# ¹⁄₁₆ DIN Ramp/Soak Controllers

## CN7800 Series
## $108
### All Models

✔ **Dual Display**
✔ **Autotune**
✔ **Universal Input**
✔ **8 Ramp/Soak Programs, 8 Segments Each**
✔ **Programmable Repeat and Linking Features**
✔ **RS485 Communications**
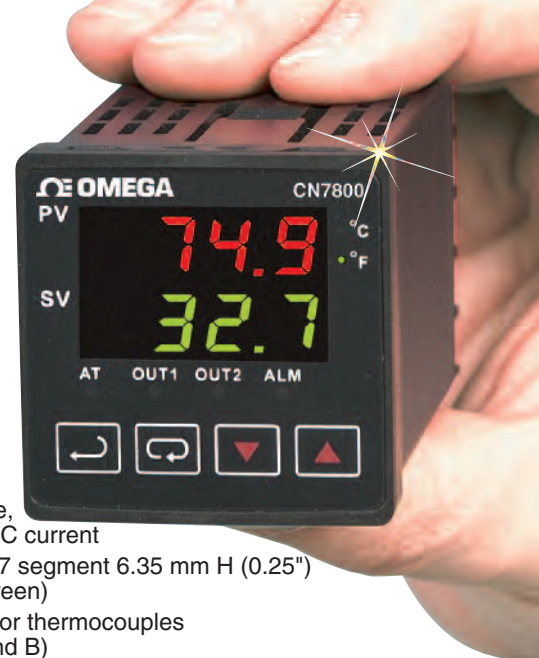✔ **Free Software**
✔ **2 Alarm Standard**

Monitor and control temperature or process applications with precision using the CN7800 Series controllers. The CN7800 Series provides dual LED displays for local indication of process value and setpoint value. Control methods include on/off, PID, auto-tune and manual-tune. PID control is supported with 64 ramp/soak control actions. Two additional alarm outputs are standard on the CN7800 Series. The alarm outputs can be quickly configured by using the 13 built-in alarm functions. The controller communicates easily with the built-in RS485 interface.

### Inputs

| Input Types | Range |
|---|---|
| K Thermocouple | -200 to 1300°C (-328 to 2372°F) |
| J Thermocouple | -100 to 1200°C (-148 to 2192°F) |
| T Thermocouple | -200 to 400°C (-328 to 752°F) |
| E Thermocouple | 0 to 600°C (32 to 1112°F) |
| N Thermocouple | -200 to 1300°C (-328 to 2372°F) |
| R Thermocouple | 0 to 1700°C (32 to 3092°F) |
| S Thermocouple | 0 to 1700°C (32 to 3092°F) |
| B Thermocouple | 100 to 1800°C (212 to 3272°F) |
| L Thermocouple | -200 to 850°C (-328 to 1562°F) |
| U Thermocouple | -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). Available at omega.com/cn7800*

**CN7833, $108.**

## Specifications
**Inputs:** Thermocouple, RTD, DC voltage or DC current
**Display:** Two 4-digit, 7 segment 6.35 mm H (0.25") LEDs (PV: red, SV: green)
**Resolution:** 1.0, 0.1 for thermocouples (except Types R, S and B)
**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, 5 A @ 250 Vac resistive
   **Voltage Pulse:** 14V, 10 to -20% (max 40 mA)
   **Current:** 4 to 20 mA
**Alarms:** SPST, 3 A @ 250 Vac resistive
**Communication:** RS485 MODBUS® A-5-11/RTU communication protocol
**Weight:** 114 g (4 oz)
**Front Bezel:** 48 mm² (1.89 in²)
**Panel Cut-Out:** 45 mm² (1.77 in²)
**Maximum Panel Thickness:** 9.50 mm (0.375")
**Panel Depth:** 80 mm (3.15")

### *AVAILABLE FOR FAST DELIVERY!*

## To Order *(Specify Model Number)*

| Model No. | Price | Description |
|---|---|---|
| CN7833 | $108 | Dual output, relay/relay, 2 alarms, RS485* |
| CN7823 | 108 | Dual output, DC pulse/relay, 2 alarms, RS485* |
| CN7853 | 108 | Dual output, 4 to 20 mA/relay, 2 alarms, RS485* |

***** *Free CN7-A software download available at omega.com/cn7800*

### Accessories (Field Installable)

| Model No. | Price | Description |
|---|---|---|
| CNQUENCHARC | $8 | Noise suppression RC snubber (2 leads), 110 to 230 Vac |
| OMX-R250 | 1 | 250 Ω precision resistor |
| CN7-485-USB-1 | 99 | RS485 to USB mini-node converter |

*Comes complete with operator's manual.*

**Ordering Examples: CN7823,** *dual-output controller, DC pulse, mechanical relay output, and RS485 communications,* **$108.**
**CN7853,** *dual output 4 to 20 mA relay two alarms,* **$108.**

Recommended Reference Book: Controller Tuning/PID, **GE-2117, $25.**
See Section Y For Additional Books

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