

OM-TS Installation Guide

Description

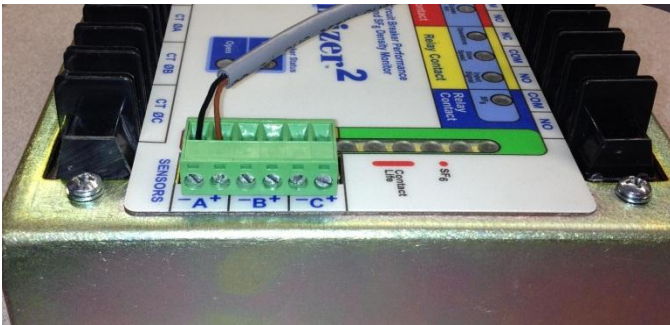
The OM-TS is a loop-powered Temperature Sensor. This sensor accurately converts the measured temperature to a 4-20 milliamp signal, which can be monitored by an intelligent electronic device (IED) such as the OPTImizer². The milliamp signal loop power supply voltage must be 12 – 28 volts DC. The temperature measurement is accurate to within +/-2% from -40°C to +120 °C (140°F to + 248°F).

Tools Needed

Straight-Blade Screwdriver
Wire Strippers

Wiring

At the OPTImizer² end of the signal cable, connect the brown wire to the “+” sensor input connection and the black wire to the “-” connection, as shown below. The shield (drain) wire should be cut off.



The signal cable can be extended up to 1000 feet using twisted pair wire, 18 gauge minimum. Observe polarity.

OPTImizer² Programming

On the OPTImizer² Preferences Page, click “Edit” in the upper right corner. Select Celsius or Fahrenheit from the Temperature menu:

Units	
Density	Grams per liter
Pressure	Pounds per square inch
Temperature	Celsius
Volume	Celsius
Mass	Fahrenheit
Mass loss	Pounds

On the OPTImizer² Configuration Page, click “Edit” in the upper right corner. Select “Temperature” from the Sensor Signal menu:

Contact Life Warning Limit	Off
Trip Time Alarm Limit	Analog Compensated Pressure
Arc Time Alarm Limit	Analog Density
Clearing Time Alarm Limit	Digital Density
Travel Time Alarm Limit	Temperature
Operations Count Alarm Limit	Voltage
No Operations Alarm Limit	Current
Restrike Alarm	Heater Monitor UPSM-241
	LenSense 2TC/105
	LenSense 2TC/106
	LenSense 2TC/108
	LenSense 2TC/115
	LenSense 2TC/117
	LenSense 2TC/118
	LenSense 2TC/822
Sensor A	
Signal	Off

Four new fields will appear:

Sensor A		
Signal	Temperature	
Signal Low	4.0	4.0 .. 19.0 mA
Signal Low Represents	-40.0	-40.0 .. 64.0 °C
Signal High	20.0	Signal Low + 1.0 .. 20.0 mA
Signal High Represents	65.0	Signal Low Represents + 1.0 .. 65.0 °C

Program the Signal Low to “4.0”mA.
Program the Signal Low Represents to “-40.0” Degrees.
Program the Signal High to “14.5”mA.
Program the Signal High Represents to “65.0” Degrees Celsius or “149.0” Degrees Fahrenheit.

The Low Temperature and High Temperature Alarm Limits can be set as desired. (Leaving them at -40 will disable the alarms.)

Temperature Monitor		
Low Temperature Alarm Limit	-40.0	-40.0 .. 65.0 °C
High Temperature Alarm Limit	-40.0	-40.0 .. 65.0 °C

When programming is complete, click the “Yes” button in the upper right corner to confirm the configuration changes. The password will need to be given, if not already entered. Click “Yes” again to confirm the changes.



When the OPTImizer² is set and running, the measured temperature and alarm status will be shown on the Status Page in the Temperature Monitor section:

Temperature Monitor		Channel A
Temperature		68.2 °F
Alarm Status		
Low Temperature		Ok
High Temperature		Ok
Sensor Malfunction		Ok