Optical Time Domain Reflectometer FS600

Fibre Optic Systems is proud to offer the FS600 Optical time domain reflectometer (OTDR). This fully featured OTDR is well suited to fibre optic testing of a range of network types and architectures.

This OTDR works by injecting optical pulses into fibre and measuring light that is back scattered or reflected. This data is used to characterise the fibre link and is useful for detecting problem areas, damage, poor installation or issues in your fibre network. In addition to confirming successful implementation of new fibre links, OTDR trace data can be used to accurately gauge link loss, cable attenuation, insertion loss and splice loss through a fibre network.

Applications

- All singlemode and multimode fibre testing
- FTTx fibre network testing
- Insertion and splice loss estimation
- Cable attenuation testing

Features & Benefits

- Easy to use interface with large touch screen and shortcut keys
- High capacity lithium battery with excellent working life
- Intelligent, simple testing and powerful functionality
- Expandable SD card storage ensures capacity is available for logging small to large fibre networks
- Excellent FTTx testing functionality
- Multiple wavelength testing ensures OTDR meets testing requirements for your network
- Solid, dustproof and shockproof exterior ensures durability even in challenging environments
- Built in visible fault locater offers additional functionality for convenient fault discovery in field
- Short (<2m) dead zone limits launch lead requirements

For further information:
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Test Modes

The FS600 OTDR has a range of modes to suit the user's test preference as follows:

Automatic measurement mode: In automatic mode a single wavelength is selected for testing, measurement parameters are automatically set and trace data is saved and automatically analysed.

Multi wavelength measurement: The FS600 has the ability to be setup to test multiple wavelengths in multi wavelength mode allows for quick analysis of the attenuation state of a fibre link under multiple wavelengths.

Trace fixing function: This OTDR offers the ability to compare a live trace with existing trace data in real time. This is useful for the comparison of cores in a multi fibre cable, or to check the degradation of aged fibre networks under maintenance.

IO Port Details

Ports

1 - VFL optical port
2 - OTDR optical port
3 - Charging indicator
4 - SD card slot
5 - Power adapter socket
6 - Headphone port
7 - USB interface
8 - Ethernet port

OTDR TracesManager PC Software

The FS600 OTDR ships with the innovative and functional TracesManager PC software. This software suite allows for simple bulk amendment and batch printing.

Additionally, TracesManager offers a range of test reports and data management. Various flexible printing modes allow for: single page printing, batch printing, multi trace printing and multi waveform display printing.

Furthermore, TracesManager allows for simple comparison of several wavelength and fibre traces allowing for in depth analysis of your fibre network or link.

Technical Specifications[1]

Wavelength (nm)	850 / 1300	1310 / 1550	1310 / 1490 / 1550	1625
Dynamic range (db)[2]	23 / 21	32 /30, 38 / 36	32 / 30 / 30	34[4], 36[5]
Pulse width (ns)	Multimode: 5, 20, 40, 80, 160, 320, 640, 1280 Singlemode: 5, 20, 40, 80, 160, 320, 640, 1280, 2560, 5120, 10240, 20480			
Event blind zone (m)[3]	≤3			
Attenuation blind zone (m)[3]	≤13			
Linearity (dB/dB)	± 0.05			
Loss threshold (dB)	0.05			
Loss resolution ratio (dB)	0.01			
Sampling resolution ratio (m)	0.125 ~ 8			
Sampling point	32K			
Distance uncertainty (m)	± (5×10^{-5} x distance + 1 + sampling interval)			
Distance scope (km)	0.3 ~ 180			
Typical real time refresh rate (s)	0.2			
Memory capacity	SD card (4G), >10,000 traces			
Duration of measurement (s)	5, 10, 15, 30, 60, 120, 180			
VFL wavelength (nm)	650			
VFL output power (dBm)	≥-3			
Maximum VFL test distance (km)	3			

1 Technical specifications are based on the usage of a typical PC model connector and do not take into account uncertainty caused by varying optical fibre refractivity
2 Dynamic range is measured with the following parameters: 180km length, 20480ns pulse width, 180 seconds duration
3 Measuring conditions of blind zone: reflection event falls within 4km, reflection strength < -35dB (minimum pulse width setting)
4 Dynamic range measured with filter
5 Dynamic range measured without filter

General Specifications

Dimensions WxHxD (mm)	235 x 150 x 66
Display	5.6” LCD touch screen
Weight (kg)	1.5
Operating temperature (°C)	-10 ~ 50
Storage temperature (°C)	-40 ~ 70
Relative humidity	0 ~ 95 % (non-condensing)
Power supply	Lithium battery, continuous working duration ≥ 8hours