



# 1/32 DIN Ramp/Soak Controllers with Fuzzy Logic

CN74000 Series  
Starts at  
**\$217**

Panel punches available, visit [omega.com/panelpunches](http://omega.com/panelpunches)



- ✓ 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
<b>K</b> Thermocouple	-200 to 2500°F (-129 to 1371°C)
<b>J</b> Thermocouple	-100 to 1600°F (-73 to 871°C)
<b>T</b> Thermocouple	-350 to 750°F (-212 to 398°C)
<b>E</b> Thermocouple	-100 to 1800°F (-73 to 982°C)
<b>N</b> Thermocouple	-100 to 2372°F (-73 to 1300°C)
<b>R</b> Thermocouple	0 to 3200°F (-17 to 1760°C)
<b>S</b> Thermocouple	0 to 3200°F (-17 to 1760°C)
<b>B</b> Thermocouple	75 to 3308°F (24 to 1820°C)
<b>L</b> (J DIN) Thermocouple	-100 to 1600°F (-73 to 871°C)
<b>C</b> Thermocouple	0 to 4208°F (-17 to 2320°C)
<b>Pt100 RTD (0.00385)</b>	-200 to 875°C (-328 to 1607°F)
<b>Pt100 RTD (0.00392)</b>	-200 to 875°C (-328 to 1607°F)
<b>RTD, 120 Ω Nickel (0.00628)</b>	-80 to 320°C (-112 to 608°F)
<b>RTD, Pt1000 (0.00385)</b>	-200 to 875°C (-328 to 1607°F)
<b>0 to 20 mA*, 4 to 20 mA*</b>	-1999 to 9999
<b>0 to 10 Vdc*, -10 to 10 Vdc*, -10 to 10 mVdc*</b>	-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 mAdc, 4 to 20 mAdc, 0 to 10 Vdc, and 2 to 10 Vdc, 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).



CN74020, \$217, shown actual size.

## 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 Vdc, nominal, 10 to 20%

**Power Consumption:** 5 VA max

**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 Vdc @ 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")

## MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)		
Model No.	Price	Description
CN74020	\$217	Single output, DC pulse
CN74030	217	Single output, relay
CN74033	238	Dual output, relay/relay
CN74053	273	Dual output, 4 to 20 mA/relay
CN74123	238	Dual output, DC pulse/relay and alarm
CN74133	238	Dual output, relay/relay and alarm

## Options

Ordering Suffix	Add'l Price	Description
-C4*	\$70	RS485 communications
-LV	40	12 to 24 Vdc/Vac power

## Accessories (Field Installable)

Model Number	Price	Description
CNQUENCHARC	\$8	Noise suppression kit, 110 to 230 Vac
DPP-1	400	1/32 DIN panel punch
CN7-485-USB-1	82	RS485 to USB mini-node converter
GE-2117	23	Reference Book: Controller Tuning, PID

\* Free CN7-A software download available at [omega.com/cn74000](http://omega.com/cn74000)

Comes complete with operator's manual.

**Ordering Examples:** CN74123-C4, dual-output controller, DC pulse and a mechanical relay output, alarm, RS485 communications, \$238 + 70 = \$308. CN74030, single output controller, relay, \$217.

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