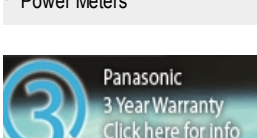


Fiber Optic Sensors: Tough Fibers Part Numbers

Automation Control Products

- ▶ PLC Controls
- ▶ HMI Panels
- ▶ Industrial Sensors
 - Area Sensors
 - Color Mark Sensors
 - Fiber Optic Sensors
 - FX-100
 - FX-300
 - FX-400
 - FX-500 Version 2
 - ▶ **Tough Fibers**
- Laser Sensors
- Measurement Sensors
- Photoelectric Sensors
- Pressure/Flow Sensors
- Proximity Sensors
- Safety Light Curtains
- Semiconductor Sensors
- Sensor Controllers
- Special Usage Sensors
- Static Ionizers
- Video Borescopes
- ▶ Laser Markers
- ▶ Servos & Drives
- ▶ UV Curing Systems
- ▶ Machine Vision/ID Products
- ▶ Timers
- ▶ Limit Switches
- ▶ Temperature Controllers
- ▶ Counters
- ▶ Hour Meters
- ▶ Power Meters



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Part numbers for Tough Fibers appear below.

You can sort models by clicking on the column title. You can also filter models by using the drop down boxes.

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- ▶ [Retro-Reflective FR Tough Fibers](#)

Thrubeam FT Tough Fibers

| Model Name | Type | Bending Radius (mm) | Sensing Range (mm) | Fiber Length (mm) |
|------------|---|---------------------|--------------------|-------------------|
| FT-140 | M14 Threaded, w/ Expansion lens, Recommended Replacement for FT-FM10L | 4 | 19600 | 10000 |
| FT-31S | M3 Threaded, Recommended Replacement for FT-NFM2S/FT-NFM2S4 | 2 | 1220 | 2000 |
| FT-31W | M3 Threaded, Recommended Replacement for FT-W4 | 1 | 990 | 2000 |
| FT-42S | M4 Threaded, Sleeve 40mm, Recommended Replacement for FT-FM2S/FT-FM2S4 | 4 | 3600 | 2000 |
| FT-42W | M4 Threaded, Recommended Replacement for FT-W8 | 1 | 3300 | 2000 |
| FT-43 | M4 Threaded, Recommended Replacement for FT-B8 | 4 | 3600 | 2000 |
| FT-45X | M4 Threaded Stainless Jacketed, Recommended Replacement for FT-P81X | 4 | 1600 | 1000 |
| FT-A11 | 11mm Wide Area, Recommended Replacement for FT-A8/FT-WA8 | 2 | 3600 | 2000 |
| FT-A11W | 11mm Wide Area, Recommended Replacement for FT-WA8 | 1 | 3600 | 2000 |
| FT-A32 | 32mm Wide Area, Recommended Replacement for FT-A30/FT-WA30 | 2 | 3600 | 2000 |
| FT-A32W | 32mm Wide Area, Recommended Replacement for FT-WA30 | 1 | 3600 | 2000 |
| FT-AL05 | 55mm Array, Recommended Replacement for FT-AFM2/FT-AFM2E | 2 | 2300 | 2000 |
| FT-F93 | Liquid sensing W23xH20xD17, Recommended Replacement for FT-902 | 2 | | 2000 |
| FT-KS40 | 3mm Non-Threaded, Narrow beam, Recommended Replacement for FT-K8 | 2 | 3600 | 2000 |
| FT-KV26 | 3mm Non-Threaded, Narrow beam, Recommended Replacement for FT-KV1 | 2 | 2500 | 2000 |
| FT-KV40 | 4mm Non-Threaded, Side-view, Recommended Replacement for FT-KV8/FT-WKV8 | 2 | 3600 | 2000 |
| FT-KV40W | 4mm Non-Threaded, Side-view, Recommended Replacement for FT-WKV8 | 1 | 3600 | 2000 |
| FT-R40 | M4 Threaded Right-Angle, Recommended Replacement for FT-P81X | 4 | 3600 | 2000 |
| FT-R41W | M4 Threaded, Recommended Replacement for FT-WR80 | 1 | 3200 | 2000 |
| FT-R42W | M4 Threaded, Square head, Recommended Replacement for FT-WR80L | 1 | 3600 | 2000 |
| FT-S11 | 1mm Non-Threaded, Recommended Replacement for FT-PS1 | 2 | 350 | 2000 |
| FT-S21W | 15mm Non-Threaded, Recommended Replacement for FT-WS4 | 1 | 990 | 2000 |
| FT-S31W | 3mm Non-Threaded, Recommended Replacement for FT-WS3/FT-WS8 | 1 | 3300 | 2000 |
| FT-S32 | 25mm Non-Threaded, Long Sensing Range, Recommended Replacement for FT-SFM2/FT-SFM2L/FT-WS8L | 10 | 3600 | 2000 |
| FT-V23 | 2mm Non-Threaded, Side-view, Recommended Replacement for FT-V22 | 4 | 1800 | 2000 |
| FT-V24W | 2mm Non-Threaded, Side-view, Recommended Replacement for FT-WV42 | 1 | 380 | 2000 |
| FT-V25 | 2mm Non-Threaded, Side-view, Recommended Replacement for FT-V41/FT-WV42 | 2 | 900 | 2000 |
| FT-V30 | 25mm Non-Threaded, Side-view, Recommended Replacement for FT-SFM2SV2 | 4 | 2200 | 2000 |
| FT-V40 | 4mm Non-Threaded, Side-view, Recommended Replacement for FT-V10 | 4 | 3600 | 2000 |
| FT-Z20HBW | W2xH10xD10 Flat Top Sensing, Recommended Replacement for FT-WZ4HB | 1 | 1100 | 1000 |
| FT-Z30 | W85xH12xD3 Flat Front Sensing, Recommended Replacement for FT-Z8/FT-WZ8 | 2 | 3600 | 2000 |
| FT-Z30E | W3xH12xD8 Flat Side Sensing, Recommended Replacement for FT-Z8E/FT-WZ8E | 2 | 3600 | 2000 |
| FT-Z30EW | W3xH12xD8 Flat Side Sensing, Recommended Replacement for FT-WZ8E | 1 | 3600 | 2000 |
| FT-Z30H | W3xH8xD12 Flat Top Sensing, Recommended Replacement for FT-Z8H/FT-WZ8H | 2 | 3600 | 2000 |
| FT-Z30HW | W3xH8xD12 Flat Top Sensing, Recommended Replacement for FT-WZ8H | 1 | 3600 | 2000 |
| FT-Z30W | W85xH12xD3 Flat Front Sensing, Recommended Replacement for FT-WZ8 | 1 | 3600 | 2000 |
| FT-Z40HBW | W35xH14xD11 Flat Top Sensing, Recommended Replacement for FT-WZ4HB | 1 | 3300 | 1000 |

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Thrubeam FT Tough Fibers Accessories

| Model Name | Description |
|------------|------------------------------|
| MS-FD-3 | Bracket for FT-KZ40/FT-KZ40W |

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Diffuse-Reflective FD Tough Fibers

| Model Name | Type | Bending Radius (mm) | Sensing Range (mm) | Fiber Length (mm) |
|------------|--|---------------------|--------------------|-------------------|
| FD-31W | M3 Threaded Diffuse, Recommended Replacement for FD-WT4 | 1 | 330 | 2000 |
| FD-32G | M3 Threaded Coaxial, Diffuse, Recommended Replacement for FD-G6 | 2 | 650 | 2000 |
| FD-32GX | M3 Threaded Stainless Jacketed, Coaxial, Diffuse, Recommended Replacement for FD-G6X | 2 | 630 | 2000 |
| FD-41S | M4 Threaded Diffuse, Sleeve 40mm, Recommended Replacement for FD-NFM2S/FD-NFM2S4/FD-W44 | 2 | 515 | 2000 |
| FD-41SW | M4 Threaded Diffuse, Sleeve 40mm, Recommended Replacement for FD-W44 | 2 | 330 | 2000 |
| FD-41W | M4 Threaded Diffuse, Recommended Replacement for FD-WT8 | 1 | 900 | 2000 |
| FD-42G | M4 Threaded Coaxial, Diffuse, Recommended Replacement for FD-G4/FD-WG4 | 2 | 650 | 2000 |
| FD-42GW | M4 Threaded Coaxial, Diffuse, Recommended Replacement for FD-WG4 | 1 | 670 | 2000 |
| FD-61G | M6 Threaded Diffuse, Coaxial, Recommended Replacement for FD-W8 | 4 | 1100 | 2000 |
| FD-61S | M6 Threaded Diffuse, Sleeve 40mm, Recommended Replacement for FD-FM2S/FD-FM2S4 | 4 | 1200 | 2000 |
| FD-61W | M6 Threaded Diffuse, Recommended Replacement for FD-W8 | 1 | 900 | 2000 |
| FD-62 | M6 Threaded Diffuse, Recommended Replacement for FD-B8 | 4 | 1500 | 2000 |
| FD-64X | M6 Threaded Stainless Jacketed, Coaxial, Diffuse, Recommended Replacement for FD-P81X | 4 | 670 | 2000 |
| FD-A16 | W7xH15xD30 Wide Beam, Recommended Replacement for FD-A15 | 4 | 200 | 2000 |
| FD-AL11 | Array Diffuse, Recommended Replacement for FT-AFM2/FT-AFM2E | 2 | 670 | 2000 |
| FD-E13 | 1.5mm Non-Threaded, Ultra-small Diffuse, Recommended Replacement for FD-E12 | 4 | 50 | 2000 |
| FD-E23 | 3mm Non-Threaded, Ultra-small Diffuse, Recommended Replacement for FD-E22 | 4 | 170 | 2000 |
| FD-EG30 | M3 Ultra-small Dia, Threaded Coaxial, Diffuse, Recommended Replacement for FD-EG1 | 4 | 170 | 2000 |
| FD-EG30S | M3 Ultra-small Dia, Threaded Coaxial, Diffuse, Sleeve 15mm, Recommended Replacement for FD-ENMS1S/FD-EN500S1 | 4 | 170 | 2000 |
| FD-EG31 | M3 Ultra-small Dia, Threaded Coaxial, Diffuse, Recommended Replacement for FD-EG2/FD-EG3 | 4 | 85 | 2000 |
| FD-F71 | Liquid Leak detection, 5M cable, Recommended Replacement for FD-F705 | 4 | | 5000 |
| FD-FA93 | Liquid sensing, W6.5xH28.3xD17, Recommended Replacement for FD-FA90 | 4 | | 2000 |
| FD-L10 | W12xH19xD3 Convergent, Recommended Replacement for FD-L44S | 4 | 6 | 2000 |
| FD-L11 | W12xH19xD3 Convergent, Recommended Replacement for FD-L44 | 4 | 11.5 | 2000 |
| FD-L12W | W7.2xH7.5xD2 Convergent, Ultra-small, Recommended Replacement for FD-WL48 | 1 | 15 | 2000 |
| FD-L20H | W8xH18xD14 Convergent, Recommended Replacement for FD-L4 | 2 | 45 | 2000 |
| FD-L21 | W24xH21xD4 Convergent, Recommended Replacement for FD-L41/FD-WL41 | 2 | 19 | 2000 |
| FD-L21W | W24xH21xD4 Convergent, Recommended Replacement for FD-WL41 | 1 | 15 | 2000 |
| FD-L22A | W17xH29xD3.8 Convergent, Recommended Replacement for FD-L43 | 2 | 31 | 2000 |
| FD-L23 | W18xH29xD3.8 Convergent, Recommended Replacement for FD-L47 | 2 | 30 | 3000 |
| FD-L30A | W20xH29xD3.8 Convergent, Recommended Replacement for FD-L45 | 2 | 43 | 3000 |
| FD-L31A | W20xH29xD3.8 Convergent, Recommended Replacement for FD-L45A | 4 | 35 | 3000 |
| FD-L32H | W25xH7.3xD30 Convergent, Recommended Replacement for FD-L46 | 4 | 110 | 4000 |
| FD-R60 | M6 Threaded Right-Angle Diffuse, Recommended Replacement for FD-R80 | 4 | 1100 | 2000 |
| FD-S21 | 1.5mm Non-Threaded, Diffuse, Recommended Replacement for FD-P2 | 2 | 190 | 2000 |
| FD-S32 | 3mm Non-Threaded, Diffuse, Recommended Replacement for FD-P50/FD-S80/FD-WS8 | 4 | 1200 | 2000 |
| FD-S32W | 3mm Non-Threaded, Diffuse, Recommended Replacement for FD-WS8 | 1 | 900 | 2000 |
| FD-S33GW | 3mm Non-Threaded, Coaxial Diffuse, Recommended Replacement for FD-WSG4 | 1 | 670 | 2000 |
| FD-V30 | 3mm Non-Threaded, Side-view Diffuse, Recommended Replacement for FD-V41/FD-WV42 | 2 | 240 | 2000 |
| FD-V30W | 3mm Non-Threaded, Side-view Diffuse, Recommended Replacement for FD-WV42 | 1 | 80 | 2000 |
| FD-V50 | 5mm Non-Threaded, Side-view Diffuse, Recommended Replacement for FD-SFM2SV2 | 4 | 370 | 2000 |
| FD-Z20HBW | W2xH10xD10 Flat Diffuse, Top Sensing, Recommended Replacement for FT-WZ4HB | 1 | 340 | 1000 |
| FD-Z40HBW | W3.5xH14xD11 Flat Diffuse, Top Sensing, Recommended Replacement for FT-WZ7HB | 1 | 760 | 1000 |
| FD-Z50HW | W5.2xH9.5xD15 Flat Long range Diffuse, Top Sensing, Recommended Replacement for FT-WKZ1 | 1 | 2500 | 1000 |

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Retro-Reflective FR Tough Fibers

| Model Name | Type | Bending Radius (mm) | Sensing Range (mm) | Fiber Length (mm) |
|------------|---|---------------------|--------------------|-------------------|
| FR-KZ22E | Retro-Reflective fiber, Wafer Mapping, Recommended Replacement for FR-KV1 | 2 | 570 | 2000 |
| FR-KZ50E | Retro-Reflective fiber, Side sensing narrow beam, Recommended Replacement for FR-KZ21 | 2 | 1000 | 2000 |
| FR-KZ50H | Retro-Reflective fiber, Top sensing narrow beam, Recommended Replacement for FR-KZ21 | 2 | 1000 | 2000 |
| FR-Z50HW | Retro-Reflective fiber with polarizing filters, Recommended Replacement for FR-WKZ11 | 1 | 1900 | 2000 |

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