

Compact Benchtop Controllers

Optional Communications
Bundled with Free Software

CSC32 Series
Starts at
\$345



- ✓ Rugged Metal Benchtop Enclosure
- ✓ 4-Digit Display, 1 or 0.1° Resolution
- ✓ Full Autotune PID Heat-Cool Control
- ✓ Single Ramp and Soak Capability
- ✓ High Accuracy ($\pm 0.25\%$ FS $\pm 1.5^\circ\text{C}$)
- ✓ Models with Dedicated Thermocouple, RTD, Process Voltage or Current Input
- ✓ Two 5 A 120 Vac SSR Outputs Standard
- ✓ Second Output May Be Used for Control or 1 of 5 Types of Alarms
- ✓ Optional RS232 or RS485 MODBUS Communications with Free CN9-SW Communications Software and Cable



The CSC32 Series compact benchtop controllers are ideal for laboratory use and applications requiring portable temperature and process control. Pre-wired input and output receptacles in the rear of the case enable quick and easy connections to power, input, power output and digital communications. These benchtop controllers are factory configured and calibrated for a dedicated input type by model number.



The 1/2 DIN CN9500 controller used in this benchtop controller series can be programmed for either

on/off, or PID autotune control (with autotune feature) via the front panel or through the use of a PC and CN9-SW communications software.

Specifications

Power: 115 Vac, ±10%, 50/60 Hz

Display: 4-digit LED, 10 mm (0.4"), high-brightness green display

Display Range: -199 to 9999 counts (hi-res mode, -199.9 to 999.9)

Range: Sensor limited 2000°C/3500°F; -99.9 to 999.9° in 0.1° resolution

Display Indicators: Process variable (PV), setpoint (SP), LED output indicators-flashing, output 1 (SP1 square) green, output 2 (SP2 round) red; error messages, function/option mnemonics

Control Modes: PID autotune, on/off, direct/reverse

Alarm Modes: Deviation high, deviation low, deviation band, full scale high, or full scale low

External Thermocouple:

Resistance: 100 Ω max

Thermocouple: See table

Standards: IPTS/68/DIN43710

RTD Input: Pt100 2-wire (0.00385)

Linear Process Inputs: mV range: 0 to 50 mV (1 Ω shunt resistor supplied for mA inputs)

Calibration Accuracy: ±0.25% FS ±1.5°C (±2.7°F)

Sampling Frequency:

Input: 10 Hz

CJC: 2 seconds

Common Mode Rejection: Negligible effect up to 140 dB, 240V, 50 to 60 Hz

Temperature Coefficient:

150 ppm/°C sensor max

Input Connection:

Thermocouple: Accepts both miniature and standard male thermocouple connectors

Note: A miniature and standard size male mating connector is included with each benchtop controller.

RTD, mA or mV: Accepts OMEGA® T Series model TA3F keyed-3-pin locking connector

Note: A mating connector is included with each benchtop controller.

Outputs: 2 solid state relays rated for 5 A @120Vac (internally, the controller provides 2 DC pulse outputs to drive a built-in dual solid-state relay)

Operating Ambient Range:

0 to 50°C (32 to 130°F)

Benchtop Case Material:

Aluminum

Controller Case: Flame-retardant polycarbonate

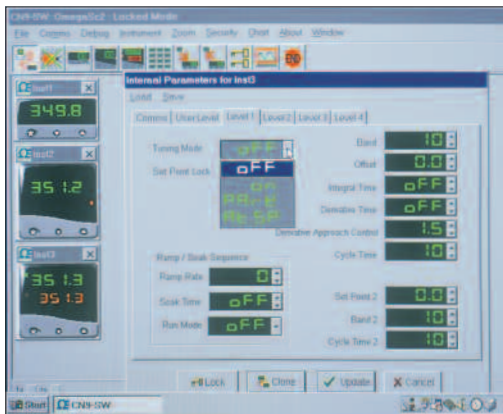
Dimensions: 135 W x 59 H x 159 mm L (5.3 W x 2.4 H x 6.5" L)

Power Connection: Standard 3-prong power cord (provided)

Output Connections: 2 standard

120 Vac outlets

Weight: 0.9 kg (2 lbs)



Software included **FREE** with “-C2” or “-C4” options!

Computer screen depicting the internal parameters setup for tuning mode, ramp/soak sequence and security lockouts when using CN9-SW software.

When a satisfactory instrument configuration has been achieved, these settings can be saved to a file for later use or cloned to other instruments on the network.

Input and Range Table MOST POPULAR RANGES HIGHLIGHTED!

Input Code	Input Type	Linearized Range (Units are °C/°F Switchable)	Linearity °C (°F)
J	Iron-Constantan	-0 to 800°C/32 to 1472°F	0.5 (0.9)
K	CHROMEGA®-ALOMEGA®	-50 to -1200°C/-58 to 2192°F	0.25 (4.5)
T	Copper-Constantan	-200 to -250°C/-273 to 482°F	0.25 (4.5)
E	CHROMEGA®-Constantan	0 to 600°C/32 to 1112°F	0.5 (0.9)
R	Pt-13%Rh/Pt	-50 to 40°C/40 to 1768°F	2.0 (3.6)
S	Pt-10%Rh/Pt	0 to 1600°C/32 to 2912°F	2.0 (3.6)
N	OMEGA-P®-OMEGA-N®	-50 to 1200°C/-58 to 2912°F	0.25 (0.45)
RTD	100 Ω Pt, 2-Wire	-200 to 400°C/-273 to 752°F	0.25 (0.45)
MA	LINEAR CURRENT	0 to 20 mA (-250 to 3000 max acale)	±0.5% (±0.9%)
MV	LINEAR VOLTAGE	0 to 20 mV (-250 to 3000 max scale)	±0.5% (±0.9%)

To Order (Specify Model No.)

Model Number	Price	Description
CSC32(*)	\$345	Benchtop controller

* Insert Input Code: **J, K, T, E, R, S, N, RTD, MV or MA** from Input and Range Table Comes complete with operator's manual and 120 Vac power cord and input connector.

Ordering Example: **CSC32K**, benchtop controller, Type K input, **\$345**.

OCW-3, OMEGACARESM extends standard 1-year warranty to a total of 4 years (**\$86**), \$345 + 86 = **\$431**.

Communications Options (Pre-Wired 6' Communications Cable Included)

Suffix	Price	Description
-C2	\$125	RS232 communications bundled with free CN9-SW software
-C4	125	RS485 communications bundled with free CN9-SW software

Protocol Manual for CN9-SW Software

Model Number	Price	Description
BD9-PROTOCOL**	N/C	MODBUS® protocol manual (not required when using the CN9-SW software)

**Note: This protocol manual provides the address information necessary to communicate with the CN9300/CN9400/CN9500 and CSC32 Series, with communications options installed, when interacting with custom, or other commercially available, software.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.



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