

FOCIS Flex – Fiber Optic Connector Inspection System

Easy, Fast, Compact, Tether-free

U.S. Patent 9,217,688



Features

- 1-button to auto-focus, center, capture, analyze, and save
- IEC, IPC, and user-defined pass/fail analysis
- Untethered, compact, hand-held inspection
- Use independently or pair with OTDR
- Save 10K results internally or share via WiFi or USB

Applications

- Inspect connectors on patch cords or in bulkhead adapters
- Optical network installation, troubleshooting, and maintenance
- Inspect MPO/MTP multi-fiber connectors
- Assure critical fiber infrastructure performs properly
- Keep fiber connections working at optimal performance levels
- Verify proper connector cleaning practices are being used

FOCIS Flex makes connector inspection simple, fast, and convenient. With the press of a single button, FOCIS Flex auto-focuses, captures and centers the end-face image, applies Pass/Fail rules, displays image and Pass/Fail results, saves results internally and/or wirelessly transfers data to a paired FlexScan OTDR or a smart device. It is fast, small, and easy to use to enable 100% connector inspection.

Independent, untethered operation: With rechargeable battery and integrated display, FOCIS Flex can be used independently without requiring an external OTDR or display unit.

Optional pairing with FlexScan OTDR or smart devices: Captured images and Pass/Fail results can be immediately displayed and easily saved on either paired FlexScan OTDR or a smart device equipped with the AFL's free FOCIS Flex App. This capability enables inspection results to be included in reporting and archiving.

Save results internally or externally: FOCIS Flex internally stores up to 10,000 results using file-naming capabilities similar to those of the FlexScan OTDR. A micro-USB port supports fast upload of internally stored results to PC and ensures your FOCIS Flex software can be updated to the latest features and supported languages.

Wide range of adapter tips: Interchangeable adapter tips support connector inspection for a wide range of both single-fiber and multi-fiber patchcords and bulkhead-mounted connectors having either PC or APC polished end-faces.

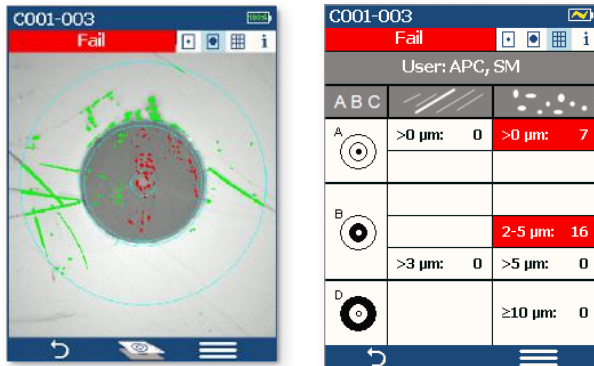
Bundled kits for significant savings: FOCIS Flex is available in kits that include a Basic license for Test Result Manager (TRM® 3.0), user-selected adapter tips and cleaning supplies, and a soft carry case.

Easy reporting and archiving: Included Test Result Manager (TRM 3.0) provides data processing and reporting locally via a PC. The FOCIS Flex mobile App is available for free download from Google play or App Store for sharing data with smart devices.

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Pass/Fail results in seconds: With the press of a single button, FOCIS Flex auto-focuses, captures and centers the end-face image, applies Pass/Fail rules, displays image and Pass/Fail results. Captured Pass/Fail results are easily viewed in either Image or Table view.

Image view shows end-face image with Pass/Fail region overlay, failing scratches/defects highlighted in red, and passing scratches/defects highlighted in green.

Table view shows analysis rule applied to determine Pass/Fail, analysis Zone IDs (A, B, C, D), scratch analysis results for each zone, and defect analysis results for each zone.

Specifications ^a

| OPTICAL PERFORMANCE | |
|---|---|
| Field of View (viewed on FOCIS Flex) | Live: 710 x 860 μm; Captured, Zoomed Out: 560 x 600 μm; Captured, Partially Zoomed In: 360 x 390 μm; Captured, Fully Zoomed In: 180 x 195 μm |
| Field of View (Viewed on a PC) | Stored, Zoomed Out: 700 x 525 μm; Stored, Fully Zoomed In: 240 x 180 μm |
| Manual Detection Capability (minimum) | 0.25 μm |
| Auto Analysis Resolution | <1.0 μm |
| Captured Image Size (Pixels) | 648 x 480 VGA; Images stored internally in three .JPG files, one at each FOV |
| OPERATING FEATURES | |
| Focus | Auto-focus and manual focus |
| Centering | Auto-centering after capture |
| Pass/Fail Analysis | IEC 61300-3-35 (2015), IPC and user-defined criteria |
| Image Capture and File Storage Capacity | 10,000 files |
| File Format (Image and Pass/Fail Results) | jpg, gif |
| Bluetooth Characteristics | SPP to FlexScan and FlexTester OTDRs; IAP to iOS devices |
| USB Characteristics | USB 1.1 mass storage device |
| Supported Languages | English, Chinese Simplified, Chinese Traditional, Finnish, French, German, Italian, Japanese, Korean, Polish, Russian, Spanish, Turkish |
| PHYSICAL AND POWER CHARACTERISTICS | |
| Display size, type, resolution | 2.4", TFT, 240 x 320 with brightness control |
| Battery Type | NiMH, user replaceable |
| Battery Operating Time (typical) | 8 hours (60 tests in 20 minutes each hour; auto-off enabled) |
| Recharge Time | <4.5 hours |
| Power Save Features | Auto-off (disabled, 2, 5, 10 minutes) |
| AC Charger voltage, frequency, current | 100-240 V, 50/60 Hz, 5VDC, 2A |
| Size | 47 x 37 x 183 mm (1.8 x 1.5 x 7.2 in) |
| Weight | 240 g (0.5 lb) |
| ENVIRONMENTAL CHARACTERISTICS | |
| Operating Temperature | 0 to +50 °C |
| Storage Temperature | -40 to +70 °C |
| Relative Humidity | 95%, non-condensing |
| Transit and shock | 2G vibration, 30G shock |

Notes:

a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).

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FlexScan OTDR PRO and BIPM Kits with FOCIS Flex

PRO Kits include the following items:

- FlexScan with accessories (AC charger, carry strap, SC/2.5 mm connector adapters, TRM® 3.0 Advanced Test Results Manager, carry case)
- FOCIS Flex Fiber Optic Connector Inspection System with accessories (AC charger, USB cable, soft carry case/holster)
- Two user-selected adapter tips and one user-selected One-Click Cleaner
- 150 m Fiber Ring (launch cable) with user-specified connectors

Complete kits expand on PRO Kits by adding bend insensitive fiber identifier with optional power meter (OFI-BIPM).

See FlexScan data sheet for FlexScan PRO and Complete Kit ordering information.

FOCIS Flex Adapter Tips (Contact AFL for adapter tips for other connector types)

| DESCRIPTION | AFL NO. |
|---|----------------|
| SC-UPC bulkhead adapter tip | FFLX-01-SC |
| FC-UPC bulkhead adapter tip | FFLX-01-FC |
| ST-UPC bulkhead adapter tip | FFLX-01-ST |
| LC-UPC bulkhead adapter tip | FFLX-01-LC |
| Universal 2.5 mm, UPC ferrule adapter tip | FFLX-01-U25 |
| Universal 1.25 mm, UPC ferrule adapter tip | FFLX-01-U125 |
| SC-APC bulkhead adapter tip | FFLX-4S-ASC |
| FC-APC bulkhead adapter tip | FFLX-4S-AFC |
| LC-APC bulkhead adapter tip | FFLX-4S-ALC |
| Universal 2.5 mm, APC ferrule adapter tip | FFLX-01-A25 |
| Universal 1.25 mm, APC ferrule adapter tip | FFLX-01-A125 |
| FOCIS Flex adapter extension tube, straight, 46 mm | FFLX-01-EXTS46 |
| FOCIS Flex adapter extension tube, straight, 80 mm: | FFLX-01-EXTS80 |
| E2000 PC/UPC bulkhead adapter tip | FFLX-4S-E2K |
| E2000 APC bulkhead adapter tip | FFLX-4S-E2KA |
| Tip for SC/APC (OptiTap®) bulkhead adapter | FFLX-4S-OTA |
| Tip for OptiTip® APC ferrule and bulkhead adapter | DFS1-01-0013MR |
| MTP/PC ferrule & bulkhead adapter extended tip kit (base plus MTP/PC front end tip) | DFS1-00-0037MR |
| MTP/PC and MTP/APC ferrule & bulkhead adapter extended tip kit (base, MTP/PC, MTP/APC front end tips) | DFS1-00-0042MR |
| MTP/APC ferrule and bulkhead adapter extended tip kit (base plus MTP/APC front end tip) | DFS1-01-0010MR |

Ordering Information

| DESCRIPTION | AFL NO. |
|--|-----------------|
| FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM® 3.0 reporting software, reference guide, no tips | FOCIS-FLX-P4XN |
| FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, 2 user-selected UPC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner | FOCIS-FLX-P4XU |
| FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, 2 user-selected APC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner | FOCIS-FLX-P4XA |
| FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, user-selected UPC adapter tips (ferrule and bulkhead), 2 user-selected APC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner | FOCIS-FLX-P4XUA |

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Test Management and Reporting Software


| DESCRIPTION | AFL NO. |
|--|---------------|
| TRM 3.0 with Basic License, USB delivery (included with all FOCIS Flex kits) | TRM3-BASIC |
| TRM 3.0 upgrade from Basic to Advanced License, USB delivery | TRM3-UPGRADE |
| TRM 3.0 upgrade from Basic to Advanced License, email delivery | TRM3-UP-EMAIL |
| FOCIS Flex App (Google play or App Store) | Free Download |

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FlexXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option

Qualifications

| CATEGORY | REGULATION/STANDARD | QUALIFICATION |
|------------------|---------------------|--|
| CE Marking | EU | Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking |
| Safety /EMC /EMI | IEC | Compliant to IEC 61010-1 for safety requirements for electrical equipment |
| | EN | Compliant to EN 61010-1 for safety requirements for electrical equipment |
| | IEC | Compliant to IEC 61326-1 for EMC requirements for electrical equipment |
| | EN | Compliant to EN 61326-1 for EMC requirements for electrical equipment |
| | EN | Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment |
| | FCC | Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions |
| | FDA | Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products |
| RoHS | IEC | Compliant to IEC 60825-1 for safety of laser products |
| | EU | Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3) |
| Test Method | IEC | Compliant to IEC 61300-3-35 for visual inspection of fiber optic connectors and fiber-stub transceivers |
| | IPC | Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly |