

Overview

The Optical Power Meter OM1 constantly monitors the optical power level in a live optical network. It is inserted between the link receiver, or the input of a WDM system, and the dark fiber. Variations of the optical power level are immediately detected and can trigger alarms.

The alarm thresholds are individually adapted to the fiber under test. Due to the high resolution, even tight bending of a fiber is detected. Therefore, the OM1 can be used to detect fiber intrusion attacks which use bend-couplers to extract light from the fiber for (unauthorized) data monitoring. In principle the extracted light is missing at the far end of the fiber. That missing light is detected.

Operators may use the OM1 to provide enhanced services, because an alarm is generated when a fiber is degraded, even before a total failure.

The OM1 can be used to relate fiber problems to a certain carrier. For this purpose OM1's are strategically placed at the exchange point between carriers and at each endpoint. If the level changes at some point in the middle it is quickly determined which section is at fault.

Typical applications include permanent monitoring of many fibers in parallel. A shelf can hold 10 modules to monitor 20 fibers simultaneously.

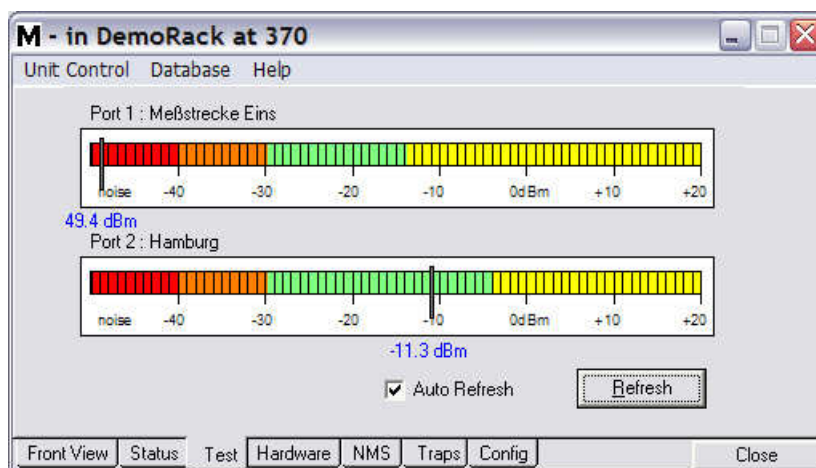
Summary

- ⚡ Optical Power Meter
- ⚡ Resolution: +/- 0.1 dB
- ⚡ Insertion Loss: < 0.5 dB
- ⚡ 1310nm & 1550nm bands
- ⚡ CWDM- and DWDM-compatible

Technical Data

Measurement Channel	Two independent measurement channels. E.g. receive level & transmit level of a duplex cable or receive power level of two independent lines.
Transmission Window	1200nm – 1650nm
Measurement Wavelength	1270nm – 1610nm (extended CWDM band, DWDM band)
Resolution, Accuracy	0.1 dB, 0.5 dB
Sensitivity	-40 dBm – +20 dBm (-45 dBm - +25 dBm with reduced accuracy)
Insertion Loss	< 0.5 dB, typ. 0.3dB
Data Rate	Independent. 10Gbit/s compatible, WDM compatible, Third party compatible
Test Functions	Selectable min/max thresholds independent for both channels
Dimensions, Weight	Approx.: 129mm x 25mm x 190mm (H x W x D) , ~ 200g
Data security	The OM1 cannot be used to read out optical data. Reset or software download will not interrupt data transmission through the module. Eavesdropping on the optical data via the management system is not possible. The module continues to transfer data even under loss of power or when removed from the shelf. Therefore, reliability is not compromised by adding the OM1 into the data stream.
Safety and Certifications	CE conform, FCC part 15, DOC, CDRH 21 CFR 1040, Laser class 1M product, no laser source inside
Order Code	MS425631M

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Management Screenshot