FOT™-100

Fiber Optic Temperature Sensor

General Specifications

Operation

• Sensitivity	0.128 mA/°C *[0.071 mA/°F]*
• Measuring range	25 to 125°C *[77 to 257°F]*
• Output	7.2 to 20 mA
• Accuracy	±5°C *[±9°F]*
• Repeatability	±2°C *[±3.6°F]*
• Maximum residual noise[1]	39 µA RMS
• Maximum response time[2]	
63%	1 minute
90%	3 minutes
• Output load	500 Ω max.
• Temperature drift (conditioner)	< 500 ppm/°C

Power Requirements

• Voltage	24 Vdc ± 15%
• Consumption	40 mA max.
• Polarity reversal protection	Built-in

Connection

• Connector type	5-pin M12 male
• Maximum Cable Length	300 m *[984 ft]*

Environment

• Temperature range	
Operating	
Sensor head	-20 to 135°C *[-4 to 275°F]*
Conditioner	0 to 60°C *[32 to 140°F]*
Storage	-20 to 70°C *[-4 to 158°F]*
• Humidity	Up to 95%, non-condensing
• Electrical insulation	
Head vs conditioner	Up to 3 kV / mm (25°C *[77°F]* & 25% humidity)
• Electrical & magnetic field	No effect (head only)

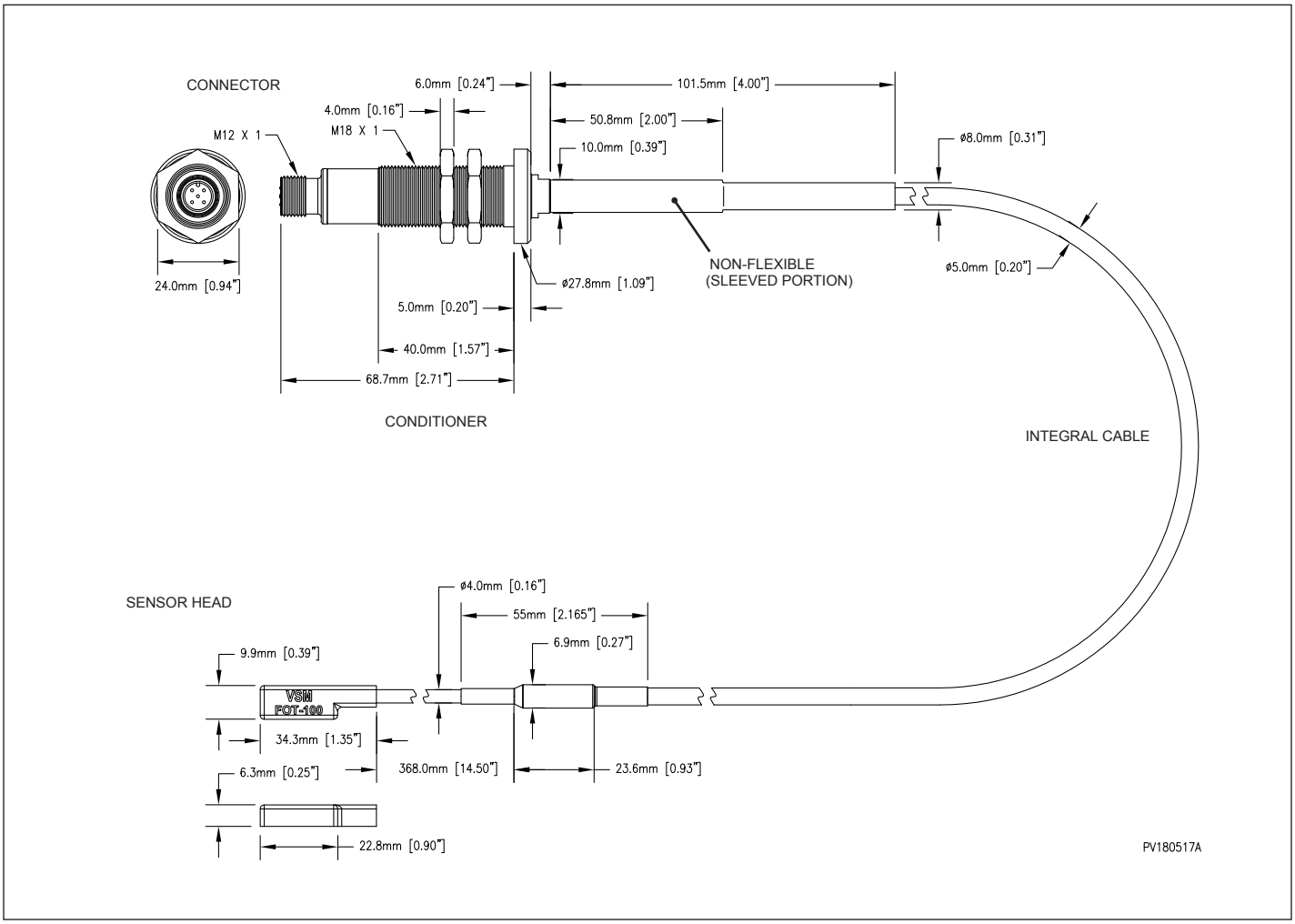
Physical Characteristics

• Sensor head	Non-conductive materials
• Integral cable	Fiber optics / PTFE jacket
Length	10 m *[33 ft]*, or 20 m *[66 ft]*
Minimum bending radius	80 mm *[3.15 in]*
• Conditioner body	Nickel-plated brass alloy

Note 1: Measured inside a 1 kHz bandwidth, with shielded cable grounded at both ends.

Note 2: The maximum response time is the amount of time required to reach 63% or 90% of the final measurement value. These values are based on the optimum thermal transfer to the sensor.

Dimensions



Product Identification

Product Number	Description
VSM-FOT100-10	FOT-100 Fiber Optic Temperature Sensor (10 m)
VSM-FOT100-20	FOT-100 Fiber Optic Temperature Sensor (20 m)

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