402F is manufactured with patience and carefulness, following the national standards to combinetherichexperience and modern technology, subject to stringent mechanical, electronic and optical testingandqualityassurance; in the other way, the new design makes OTDR402F more smart and compact and multi-purpose. Whether you want to detect link layer in the construction and installation of optical network or proceedefficientmaintenance and trouble shooting, OTDR402F can be your best assistant.

Features:

- Integrated design, smart and rugged
- IP65 protection level, outdoor enhanced
- 7-inch anti-reflection LCD screen
- PON online test module (1625nm) is optional
- Support multi-language display and input



Specifications

1. Characteristics

Item	Contents
Dimension	253×168×73.6mm , 1.5kg (battery included)
Display	7 inch TFT-LCD with LED backlight (touch screen function is optional)
Interface	1×RJ45 port, 3×USB port (USB 2.0, Type A USB×2, Type B USB×1)
Power Supply	10V(dc), 100V(ac) to 240V(ac), 50~60Hz
Battery Life	• 7.4V(dc)/4.4Ah lithium battery (with air traffic certification) • Operating time: 12 hours①, Telcordia GR-196-CORE • Charging time: <4 hours (power off)
Power Saving	• Backlight off: Disable/1 to 99 minutes • Auto shutdown: Disable/1 to 99 minutes
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℃~+50℃, ≤95% (non-condensation) • Storage temperature and humidity: -20℃~+75℃, ≤95% (non-condensation) • Proof: IP65 (IEC60529)
Accessories	Standard: Main unit, power adapter, Lithium battery, FC adapter, USB cord, User guide,CD disk, carrying case

2. Technical parameter

Type	Testing Wavelength (MM: ±20nm, SM: ±10nm)	Dynamic Range (dB)	Event Dead-zone (m)	AttenuationDead-zone(m)
OTDR402F-A1	1310/1550	32/30	1	8/8
OTDR402F-A2	1310/1550	37/35	1	8/8
OTDR402F-A3	1310/1550	42/40	0.8	8/8
OTDR402F-A4	1310/1550	45/42	0.8	8/8
OTDR402F-F1	1310/1490/1550	30/28/28	1.5	8/8/8
OTDR402F-F2	1310/1550/1625	30/28/28	1.5	8/8/8
OTDR402F-F3	1310/1490/1550	37/36/36	0.8	8/8/8
OTDR402F-F4	1310/1550/1625	37/36/36	0.8	8/8/8

3. Test parameter

Item	Parameter
Pulse Width	Single mode: 5ns, 10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs, 5μs, 10μs, 20μs
Testing Distance	Single mode: 100m, 500m, 2km, 5km, 10km, 20km, 40km, 80km, 120km, 160km, 240km
Sampling Resolution	Minimum 5cm
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×3×10-5+sampling resolution) (excludingIORuncertainty)
Reflectance Accuracy	Single mode: ±2dB, multi-mode: ±4dB
IOR Setting	1.4000~1.7000, 0.0001 step

Specifications

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 fiber identification and troubleshooting • Light source: Stabilized Light Source (CW, 270Hz, 1kHz, 2kHz output) • Field microscope probe
Fiber Event Analysis	• Reflective and non-reflective events: 0.01 to 1.99dB (0.01dB steps) • Reflective: 0.01 to 32dB (0.01dB steps) • Fiber end/break: 3 to 20dB (1dB steps)
Other Functions	• Real time sweep: 1Hz • Averaging modes: Timed (1 to 3600 sec.) • Live Fiber detect: Verifies presence communication light in optical fiber • Trace overlay and comparison

4. VFL Module (Visual Fault Locator , as standard funtion)

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

5. PM Module (Power Meter, as optional function)

Item	Contents
Wavelength Range (±20nm)	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625/1650nm
Test Range	Type A: -65~+5dBm (standard); Type B: -40~+23dBm(optional)
Resolution	0.01dB
Accuracy	±0.35dB±1nW
Modulation Identification	270/1k/2kHz,Pinput≥-40dBm
Connector	FC/UPC

Specifications

6. FM Module (Fiber Microscope, as optional function):

Item	Contents
Wavelength (±20nm)	1310/1550/1625nm
Output Power	Adjustable -25~0dBm
Accuracy	±0.5dB
Connector	FC/UPC

7. PM Module (Power Meter, as optional function)

Item	Contents
Magnification	400X
Resolution	1.0μm
View of Field	0.40×0.31mm
Storage/working Condition	-18℃~35℃
Dimension	235×95×30mm
Sensor	1/3 inch 2 million of pixel
Weight	150g
USB	1.1/2.0
Adapter	• 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)