



TWR™-200 THERMAWATCH ROTOR

Fast-Response Non-Contact Rotor Pole Temperature Monitoring

GENERAL SPECIFICATIONS

Measuring Chain

Operation^{1, 2}

• Measuring type	Infrared technology
• Temperature measuring range (target only)	0 to 200 °C [32 to 392 °F]
• Accuracy	± 5 °C [± 9 °F]
• Repeatability	± 1 °C [± 1.8 °F]
• Rotor rotation speed	Optimized for 100 or 120 poles/sec. without attenuation
• Measuring Distance	Up to 12.7 cm [5 in] without attenuation
• Viewing Angle	± 45°
• Stator Thickness - Adjustment Range	
Option A - Short:	23 to 37 cm [9.1 to 14.6 in]
Option B - Medium:	33 to 47 cm [13.0 to 18.5 in]
Option C - Long:	43 to 57 cm [16.9 to 22.4 in]

Environment

• Temperature range	
Operating	Refer to individual components
Storage	-20 to 70 °C [-4 to 158 °F]
• Magnetic field immunity (sensor only)	Up to 2 Tesla (50 or 60 Hz)
• Humidity	Up to 95%, non-condensing

Note 1: Each TWR-200 measuring chain is calibrated with a blackbody source. Response varies depending on the infrared emissivity of the target.

Note 2: The components of a TWR-200 measuring chain (sensor, signal conditioner and sensor extension cable) are not calibrated together. Components are therefore readily interchangeable.

Signal Conditioner

Operation

• Output	4 to 20mA
• Load at output	500Ω max.

Power Requirements

• Voltage	24 Vdc ± 15%
• Consumption	75 mA max.

Connection

• Sensor	8-pin M12 female
• Power/Output	5-pin M12 male
• Maximum cable length - power / output cable	300 m [984 ft]

Environment

• Operating temperature range	0 to 55 °C [32 to 131 °F]
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Physical Characteristics

- Body Aluminum, painted black
- Mounting 4 Slots for (M3.5) [#6] screws
- Status indicator Multicolor LED

Sensor

Environment

- Operating temperature range
 - Stator insertion tip 0 to 100 °C [32 to 212 °F]
 - Integral cable 0 to 80 °C [32 to 176 °F]

Physical Characteristics

- Stator insertion tip - rigid section
 - External body Metallic tube with cross linked polyolefin outer jacket
 - External diameter 5.2 mm max.
 - Mounting Glued on stator wall, using adjustable mounting support
- Integral cable - flexible section
 - Material PVC outer jacket, with PUR molded head connector
 - Length 30 cm [12 in]
 - Diameter 5 mm [0.20 in]
 - Connectors 4-pin M12 male

Extension Cable

Environment

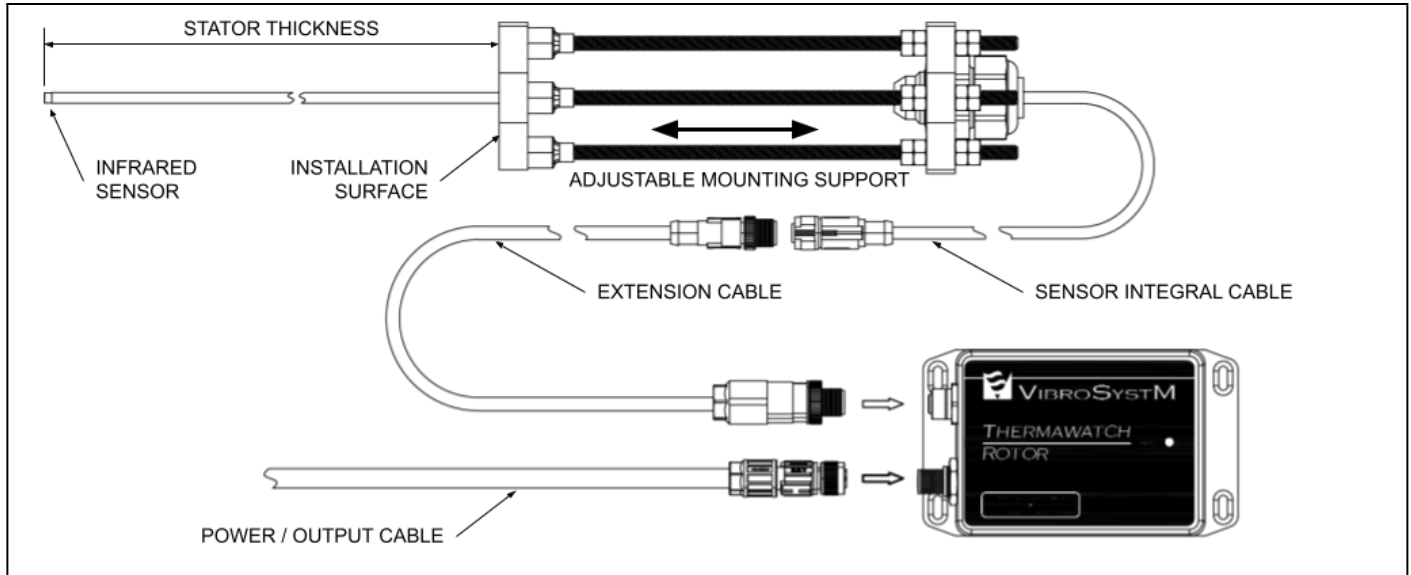
- Operating temperature range 0 to 80 °C [32 to 176 °F]

Physical Characteristics

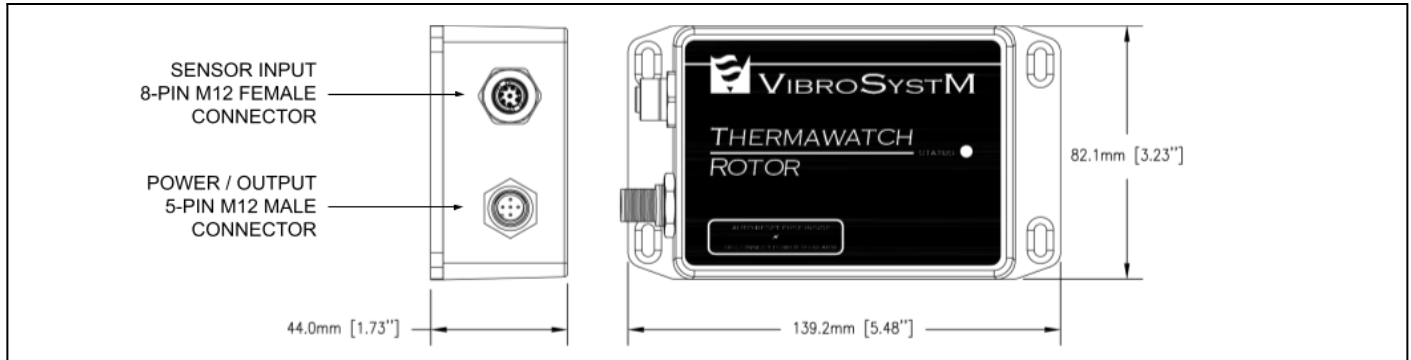
- Material PUR outer jacket, with PUR molded head connector
- Length 30m [98.4 ft] (*can be cut to desired length*)
- Diameter 5 mm [0.20 in]
- Connectors
 - Sensor end 4-pin M12 female
 - Conditioner end 4-pin M12 male (*included - to be installed at site*)



TWR-200 MEASURING CHAIN OVERVIEW



TWR-200 SIGNAL CONDITIONER



TWR-200 PRODUCT INFORMATION

Product Number	Description
VSM-TWR200- (S,M or L)	TWR-200 ThermaWatch Rotor Temperature sensor (short, medium, or long)
VSM-SUPP-TWR200	TWR-200 ThermaWatch Rotor Adjustable mounting support (15cm)
VSM-L50H-TWR200	TWR-200 ThermaWatch Rotor Signal conditioner (50Hz)
VSM-L60H-TWR200	TWR-200 ThermaWatch Rotor Signal conditioner (60Hz)
VSM-CBL-TWR200-30	TWR-200 ThermaWatch Rotor 30m Extension cable