

1/32 DIN Temperature/Process Controllers

Panel Punches Available

CN8590 Series



- ✓ **User-Selectable Universal Inputs:** Thermocouple, RTD, Voltage, or Current
- ✓ **Autotune PID, Heat or Cool**
- ✓ **Smooth Auto/Manual Transfer**
- ✓ **Configurable Dual Heat or Cool Outputs**



CN8592-R1-DC2 shown actual size.

The CN8590 is a 1/32 DIN microprocessor-based controller that provides accurate closed-loop control of temperature and other process variables. With on-demand autotuning, and complete on/off through full PID functionality, the CN8590 accepts inputs from J, K, and T Type thermocouples; RTDs; or linear signals.

Specifications Performance

Accuracy: ±0.2% FS, ±1 digit
Display Resolution: 0.1, 0.01 for process inputs; 1.0 for thermocouple inputs; 0.1, 1.0 for RTD inputs
Setpoint Resolution: 1/0.1 count
Repeatability: ±1.0 count
Temperature Stability: 5 µV/°C maximum
Thermocouple Cold-End Tracking: 0.05°C/°C ambient
Noise Rejection: Common mode >100 dB, series mode >70 dB
Sampling Frequency: 3.7 Hz (270 ms)
Operating Limits
Line Voltage, Line Power: 85 to 265V, 50/60 Hz
Power Consumption: Less than 6 VA (instrument)

Inputs

Thermocouple: J, K and T; maximum lead resistance, 100 Ω
RTD: Platinum 100 Ω @ 0°C, DIN curve 0.00385
Process Inputs: Linear current and voltage
Engineering Units: -1999 to 9999

Output Options

SPST Relay: 5 A @ 120 Vac, 5 A @ 240 Vac
DC Pulse: 5 Vdc pulsed
Solid State Relay: 120/240 Vac; zero voltage switched; 1 A continuous, 10 A surge @ 25°C

General

Display: 4-digit LED, 10 mm (0.39")
Display Indicators: 7-segment alphanumeric LED
Dimensions: 48 L x 23.97 W x 99.99 mm D (1.890 x 0.944 x 3.937")
Panel Cutout: 45 L x 22.19 mm W (1.772 x 0.874")
Front-Panel Rating: NEMA 4X (IP66)

Operating Temperature:

0 to 55°C (32 to 131°F)
Humidity Tolerance: 90% RH maximum, non-condensing
Weight: 90.7 g (3.2 oz)



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.

Universal Input Types and Ranges

Input	Type	Range	Resolution
TC	J Iron-Constantan	-100 to 760°C -148 to 1400°F	1°C 1°F
	K CHROMEGA®-ALOMEGA®	-140 to 1350°C -220 to 2462°F	1°C 1°F
	T Copper-Constantan	-130 to 400°C -202 to 752°F	1°C 1°F
RTD	RTD 2-wire, 100 Ω Pt	-200 to 850°C -328 to 1562°F	1°C 1°F
	RTD 2-wire, 100 Ω Pt	-128.8 to 200.0°C -199.0 to 392.0°F	0.1°C 0.1°F
MV	10 to 50 mV 0 to 50 mV	Scalable (-1999 to 9999) Scalable (-1999 to 9999)	Selectable Selectable
*MA	4 to 20 mA 0 to 20 mA	Scalable (-1999 to 9999) Scalable (-1999 to 9999)	Selectable Selectable

* Note: For mA input, connect external 2.5 Ω resistor across signal input terminals.

To Order

Model Number	Description
CN8592-R1-DC2	Dual-output relay/DC pulse
CN8592-R1-T2	Dual-output relay/AC SSR
CN8592-DC1-DC2	Dual-output DC pulse/DC pulse
CN8592-DC1-T2	Dual-output DC pulse/AC SSR
CN8592-T1-DC2	Dual-output AC SSR/DC pulse
CN8592-T1-T2	Dual-output AC SSR/AC SSR

Comes complete with operator's manual.

Ordering Examples: CN8592-DC1-DC2, controller with dual DC pulse outputs.
 OCW-2 OMEGACARESM extends standard 3-year warranty to a total of 5 years.
 CN8592-R1-DC2, controller with dual outputs, relay/DC pulse.