

¼ DIN Ramp/Soak Temperature/Process Controllers with Fuzzy Logic

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CN72000 Series Starts at
\$465



- ✓ Dual-Display NEMA 4X (IP65) Front Panel Resists Dust and Moisture
- ✓ Front Panel Programmability
- ✓ 16 Ramp/Soak Segments with Program End Control
- ✓ Fuzzy Logic
- ✓ Autotune
- ✓ Built-In, Isolated 24 Vdc Power Supply
- ✓ Isolated Control Outputs

The CN72000 Series temperature/process controllers set a new standard in quality, versatility, ease-of-use and value. Possessing many high-level standard features, additional function setup items also appear in the control menu when a function is selected, simplifying the selection process. Units feature a universal input for thermocouple Types J, K, E, T, L, N, B, C, S and R, RTD's, a differential input (-10 to 10 mVdc), and a process input (0 to 20 mA_{dc}, 0 to 10 Vdc). A standard 24 V isolated, regulated power supply is included; operates most standard 4 to 20 mA transmitters. Standard features include autotune, fuzzy logic, fully adjustable PID, auto/manual control with smooth transfer and front panel activation key, percent output indicator, peak and valley indicator, loop break protection and indication. For process inputs, the display is fully programmable from -1999 to 9999 with selectable decimal point location. Most thermocouple and



CN72033, \$465.

RTD inputs show whole or tenth degree displays. The CN72000 Series can be programmed for on/off, PID, heat/cool, or latching alarm. All outputs are isolated from the inputs. Outputs include 10 A relay, and scalable 0 to 20 mA_{dc}.

Specifications

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

Input Impedance:

Thermocouple: 3 MΩ minimum

Voltage: 5000

Current: 10

RTD Current: 200 μA maximum

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%

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

Control Output Ratings:

Relay: SPDT, 10 A @ 240 Vac

Resistive: ½ hp @ 120 Vac, ½ hp @ 240 Vac

Alarm Relay: SPST, 3 A @ 240 Vac resistive

Proportional Current (Isolated): 0 to 20 mA_{dc}, scalable into 600 Ω maximum

SSR: 2.5 A @ 240 Vac @ 25°C (77°F); derates to 1.25 A @ 55°C (130°F)

DC Pulse (Isolated): 15 Vdc @ 20 mA

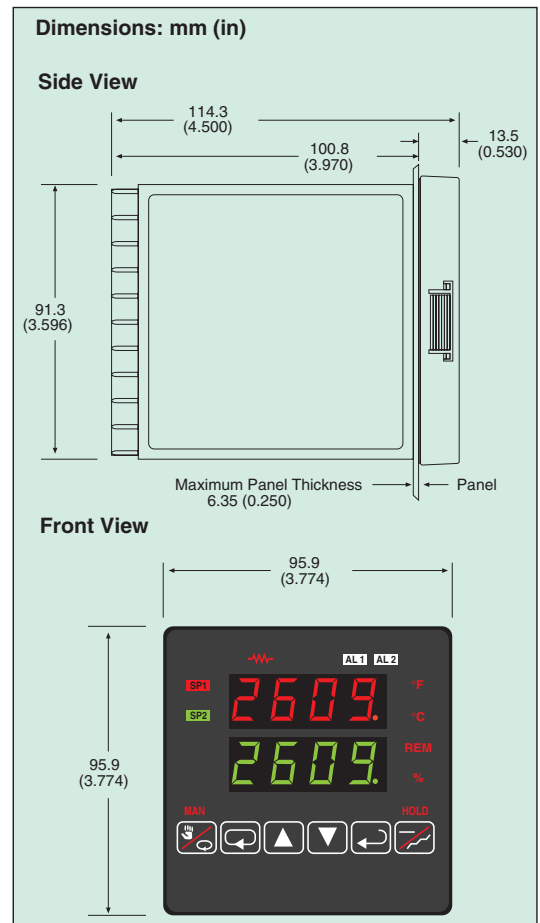
Weight: 369 g (13 oz)

Inputs

Input Types	Range
K Thermocouple	-129 to 1371°C (-200 to 2500°F)
J Thermocouple	-73 to 871°C (-100 to 1600°F)
T Thermocouple	-212 to 398°C (-350 to 750°F)
E Thermocouple	-73 to 982°C (-100 to 1800°F)
N Thermocouple	-73 to 1300°C (-100 to 2372°F)
R Thermocouple	-17 to 1760°C (0 to 3200°F)
S Thermocouple	-17 to 1760°C (0 to 3200°F)
B Thermocouple	24 to 1820°C (75 to 3308°F)
L (J DIN) Thermocouple	-73 to 871°C (-100 to 1600°F)
C Thermocouple	-17 to 2320°C (0 to 4208°F)
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 10Vdc*, -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 below -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, 2 to 10 Vdc, and -10 to 10 mVdc inputs are fully scalable from a minimum of 100 counts span placed anywhere 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).



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.

Options

Ordering Suffix	Add'l Price	Description
-RSP1	\$80	Remote setpoint, 0 to 20 mA
-RSP2	80	Remote setpoint, 0 to 10 Vdc
-PV1	80	Retransmission output, 0 to 20 mA
-PV2	80	Retransmission output, 0 to 10 Vdc
-4SP	80	4-stage remote setpoint

Recommended Reference Book:
Controller Tuning, PID, **GE-2117**, \$25.
Visit omega.com/bobi
for Additional Books



MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)		
Model Number	Price	Description
CN72130	\$479	Single output relay/DC pulse with alarm
CN72150	519	Single output 0 to 20 mA with alarm
CN72033	465	Dual output 2 relay/DC pulse
CN72011	465	Dual output 2 AC SSR/DC pulse
CN72053	519	Dual output 0 to 20 mA and relay/DC pulse
CN72055	550	Dual output two 0 to 20 mA
CN72111	502	Dual output 2 AC SSR/DC pulse with alarm
CN72133	502	Dual output 2 relay/DC pulse with alarm
CN72153	543	Dual output two 0 to 20 mA relay/DC pulse with alarm
CN72155	594	Dual output two 0 to 20 mA with alarm

Comes complete with operator's manual.

Ordering Examples: **CN72130**, single output relay/DC pulse with alarm, **\$479**.

OCW-3, OMEGACARESM extends standard 1-year warranty to a total of 4 years (\$119), \$479 + 119 = **\$598**.

CN72053, dual output relay/DC pulse, **\$519**.

Accessory (Field Installable)

Model Number	Price	Description
CNQUENCHARC	\$10	Noise suppression RC snubber (2 leads), 110 to 230 Vac



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• Flow and Level

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