

1/8 DIN Digital Panel Thermocouple Meters

Panel Punches Available

DP63300-TC



DP63300-TC shown actual size.

- ✓ Thermocouple Meter
- ✓ 4-Digit, 14.2 mm (0.56") LED
- ✓ Programmable Thermocouple Type (T, E, J, K, R, S, B, N or mV Scale)
- ✓ Conforms to ITS-90 Standards
- ✓ Selectable °F or °C with 0.1 or 1° Display Resolution
- ✓ Programmable Temperature Offset
- ✓ Programmable Digital Filtering Enhances Stability
- ✓ Peak/Valley (High/Low Reading) Memory
- ✓ NEMA 4X (IP65) Sealed Front Bezel
- ✓ Custom Units Overlay with Backlight

The DP63300-TC thermocouple meter accepts inputs from standard thermocouples and precisely linearizes them. A full 4-digit display accommodates a wide range of temperature inputs. The unit automatically compensates for cold junction, NBS linearity and the meter's zero and span.

The meter features a readout choice of either Fahrenheit or Celsius with 0.1 or 1° resolution. Display prompts and front panel buttons aid the operator through set-up and operation. With a few simple steps the unit can be used as a millivolt meter. This mode is useful in monitoring and displaying

the actual voltage produced at the thermocouple probe junction and as an aid in troubleshooting for a faulty thermocouple probe.

The meter provides a peak "HI" and valley "LO" reading memory with selectable capture delay time. The capture delay is used to prevent detection of false peak or valley readings that may occur during start-up or unusual process events. The peak and valley readings are stored at power-down so that process limits can be monitored over any length of time. Programmable digital filtering enhances the stability of the reading.

All setup data is stored in EEPROM, which will hold data for a minimum of 10 years without power. The meter has several built-in diagnostic functions to alert operators of any malfunction. Extensive testing of noise interference mechanisms and full burn-in makes the indicator extremely reliable in industrial environments. The front bezel meets NEMA 4X (IP65) requirements for wash-down applications.

Specifications

- Display:** 4-digit, 14.2 mm H (0.56") LED, minus sign displayed for negative temperatures
- Power:** 85 to 250 Vac, 50/60 Hz, 6 VA
- Isolation:** 2300 Vrms for 1 min between input and supply (300V working voltage)
- Thermocouple Types:** T, E, J, K, R, S, B, N or mV scale
- Resolution:** 1° for all types, or 0.1° for T, E, J, K and N only

Thermocouple Range and Accuracy:

All errors include NBS conformity, cold junction effect and A/D conversion errors at 23°C after 60 minutes warm-up; relative humidity <85%

Input Impedance: 20 MΩ, all types

Lead Resistance Effect: 20 μV/350 Ω

Max Input Voltage Protection: 70 Vdc continuous

Cold Junction Compensation: Automatic, 0.02 degree/degree (disabled for linear mV scale)

Reading Rate: 2.5 readings/second

Response Time: 2 seconds to settle for step input (increases with programmable digital filtering)

Low-Frequency Noise Rejection:

Normal Mode Rejection: 45 dB @ 50/60 Hz (may be improved by programmable digital filtering)

Common Mode Rejection: 120 dB, DC to 50/60 Hz

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F)

Storage Temperature Range: -40 to 80°C (-40 to 176°F)

Operating and Storage Humidity: 85% max (non-condensing) from 0 to 50°C (32 to 122°F)

Span Drift: 40 ppm/°C

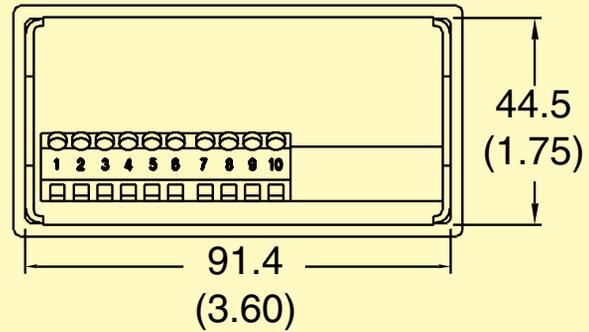
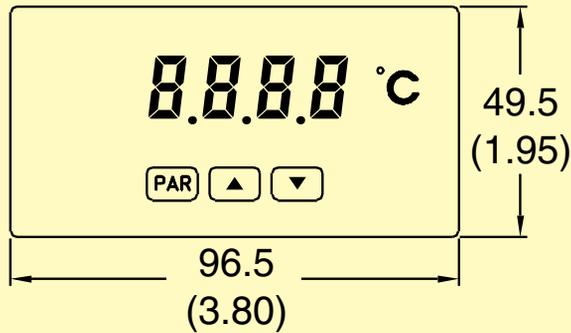
Zero Drift: 1 μV/°C

Altitude: Up to 2000 m (6562')

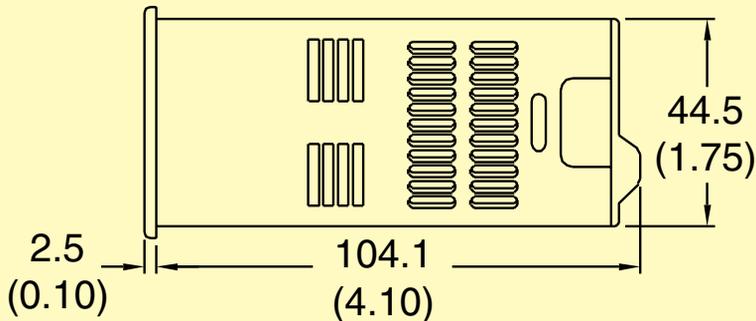
Construction: This unit is rated for NEMA 4X (IP65) indoor use, 1-piece bezel/case, flame resistant—panel gasket and mounting clip included

Connections: High-compression, cage-clamp terminal block

Weight: 0.24 kg (0.65 lb)



Dimensions: mm (inch)



Note: Recommended minimum clearance (behind the panel) for mounting clip installation is 53.4 (2.1) H x 127 (5) W.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

Thermocouple Types

Thermocouple Type	Range	Accuracy
T	-200 to 400°C (-328 to 752°F)	0.8°C (1.4°F)
E	-200 to 1000°C (-328 to 1832°F)	0.8°C (1.4°F)
J	-200 to 760°C (-328 to 1400°F)	0.8°C (1.4°F)
K	-200 to 1250°C (-328 to 2282°F)	0.8°C (1.4°F)
R	0 to 1768°C (32 to 3214°F)	2.1°C (3.8°F)
S	0 to 1768°C (32 to 3214°F)	2.1°C (3.8°F)
B	150 to 1820°C (302 to 3308°F)	2.3°C (4.1°F)
N	-200 to 1300°C (-328 to 2372°F)	0.8°C (1.4°F)
mV	-10.00 to 80.00 mV	0.01%

To Order

Model No.	Description
DP63300-TC	Thermocouple input, 85 to 250 Vac, 50/60 Hz

Comes complete with operator's manual.

Ordering Example: DP63300-TC, thermocouple input panel meter.

OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years.