



TWR-100™ THERMAWATCH ROTOR

FAST-RESPONSE NON-CONTACT ROTOR POLE TEMPERATURE MONITORING

GENERAL SPECIFICATIONS

Measuring Chain¹

Operation

• Measurement Type	Infrared Technology
• Temperature Measuring Range (Target Only) ²	40 to 200 °C [104 to 392 °F]
• Accuracy	±5 °C [±9 °F]
• Repeatability	±1 °C [±1.8 °F]
• Bandwidth	Up to 300 Hz Without Attenuation
• Measuring Distance	Up to 12.7 cm [5 in.] Without Attenuation
• Viewing Angle	± 45°
• Warm-Up Time to Reach Thermal Stability of All Components	45 Minutes
• Stator Thickness	
Option A:	25 to 35 cm [9.8 to 13.8 in.]
Option B:	35 to 45 cm [13.8 to 17.7 in.]

Environment

• Storage	-20 to 70 °C [-4 to 158 °F]
• Magnetic Field Immunity (Waveguide Only)	Up to 2 Tesla (50 or 60 Hz)
• Humidity	Up to 95%, Non-Condensing

Signal Conditioner

Operation

• Output	4 to 20 mA
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Power Requirements

• Voltage	24 Vdc ± 15%
• Consumption	75 mA max.
• Protection	Auto-Reset Fuse

Connection

• Power/Output	5-Pin M12 Male
• Sensor	8-Pin M12 Male
• Maximum Cable Length - Power/Output Cable	300 m [984 ft]

Environment

• Temperature Range	
Operating	0 to 55 °C [32 to 131 °F]

Physical Characteristics

• Body	Aluminium, Painted Black
• Mounting	4 Slots for (M3.5) [#6] Screws
• Status Indicator	Tricolor LED

Note 1: Each TWR-100 measuring chain is calibrated with a blackbody source. Response varies depending on the infrared emissivity of the target surface.

Note 2: The components of a TWR-100 measuring chain (signal conditioner, waveguide, and sensor with integral cable) are calibrated together. Components are not readily interchangeable.



Waveguide

Environment

- Temperature Range
Operating (Stator Core Temperature) 40 to 100°C [104 to 212°F]

Physical Characteristics

- Body Metallic Waveguide, Covered With Non-Conductive Materials
- Mounting Glued on Stator Wall, Using Waveguide Support System (Included)

Sensor With Integral Cable

Environment

- Temperature Range
Operating
Sensor Only 40 to 100°C [104 to 212°F]
Cable Only 40 to 80°C [104 to 176°F]

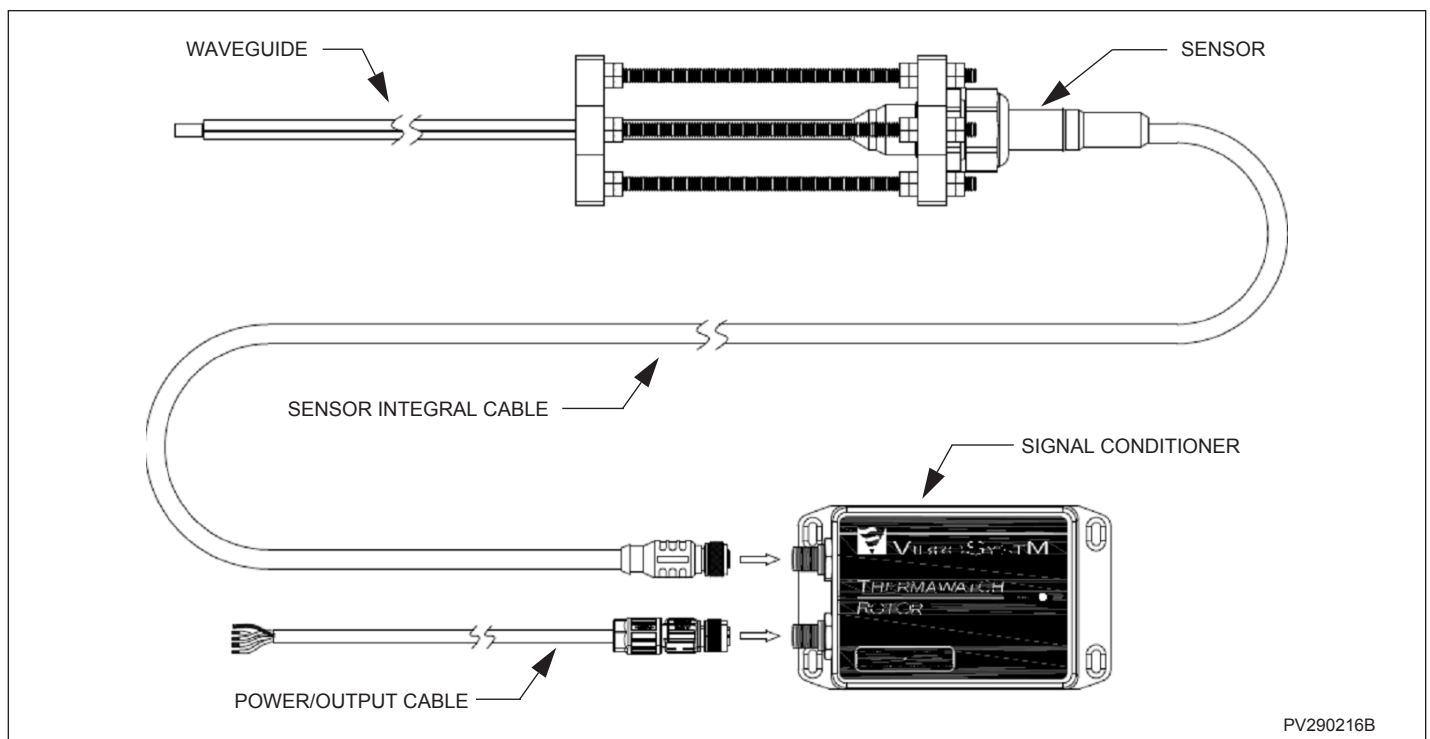
Physical Characteristics

- Body Non-Conductive Materials with Integral Extension Cable
- Integral Cable PVC Outer Jacket, with PUR Connector Molded Head

Connection - Integral Cable

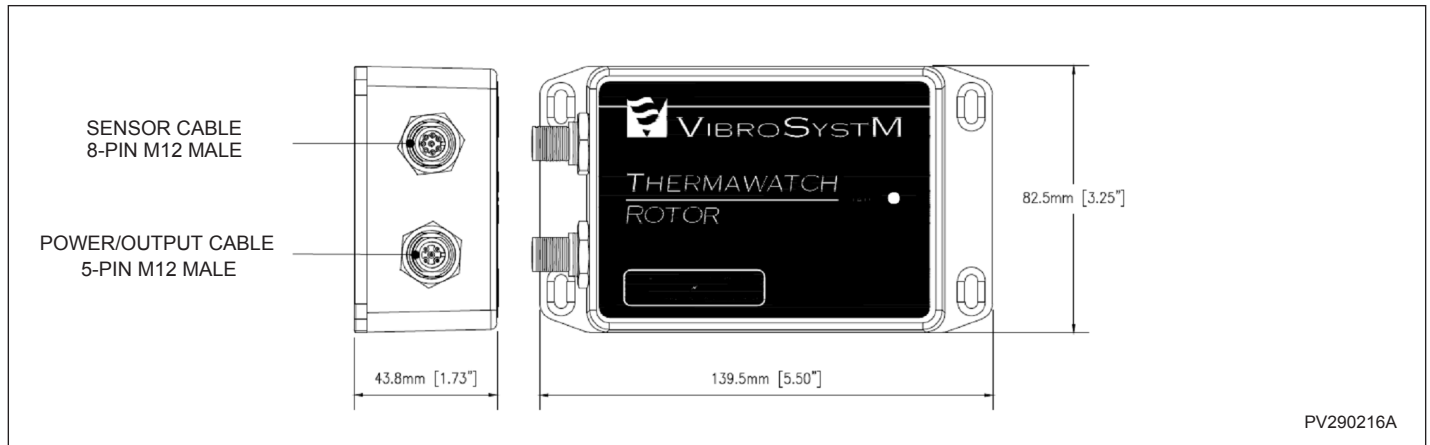
- Cable Type 8-Conductor, Shielded
- Cable Length 6 m [19.7 ft]
- Connectors
To Waveguide 4-Pin Cable Gland Connector
To Conditioner 8-Pin M12 Female

TWR-100 MEASURING CHAIN OVERVIEW

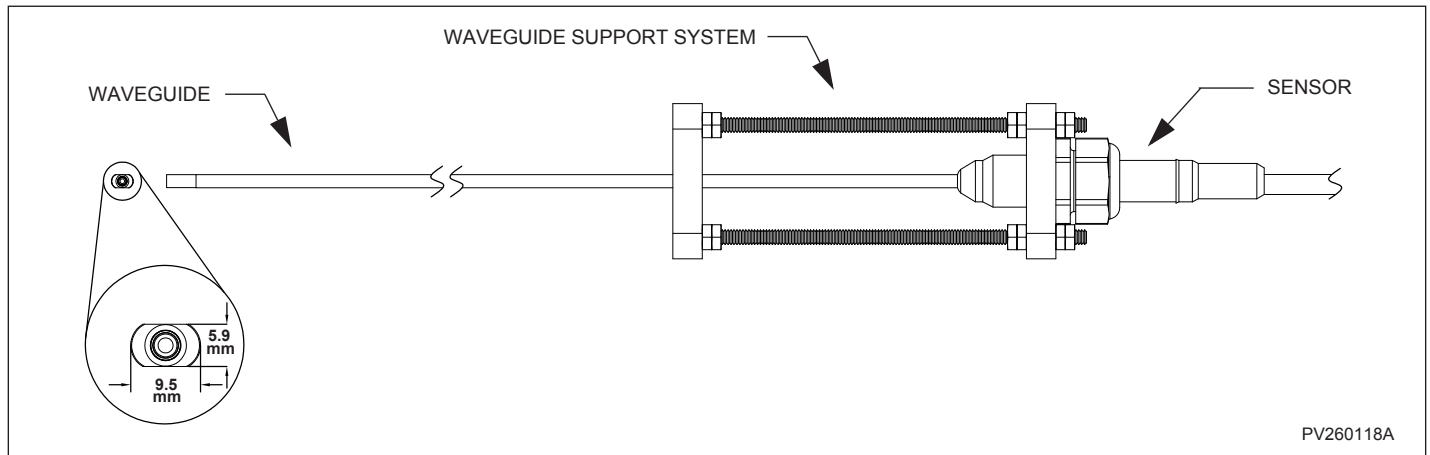




SIGNAL CONDITIONER DIMENSIONS



WAVEGUIDE DIMENSIONS



PRODUCT IDENTIFICATION

Product Number	Description
VSM-TWR100-2535	ThermaWatch Rotor Temperature Measuring Chain (25-35 cm)
VSM-TWR100-3545	ThermaWatch Rotor Temperature Measuring Chain (35-45 cm)