PLATINUM Series

OMEGA

Universal Benchtop Digital Panel Meters

Single Channel Models with Embedded Ethernet Connectivity Option

MDS8PT Series

1 YEAR WARRANTY

MDS8PT shown smaller than actual size.

- Universal Inputs
- Easy-to-Use and Configure
- Optional Embedded Internet
- Built Around OMEGA's New PLATINUM Meter
- High Quality
- 5-Year Warranty
- High Accuracy ±0.5°C
- Totally Programmable Color Display
- Optional Alarm Relays or Analog Output

The OMEGA® MDS8PT is a ⅛ DIN size (96 x 48 mm) digital panel meter in a benchtop plastic enclosure featuring the Pt Series color-changing display.

The Pt Series meters feature 4 or 6 digit LED displays that can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any set-point or alarm point. Other options include isolated programmable analog output, serial communications, Modbus® and Ethernet.

The universal temperature and process instrument handles 10 common types of thermocouples, thermistors, multiple RTD's, and several process (DC) voltage and current ranges.

Specifications

SINGLE-CHANNEL UNIVERSAL INPUTS

Accuracy: See table for details

Resolution: 1°/0.1°; 10 µV process

Temperature Stability:

RTD: 0.04°C/°C

Thermocouple @ 25°C (77°F): 0.05°C/°C (cold junction compensation)

Process: 50 ppm/°C

CMRR: 120 dB

A/D Conversion: 24-bit sigma delta

Digital Filter: Programmable

Display: 4 or 6 digit, 9-segment LED, 21 mm (0.83") **GREEN**, **AMBER**, and **RED** programmable colors for process variable, set point and temperature units

Input Types: Thermocouple, RTD, thermistor, analog voltage, analog current

Thermocouple Type (ITS 90): J, K, T, E, R, S, B, C, N, L

RTD Input (ITS 90): 100/500/1000Ω Pt sensor, 2-, 3- or 4-wire; 0.00385 or 0.00392 curve

Thermistor Input: 2252Ω, 5K Ω, 10K Ω

Voltage Input: -100 to 100 mV, -1 to 1 V, -10 to 10 Vdc

Current Input: 4 to 20 mA, 0 to 24 mA scalable

Configuration: Differential

Polarity: Bipolar

Input Type		Range	Accuracy
Process Voltage		±100 mV, ±1, ±10 Vdc	0.03% FS
Process Current		Scalable within 0 to 24 mA	0.03% FS
J	Iron–Constantan	-210 to 760°C/-346 to 1400°F	0.4°C/0.7°F
K	CHROMEGA®-ALOMEGA®	-270 to -160°C/-160 to 1372°C -454 to -256°F/-256 to 2502°F	1.0°C/0.4°C 1.8°F/0.7°F
T	Copper–Constantan	-270 to -190°C/-190 to 400°C -454 to -310°F/-310 to 752°F	1.0°C/0.4°C 1.8°F/0.7°F
E	CHROMEGA®–Constantan	-270 to -220°C/-220 to 1000°C -454 to -364°F/-364 to 1832°F	1.0°C/0.4°C 1.8°F/0.7°F
R	Pt/13%Rh-Pt	-50 to 40°C/40 to 1768°C -58 to 104°F/104 to 3214°F	1.0°C/0.5°C 1.8°F/0.9°F
S	Pt/10%Rh-Pt	-50 to 100°C/100 to 1768°C -58 to 212°F/212 to 3214°F	1.0°C/0.5°C 1.8°F/0.9°F
B	30%Rh–Pt/6%Rh-Pt	100 to 640°C/640 to 1820°C 212 to 1184°F/1184 to 3308°F	1.0°C/0.5°C 1.8°F/0.9°F
C	5%Re–W/26%Re-W	0 to 2320°C/32 to 4208°F	0.4°C/0.7°F
N	Nicrosil–Nisil	-250 to -100°C/-100 to 1300°C -418 to -148°F/-148 to 2372°F	1.0°C/0.4°C 1.8°F/0.7°F
L	J DIN	-200 to 900°C/-328 to 1652°F	0.4°C/0.7°F
RTD	Pt, 0.00385, 100, 500, 1000 Ω	-200 to 900°C/-328 to 1652°F	0.4°C/0.7°F
RTD	Pt, 0.00392, 100, 500, 1000 Ω	-200 to 850°C/-328 to 1562°F	0.4°C/0.7°F
Thermistor		2252Ω -40 to 120°C (-40 to 248°F)	0.2°C (0.35°F)
Thermistor		5K Ω -30 to 140°C (-22 to 284°F)	0.2°C (0.35°F)
Thermistor		10K Ω -20 to 150°C (-4 to 302°F)	0.2°C (0.35°F)

Step Response: 0.7 s for 99.9%

Decimal Selection: None, 0.1 for temperature; none, 0.1, 0.01 or 0.001 for process

Set-Point Adjustment: -9999 to 9999 counts

Span Adjustment: 0.001 to 9999 counts

Offset Adjustment: -9999 to +9999

NETWORK AND COMMUNICATIONS

Ethernet: Standards Compliance IEEE 802.3 10/100

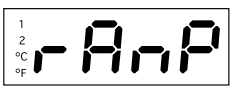
Supported Protocols: TCP/IP, ARP, HTTPGET

RS232/RS485: Selectable from menu; both ASCII and Modbus protocol selectable from menu; programmable 1200 to 115.2 Kb; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status

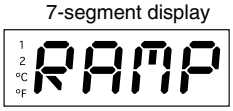
Connection: USB connector on front panel; optional alarm 1 and 2 (programmable)

9-segment LED

The **Pt Series** displays feature unique 9-segment LED characters, which greatly improves alphanumeric representations. The 7-segment LED characters found on most instruments are adequate for presenting numbers, but not letters. Words are easier to read with the unique 9-segment LED characters on the **Pt Series**, which makes operating and programming simpler and easier.



7-segment display



9-segment display

Optional Alarm 1 and 2 (Programmable)

Type: Form "C" SPDT relays

Operation: High/low, above/below, limited output to 30 Vrms, 60 Vdc max, band, latch/unlatch, normally open/normally closed and process/deviation; front panel configurations

Optional Analog Output (Programmable):

Isolated, retransmission 0 to 10 Vdc or 0 to 20 mA, 500 Ω max (output 1 only). Accuracy is ± 1% of FS when following conditions are satisfied.

1) Input is not scaled below 1% of input FS
2) Analog output is not scaled below 3% of output FS

General

Power: 90 to 240 Vac, 50 to 60 Hz

Note: *Power cords for 120 Vac operation are available. See "Accessories."*

Single channel shown with dual alarm, ethernet, and isolated analog.

To Order

Model No.	Description
MDS8PT-330	1-channel 4 digit benchtop panel meter, universal input with dual alarm relays
MDS8EPT-330	1-channel 6 digit benchtop panel meter, universal inputs with dual alarm relays
MDS8PT-330-C24-EIP-A	1-channel 4 digit benchtop panel meter, universal input with dual alarm relays (RS232/485 communication, embedded ethernet and isolated analog output)
MDS8EPT-330-C24-EIP-A	1-channel 6 digit benchtop panel meter, universal input with dual alarm relays (RS232/485 communication, embedded ethernet and isolated analog output)

Comes with quick start manual.

Accessories* (Select One)	Description
POWER CORD-MOLDED	Power cord with connector for North America (USA, Mexico, Canada), standard 120 Vac
POWER CORD-DM	Power cord with connector for Denmark
POWER CORD-E-10A	Power cord with connector for Continental Europe
POWER CORD-IT	Power cord with connector for Italy or Ireland
POWER CORD-SE	Power cord with stripped ends (no connection), all countries 250 Vac max
POWER CORD-UK	Power cord with connector for United Kingdom

** Select one power cord. Required for operation.*