

Fiber Optic Sensors: FR Dimensions

Automation Control Products

PLC Controls

HMI Panels

Industrial Sensors

Area Sensors

Color Mark Sensors

Fiber Optic Sensors

FX-100

FX-400

FX-500

FT Fibers

FR Fibers

FR Fibers

Laser Sensors

Measurement Sensors

Optical Touch Switches

Photoelectric Sensors

Pressure/Flow Sensors

Proximity Sensors

Safety Light Curtains

Semiconductor Sensors

Sensor Controllers

Special Usage Sensors

Static Ionizers

Video Borescopes

Video Markers

Servos & Drives

UV Curing Systems

Machine Vision/ID Products

Timers

Limit Switches

Temperature Controllers

Counters

Hour Meters

Power Meters


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Dimensions/model drawings for this product appear below.

Units are usually noted in millimeters (mm) and in inches (in) or inches (in) (if provided).

[Download FR product catalog in PDF format for more in-depth part form information](#)
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FR-KV1

Retractable type? Free-cut

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FR-KZ21

Retroreflective type? Free-cut

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FR-KZ21E

Retroreflective type? Free-cut

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FR-WKZ11

Retroreflective type? Free-cut

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FB-1

Fiber bender (Optional)

Material: PP (Containing steel blade)

FTP-? FDP-?

Protective tube (Optional)

FTP-?, FDP-N?

| Model No. | Length L |
|--|-------------------------------|
| FTP-500, FTP-N500, FDP-N500, FDP-500 | 500 ^{+0.10} -0.394 |
| FTP-1000, FTP-N1000, FDP-N1000, FDP-1000 | 1,000 ^{+0.10} -0.394 |
| FTP-1500, FTP-N1500, FDP-N1500, FDP-1500 | 1,500 ^{+0.10} -0.394 |

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FV-BR1

Photo-terminal (for vacuum-resistant fiber) (Optional)

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FV-LE1

Vacuum resistant expansion lens (Optional)

Material: Enclosure Aluminum alloy (A6061T6)

Lens BK7

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FV-SV2

Vacuum resistant side view lens (Optional)

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FX-AT2

Attachment for fixed-length fiber (Accessory for fixed-length fiber)

Material: POM

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FX-AT3

Attachment for ø2.2 mm ø0.087 in fiber (Accessory for ø2.2 mm ø0.087 in fiber)

Material: Polycarbonate

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FX-AT4

Attachment for ø1 mm ø0.039 in fiber (Accessory for ø1 mm ø0.039 in fiber)

Material: Holder??? PA (Nylon 66)

Ground??? POM

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FX-AT6

Attachment for ø1 mm ø0.039 in / ø1.3 mm ø0.051 in mixed fiber (Accessory for ø1 mm ø0.039 in / ø1.3 mm ø0.051 in mixed fiber)

Material: Holder??? PA (Nylon 66)

Ground??? POM

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FX-CT2

Fiber cutter (Accessory for fixed-cut type fiber)

Material: ABS

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FX-LE1

Expansion lens (Optional)

Material: Enclosure??? Brass (Nickel plated)

Lens??? Glass

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FX-LE2

Super-expansion lens (Optional)

Material: Enclosure??? Stainless steel (SUS303)

Lens??? Glass

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FX-MR1

Pinpoint spot lens (Optional)

Material: Enclosure??? Aluminum (Black ALMITE)

Lens??? Glass

Note: In order to obtain a ø0.5 mmø0.02 in spot, it is necessary to keep "L" in the above figure, within the specified range.

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FX-MR2

Zoom lens (Optional)

Material: Enclosure??? Aluminum (Black ALMITE)

Lens??? Glass

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FX-MR3

Finest spot lens (Optional)

Material: Enclosure??? Aluminum (Black ALMITE)

Lens??? Glass

Notes: 1) In order to obtain a ø0.3 mmø0.012 in spot, it is necessary for "L" in the above figure, to be 28.5 mm ± 1.122 in.

2) When inserting the fiber, insert fully 88 it stops.

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FX-MR5

Zoom lens (Optional)

Material: Enclosure??? PBT (Black)

Lens??? Glass

NTF-FXMR5 (exclusive nut) is attached.

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FX-MR6

Finest spot lens (Optional)

Material: Enclosure??? Aluminum (Black ALMITE)

Lens??? Acrylic

Notes: 1) In order to obtain a ø1 mmø0.004 in spot, it is necessary for "L" in the above figure, to be 29.5 mm ± 1.161 in.

2) When inserting the fiber, insert fully 88 it stops.

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FX-SV1

Side-view lens (Optional)

Material: Enclosure??? Brass (Nickel plated)

Lens??? Glass

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MS-EX-3

Mounting bracket for FX-MR2 (Accessory for FX-MR2)

Material: Brass (Nickel plated)

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MS-FD-2

Fiber mounting bracket (Accessory for FD-WKZ1, FR-WKZ11, FD-H30-KZ1V-S)

Material: Stainless steel (SUS)

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RF-003

Reflector for FR-KZ21/KZ21E (Accessory for FR-KZ21/KZ21E)

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RF-210

Reflector (Optional)

Material: Acrylic (Reflector)

ABS (Base)

Note: Two M3 (length 8 mm)ø0.315 in screws with washers and two nuts are attached.

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RF-220

Reflector (Optional)

Material: Acrylic (Reflector)

ABS (Base)

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RF-230

Reflector (Optional)

Material: Acrylic (Reflector)

ABS (Base)

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