

# Universal Benchtop Digital Controllers



## With Optional Embedded Ethernet Connectivity

Features Universal Input



PLATINUM™ Series

CS8DPT/CS8EPT

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.

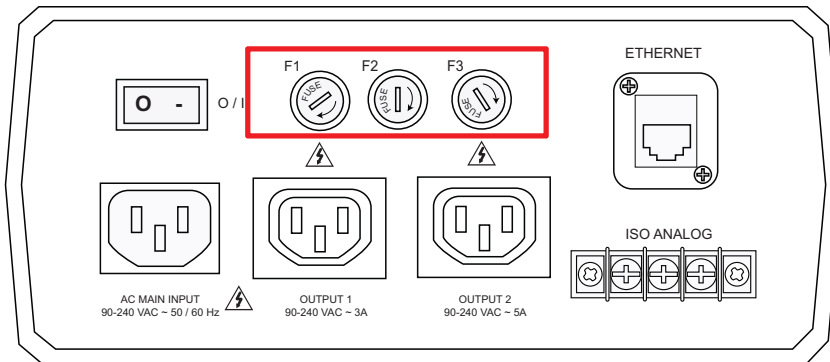
### LabVIEW™ Driver

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
<b>Process/Strain</b>	Process Voltage	$\pm 50$ mV, $\pm 100$ mV, $\pm 1$ Vdc, $\pm 10$ Vdc	0.03% FS
<b>Process</b>	Process Current	Scalable within 0 to 24 mA	0.03% FS
<b>J</b>	Iron-Constantan	-210 to 1200°C (-346 to 2192°F)	0.4°C (0.7°F)
<b>K</b>	CHROMEQA®-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)
<b>T</b>	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)
<b>E</b>	CHROMEQA-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)
<b>R</b>	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)
<b>S</b>	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>B</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)
<b>C</b>	5%Re-W/26%Re-W	0 to 2320°C (32 to 4208°F)	0.4°C (0.7°F)
<b>N</b>	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)
<b>RTD</b>	Pt, 0.00385, 100Ω, 500Ω, 1000Ω	-200 to 850°C (-328 to 1562°F)	0.3°C (0.7°F)
<b>RTD</b>	Pt, 0.003916, 100Ω	-200 to 660°C (-328 to 1220°F)	0.3°C (0.7°F)
<b>RTD</b>	Pt, 0.00392, 100Ω	-200 to 660°C (-328 to 1220°F)	0.3°C (0.7°F)
<b>Thermistor</b>	2252Ω	-40 to 120°C (-40 to 248°F)	0.2°C (0.35°F)
<b>Thermistor</b>	5K Ω	-30 to 140°C (-22 to 284°F)	0.2°C (0.35°F)
<b>Thermistor</b>	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 or 6-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
<b>CS8DPT</b>	Benchtop controller, universal input with 4-digit display
<b>CS8DPT-C24-EIP-A</b>	Benchtop controller with 4-digit display, embedded Ethernet, serial communication, and isolated analog output
<b>CS8EPT</b>	Benchtop controller, universal input with 6-digit display
<b>CS8EPT-C24-EIP-A</b>	Benchtop controller with 6-digit display, 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
<b>POWER CORD-DM</b>	Power cord with connector for Denmark
<b>POWER CORD-E-10A</b>	Power cord with connector for Continental Europe
<b>POWER CORD-IT</b>	Power cord with connector for Italy or Ireland
<b>POWER CORD-SE</b>	Power cord with stripped ends (no connection), all countries 250 Vac max
<b>POWER CORD-UK</b>	Power cord with connector for United Kingdom
<b>POWER CORD-MOLDED</b>	Power cord with connector for North America (USA, Mexico, Canada), standard 120 Vac