FRL-20/30

Optical Insertion Loss and Return Loss Tester

FRL-20/30 series optical insertion loss/return loss tester is a high-performance, integrated and intelligent tester for optical fiber network, fiber cable and component manufacturing and laboratory use. Not only can it measure the return loss and determine absolute and relative power value, but also work as a self-testing system measuring optical loss of optical fiber cables and passive devices. The FRL-30 with three wavelengths of 1310/1490/1550 nm commonly used in FTTx is perfect for testing PONs (Passive Optical Networks). Hence, the small, light-weight and robust handheld unit is an idea tool for fiber network installation, troubleshooting and maintenance, as well as verifying the polish quality of fibers by measuring the optical return loss in field installation and proceeding routine inspection. The laser source and power meter-integrated FRL-20/30 with its cost efficiency makes it the most valuable 4-in-1 instrument in the market.

The Smallest
The Lightest

4 in 1

- *Return Loss Meter*
- *Power Meter*
- *Insertion Loss meter*
- *Light Source*

Key Features

- The smallest-size and lightest-weight four-in-one tester in the market – supporting Return loss meter/Power Meter/Insertion Loss meter/Light source
- Easy-to-use interface with large display for easy visibility
- Cost-efficient palm-size tester designed for field and lab testing
- Robust design - ideal for field operation
- High-precision ORL testing up to 3 wavelengths (SM at 1310nm, 1490nm and 1550nm)
- Internal data storage up to 1500 results and unlimited result storage capacity via USB memory sticks
- USB interface enables communication with personal computer, easy and quick data transfer of stored results. In conjunction with FibreOptica's standard software, it provides easy documentation and test reporting.
- Remote Upgrade
- Unit runs with either battery or AC/DC adapter
- Interchangeable connectors with FC/APC, SC/APC and ST/APC available for Return loss and FC/SC/ST for insertion loss and power meter.
- Supports Reference value
- Auto power shut off
- Low battery warning

Specifications

Return Loss

Wavelength	1310, 1490 and 1550nm
Measurement range	0 to 65dB
Calibrated wavelengths	1310, 1490 and 1550nm
Measurement accuracy	0.4dB (0 to 55dB)
	1dB (55 to 65dB)
Stability short-term	±0.05dB /15min
Stability long-term	± 0.1dB /8hrs
Connector type	Interchangeable FC/APC
	SC/APC, ST/APC
Resolution	0.1 dB
Internal storage	500 results

Light source

Power output*	-2 dBm
Spectral width (RMS)	<3nm
Stability short-Term	±0.05dB /15min
Stability long-Term	± 0.1dB /8hrs

Insertion loss meter

Calibrated wavelengths	1310, 1490 and 1550nm
Range	0 to 70dB
Accuracy	0.2dB (0 to 60dB)
	1dB (60 to 70dB)
Connector type	Interchangeable FC, SC or ST
Internal storage	500 results

* Other output powers are available upon request (contact agent for detail)

** Applicable to all Fibreoptica's FPM series

Note: Specifications subject to change without notice

Power meter

Calibrated wavelengths	850/1300/1310/1490/1550/1625nm
Measurement range	-70dBm to 7dBm
Measurement accuracy	± 0.2dB ± 1nW (-60 to 7dBm)
	1dB (-70 to -60dBm)
Modulation detection	270Hz, 1KHz, 2KHz
Wavelength recognizing**	Yes
Resolution	0.01dB (-60 to 7dBm)
	0.1dB (-70 to -60dBm)
Connector type	Interchangeable FC, SC or ST
Display unit	dB / dBm / mW / µW
Ref value	Yes
Internal storage	500 results

General specification

COM Port	USB interface
Internal storage	1500 results (in total)
External storage	USB memory stick
Rechargeable battery	2 x AA NiMH 1.2V, 2500mAh
Adapter	Input: 100 to 240AC at 50/60Hz
	Output: 6VDC, 1A
Working temperature	-5 to 50ºC
Storage temperature	-20 to 70ºC
Humidity	0 to 90% non-condensing
Remote upgrade	Yes
Dimension (mm)	168(L)×76(W)×43(H)
Weight	310g
Auto power off	Yes
Backlit	Yes
Low battery warning	Yes

Standard package

- Interchangeable FC, SC or ST connectors
- Interchangeable FC/APC, SC/APC or ST/APC connectors
- FC/APC to FC/APC and FC/APC to FC/PC patchcords
- Rechargeable Batteries
- AC/DC power adapter
- USB Connecting cable
- User Manual
- PC software in CD
- Test report
- Cotton bud
- Carrying bag

Optional Accessories

- Hard carrying case
- Silicon boot
- FC/PC male to LC/PC female adapter
- Other type connectors or adapters are available upon request

Order Information

FRL-AA-XX-YYAPC-ZZ

AA – 20 (2 wavelengths: 1310nm and 1550nm)
    30 (3 wavelengths: 1310nm, 1490nm and 1550nm)
XX – Output power
    02 = -2dBm (standard)
    Other – customized (contact to agent for availability)
YY – Connector Type of APC for Return Loss
    FC, SC and ST
ZZ – Connector type of PC for IL and Power Meter
    FC, SC and ST