

1/8 DIN Digital Panel Temperature Meters For Thermocouple and RTD Inputs

DP63400-T

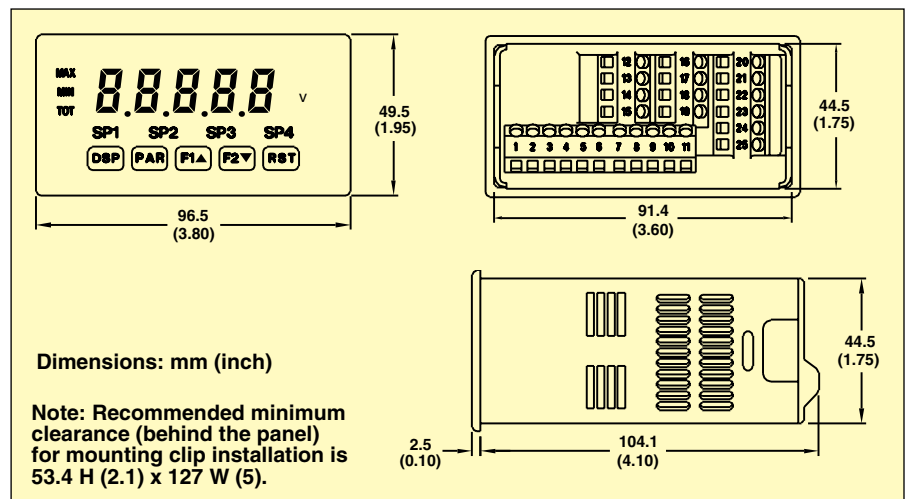


- ✓ Thermocouple and RTD Panel Meter
- ✓ 5-Digit, 14 mm (0.56") LED
- ✓ Conforms to ITS-90 Standards
- ✓ °F or °C Unit Overlay with Backlight
- ✓ NEMX 4X (IP65)



DP63400-T shown smaller than actual size.

The DP63400 Series panel meters offer many features and performance capabilities to suit a wide range of industrial applications. These meters accept thermocouple or RTD inputs. The meters provide a maximum and minimum reading memory with programmable capture time. The capture time is used to prevent detection of false max or min readings which may occur during start-up or unusual process events. These meters have been specifically designed for harsh industrial environments. With NEMA 4X (IP65) sealed bezel and extensive testing of noise effects to CE requirements, the DP63400 Series meters provide a tough, yet reliable, application solution.



Specifications

Display: 5-digit, 14.2 mm (0.56") red LED, (-19999 to 99999)

Power:

AC Versions:

AC Power: 85 to 250 Vac, 50/60 Hz, 10 VA

Isolation: 2300 Vrms for 1 minute to all inputs

Low Voltage Versions:

DC Power: 11 to 36 Vdc, 11 W

AC Power: 24 Vac, ± 10%, 50/60 Hz, 10 VA

Isolation: 500 Vrms for 1 minute to all inputs (50V working)

Keypad: 3 programmable function keys, 5 keys total

A/D Converter: 16-bit resolution

Update Rates:

A/D Conversion Rate: 10 readings/s

Step Response: 200 ms max to within 99% of final readout value (digital filter and internal zero correction disabled), 700 ms max (digital filter disabled, internal zero correction enabled)

Display Update Rate: 1 to 10 updates/s

Max/Min Capture Delay Time: 0 to 3275 s

Low-Frequency Noise Rejection:

Normal Mode: >60 dB @ 50 or 60 Hz ±1%, digital filter off

Common Mode: >100 dB, DC to 120 Hz

Memory: Non-volatile E²PROM retains all programmable parameters and display values

Environmental Conditions:

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

Storage Temperature Range: -40 to 60°C (-40 to 140°F)

Operating and Storage Humidity: 0 to 85% max RH non-condensing

Altitude: Up to 2000 m (6562')

Connections: High-compression, cage-clamp terminal block

Wire Strip Length: 7.5 mm (0.3")

Wire Gage: 30 to 14 AWG copper wire

Torque: 0.51 N/m (4.5 lb/in) max

Construction: This unit is rated for NEMA 4X (IP65) outdoor use, IP20 touch-safe, Installation Category II, Pollution Degree 2, 1-piece bezel/case, flame-resistant, synthetic rubber keypad—panel gasket and mounting clip included

Weight: 200 g (7 oz)

Thermocouple Inputs

Resolution: Variable: 0.1, 0.2, 0.5, or 1, 2, or 5 degrees
Scale: °F or °C

Offset Range: -19,999 to 99,999 display units

Input Impedance: 20 MΩ

Lead Resistance Effect: 0.03μV/Ω

Maximum Continuous Overvoltage: 30V

Input Type	Range	Accuracy* (18 to 28°C)	Accuracy* (0 to 60°C)
T	-200 to 400°C (-328 to 752°F) -270 to -200°C (-454 to -328°F)	1.2°C**	2.1°C
E	-200 to 871°C (-328 to 1600°F) -270 to -200°C (-454 to -328°F)	1.0°C**	2.4°C
J	-200 to 760°C (-328 to 1400°F)	1.1°C	2.3°C
K	-200 to 1372°C (-328 to 2502°F) -270 to -200°C (-454 to -328°F)	1.3°C**	3.4°C
R	-50 to 1768°C (-58 to 3214°F)	1.9°C	4.0°C
S	-50 to 1768°C (-58 to 3214°F)	1.9°C	4.0°C
B	100 to 300°C (100 to 572°F) 300 to 1820°C (572 to 3308°F)	3.9°C 2.8°C	5.7°C 4.4°C
N	-200 to 1300°C (-328 to 2372°F) -270 to -200°C (-454 to -328°F)	1.3°C**	3.1°C
C	0 to 2315°C (32 to 4199°F)	1.9°C	6.1°C

* After 20 minute warm-up. Accuracy is specified in 2 ways—accuracy over an 18 to 28°C (64 to 82°F) in a 15 to 75% RH environment and accuracy over a 0 to 50°C (32 to 122°F) in a 0 to 85% RH (non-condensing) environment. Accuracy specified over the 0 to 50°C (32 to 122°F) operating range includes meter tempco and ice point tracking effects. The specification includes the A/D conversion errors, linearization conformity, and thermocouple ice point compensation. Total system accuracy is the sum of meter and probe errors. Accuracy may be improved by field calibrating the meter readout at the temperature of interest.

** The accuracy over the interval -270 to -200°C (-454 to -328°F) is a function of temperature, ranging from 1°C at -200°C and degrading to 7°C at -270°C. Accuracy may be improved by field calibrating the meter readout at the temperature of interest.

RTD Inputs

Type: 3- or 4-wire, 2-wire can be compensated for lead wire resistance

Excitation Current:

100 Ω Range: 165 μA

10 Ω Range: 2.6 mA

Lead Resistance:

100 Ω Range: 10 Ω/lead max

10 Ω Range: 3 Ω/lead max

Direct Readout

Input Range: -10 to 65 mV

0 to 400 Ω: High range

0 to 25 Ω: Low range

Display Range: -19999 to 99999

Input Type	Range	Accuracy* (18 to 28°C)	Accuracy* (0 to 50°C)
100 Ω Pt alpha = .00385	-200 to 850°C (-328 to 1562°F)	0.4°C	1.6°C
100 Ω Pt alpha = .003919	-200 to 850°C (-328 to 1562°F)	0.4°C	1.6°C
120 Ω Nickel alpha = .00672	-80 to 260°C (-112 to 1562°F)	0.2°C	0.5°C
10 Ω Copper alpha = .00427	-100 to 260°C (-148 to 500°F)	0.4°C	0.9°C

Input Type	Range	Accuracy* (18 to 28°C)	Accuracy* (0 to 50°C)
Direct mV Range	-10 to 65 mV (1 μV res.)	0.02% of rdg + 4μV	0.12% of rdg + 5μV
Direct 100 Ω Range	0 to 400 W (10 MW res.)	0.02% of rdg + 0.04 Ω	0.12% of rdg + 0.05 Ω
Direct 10 Ω Range	0 to 25 W (1 MW res.)	0.04% of rdg + 0.005 Ω	0.20% of rdg + 0.007 Ω

To Order

Model No.	Description
DP63400-T	Temperature input, 85 to 250 Vac, 50/60 Hz
DP63400-T-LV	Temperature input, 11 to 36 Vdc, 24 Vac

Accessories

Model No.	Description
DPP-5	1/8 DIN Panel Punch

Comes complete with operator's manual.

Ordering Example: DP63400-T-LV, temperature input, 11 to 36 Vdc.