



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 $\pm 1 \,^{\circ}\text{C} \, [\pm 1.8 \,^{\circ}\text{F}]$

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

Power Requirements

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

Connection

Power/Output
 Sensor
 Maximum Cable Length - Power/Output Cable
 5-Pin M12 Male
 8-Pin M12 Male
 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)

Physical Characteristics

Body

Mounting

40 to 100 °C [104 to 212 °F]

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

Sensor With Integral Cable

Environment

· Temperature Range

Operating

Sensor Only

Cable Only

Physical Characteristics

Body

· Integral Cable

Connection - Integral Cable

· Cable Type

· Cable Length

Connectors

To Waveguide
To Conditioner

40 to 100 °C [104 to 212 °F] 40 to 80 °C [104 to 176 °F]

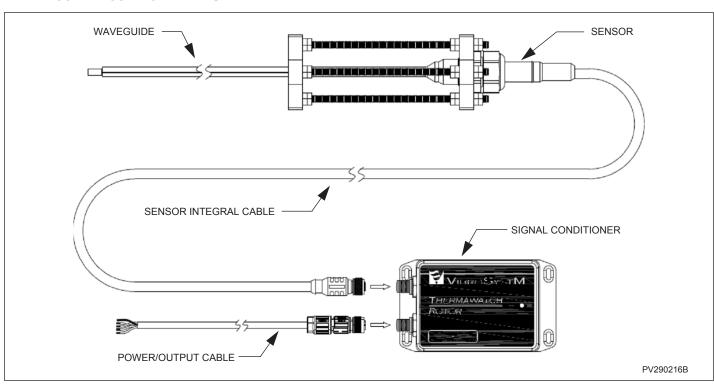
Non-Conductive Materials with Integral Extension Cable PVC Outer Jacket, with PUR Connector Molded Head

8-Conductor, Shielded 6 m [19.7 ft]

8-Pin M12 Female

4-Pin Cable Gland Connector

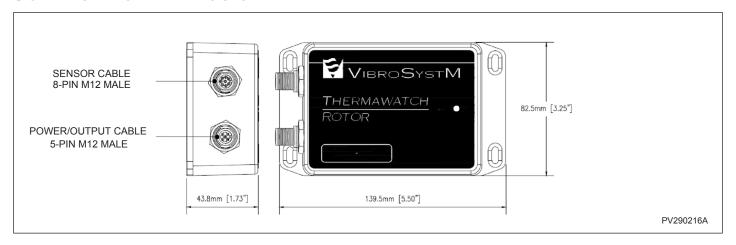
TWR-100 MEASURING CHAIN OVERVIEW



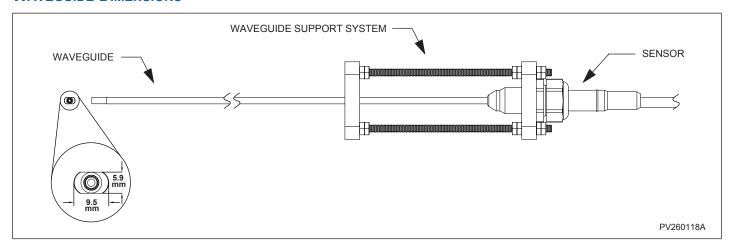




SIGNAL CONDITIONER DIMENSIONS



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)

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