

1/32 DIN Ramp/Soak Controllers

CN7500 Series



- ✓ Dual 4-Digit LED Display
- ✓ 8 Ramp/Soak Programs, 8 Segments Each
- ✓ Universal Inputs
- ✓ Autotune
- ✓ Dual Control Outputs
- ✓ RS485 Communications Standard
- ✓ Alarm Functions
- ✓ Free Software

The CN7500 Series temperature/process controller's advanced control features can handle the most demanding temperature or process applications. Enclosed in a compact 1/32 DIN housing, the CN7500 has dual, 4-digit LED displays for local indication of process value and setpoint. Control methods include on/off, PID, autotune, and manual tune. PID control is supported with 64 temperature and time (ramp/soak) control actions. The dual-loop output control allows simultaneous heating and cooling. The second output can be configured as an alarm mode using one of the 13 built-in alarm functions.

RS485 communications is standard. Up to 247 communication addresses are available, with transmission speeds of 2400 to 38,400 bps. Other features include universal inputs, selectable temperature units (°C/°F), selectable resolution, quick sampling rate, and security protection.

Specifications

Inputs: Thermocouple, RTD, DC voltage or DC current

Display: Two 4-digit, 7 segment 6.35 mm H (25") LEDs;

PV: red

SV: green

Accuracy: ±0.25% span, ±1 least significant digit

Supply Voltage: 100 to 240 Vac, 50/60 Hz

Power Consumption: 5 VA max

Operating Temperature: 0 to 50°C (32 to 122°F)

Memory Backup: Non-volatile memory

Control Output Ratings:

Relay: SPST, 5A @ 250 Vac resistive

Voltage Pulse: 14 V, 10 to -20% (max 40 mA)

Current: 4 to 20 mA

Communication: RS485 MODBUS® A-5-11/RTU communication protocol

Weight: 114 g (4 oz)

Panel Cut-Out: 45 x 22.5 mm (1.772 x 0.886")

Maximum Panel Thickness: 3.40 mm (0.14")

Panel Depth: 99.80 mm (3.86")



Panel punches available, visit omega.com/panelpunches

Inputs

Input Types	Range
K	-200 to 1300°C (-328 to 2372°F)
J	-100 to 1200°C (-148 to 2192°F)
T	-200 to 400°C (-328 to 752°F)
E	0 to 600°C (32 to 1112°F)
N	-200 to 1300°C (-328 to 2372°F)
R	0 to 1700°C (32 to 3092°F)
S	0 to 1700°C (32 to 3092°F)
B	100 to 1800°C (212 to 3272°F)
L	-200 to 850°C (-328 to 1562°F)
U	-200 to 500°C (-328 to 932°F)
Pt100 RTD	-200 to 600°C (-328 to 1112°F)
0 to 50 mV	-999 to 9999
0 to 5 V	-999 to 9999
0 to 10 V	-999 to 9999
0 to 20 mA*	-999 to 9999
4 to 20 mA*	-999 to 9999

* Requires external 250 Ω precision shunt resistor, **OMX-R250** (sold separately).

To Order Visit omega.com/cn7500 for Pricing and Details

Model No.	Description
CN7523	Dual output, DC pulse/relay, RS485*
CN7533	Dual output, relay/relay, RS485*
CN7553	Dual output, 4 to 20 mA/relay, RS485*

Accessories (Field Installable)

Model No.	Description
CNQUENCHARC	Noise suppression RC snubber (2 leads), 110 to 230 Vac
OMX-R250	250 Ω precision resistor
CN7-485-USB-1	RS485 to USB mini-node converter

Comes complete with operator's manual.

* Free CN7-A software download available at omega.com/cn7500

Ordering Example: **CN7523**, dual-output controller, DC pulse and a mechanical relay output, RS485 communications.