



# TWS™-200

## Temperature Sensing Measuring Chain

The TWS™ -200 is an individually sold temperature sensor that is field-assembled in a series to create a measuring chain designed for monitoring and mapping the temperature of a stator core and/or windings on large machines. Once assembled, a typical measuring chain is composed of a maximum of 100 sensors and one HAVSM™-100 communication interface. The chain is then connected to a ZPU™-5000 acquisition unit or a server through an RS-485 network.

### General Specifications TWS-200 Sensor

#### Operation

- Measuring Range -55 to 125°C [-67 to 257°F]
- Accuracy ±0.5°C (-10 to 85°C)  
[±0.9°F (14 to 185°F)]  
±2°C (-55 to 125°C)  
[±3.6°F (-67 to 257°F)]
- Sensors per Measuring Chain 1 to 100

#### Power Requirements

- Power Supply Supplied by HAVSM Interface

#### Connection

- Integral Cable
  - Type 3-Wire Cable
  - Outer Jacket Diameter 3.3 mm [130 mils]
  - Sensor-to-Sensor Connection Metal Crimp Splice with Isolation Sleeve  
(Special tool required)
  - Distance Between Sensors Min: 30 cm [11.8 in]  
Max: 96 cm [37.8 in]  
(without extension cable)
- Measuring Chain Max. Length 100 m [330 ft]

#### Environment

- Temperature Range
  - Operating -55 to 125°C [-67 to 257°F]
  - Storage -55 to 125°C [-67 to 257°F]
- Protection Rating IP64

#### Physical Characteristics

- Sensor Body PEEK
- Cable Jacket Irradiated Polyolefin

### HAVSM-100 Communication Interface

#### Operation

- Input TWS-200 Sensors
- Output RS-485
- Communication Speed Selectable up to 115.2 kbps
- HAVSM per Network 1 to 32 (without RS-485 repeater)
- Sampling 50 ms per Point

#### Power Requirements

- Voltage 24 Vdc ±15%
- Consumption 150 mA max.

#### Connection

- Type Screw Terminal
- RS-485 Communication Cable
  - Type 1-Pair Shielded
  - Maximum Length 1000 m [3280 ft]

#### Environment

- Temperature Range
  - Operating 0 to 70°C [32 to 158°F]
  - Storage -25 to 70°C [-13 to 158°F]

#### Physical Characteristics

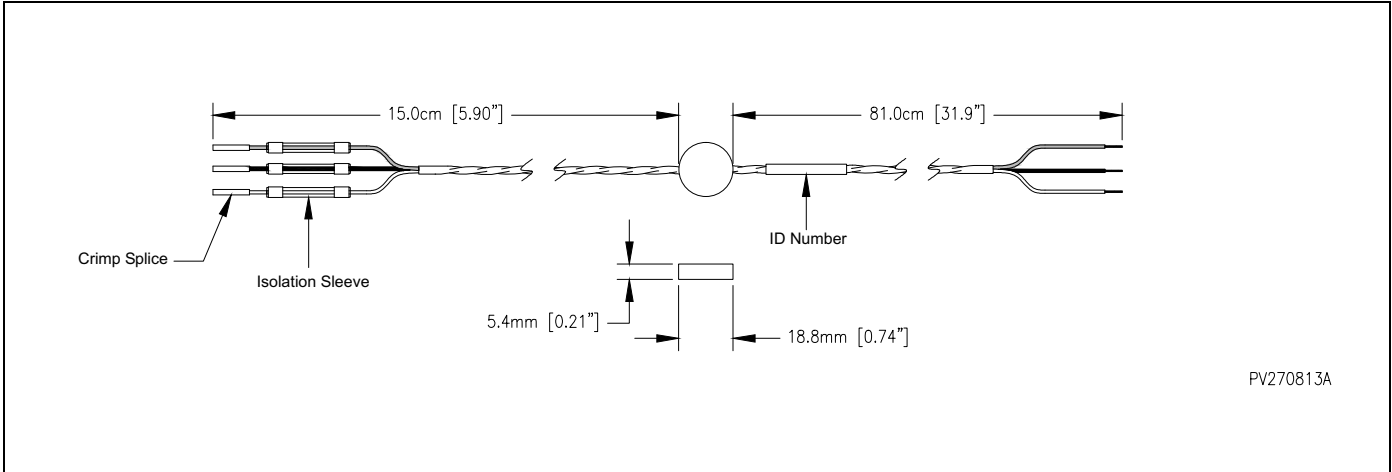
- Interface
  - Mounting Type 35 mm DIN Rail
  - Case Body Polyamide



**Warning:** TWS-200 sensors **MUST NOT** be installed on the high voltage portion of bars and **MUST** be installed by a VibroSystM technician.



## TWS-200 Dimensions



## HAVSM-100 Dimensions

