

# MS12 Return Loss Meter



## PRODUCT DESCRIPTION

The MS12 modules combine advanced time-domain technology with a unique wide-aperture integrating cavity. An internal monitoring channel and a return loss reference are used to provide highly accurate insertion loss and return loss measurements even for APC connectors which are well known to be difficult to test.

The MS12 modules use an internal monitoring channel to ensure IL measurement accuracy and an internal return loss reference to improve multi-mode and singlemode return loss measurement performance.

The multi-mode MS12 Return Loss Meter meets IEC-61280-4-1 Encircled Flux Standard.

## COMPATIBLE WITH EXFO'S IQS-12001B

2 modules are fully compatible with EXFO's IQS-3250, IQS-3250B and IQS-9403 modules. They meet the same specifications and will be recognized by both the MS12001 and the IQS-12001B systems.

## KEY FEATURES

- SM 1310, 1490, 1550 and 1625 nm
- MM 850, 1310 nm
- RL: SM 80 dB
- RL: MM 50 dB
- Integrating Cavity (9 mm) Power Meter Detector

## APPLICATIONS

- Component testing
- Connector and Patchcord testing
- Incoming inspection
- QA Testing

## COMPLIANCE

- Multi-mode meets IEC 61280-4-1 Encircled Flux standard

## IN THE BOX

- Return Loss Meter
- Calibration Certificate
- Detector Cap
- FC Detector Adapter
- Hybrid Test Jumper
- SM comes with power level Adjustment Jumper

## HOW TO ORDER

Choose your model and then use the appropriate part number listed.

## CONTACT US

**JGR Optics Inc.**

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K2M 1P6 CANADA

**Tel:** 613-599-1000

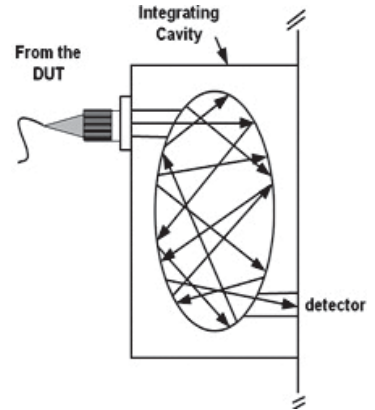
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## ACCURATE, REPEATABLE AND FLEXIBLE

The wide aperture of the unique integrating cavity used on the MS12 modules makes it usable both for simplex and multiplex connectors and make the connector alignment much less critical. The other big advantage of the integrating cavity used is the negligible polarization dependence. Therefore, accuracy and repeatability of the measurements are increased.

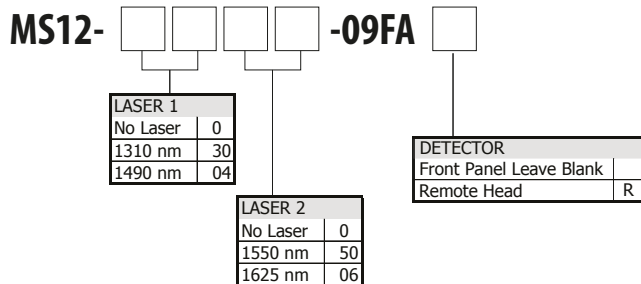


The integrating cavity is a standard feature of all modules used in the MS12001 system, the loss test modules and the loss meters.

Based on advanced time domain technology and the wide aperture integrating cavity detector, the MS12 IL/RL Loss Meter module will deliver accurate and repeatable insertion loss and return loss measurements. The internal monitoring channel ensures accurate insertion loss measurements by compensating for any source power variations. The insertion loss measurement has been developed in accordance with the TIA/EIA-455-34A Standard FOTP-34A, "Interconnection Device Insertion Loss Test".

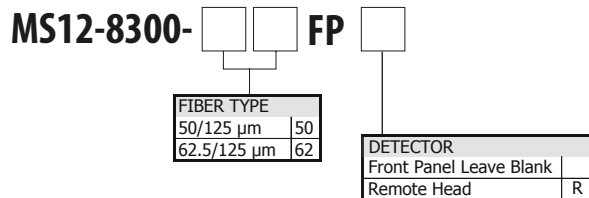
## ORDERING SCHEME

Single-Mode Version



- Single-mode version comes with FC/APC laser connector

Multimode Version



- The standard multimode versions contain two lasers at 850 and 1310 nm and comes with FC/UPC laser connector

## SPECIFICATIONS

OPTICAL / ELECTRICAL SPECIFICATIONS		
Parameter	Specification	
	Single-mode	Multimode
Fiber Type (µm)	9/125	50/125 or 62.5/125
Encircled Flux Standard	N/A	IEC-61280-4-1
Wavelength Range (nm)	1310 / 1550 or 1490 / 1625	850 / 1300
Insertion Loss Uncertainty (dB)	± 0.03 <sup>1</sup>	± 0.07 <sup>1</sup>
Insertion Loss Stability (dB) <sup>2</sup>	± 0.004	± 0.015
Return Loss (dB)	30 to 80	10 to 50
Return Loss Accuracy (dB)	± 1.0 (30 to 70) ± 1.7 (70 to 75) ± 2.2 (75 to 80)	± 1.2 (10 to 30) ± 1.5 (30 to 40) ± 1.6 (40 to 43) ± 2.9 (43 to 50)
Return Loss Repeatability (dB) <sup>3</sup>	± 0.1 (30 to 65) ± 0.2 (65 to 70) ± 0.4 (70 to 75) ± 1.5 (75 to 80)	± 0.2 (10 to 30) ± 0.4 (30 to 40) ± 0.6 (40 to 43) ± 1.8 (43 to 50)
Testing Time (s)	< 6	
Cable Assembly Length (m)	1.7 to 1500	
Detector Type	Integrating cavity	
Output Channels <sup>4</sup>	Up to 72	
Test Method	End to end / bidirectional	

<sup>1</sup> For simplex measurements using FC detector adapter. Uncertainty for MTP to MTP, MT-RJ to MT-RJ, MTP to fanout is ± 0.06 dB (reported with a level of confidence of 95%). This does not include uncertainties due to connector, connector adapter or switch PDL.

<sup>2</sup> For a stable connection over a period of 15 minutes.

<sup>3</sup> For a stable connection over 10 measurements.

<sup>4</sup> With MS7 Optical Switch.

MECHANICAL / ENVIRONMENTAL SPECIFICATIONS	
Parameter	Specification
Number of slots	2
Unit Dimensions W x H x D (cm)	7.4 x 12.5 x 28.2
Shipping Box Dimensions W x H x D (cm)	43 x 27 x 47
Unit Weight (kg)	0.9
Total Shipment Weight (kg)	1.5 (depending on number of modules purchased)
Operating Temperature (°C)	0 to 40
Storage Temperature (°C)	-40 to 60
Humidity (Non-condensing) (°C)	Maximum 80%, no condensing at 40

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