



Temperature Meter User Manual

Overview

The Temperature Meter is a digital panel meter designed to monitor and display temperature readings from a variety of thermocouple sensors. It is suitable for both indoor and outdoor environments with robust configuration options and multiple output features.

Environmental and Power Specifications

- Operating Temperature: -10 to +60°C
- Storage Temperature: -40 to +70°C
- Relative Humidity: 0–85% (continuous), 0–95% (intermittent)
- Altitude: up to 2000 meters
- Pollution Degree: 2
- Power Supply: 12–24V AC/DC ($\pm 10\%$)
- Power Consumption: 1.6W
- Supply Frequency: DC or 50–400 Hz
- Protection Rating: IP65 (front), NEMA Type 4 & 12

Display Features

- 4-digit display (12 mm height)
- 40 bar-graph segments
- 4-character starburst message display
- Backlight Colors: Red, Green, White
- Viewing Angle: $\pm 70^\circ$ Horizontal and Vertical
- Update Rate: 0.08 to 21 seconds

Wiring and Connections

- Screw terminal connections (solid or stranded wire)
- Wire Strip Length: 6.5–7 mm (0.26–0.28 in)
- Cable Temperature Rating: $\geq 65^\circ\text{C}$ (149°F)
- Wire Gauge: 0.8–3.3 mm² (18–12 AWG)
- Torque: 0.4–0.6 Nm (3.54–5.31 lbf-in)
- Ensure proper polarity and secure connections to avoid damage

Inputs and DIP Switch Configuration

Supported thermocouple types include B, E, J, K, N, R, S, and T. DIP switches on the rear of the unit allow for setting the sensor type, measurement unit ($^\circ\text{C}$ or $^\circ\text{F}$), and scaling parameters. A software application is available for advanced settings.

Switch	Type	Thermocouple		Units	Display Scale			
		Min	Max		Min	Max	X10	
1234								
0000	Custom							
1000	B	250	1820	°C	0	200	X10	
0100	E	-200	1000	°C	0	1000		
1100	J	-210	1200	°C	0	1200		
0010	K	-200	1372	°C	0	140	X10	
1010	N	-200	1300	°C	0	140	X10	
0110	R	-50	1768	°C	0	200	X10	
1110	S	-50	1768	°C	0	200	X10	
0001	T	-200	400	°C	0	400		
1001	B	482	3308	°F	0	400	X10	
0101	E	-328	1832	°F	0	200	X10	
1101	J	-346	2192	°F	0	220	X10	
0011	K	-328	2502	°F	0	260	X10	
1011	N	-328	2372	°F	0	240	X10	
0111	R	-58	3214	°F	0	320	X10	
1111	S	-58	3214	°F	0	320	X10	



The DIP switches are on the back of the unit.

Installation and Safety Warnings

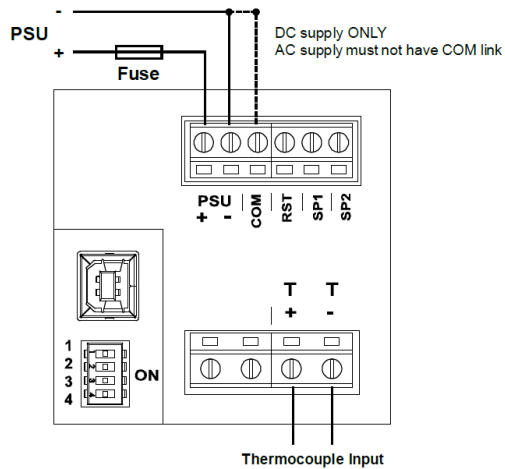
Installation must be carried out by qualified personnel. Hazardous voltages may be present at the connection terminals. Install fuses (0.5A, 250V Type F with $\geq 35A$ breaking capacity). Ensure isolation and surge protection for signal cables longer than 30 meters. Do not exceed voltage limits. Improper installation may compromise the safety of the unit.

Output Configuration

- 4–20 mA analog output
- 0.5% Accuracy, 0.02mA Resolution
- Relay output (diode-protected)
- Combined analog and relay outputs using both setpoints
- Reset input supports peak hold feature
- Software required to configure outputs and setpoints (available upon request)

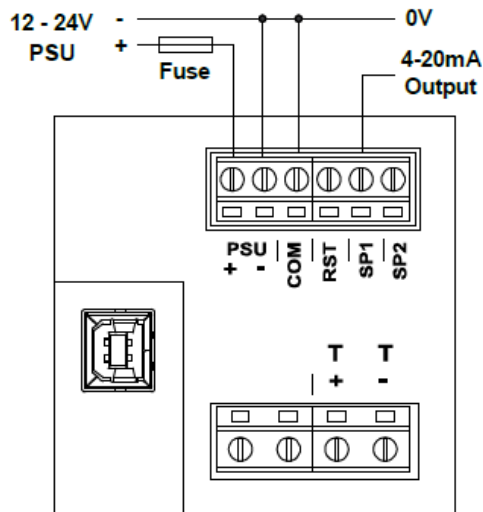
Wiring Diagram

Input:

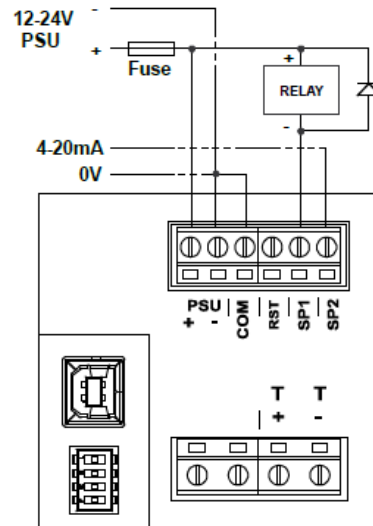


Output:

4-20mA Analogue Output (Setpoint 1)



Analogue Output (Setpoint 2) & Relay Output (Setpoint 1)





Maintenance Instructions

- Disconnect power before cleaning or servicing
- Clean using a dry cloth only
- No user-serviceable parts inside – do not open the enclosure
- Periodically inspect wiring for damage or looseness

For additional questions, contact us at sales@innovatechs.us