PPM-350C PON Power Meter

FTTx Test Solutions

FROST & SULLIVAN
2014 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET LEADERSHIP AWARD

SPEC SHEET

Unique workflow management for faster PON deployments

KEY FEATURES

Concurrent measurement of all PON signals* anywhere on the network

Innovative workflow management for boosted test routine efficiency

Enhanced rugged and weatherproof design

Protected data format for guaranteed test result authenticity

COMPLEMENTARY PRODUCTS

AXS-100
Access OTDR

FIP-400
Fiber Inspection Probe

EXFO

THE FRONTRUNNER NOW RUNS EVEN FASTER

When FTTH was first deployed, EXFO was there to test it, namely by pioneering the concurrent upstream/downstream measurement technique via a pass-through connection. In fact, the EXFO-pioneered PPM-350 series, which quickly established itself as the clear-cut leader in the PON power meter market–over 35000 units sold–has played an important part in major FTTH deployments worldwide.

Since then, we have developed our instrument even more to provide you with the best PON power meter to date. The PPM-350C enables quick, on-site testing of all PON signals, anywhere on the network. Its new workflow management capabilities and enhanced ruggedness will increase the efficiency of your daily deployment activities.

Moreover, its visual fault locator port allows for easy fiber identification and macrobend location. This handheld unit also features pass/warning/fail LED indicators with user-defined thresholds.

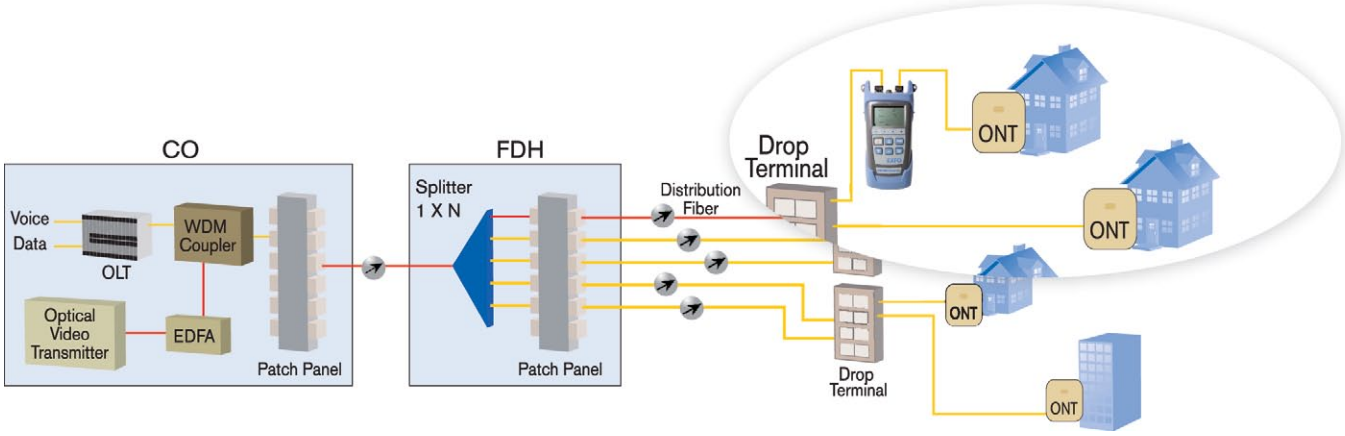


Figure 1. Typical use of a pass-through filter in a PON network.

RELIABLE PERFORMANCE, WHETHER THE ELEMENTS AGREE OR NOT

Thanks to its enhanced weatherproof design and intuitive user interface, and building on the strength of its predecessor (PPM-350B), the PPM-350C PON Power Meter establishes a new FTTx testing benchmark. It delivers fast, reliable results, even when used in cold, wet or windy conditions.

Easy-to-Access Data Storage

The unit's data storage capabilities provide ultimate flexibility. Transfer your data quickly and easily, store your test results for future reference and generate a wide range of FTTH reports. Moreover, the PPM-350C allows you to store up to 1000 test results, which are downloadable through its USB interface.

Simultaneous Display of All PON Signals

The PPM-350C acts as a pass-through device, allowing the concurrent measurement and simultaneous display of all PON signals—voice, data and video. This patented, built-in technology facilitates service-activation testing and troubleshooting.

Quick and Efficient Visual Inspection

Whether to identify breaks, bends, faulty connectors or splices, as well as other causes of signal loss, the PPM-350C's optional visual fault locator (VFL) enables quick and easy troubleshooting. This valuable option helps you shorten time-to-restoration cycles and increase the productivity of your field crews.

Automated Pass/Warning/Fail Assessment

In addition to user-defined thresholds, EXFO's PON power meter offers pass/warning/fail LED indicators that allow you to clearly and quickly assess your network's power level. This user-friendly feature facilitates QoS verification.

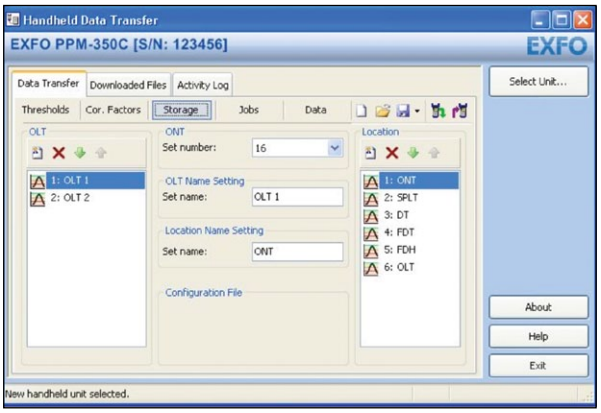
Rugged and Weatherproof Design

Truly rugged and weatherproof, the PPM-350C is the ideal tool for technicians working outdoors. Its enhanced design also features a waterproof keyboard, port cover flaps and a protective cap.

UNIQUE WORKFLOW MANAGEMENT FOR FASTER DEPLOYMENTS

Ensure the Authenticity of Each Measurement

Eliminate guesswork with EXFO's comprehensive and easy-to-use data-storage interface designed with PON testing in mind. Test results can be stored and flagged per OLT, per ONT and even, per location. Then, they are stored in a protected data format, ensuring the authenticity of each measurement.

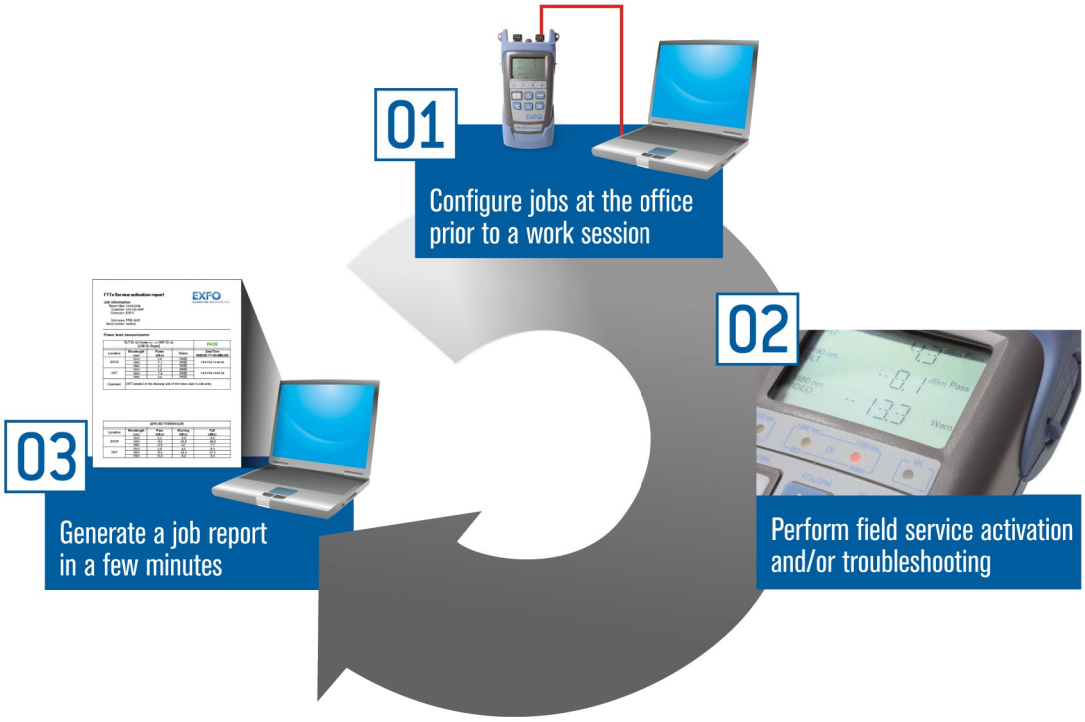


Customize Location Names, Inside and Outside

The computer interface allows easy customization of OLT, ONT and location names. Start testing right away; don't waste time naming files. This time-saving feature eliminates the risk of mistakes. Each file is named correctly so you don't have to worry about having to rename each file when you are back at the office.

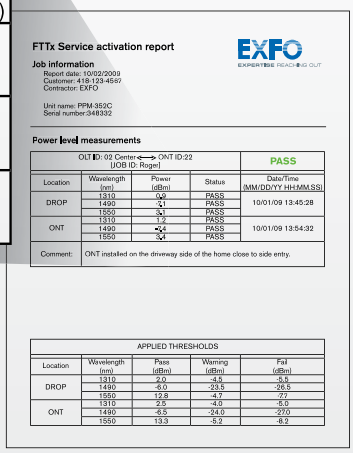
ELIMINATE WRONG DATA NAMING AND SPEED UP TEST ROUTINES

The PPM-350C features a Job Editor mode, which allows you to pre-configure upcoming jobs in the unit's memory. Once on location, you simply have to select the job ID, the ONT number and the location ID for quick data storage–making the need to carry your work schedule in the field a thing of the past. This is the best way to link results with customers/activations, also called jobs. It's as easy as 1-2-3:



Plus, even when the Job Editor mode is not configured, you can still store your results using generic names, for quick and efficient testing.

OLT ID: 02 Center ⟷ ONT ID:22 [JOB ID: Roger]				PASS
Location	Wavelength (nm)	Power (dBm)	Status	Date/Time (MM/DD/YY HH:MM.SS)
DROP	1310	0.9	PASS	10/01/09 13:45:28
	1490	-7.1	PASS	
	1550	3.1	PASS	
ONT	1310	1.2	PASS	10/01/09 13:54:32
	1490	-7.4	PASS	
	1550	3.4	PASS	
Comment:	ONT installed on the driveway side of the home close to side entry.			


FTTx Service activation report

EXFO

Job information
Report date: 10/02/2009
Customer: 418-123-4567
Contractor: EXFO

Unit name: PPM-352C
Serial number:348332

Power level measurements

OLT ID: 02 Center ⟷ ONT ID:22 [JOB ID: Roger]				PASS
Location	Wavelength (nm)	Power (dBm)	Status	Date/Time (MM/DD/YY HH:MM.SS)
DROP	1310	0.9	PASS	10/01/09 13:45:28
	1490	-7.1	PASS	
	1550	3.1	PASS	
ONT	1310	1.2	PASS	10/01/09 13:54:32
	1490	-7.4	PASS	
	1550	3.4	PASS	
Comment:	ONT installed on the driveway side of the home close to side entry.			

APPLIED THRESHOLDS

Location	Wavelength (nm)	Pass (dBm)	Warning (dBm)	Fail (dBm)
DROP	1310	2.0	-4.5	-5.5
	1490	-6.0	-23.5	-26.5
	1550	12.8	-4.7	-7.7
ONT	1310	2.5	-4.0	-5.0
	1490	-6.5	-24.0	-27.0
	1550	13.3	-5.2	-8.2

SPECIFICATIONS [a]

CONFIGURATIONS

	PPM-352C	PPM-353C
Two-port pass-through: all wavelengths	x	x
Downstream OLT signal (1490 nm)	x	x
Downstream RF video signal (1550 nm)	x	
Upstream BPON ONT signal for up to 622 Mbit/s, as per ITU 983 (A, B, C)	x	x
Upstream EPON and GPON ONT signal for up to 1.25 Gbit/s, as per ITU 984 and IEEE 802.3ah	x	x

FTTx MODE

	PPM-352C	PPM-353C
Power measurement range–pass zone for continuous data stream (dBm)		
1310 nm	8 to -40	8 to -40
1490 nm	12 to -40	12 to -40
1550 nm	25 to -40	N/A
Burst measurement capability	CO to ONT	CO to ONT
Burst measurement range [b] (dBm)		
1310 nm	8 to –30	8 to –30
ORL [e] (dB)		
1550 nm	55	55
Pass-through insertion loss [b] (dB)	1.5	1.5
Spectral passband (nm)		
1310 nm	1260 to 1360	1260 to 1360
1490 nm	1480 to 1500	1480 to 1500
1550 nm	1539 to 1565	1539 to 1565
Power uncertainty [b, c, d] (dB)	0.5	0.5
Calibrated wavelengths (nm)	1310/1490/1550	1310/1490
Threshold sets	10 configurable threshold sets with threshold naming	10 configurable threshold sets with threshold naming

OPM MODE (BROADBAND CW)

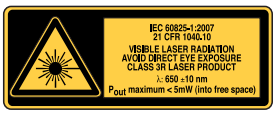
Power measurement range (dBm)	
1310 nm	25 to –40
1490 nm	25 to –40
1550 nm	25 to –40
ORL [e] (dB)	
1550 nm	55
Power uncertainty [b, c, d] (dB)	0.5
Calibrated wavelengths (nm)	1310/1490/1550

STANDARD ACCESSORIES

Quick reference guide, USB cable, software and user guide on CD, wrist strap, protective cover for optical ports.

LASER SAFETY

21 CFR 1040.10
AND IEC 60825-1:2007
CLASS 3R WITH
VFL OPTION



GENERAL SPECIFICATIONS

Size (H x W x D)	195 mm x 100 mm x 57 mm (7 11/16 in x 4 in x 2 ¼ in)
Weight [f]	0.4 kg (0.9 lb)
Temperature	
Operating	–10 °C to 50 °C (14 °F to 122 °F)
Storage [f]	–40 °C to 70 °C (–40 °F to 158 °F)
Relative humidity	0% to 95% non-condensing
Autonomy [b] (hours)	
FTTx mode (burst)	35
OPM mode (CW)	80
Number of ports	2
Warranty and recommended calibration interval (years) [g]	3

Notes

a. At room temperature.
b. Typical.
c. Around –7 dBm, CW.
d. At calibrated wavelengths.
e. For APC connectors.
f. Without batteries.
g Excluding connector wear.

ORDERING INFORMATION

PPM-35XC-XX-XX

Models

PPM-352C = PON Power Meter, two ports, extended range, BPON, EPON, GPON FTTx mode: 1310/1490/1550 nm

PPM-353C = PON Power Meter, two ports, extended range, BPON, EPON, GPON FTTx mode: 1310/1490 nm

Example: PPM-352C-VFL-EA-EUI-91

Visual fault locator

00 = Without visual fault locator
VFL = With visual fault locator

Connectors [a]

EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC
EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000
EI-EUI-98 = UPC/LC

Note

a. Same connectors for both ports.

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