

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**

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: $\pm 0.2\%$ 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: $5 \mu\text{V}/^\circ\text{C}$ maximum

Thermocouple Cold-End Tracking: $0.05^\circ\text{C}/^\circ\text{C}$ 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



CN8592-R1-DC2 shown actual size.

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)

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 CHRTRODEKS®-ALOTRODEKS®	-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.