

Universal Benchtop Digital Controllers

With Optional Embedded Ethernet Connectivity

Features
Universal
Input



CS8DPT

CS8DPT shown smaller than actual size.



- ✓ **Universal Inputs:** Thermocouple, RTD, Thermistor, Process Voltage/Current, and Strain
- ✓ **Simple to Configure and Use**
- ✓ **Optional RS232/485 and Ethernet Communications**
- ✓ **High Accuracy**
- ✓ **Internal 5A SSR Control Output**
- ✓ **5-Year Warranty**
- ✓ **Dual Display Standard, Indicates Both Setpoint and Real-Time Process**
- ✓ **Totally Programmable Color Displays, Standard**
- ✓ **Operates from 90 to 240 Vac @ 50/60 Hz**

The OMEGA® CS8DPT is a portable benchtop digital controller and with a large color-changing display. The PLATINUM Series meters feature dual LED displays that can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point. Other options include, serial

communications, Modbus®, and Ethernet.

The universal temperature and process instrument handles 10 common types of thermocouples, thermistors, multiple RTDs, and several process (DC) voltage current ranges and strain inputs.

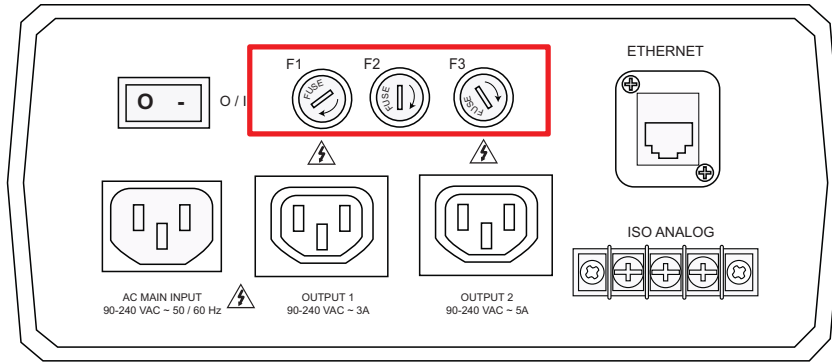
LabVIEW™ Driver

The PLATINUM LabVIEW driver is the National Instrument device driver for communicating with OMEGA® PLATINUM Controllers via Modbus RTU/ASCII and Modbus TCP protocols. The driver allows easy access to the internal data, configuration settings, and operating functions of the PLATINUM product family.

The LabVIEW instrument driver reduces the application development time and simplifies instrument control. With the PLATINUM LabVIEW driver, customers can quickly communicate with the instrument and develop robust test applications and software.



Just Hook Up Your Sensor, Plug in Your Heater, and You're Ready to Go!



The power, fuses and outputs are located on the rear panel of the Benchtop Digital Controller. The optional Ethernet port is also located at the rear of the unit.

CS8DPT-C24-EIP-A Rear Panel.

Input Type	Description	Range	Accuracy
Process/Strain	Process Voltage	± 50 mV, ± 100 mV, ± 1 Vdc, ± 10 Vdc	0.03% FS
Process	Process Current	Scalable within 0 to 24 mA	0.03% FS
J	Iron-Constantan	-210 to 1200°C (-346 to 2192°F)	0.4°C (0.7°F)
K	CHROMEGA®-ALOMEGA®	-270 to -160°C (-454 to -256°F) -160 to 1372°C (-256 to 2502°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
T	Copper-Constantan	-270 to -190°C (-454 to -310°F) -190 to 400°C (-310 to 752°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
E	CHROMEGA®-Constantan	-270 to -220°C (-454 to -364°F) -220 to 1000°C (-364 to 1832°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
R	Pt/13%Rh-Pt	-50 to 40°C (-58 to 104°F) 40 to 1788°C (104 to 3250°F)	1.0°C (1.8°F) 0.5°C (0.9°F)
S	Pt/10%Rh-Pt	-50 to 100°C (-58 to 212°F) 100 to 1768°C (212 to 3214°F)	1.0°C (1.8°F) 0.5°C (0.9°F)
B	30%Rh-Pt/6%Rh-Pt	100 to 640°C (212 to 1184°F) 640 to 1820°C (1184 to 3308°F)	1.0°C (1.8°F) 0.5°C (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 (-418 to -148°F) -100 to 1300°C (-148 to 2372°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
RTD	Pt, 0.00385, 100Ω, 500Ω, 1000Ω	-200 to 850°C (-328 to 1562°F)	0.3°C (0.7°F)
RTD	Pt, 0.003916, 100Ω	-200 to 660°C (-328 to 1220°F)	0.3°C (0.7°F)
RTD	Pt, 0.00392, 100Ω	-200 to 660°C (-328 to 1220°F)	0.3°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)

Specifications

Accuracy: See table on page 2

Resolution: 1°/0.1°; 10 µV process

Temperature Stability:

RTD: 0.04°C/°C

Thermocouple: 25°C (77°F); cold-junction compensation of 0.05°C/°C

Process: 50 ppm/°C

CMRR: 120 dB

A/D Conversion: Dual-slope

Reading Rate: 20 samples per second

Digital Filter: Programmable

Display: 4-digit, 9-segment LED with size 21 mm (83") and 10.2 mm (40"); **RED, GREEN, and AMBER**, and programmable colors for process variable, and temperature units

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

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, 5kΩ, and 10kΩ

Voltage Input: -100 to 100 mV, -1 to 1 Vdc, 0 to 10 Vdc

Current Input: 4 to 20 mA

Strain Inputs: ±50, ±100 mV

Configuration: Differential

Polarity: Bipolar

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

Control Output: 5A SSR (internal), 3A relay max, analog process output

Excitation: Firmware selectable to 5, 10, 12, and 24 Vdc @ 25 mA

Network and Communications

Ethernet: 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 115K baud; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status

Connection: USB, Ethernet (option), Series (option)

General

Power: 90 to 240 Vac, 50 to 60 Hz

Dimensions: 236 W x 230 D x 108 mm H (9.3" x 9.1" x 4.3")

Weight: 1.13 kg (2.5 lb)

Note: Power cords are available from OMEGA.



The OMEGA Dashboard Windows® web server provides a comprehensive data logging, charting and alarm notification system for all OMEGA iServer web connected devices, including PLATINUM series, iSeries, and all OMEGA wireless products. Users may view charts and graphs, monitor and record readings and receive alarm information from virtually any type of iServer connected transducer on any computer, tablet, or smartphone that supports a web browser.

To Order

Model No.	Description
CS8DPT	Benchtop controller, universal input
CS8DPT-C24-EIP-A	Benchtop controller with embedded ethernet, serial communication, and isolated analog output

Comes complete with 2 output cords, wire kit (for RTD and bridge inputs only) and quick start manual.

Power Cord Option

Model No.	Description
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
POWER CORD-MOLDED	Power cord with connector for North America (USA, Mexico, Canada), standard 120 Vac