FIBER CERTIFICATION TEST SET

AXS-200/360

part of the SharpTESTER Line
LAN Applications

NETWORK TESTING–OPTICAL

Features/Benefits

- Fiber loss wizard for step-by-step user-friendliness

- Editable and user-definable thresholds, consistent with all the latest industry standards

- Fiber inspection probe (FIP) support for assessing connector cleanliness and condition

- Pass/fail results on a bright, transflective screen for optimal viewing

- Compliant with the IEC 61280-4-1 standard–a first in the industry*

* Loss measurements performed on 50/125 µm multimode fiber using an external conditioner are in compliance with the encircled flux requirements for launch conditions of the IEC 61280-4-1 standard.

FROST & SULLIVAN
2004
FROST & SULLIVAN
2005
FROST & SULLIVAN
2006
FROST & SULLIVAN
2007
Global Fiber Optic Test Equipment
Growth Strategy Leadership Award

Next-Generation Network Assessment

EXFO
EXPERTISE REACHING OUT

Simplifying Certification Testing

To validate that the performance of their fiber networks meets industry standards, enterprise network installers and contractors must make sure that fiber links are installed properly and within specifications. To achieve this, they need to perform fiber certification testing prior to network commissioning, which provides them with complete documentation to fully assess the quality of the fiber installation.

The AXS-200/360 Fiber Certification Test Set provides unparalleled ease of use and accuracy to perform all fiber certification and troubleshooting tasks. Moreover, it makes it simple to certify fiber to the latest standards.

Combined with the AXS-200 Handheld Modular Platform, the AXS-200/360 supports a user-friendly interface and numerous features. Optimized for various applications such as 10 Gbit/s transmission, this test set delivers optical loss measurements at multiple wavelengths automatically, verifies user-inputted fiber lengths, inspects connectors with the optional fiber inspection probe (FIP) and detects breaks with the optional visual fault locator (VFL).

Quick access to all test results.

Multimode and singlemode fiber certification

Your network may be comprised of multimode and singlemode fibers. Thanks to EXFO's complete test set, you can now test both fiber types without changing module. You only need one tester–the AXS-200/360. This instrument allows you to qualify the physical layer for Ethernet transmission at up to 10 Gbit/s on singlemode and multimode fibers.

A complete fiber certification solution

In addition to a power meter, fiber certification requires a light source, namely the FLS-600 Light Source, which comes with the AXS-200/360 kit.
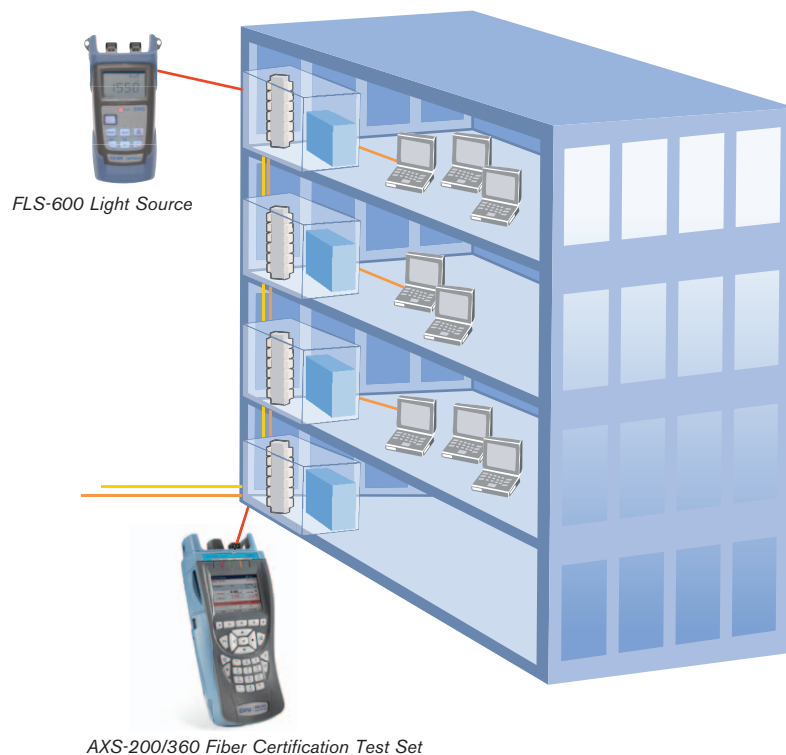
- Up to three singlemode wavelengths (1310, 1550, and 1490 or 1625 nm) on a single port, or four wavelengths (850/1300 nm and 1310/1550 nm) on two ports
- New controlled multimode launching conditions for reliable loss measurements
- Three-year warranty for low cost of ownership
- Full-fledged unit that can be used for other test applications

850/1300 nm

*AXS-200/360
Fiber Certification Test Set*

*FLS-600
Light Source*

Easy operation. Clear results. Error-free testing.

Application-specific LEDs

Common GUI for all test configurations

Quick-test button

On-screen help

Built for LAN networks.

FLS-600 Light Source

AXS-200/360 Fiber Certification Test Set

An Essential Fiber Certification Tool for Enterprise Network Installers and Contractors

AXS-200/360 key features and benefits

Industry standards support	Offers user-configurable thresholds, consistent with industry standards: TIA/EIA-568-B.3, ISO/IEC-11801, 10GBASE-LX4, 10GBASE-L, 10GBASE-E, 10GBASE-S, 1000BASE-SX, 1000BASE-LX, 100BASE-FX, 10BASE-FB, 10BASE-FL, FDDI, ATM-155, ATM-622, Token Ring 4 and 16 Mbit/s, Fibre Channel 1062 Mbit/s, Corning plug and play.
AXS-200 SharpTESTER platform main characteristics: modularity, connectivity, weather-proofness and color display	Expands with your network and service test requirements, covering copper/DSL/triple-play, Ethernet and other optical applications; transflective screen for optimal viewing; easy data transfer via USB connection.
FIP support	Ensures that you perform a connection with clean connectors/adapters, exempt from any defect.
Step-by-step fiber loss wizard	Guides the user through quick procedures, limiting testing time and operator errors.
User-friendliness	Displays straightforward, automated test results with user-definable pass/fail criteria, without requiring interpretation; possibility to interchange connectors for perfect referencing setup.
Low cost of ownership	Allows you to bid on more contracts, thanks to this dedicated fiber tester that certifies singlemode and multimode fiber networks; offers a three-year warranty and recommended calibration interval; is less expensive than major competitors' instruments.

FLS-600 key features and benefits

Automatic wavelength switching	Offers automated toggling between wavelengths thanks to the Auto-Switching mode; this feature enables the AXS-200/360 to recognize the wavelength in use and switch to the proper calibration parameters.
Distant referencing	Sends a signal remotely, giving the power meter information on the source wavelength and output power to be used as reference and helping ensure efficient referencing—even when the source and power meter are far apart.
Controlled multimode	Designed to provide reliable loss measurements.

Fiber Testing Made Easy

Network certification in four easy steps

1. Select a standard or an application
2. Follow the step-by-step fiber loss wizard
3. Set reference
4. Start the test

Step-by-step loss wizard.

Select a standard or an application.

The AXS-200/360 automatically completes loss measurements at 850 and 1300 nm (MM) or 1310 and 1550 nm (SM), compares results against industry standards such as TIA-568-B and provides pass/fail analysis in compliance with those standards.

Retest fibers as needed

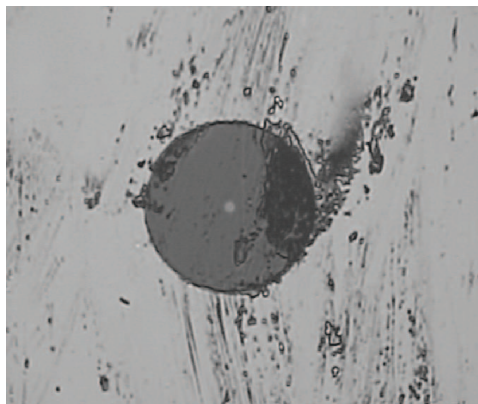If the loss measured is above the budget, the fiber can easily be retested.

View all results at a glance

Once the cable is completely tested, the AXS-200/360 displays a table of all measurement values along with pass/fail status, based on user-inputted fiber lengths.

Connector inspection and cleaning

It's a fact: Most fiber network problems are caused by dirty, damaged or improperly installed connectors, which can lead to erroneous test results or poor transmission. Using a FIP to ensure connectors/adapters are clean and exempt from any defect is where accurate testing starts.

Avoid failing certification testing thanks to the FIP port on the AXS-200/360. Just plug EXFO's efficiently designed FIP-400 Fiber Inspection Probe and benefit from an unmatched optical resolution. Moreover, keep snapshots of your connectors for future reference
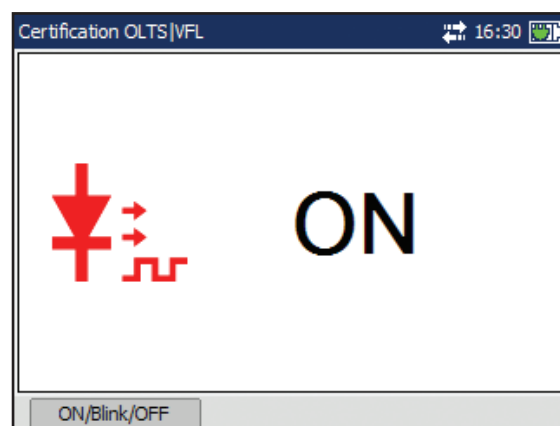

Dirty connector.

Clean connector.

AXS-200/360 with FIP-400.

and documentation.

Facilitating troubleshooting

Troubleshoot link problems such as bad splices, macrobendings and fiber breaks using EXFO's visual fault locator. The VFL's bright red light helps you visually locate many near-end fiber faults and tests polarity. With this valuable and cost-efficient option, you will benefit from another opportunity to expand your business.

Visual fault locator.

Comprehensive certification reports using Optical Report Viewer

Save, upload, manage and print comprehensive certification reports with EXFO's Optical Report Viewer. Among its numerous features, this software's pass/fail thresholds, which are active during download, are automatically activated and displayed in the Report Viewer. It also enables you to produce professional-looking reports with detailed documentation.

Optical Report Viewer: main window.

AXS-200/360 SPECIFICATIONS [a]

Power Meter [b]	AXS-200/362
Detector	Ge
Power range (dBm) [c]	10 to −75
Wavelength range (nm)	800 to 1650
Calibrated wavelengths (nm)	800, 820, 830, 840, 850, 860, 870, 880, 910, 980, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1370, 1390, 1410, 1430, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650
Power uncertainty [d]	±5 % ± 31 pW
Resolution (dB)	±0.01 (10 dBm to −60 dBm)
Automatic offset nulling [e]	Yes
Display units	dB, dBm, W
Tone detection	270 Hz, 1 kHz and 2 kHz
Auto-switching [f]	Yes
Warm-up period (min) [e]	0
Data storage (items)	More than 10 000
Battery life (hours) (typical)	8
Recommended calibration interval (years)	3

GENERAL SPECIFICATIONS

Module and platform size (H x W x D)	284 mm x 125 mm x 82 mm	(11 $^3/_{16}$ in x 4 $^{15}/_{16}$ in x 3 $^1/_4$ in)
Module and platform weight (with battery)	1.45 kg	(3.2 lb)
Temperature		
operating	−10 °C to 50 °C	(14 °F to 122 °F)
storage	−40 °C to 70 °C	(−40 °F to 158 °F)
Humidity	5 % to 95 % relative, non-condensing	
Power supply input	100 V to 240 V to AC at 1.8 A, 50 Hz to 60 Hz	
Power supply output	18 V to 24 V DC at 3.3 A to 2.50 A, 60 W	
Battery	Internal rechargeable Li-Ion battery, with battery state indication	
Self-test	Routine on power-up	
Results storage	128 MB	
Languages	English, French, German, Spanish, Chinese (Simplified and Traditional), Russian, Korean	
Warranty (years)	3	

STANDARD ACCESSORIES

CD-based user guide, Certificate of Calibration, quick reference guide, AC adapter/charger, connector adapter (FOA-XX), lithium ion battery, shoulder strap, carrying case, USB cable, reporting software

VFL

Emitter type	Laser
Wavelength (nm)	650
Output power (dBm) [g]	3

SAFETY

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001: CLASS 3R LASER PRODUCT FOR VFL

If VFL option is available

IEC 60825-1:1993+A2:2001
21 CFR 1040.10
LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
λ: 650 ±10 nm
P$_{out}$ maximum < 5mW (into free space)

FLS-600 SPECIFICATIONS [h]

Model	12D	23BL	234BL	235BL
Central wavelength (nm)	850 ± 25	1310 ± 20	1310 ± 20	1310 ± 20
	1300 +50/−10	1550 ± 20	1550 ± 20	1490 ± 10
			1625 ± 15	1550 ± 20
Spectral width (nm) [i]	50/135	≤ 5	≤ 5	≤ 5
Output power (dBm)	≥ −20/≥ −20 (62.5/125 µm)	≥ 1/≥ 1	≥ 1/≥ −3/≥ −5	≥ 1/≥ −4.5/≥ −3
Power stability (dB) [j] 15 min	±0.05	±0.03	±0.03	±0.03
8 h	±0.1	±0.1	±0.1	±0.1
Auto-switching	Yes	Yes	Yes	Yes
Tone generation	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz
Battery life (hours) (typical in Auto mode)	50	50	50	50
Warranty	3	3	3	3

SAFETY

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001: CLASS 3R LASER PRODUCT FOR VFL

If VFL option is available

IEC 60825-1:1993+A2:2001
21 CFR 1040.10
LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
λ: 650 ±10 nm
P$_{out}$ maximum < 5mW (into free space)

NOTES

a. At 23 °C ± 1 °C, with an FC connector.

b. At 1550 nm, unless otherwise specified.

c. Sensitivity defined as 6 x rms noise level.

d. For calibrated wavelengths. Valid up to 5 dBm for AXS-200/362.

e. For a variation of ±0.05 dB from 18 °C to 28 °C, for power > −50 dBm.

f. At 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1650 nm; for power > −50 dBm.

g. Typical values in 62.5/125 µm fiber.

h. Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.

i. rms for FP lasers; and −3 dB width for LEDs (typical values for LEDs).

j. After a 15-minute warm-up period, and using an APC connector on the power meter (except for multimode sources, for which a PC connector is used). Expressed as ± half the difference between the maximum and minimum values measured during the period.

ORDERING INFORMATION

TK-AXS-360-XX-XX-XX-XX-XX-XX-XX-XX

Model
TK-AXS-360

Probe Option
00 = Without probe
FP4D = 200X/400X video inspection probe
FP4S = 400X video inspection probe

Platform Software Option
00 = Without FIP software
FPS = With FIP software [a]

Module
A1 = AXS-362 fiber certification Ge detector

VFL
00 = Without VFL
VFL = With VFL

Connector Adapter
FOA-12 = Biconic
FOA-14 = D4, D4/PC
FOA-16 = SMA/905, SMA/906
FOA-22 = FC (PC/SPC/UPC/APC), NEC-D3
FOA-28 = DIN 47256 (LSA): DIN 47256 (PC/APC)
FOA-32 = ST (PC/SPC/UPC)
FOA-54 = SC (PC/SPC/UPC/APC)
FOA-78 = Radiall EC
FOA-96B = E-2000
FOA-98 = LC
FOA-99 = MU

Source Option
B1 = FLS-600-12D, 850/1300 nm
B2 = FLS-600-23BL, 1310/1550 nm
B3 = FLS-600-12D-23BL, 850/1300/1310/1550 nm

Connector
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

Documentation Language
A = English
C = Chinese (Simplified)
E = Spanish
F = French
G = German
K = Korean
R = Russian
V = Chinese (Traditional)

Example: TK-AXS-360-FP4D-FPS-A1-FOA-54-B1-EI-EUI-89-A

Note
a. Mandatory with FP4D or FP4S.

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AXS-200

линия продуктов для сетей доступа – SharpTESTER

ТЕСТИРОВАНИЕ СЕТЕЙ ДОСТУПА

Новый авторитет в тестировании сетей доступа: создан для многоуровневого тестирования в оптических и медных линиях доступа

Простота и Эффективность

- Запуска и остановка теста одним нажатием
- Единый пользовательский интерфейс для всей серии модулей SharpTESTER
- Гибкая архитектура, позволяющая адаптироваться к постоянно изменяющимся требованиям пользователей
- Прочное всепогодное исполнение
- Легок в использовании даже для неопытных пользователей или незнакомых с конкретными применениями специалистов
- Быстрое и однозначное заключение по выполненному тесту по критерию «годен/негоден» предлагается пользователю на цветном графическом трансфлективном экране

Решение, позволяющее работать на множестве уровней и в различных средах —Серия из трех модулей

Тестирование медных линий/DSL/Сервисов «три-в-одном»

- Полная проверка абонентского кабеля
- Проверка качества сервисов (QoS), поставляемых с помощью xDSL подключений
- Тестирование Ethernet для проверки сервисов

Тестирование оптических линий

- Тестирование физического уровня волоконной линии доступа

Тестирование Ethernet

- Тестирование Ethernet линий при их инсталляции или в процессе обслуживания

Гибкость в подключении

- Легкая передача данных и обновление программного обеспечения с помощью USB подключения
- USB A/B и RJ-45
- Порт для подключения видеомикроскопа

www.EXFO.com
Тестирования и Измерения в Телекоммуникациях

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ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

Экран	89 мм (3.5 in) LCD, 320 x 240, QVGA, TFT
Интерфейсы	USB хост/клиент, RJ–45 Ethernet 10/100, порт видеомикроскопа
Память	Внутренняя: 512 МБ; USB: 1 ГБ, 2 ГБ и больше
Аккумулятор	Перезаряжаемый Li–Ion аккумулятор
Источник питания	15–24 В, пост тока, 40 Вт минимум

ОБЩИЕ ХАРАКТЕРИСТИКИ

Температура		
Работы	от – 10 ℃ до 50 ℃	(от 14 ℉ до 122 ℉)
хранения[a]	от – 40 ℃ до 70 ℃	(от –40 ℉ до 158 ℉)
Размер (В x Ш x Г)	241.3 мм x 109.2 мм x 38.1 мм	(9 1/2 in x 4 5/16 in x 1 1/2 in)
Вес	0.468 кг	(1.02 lb)
Относительная влажность	от 0 % до 93 % без конденсата	
Гарантия	1 год	

Примечание

a. Максимальная температура для внутреннего аккумулятора 60 ℃ (140 ℉).

АКСССЕССУАРЫ

GP-10-061	Мягкая сумка
GP-10-072	Полужесткая сумка для переноски
GP-10-074	Жесткий кейс AXS–200
GP-2016	Кабель RJ–45 LAN (10 фт)
GP-2019	USB микродиск (1 ГБ)

ИНФОРМАЦИЯ ДЛЯ ЗАКАЗА

AXS-200-XX-XX

Модель
AXS–200 = SharpTester

Видеомикроскоп
FP = Поддержка видеомикроскопа
FP5 = Кабель подключения и головка видеомикроскопа 200x/400x

PSWO
00 = Без дополнительного ПО
FPS[a] = ПО для видеомикроскопа

Примечание
a. Обязательно с FPS.

Пример: AXS–200–FP5–FPS

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