

FOCIS Duel Fibre Optic Connector Inspection System



Features

- Auto-focus (both ports) and auto-centering (Port 1) for fast, easy inspection
- Rechargeable battery lasts more than eight hours
- Self-contained, tether-free, compact, hand-held inspection solution
- IEC 61300-3-35 (2015), IPC 8497-1, AT&T TP-76461 and user-defined auto-inspection (Port 1)
- Available with more than three dozen tips supporting all commonly used connector types, including MPO/MTP multi-fibre connectors and bulkheads
- Field replaceable NiMH battery
- Snout and adapter tip slots eliminate loosening during normal operation

Applications

- Inspect connectors on bulkhead adapters (Port 1) and patch cords (Port 2) without swapping adapter tips
- Optimal tool for optical network installation, turn-up, troubleshooting and maintenance
- MPO/MTP multi-fibre multi-row connectors inspection
- Critical fibre infrastructure performance assurance
- Maintenance of fibre connections at highest optical performance levels
- Verification that proper connector cleaning practices are being used

FOCIS Duel is a self-contained twin-ported Bluetooth connected fibre optic connector inspection probe with integrated screen. The first port (right hand side Port 1) is fully featured, identical to AFL's FOCIS Flex. The second port (left hand side Port 2) has fast and convenient female LC "click-in" adapters, auto-focus and 2X zoom capabilities. The FOCIS Duel can perform IEC, IPC, AT&T and userdefined end-face cleanliness analysis and store Port 1 images and reports locally. The AFL FOCIS App (iOS and Android) provides a comprehensive and user-friendly feature set as well as connectivity with AFL's cloud-based aeRos® workflow automation platform.

Pass / fail results in seconds: With the press of a single button, Port 1 of the FOCIS Duel auto-focuses, captures, centers and analyzes the end-face image to industry standard IEC 61300-3-35 (2015), IPC, AT&T and user-defined criteria.

Untethered operation: With rechargeable battery and integrated 2.4" colour TFT LCD screen, FOCIS Duel can be used independently.

Wide range of adapter tips: Port 1 – Interchangeable adapter tips support single and multi-fibre connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces. A key on the probe snout combined with a slot on the adapter tips assures that adapter tips never loosen during use, under any circumstances. Quad-slotted APC adapter tips ensure the screen is visible in any use case.

Port 2 – A slot on the adapter tips combined with a keyed snout eliminates loosening during normal use. Port 2 adapter tips are available for all common connector types – Universal 1.25 mm and 2.5 mm, SC and LC in both UPC and APC polish types.

Inspection kits include AC charger, carry strap, two user-selected adapter tips (optionally), and soft carry case.



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Specifications ^a

FIRST PORT (PORT 1) PARAMETERS	SPECIFICATION
Field of View (FOV; viewed on FOCIS Duel)	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 (FOV; viewed on a PC)	Captured, Zoomed Out: 525 x 700 µm; Captured, Partially Zoomed In: 355 x 475 µm; Captured, Zoomed In: 175 x 235 µm
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Internally Stored Image Size (pixels)	640 x 480 VGA; images stored internally in three .JPG files, one at each FOV
Bluetooth Image and Overlay	2 x QVGA (320 x 240; image + overlay) to AFL test instruments (SPP) 1 x VGA (640 x 480) file to Apple iOS devices (IAP / MFi)
Maximum No Damage Live Fibre Power Level	+20 dBm; Image cannot be viewed if fibre is live
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
Centering	Auto-centering (<1 sec)
Zoom in Live Mode	1x and 2x modes
Image Capture with Pass/Fail Analysis	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF, Port 1 only
File Storage Capacity	10,000 files
SECOND PORT (PORT 2) PARAMETERS	
Field of View (FOV; Viewed on FOCIS Duel)	Live: 365 x 440 µm and 183 x 220 µm
Manual Detection Capability (minimum)	0.25 µm
Maximum No Damage Live Fibre Power Level	+20 dBm; Image cannot be viewed if fibre is live
Zoom in Live Mode	1x and 2x modes
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
OPERATING FEATURES	
Bluetooth Characteristics	IAP (iPod accessory protocol), SPP 0 x 1101
USB Characteristics	USB 2.0 mass storage device
Supported Languages	English, Finnish, French, German, Italian, Japanese, Polish, Russian, Spanish, Turkish
ENVIRONMENT PARAMETERS	
Storage Temperature -	40°C to +70°C
Operating Temperature	0°C to +50°C
Relative Humidity	0 to 95% RH
Vibration Limits	2G (transportation)
Transit Drop (without soft case)	300 mm (12 inches, all sides, dust cover installed)
Transit Drop (with soft case)	460 mm (18 inches, all sides, dust cover installed)
PHYSICAL AND POWER CHARACTERISTICS	
Display Size, Type, Resolution	2.4", colour TFT, backlit, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Operating Time (typical)	8 hours ±; 3 hours continuous
Power Save Features	Auto-off (disabled, 2, 5, 10 min)
Recharge Time	≤4 hours
Low-Battery Warning	Alerts when ≤15 minutes battery operation remains
AC Charger Voltage, Frequency, Current	100-240VAC, 50/60Hz, 5VDC, 2A
Charger Jack	3.2 mm, center positive
Size	47 x 37 x 175 mm (1.8 x 1.5 x 6.8 in)
Weight	280 g (0.62 lb)
Safety & Compliance Certifications	UL, CE, FCC

Notes:

- a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
b. Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.
c. Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

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Ordering Information

PART NUMBER	DESCRIPTION
FOCIS-DUEL-N	FOCIS Duel Kit, soft carry case, AC charger, with no tips or One-Click® cleaner
FOCIS-DUEL-K08	FOCIS Duel Kit, soft carry case, AC charger, PORT 1 – 4 tips (for bulkhead testing): 1.25 mm, 1.25 mm APC, 2.5 mm, 2.5 mm APC PORT 2 – 4 tips (for patch-cord testing) : LC, LCA SC, SCA
FOCIS-DUEL-K12	FOCIS Duel Kit, soft carry case, AC charger, PORT 1 – 8 tips (for bulkhead/patch-cord testing): 1.25 mm, 1.25 mm APC, 2.5 mm, 2.5 mm APC, LC, LCA, SC, SCA PORT 2 – 4 tips (for patch-cord testing) : LC, LCA SC, SCA

FOCIS Duel Adapter Tips

PART NUMBER	PORT USAGE	DESCRIPTION	TIP ID
FFLX-4S-ASC	1	Quad Slotted SC APC Bulkhead Tip	XASC
FFLX-4S-AFC	1	Quad Slotted FC APC Bulkhead Tip	XAFC
FFLX-4S-ALC	1	Quad Slotted LC APC Bulkhead Tip	XALC
FDUO-01-ULC	2	Slotted Female LC UPC Adapter	SULC
FDUO-01-ALC	2	Slotted Female LC APC Adapter	SALC
FDUO-01-USC	2	Slotted Female SC UPC Adapter	SUSC
FDUO-01-ASC	2	Slotted Female SC UPC Adapter	SASC
FDUO-01-U125	2	Slotted Universal 1.25 mm UPC Adapter	SU125
FDUO-01-A125	2	Slotted Universal 1.25 mm APC Adapter	SA125
FDUO-01-U25	2	Slotted Universal 2.5 mm UPC Adapter	SU25
FDUO-01-A25	2	Slotted Universal 2.5 mm APC Adapter	SA25

