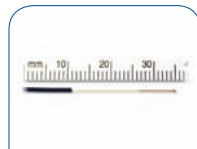
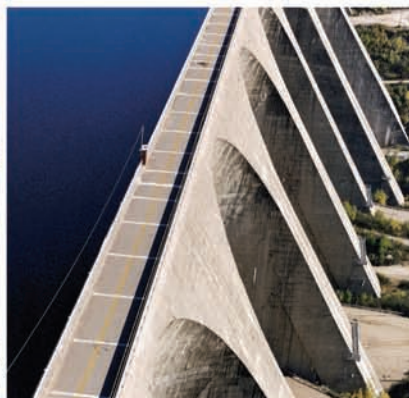


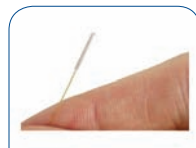
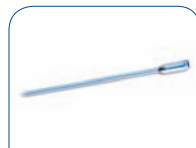
FIBER OPTIC SENSORS



MODEL	FOT-L	FOT-M	TPT-32	FOT-HERO	FOD	FOS-N	EFO	SFO-W
Description	Fiber optic temperature sensors	High accuracy medical fiber optic temperature sensor	Fiber optic temperature sensor for power transformer	Fiber optic temperature sensor (EED)	Fiber optic linear position and displacement sensor	Fiber optic strain sensor	Embeddable fiber optic strain gauge	Surface weldable fiber optic strain sensor
Range	FOT-L-BA -40 to 250°C (-40 to 482°F) FOT-L-SD -40 to 300°C (-40 to 572°F)	20 to 85°C (68 to 185°F)	-40 to 225°C (-40 to 437°F)	0 to 120°C (32 to 248°F)	20 mm (0.8 in) linear stroke	Up to ±5000 µε	Up to ±3000 µε	Up to ±2000 µε
Accuracy	±1°C	±0.3°C	±2°C	N/A	±0.02 mm (0.0008 in)	Range dependent	Range dependent	Range dependent
Response time	≤1.5 sec.	<750 ms	0.25 sec.	<1 millisecond	—	—	—	—
Resolution	0.1°C	0.1°C	0.1°C	1 mA	0.002 mm (0.00008 in)	0.01% of full scale	0.01% of full scale	0.01% of full scale
Probe dimensions (at tip)	OD: 1.7 mm	OD: 800 µm	OD: 1.50 mm	OD: 150 µm	OD: 5 mm	OD: 230 µm	Length: 70 mm	25 × 5 mm
Fiber optic cable	1.0 mm OD PTFE cable	0.9 mm OD Hytel™ cable	3.0 mm OD PTFE Spiral wrap cable	1.0 mm OD PTFE cable	3.0 mm OD Polyurethane & Kevlar cable	3.0 mm OD Polyurethane & Kevlar cable	3.0 mm OD Polyurethane & Kevlar cable	3.0 mm OD Polyurethane & Kevlar cable
Operating temperature	—	—	—	—	-20 to 170°C (-4 to 338°F)	-40 to 250°C (-40 to 482°F)	-40 to 85°C (-40 to 185°F)	-40 to 85°C (-40 to 185°F)



PRODUCT OVERVIEW



MODEL	FOP-M	FOP-MIV	FOP-C	FOP-MHP	FOP-MH	FOP-MS/FOP-MSL	FOP-MA	FRI
Description	Fiber optic pressure sensor	Fiber optic pressure transducer (medical)	Fiber optic pressure sensor	Fiber optic high pressure sensor	Fiber optic high-temperature pressure sensor	Fiber optic pressure sensor (side-looking)	Fiber optic acoustic pressure sensor	Fiber optic refractive index sensor
Range	0-5 psi 0-50 psi 0-150 psi 0-1000 psi	R1 -300 to 300 mmHg R3 -300 to 7500 mmHg	30-10 000 psi (170 to 69 000 kPa)	0-3000 psi 0-5000 psi	0-150 psi 0-1000 psi 0-3000 psi	FOP-MS 0-5 to 0-1000 psi FOP-MSL 0-50, 0-1000 psi	0-2 psi	From 1.0000 to 1.7000 RI
Accuracy	±0.5% of full scale	R1 1.5% R3 0.1%	0.25% of full scale	<2% of full scale	±1% of full scale	±0.5% of full scale	±1% of full scale	±0.0005 RI
Response time	—	—	—	—	—	—	—	—
Resolution	<0.2% of full scale	R1 0.3 mmHg (40 Pa) R3 2.6 mmHg (0.34 kPa)	0.00625% typical with averaging	<0.5% of full scale	0.1% of full scale	0.1% of full scale	0.0075 psi	0.0001 RI
Probe dimensions (at tip)	OD: 800 µm	OD max: 560 µm	¼-18 NPT female fitting	OD: 800 µm	OD: 800 µm	FOP-MS OD: 800 µm FOP-MSL 5 × 6 mm	OD: 800 µm	OD: 800 µm
Fiber optic cable	1.0 mm OD PTFE cable	1.0 mm OD PTFE cable	3.0 mm OD Polyurethane & Kevlar cable	1.0 mm OD PTFE cable	1.0 mm OD PTFE cable	1.0 mm OD PTFE cable	1.0 mm OD PTFE cable	1.0 mm OD PTFE cable
Operating temperature	-20 to 150°C (-4 to 302°F)	R1 10 to 50°C (50 to 122°F) R3 -40 to 50°C (40 to 122°F)	-20 to 60°C (-4 to 140°F)	-20 to 150°C (-4 to 302°F)	-20 to 450°C (-4 to 842°F)	-20 to 150°C (-4 to 302°F)	-20 to 150°C (-4 to 302°F)	0 to 100°C (32 to 212°F)
				<i>*Engineering prototype</i>	<i>*Engineering prototype</i>	<i>*Engineering prototype</i>	<i>*Engineering prototype</i>	

FIBER OPTIC SENSORS & SOLUTIONS



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FIBER OPTIC SIGNAL CONDITIONERS



MODEL	FTI-10	UMI	TMI	DMI	BUS SYSTEM	VELOCE 50	VELOCE 100	MW SYSTEM	NORTECH SENTINEL	NORTECH TT	FPI-HR
Application(s)	R&D/Industrial/Medical	R&D/Industrial/Medical	R&D/Industrial/Medical	R&D/Industrial/MRI Testing/Laboratory	R&D/Industrial/Medical	R&D	HERO/EED/EMC Solution	Food	Transformer	Transformer	R&D/Industrial/Medical
Description	Single channel Signal conditioner	Multichannel Signal conditioner	Multichannel Signal conditioner (Temperature)	Multichannel Signal conditioner	Multichannel Signal conditioner	Multichannel Signal conditioner	Multichannel Signal conditioner (Temperature/Current)	Microwave Work Station (Temperature)	Multichannel Signal conditioner	Multichannel Signal conditioner	Multichannel Signal conditioner
Technology	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	WLI (White Light Interferometry)	GaAs spectrum	GaAs spectrum	WLI (White Light Interferometry)
Number of channel(s)	1	4 or 8	4 or 8	16 or 32	1 to 8	1 to 8	1 to 8	8	1 to 6	1, 2, 4 or 6	1 or 2
Sampling rate	10 Hz	20 Hz	20 Hz	20 Hz	100, 500, 1000 Hz	200 kHz	200 kHz	20 Hz	0.1 Hz	1 Hz total system	Up to 250 Hz / module
Analog outputs	±10 V	±5 V	±5 V	±5 V	±10 V	±5 V	±5 V	N/A	4–20 mA or 0–10 V	4–20 mA Optional 0.1 mA and 0–10 V	±5 V analog output or 4–20 mA (optional)
Communication	RS-232	RS-232; USB	RS-232; USB	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232 and RS-485 Modem capabilities 7 form-C (SPDT) relays	RS-232 and RS-485 MODBUS	RS-232; RS-485; USB
Type of acquisition	—	Sequential (150 ms switching time)	Sequential (150 ms switching time)	Sequential (150 ms switching time)	Parallel	Parallel	Parallel	Sequential (150 ms switching time)	Sequential	Sequential	Sequential/Parallel

SENSORS vs CONDITIONERS

Temperature Sensors

FOT-L	✓	✓	✓	✓	✓			✓			✓
FOT-M	✓	✓	✓	✓	✓			✓			✓
TPT-32									✓	✓	
FOT-HERO							✓				✓

Pressure Sensors

FOP-M (MA/MH/MHP/ MS/MSL)	✓	✓		✓	✓	✓					✓
FOP-MIV	Option	Option		Option	Option	Option					✓
FOP-C	✓	✓		✓	✓	Option					

Strain Sensors

FOS-N	✓	✓		✓	✓	✓					
EFO	✓	✓		✓	✓	✓					
SFO-W	✓	✓		✓	✓	✓					

Displacement Sensor

FOD	✓	✓		✓	✓						
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Refractive Index

FRI	✓	✓		✓	✓						
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✓ Compatible