

1/32 DIN Ramp/Soak Controllers with Fuzzy Logic



CN74000 Series



Panel punches available



CN74020 shown actual size.

- ✓ Large Dual Display
- ✓ Autotune
- ✓ Fuzzy Logic
- ✓ Universal Inputs
- ✓ Peak/Valley Indication
- ✓ Percent Output Indication
- ✓ 16-Segment Ramp/Soak Function
- ✓ Illuminated Keypad
- ✓ Free Software

The CN74000 Series controllers set a new standard in 1/32 DIN power, flexibility, and value. Despite their small size, these controllers are loaded with features, including multiple universal inputs, fuzzy logic, autotune, auto/manual capability, and 16-segment ramp and soak with adjustable time base. RS485 serial communication is optional.

Inputs

Input Types	Range
K Thermocouple	-200 to 2500°F (-129 to 1371°C)
J Thermocouple	-100 to 1600°F (-73 to 871°C)
T Thermocouple	-350 to 750°F (-212 to 398°C)
E Thermocouple	-100 to 1800°F (-73 to 982°C)
N Thermocouple	-100 to 2372°F (-73 to 1300°C)
R Thermocouple	0 to 3200°F (-17 to 1760°C)
S Thermocouple	0 to 3200°F (-17 to 1760°C)
B Thermocouple	75 to 3308°F (24 to 1820°C)
L (J DIN) Thermocouple	-100 to 1600°F (-73 to 871°C)
C Thermocouple	0 to 4208°F (-17 to 2320°C)
Pt100 RTD (0.00385)	-200 to 875°C (-328 to 1607°F)
Pt100 RTD (0.00392)	-200 to 875°C (-328 to 1607°F)
RTD, 120 Ω Nickel (0.00628)	-80 to 320°C (-112 to 608°F)
RTD, Pt1000 (0.00385)	-200 to 875°C (-328 to 1607°F)
0 to 20 mA*, 4 to 20 mA*	-1999 to 9999
0 to 10 Vdc*, -10 to 10 Vdc*, -10 to 10 mVdc*	-1999 to 9999

Note: All thermocouple and RTD inputs can be set for 0.1° display. If temperature goes above 999.9° or less than -199.9° the display will return to whole degree resolution.

* **Process Input Types:** The 0 to 20 mA_{dc}, 4 to 20 mA_{dc}, 0 to 10 V_{dc}, and 2 to 10 V_{dc}, inputs are fully scalable from a minimum of 100 counts span placed anywhere within the within the range of -1999 to 9999. Decimal point position is adjustable from the zero place (9999), tenths (999.9), hundredths (99.99), or thousandths (9.999).

Specifications

Selectable Inputs: Thermocouple, RTD, DC voltage or DC current

Display: Two 4-digit, 7-segment, 6.35 mm H (0.25") LEDs

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

Supply Voltage: 100 to 240 Vac, nominal, 10 to 15%, 50 to 400 Hz

Single Phase: 132 to 240 V_{dc}, nominal, 10 to 20%

Power Consumption: 5 VA maximum

Operating Temperature: -10 to 55°C (14 to 131°F)

Memory Backup: Non-volatile memory, no batteries required

Control Output Ratings:

Relay: SPST, 3 A @ 240 Vac resistive; 1.5 A @ 240 Vac inductive; Pilot Duty Rating: 250 VA, 2 A @ 120 Vac or 1 A @ 240 Vac

Switched Voltage (Non-Isolated): 5 V_{dc} @ 20 mA

Weight: 114 g (4 oz)

Front-Panel Rating: NEMA 4X (IP66)

Panel Cut-Out: 45 x 22 mm (1.772 x 0.874")

Maximum Panel Thickness: 6.35 mm (0.25")

Panel Depth: 111.60 mm (4.395")

To Order

Model No.	Description
CN74020	Single output, DC pulse
CN74030	Single output, relay
CN74033	Dual output, relay/relay
CN74053	Dual output, 4 to 20 mA/relay
CN74123	Dual output, DC pulse/relay and alarm
CN74133	Dual output, relay/relay and alarm

Options

Ordering Suffix	Description
-C4*	RS485 communications
-LV	12 to 24 V _{dc} /V _{ac} power

Accessories (Field Installable)

Model Number	Description
CNQUENCHARC	Noise suppression kit, 110 to 230 Vac
CN7-485-USB-1	RS485 to USB mini-node converter

* Free CN7-A software download available at **OMEGA**

Ordering Examples: **CN74123-C4**, dual-output controller, DC pulse and a mechanical relay output, alarm, RS485 communications.

CN74030, single output controller, relay.