Inputs
- Thermocouple
- RTD
- Process (DC Voltage and Current)
- Strain Gage

Options
- Relay Output with Adjustable Deadband
- Isolated or Non-Isolated Analog Output
- Totally Programmable Color Display
- Low-Voltage Power Options

Panel Meters/Controllers
The OMEGA® DP25B Series meters have the biggest, brightest display of any 1/8 DIN panel meter. The user can select the display color: RED, AMBER, or GREEN.

Along with the 4-digit, 9-segment display, these low-cost panel meters/controllers provide unparalleled accuracy in signal conditioning. Additional features include microprocessor-based operation; dual 5 A SPDT relays (optional); and isolated or non-isolated analog output in ranges of 0 to 10 Vdc, 0 to 20 mA, or 4 to 20 mA, which can be used for retransmission of the display value or as a proportional control output. The DP25 Series includes models with inputs for process (DC voltage and current), strain gages, thermocouples, and RTDs.

Thermocouple and RTD Models
These models combine versatility with ease of programming. The DP25B-TC is selectable for J, K, T, or J DIN thermocouples. The DP25B-RTD accepts Pt 100 Ω (0.00385 curve) RTDs.

SPECIFICATIONS
Display: 4-digit, 9-segment, 21 mm (0.83") high red, amber or green LED (programmable)
Analog-to-Digital Technique: Dual slope
Internal Resolution: 15-bit
Polarity: Automatic
Read Rate: 3/s
Step Response: 2 s
Relay Outputs (Optional): 2 form “C” (SPDT) relays rated 5 A 250 Vac, programmable for active high/low alarms with latching/non-latching relays

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**DP25B Series**

DP25B, shown close to actual size.

**MONOGRAM SERIES**

Covered by U.S. and International patents and pending applications

<table>
<thead>
<tr>
<th>INPUT TYPE</th>
<th>RANGE</th>
<th>ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>-210 to 760°C</td>
<td>-346 to 1400°C</td>
</tr>
<tr>
<td>K</td>
<td>-270 to 1372°C</td>
<td>-454 to 2500°F</td>
</tr>
<tr>
<td>T</td>
<td>-210 to 400°C</td>
<td>-346 to 752°F</td>
</tr>
<tr>
<td>J DIN</td>
<td>-200 to 900°C</td>
<td>-328 to 1652°F</td>
</tr>
</tbody>
</table>

Analog Output (Optional): 0 to 10 V, 4 to 20 mA or 0 to 20 mA; can be assigned to a display range (scalable) or proportional control output with setpoint #1 when used as a control output

Power: 115 Vac or 230 Vac ±10%, 10 to 32 Vdc, 26 to 56 Vdc; 8 W max (DP25B-TC or -RTD), 11 W max (DP25B-E or -S); 240 Vrms overvoltage protection

Isolation: Dielectric strength to 2500 V transient per 3 mm spacing based on EN61010 for 260 Vrms or Vdc

NMR: 60 dB
CMR: 120 dB
Operating Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Relative Humidity: 90% @ 40°C (104°F), non-condensing
Dimensions: 48 H x 96 W x 152 mm D (1.89 x 3.78 x 6.0”)
Panel Cutout: 45 H x 92 mm W (1.772 x 3.622”)
Weight: 36 g (1.27 lb)

THermocouPLe MeTereR SPeCIfICATIONS
Input: Thermocouple Types J, K, T and J DIN
Relay Hysteresis: Programmable from 0 to 9999
Accuracy: ±0.5°C (0.9°F) after 30 minutes warm-up
Temperature Coefficient: ±50 ppm/°C
Input Resistance: 100 MΩ

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Process and Strain Models
Because they accept a wide range of DC voltage and current inputs, the DP25B-E strain meters can handle most process and strain applications. Features include easy front-panel scaling to virtually any engineering units, a remote tare function for weighing applications, and a hardware lockout to prevent unauthorized changes in setup. In addition, the DP25B-E meters feature built-in excitation in 4 user-selectable voltages, which makes them compatible with most transducers and transmitters.

<table>
<thead>
<tr>
<th>INPUT TYPE</th>
<th>RANGE</th>
<th>ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTD, 100 Ω Pt, 2-, 3-, 4-wire</td>
<td>-200 to 850°C (-328 to 1562°F)</td>
<td>0.5°C (0.9°F)</td>
</tr>
</tbody>
</table>

SPECIFICATIONS
(RTD Temperature Meter/Controller)
Input: RTD 100 Ω Pt (0.00385 curves); 2-, 3- and 4-wire selectable
Accuracy: ±0.5°C (0.9°F) after 30 min warm-up
Temperature Coefficient: ±50 ppm/°C
Input Resistance: 100 MΩ

<table>
<thead>
<tr>
<th>INPUT TYPE</th>
<th>RANGE</th>
<th>ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>mV, V, mA</td>
<td>0 to 100 mV, ±50 mV, 0 to 10V, ±5V, 0 to 20 mA, 4 to 20 mA</td>
<td>0.02% rdg</td>
</tr>
</tbody>
</table>

Total Programmable Color Displays
The OMEGA® DP25B Series meters and controllers have totally programmable color displays—for RED, AMBER, or GREEN.
CUSTOM CONFIGURATIONS

Custom firmware and hardware available in quantity.

CUSTOM COLORS

Custom-color bezels and enclosures are available for original equipment manufacturers.
Enhance the appearance of your equipment design with custom colors.

Consult the OMEGA® OEM GROUP at 1-856-467-4200

The following LVD (Low Voltage Directive/Safety) requirements have been met to comply with EN 61010-1, 1993 (Electrical equipment for measurement, control and laboratory use)

1. Pollution Degree 2
2. Installation Category II
3. Double Insulation

DP25/DP26/PHCN-37/ORCN-37/OPCN-37 complies with the following EMC Immunity Standards as tested per EN 50082-2, 1995 (Industrial environment)

Phenomena Test Specification Basic Standard
Electromagnetic Discharge +/− 4 kV contact discharge IEC 1000-4-2 Perf. Criteria B
+/- 8 kV air discharge IEC 1000-4-3 Perf. Criteria A
Radio Frequency electromagnetic field 27 - 1000 MHz 10 V/m 80% AM (1 KHz) IEC 1000-4-4 Perf. Criteria B
500 ns Tr/Th, 5 KHz repet. Freq. IEC 1000-4-5 Perf. Criteria A
Fast Transients +/- 2 kV (ac mains) +/- 1 kV (dc, signal I/O) 5/50 ns Tr/Th, 5 KHz repet. Freq. IEC 1000-4-6 Perf. Criteria A
Radio Frequency conducted 0.15 - 80 MHz 10 V/m 80% AM (1 KHz) IEC 1000-4-7 Perf. Criteria A
Surges +/− 2 kV line to earth ic 1000-4-8 Perf. Criteria A
+/- 1 kV line to line IEC 1000-4-9 Perf. Criteria B
Voltage Dips 30% reduction 10 ms 60% reduction 100 ms IEC 1000-4-11 Perf. Criteria B
Voltage Interruption >90% reduction 500 ms Perf. Criteria C IEC 1000-4-11

DP25/DP26/PHCN-37/ORCN-37/OPCN-37 complies with the following EMC Emission Standards as tested per EN 50081-1, 1997 (Residential, Commercial and Light Industrial)

Phenomena Frequency Range Limits Basic Standard
Radiated Emission 30 - 230 MHz 30 dB, V/m at 10 m CISPR 22 Class B
230 - 1000 MHz 37 dB, V/m at 10 m Class B
Conducted Emission 0.15-5.0 MHz 86-56 dB, V/peak CISPR 22 Class B
0.5-30 MHz 56-60 dB, V/peak Class B

To Order

MODEL NO. DESCRIPTION
DP25B-TC Thermocouple
DP25B-RTD RTD
DP25B-E Process (DC voltage and current)
DP25B-S Strain input

POWER OPTIONS*

ORDER SUFFIX POWER
-A Analog output
-AR Analog and relay options
-S Isolated analog output
-R Dual 5 A relays

OUTPUT OPTIONS*

ORDER SUFFIX POWER
-A Analog output
-AR Analog and relay options

ACCESSORY

MODEL NO. DESCRIPTION
DPP-5 1/8 DIN panel punch

* Not field installable. For “-AI” option, the “-R” option is required.

DP25B-E, process meter.