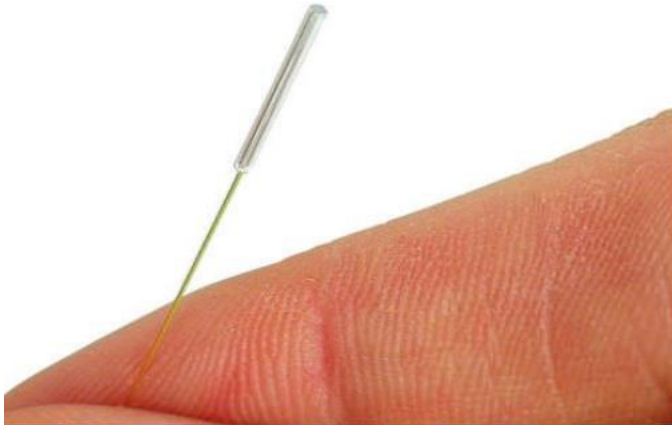


## FOP-M Pressure Sensor

Industry, laboratory, process, R&D



### Explain

The FOP-M fiber optic pressure sensor is specifically engineered for high-temperature environments such as aerospace and automotive R&D, making it ideal for industrial applications in harsh and hazardous settings. Resistant to EMI/RFI/MW interference, this compact yet precise device delivers reliable measurements even under extreme conditions while demonstrating corrosion resistance.

The FOP-M fiber optic pressure sensor utilizes time-tested white-light Fabry-Perot interferometry technology. Its innovative design measures silicon diaphragm deflection rather than conventional stress measurement methods. Pressure modifies the length of the Fabry-Perot resonator, while our optical signal modulator maintains precise measurements under extreme conditions including temperature fluctuations, electromagnetic interference (EMI), humidity, and vibration.

With a temperature range up to 150°C, this sensor is ideal for any R&D application. For extreme conditions, it provides various types of fiber optic lead cables with lengths up to several kilometers.

### specifications

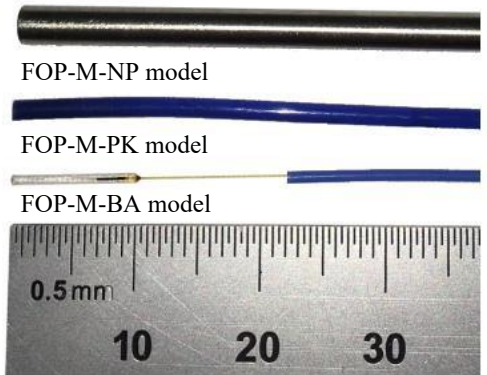
Pressure range <sup>1</sup>	R0: 0 ~2 psi	R1: 0 ~5 psi	R2: 0 ~50 psi	R3: 0 ~150 psi	R4: 0 ~1000 psi	R5: 0 ~3000 psi <sup>2</sup>
Performance of the EVOLUTION regulator (FPI-HR and FPI-HS)						
Accuracy <sup>3</sup> (psi)	±0.05	±0.06	±0.25	±1.00	±2	±15
Resolution <sup>4</sup> (psi)	0.002	0.0025	0.025	0.075	0.5	1.5
Performance of the belt CLASSIC regulator (FTI, UMI, VELOC <sup>5</sup> CE) Accuracy <sup>3</sup> (psi)						
Accuracy <sup>3</sup> (psi)	±0.20	±0.20	±0.5	±1.5	±8	±60
Resolution <sup>4</sup> (psi)	0.008	0.01	0.1	0.3	2	15
withstand voltage (psi)	10	90	250	450	2000	5000
storage temperature	-30°C ~ 80°C					
working temperature <sup>6</sup>	-20°C ~ +150°C (Optional up to 300°C temperature range, Consultation FOP-MH)					

### Key Features

- √ Anti EMI / RFI / MW
- intrinsically safe (explosion-proof)
- high precision and high sensitivity
- √ Temperature up to 150°C (optional up to 300° C)
- √ range 0-2 psi to 0-3000 psi
- <sp\_1> Micro size
- √ Remote interrogation

### Apply

- √ Sealed environment
- Aerospace
- √ National Defence and Security
- √ Metallurgy
- √ Industrial process monitoring
- high temperature
- √ Automotive development
- √ Harsh and dangerous environment
- oil well and gas pumping station
- √ Plastic injection molding and extrusion monitoring
- √ food packaging development



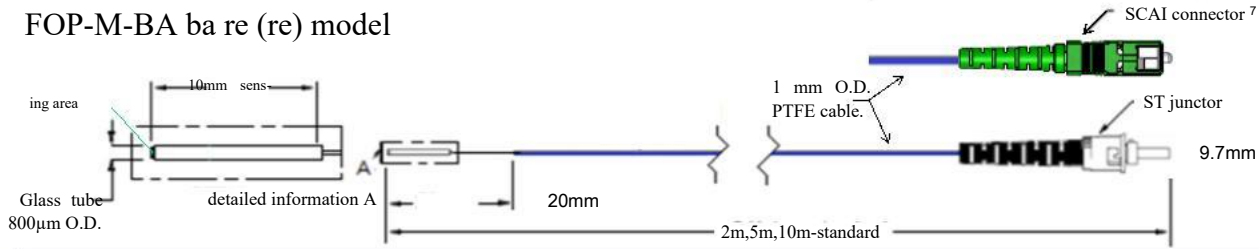


# FOP-M Pressure Sensor

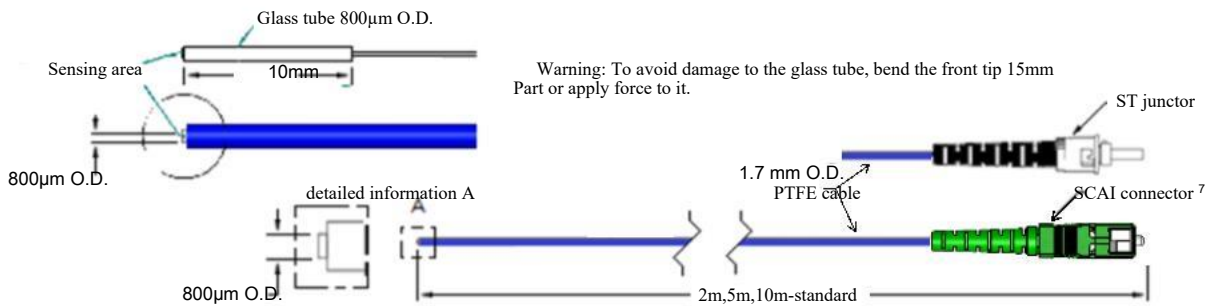
Industry, laboratory, process, R&D

## size

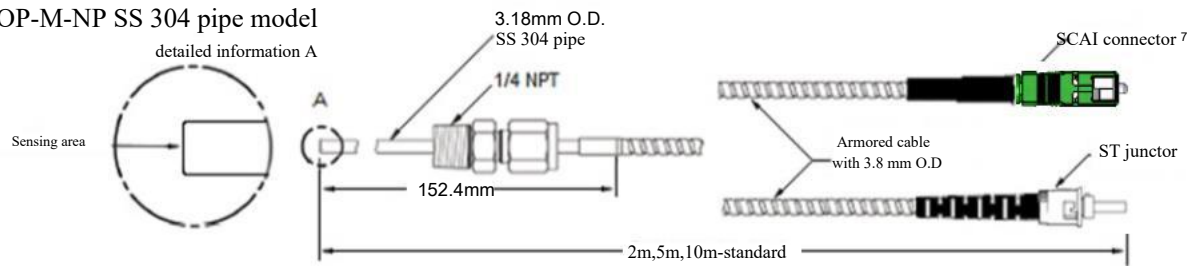
### FOP-M-BA bare (re) model



### FOP-M-PK packaged (encapsulated) model



### FOP-M-NP SS 304 pipe model



## Order information

Example: FOP-M-BA-C1-F1-M2-R0-ST

Op. Range	Distal tip	Cable	Fiber	Sensor overall length	Range	Connector
M- -20°C ~ +150°C MH- -20°C ~ +300°C						ST-for CLASSIC (FTI, UMI, VELOCES <sup>5</sup> ) SCAI <sup>7</sup> -for EVOLUTION (FPI-HR, FPI-HS)
BA - 20 mm sensor and bare fiber PK - encapsulated 1.7 mm outer diameter PTFE tube NP - encapsulated 3.18 mm outer diameter stainless steel					R0 0 ~ 2 psi R1 0 ~ 5 psi R2 0 ~ 50 psi R3 0 ~ 150 psi R4 0 ~ 1000 psi R5 0 ~ 3000 psi <sup>2</sup>	
C1 - 1 mm O.D. PTFE cable (Model BA) C2 - 1.7 mm O.D. PTFE cable for PK model C5 - 3.8 mm O.D. armored cable for NP model				M2-total length in m M5-5-meter total length M10-total length of 10 m		
F1-50µm CLASSIC (FTI, UMI, VELOCES <sup>5</sup> ) and F 2-62.5µm, EVOLUTION (FPI-HR, FPI-HS) are available in other configurations. Please call FISO for details.						

- Note 1. Atmospheric pressure at room temperature
- Note 2. Calibration up to 1000 psi, extrapolation and validation up to 3000 psi
- Note 3. System precision (regulators and sensors)
- Note 4. Dependent on the signal modulator
- Note 5. The system is outdated
- Note 6. Exposed temperature of sensor tip
- Note 7. SCAI is an SCAI connector with an intelligent chip that transfers calibration data to the signal regulator module

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