FOT™-200

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 signal 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)

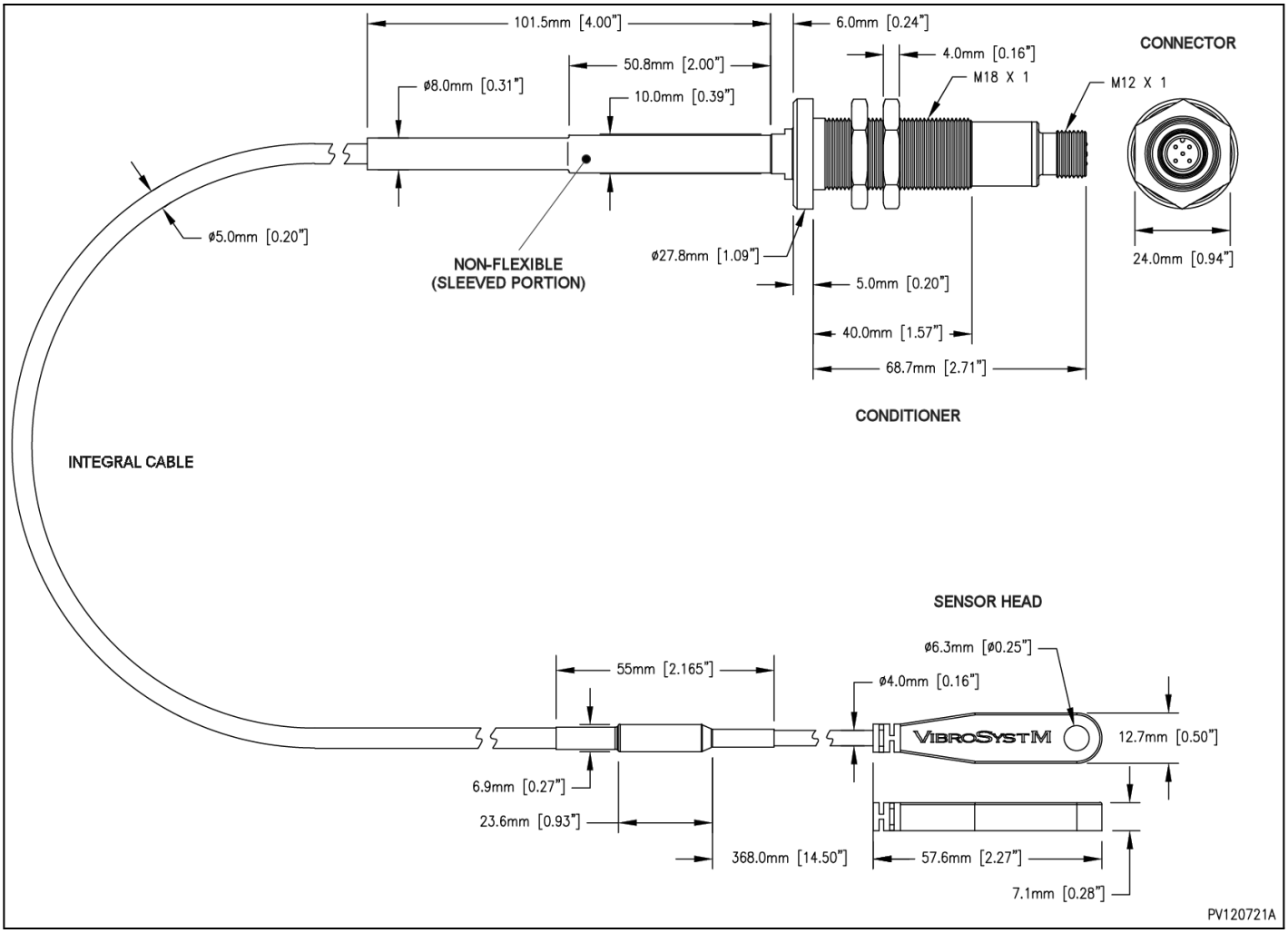
Physical Characteristics

• Sensor head	Non-conductive materials
• Integral cable	Fiber optics / PTFE jacket
Length	10 m *[33 ft]*
Minimum bending radius (routing path)	80 mm *[3.15 in]*
Minimum bending radius (excess coiled)	150 mm *[6 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-FOT200-10	FOT-200 Fiber Optic Temperature Sensor (10 m)

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