¹⁄₃₂ DIN Autotune Temperature/Process Controllers

CN132 shown actual size.

CN132

3 YEAR WARRANTY CE c UL US

✔ **User Selectable Inputs**
✔ **Autotune PID**
✔ **Configurable Dual Output**
✔ **Second Setpoint and Output**
✔ **NEMA 4X Front Panel**
✔ **Full Cool Strategy**
✔ **Auto/Manual Operation**
✔ **Optional 12 Vac/dc or 24 Vac/dc Models**

The CN132 digital microcontrollers include all the features of standard ¼, ⅛ and ¹⁄₁₆ DIN microprocessor controllers, in a very small package. The CN132 features advanced autotune PID. Autotune teaches the controller the main characteristics of the process. Autotune learns by cycling the output on and off. The results are measured and used to calculate optimum PID values which are automatically entered in the controller memory. Optimum cycle-time is calculated by Autotune programs. The choice of cycle-time is influenced by the external switching device or load, e.g., contactor, SSR, valve. Each control parameter can be set by the user through the front keypad. These units include program security in a hidden level for OEMs.

Specifications

Power: 100 to 240 Vac/dc, ±10%, 50 to 60 Hz, 3 VA; Optional 12 or 24 Vac/dc, ±20%, 50 to 60 Hz, 3 VA
Display: 4-digit LED, 10 mm (0.4"), high-brightness green, -199 to 9999 counts display range
Range: Sensor limited 2000°C (3500°F); -99.9 to 999.9° in 0.1° resolution
Display Indicators: Process temperature (PV), setpoint (SP), SP1/2 indicators (flashing), error messages, function/option mnemonics
Thermocouple Cold Junction Compensation Rejection: 20:1 (0.05°/°C) typical
Thermocouple External Resistance: 100 Ω max
RTD Input: Pt100, 2-wire
Process Inputs: -10 to 50 mV
Calibration Accuracy: ±0.25% sensor max ±1°C (2°F)
Sampling Frequency: Input 10 Hz, CJC 2 seconds
Common Mode Rejection: Negligible effect up to 140 dB, 240V, 50 to 60 Hz
Temperature Coefficient: 150 ppm/°C sensor max
Relay: form A/SPST contacts 2 A/250 Vac, resistive
SSd (DC Pulse driver): To switch a remote SSR 5 Vdc 0/-15% 10 mA non-isolated
Operating Ambient Range: 0 to 50°C (32 to 122°F)
Case Material: Flame-retardant polycarbonate
Weight: 100 g (3.5 oz)
Dimensions: 24 H x 48 W x 10 mm D bezel (0.95 x 1.89 x 0.39"), 102 mm (4.02") depth
Panel Cutout: 45 x 22.2 mm (1.77 x 0.87")

Inputs Types and Ranges

Sensor Type	Linearized Range* (Units Are °C/°F Switchable)		Linearity °C
J	0 to 800°C	32 to 1472°F	±0.5
K	-50 to 1200°C	-58 to 2192°F	±0.25*
T	-200 to 250°C	-273 to 482°F	±0.25*
E	0 to 600°C	32 to 1112°F	±0.5
R	0 to 1600°C	32 to 2912°F	±2.0*
S	0 to 1600°C	32 to 2912°F	±2.0*
B	0 to 1800°C	32 to 3272°F	±2.0*
N	-50 to 1200°C	-58 to 2192°F	±0.25*
J DIN	0 to 800°C	32 to 1472°F	±0.5
RTD	-200 to 400°C	-273 to 752°F	±0.25*

* Linearity: Type B: 5° (70-500°C), Types K and N: 1° >350°C Exceptions: Types R and S: 5° < 300°C, Type T: 1°<-25° or >150°C RTD/Pt100: 0.5°<-100°C.

Linear Process Inputs (Input mV Range: -10 to 50 mV)

Range	0 to 20 mV	4 to 20 mV
Lin 1	0 to 100	–
Lin 2	0 to 1000	–
Lin 3	0 to 2000	–
Lin 4	–	0 to 100
Lin 5	–	0 to 1000

Linearity is ±0.5%.

To Order

Model Number	Description
CN132	Relay/dc pulse controller**

*** **Note:** Either the relay or the dc pulse can be chosen as the primary output device for the main setpoint, SP1; the remaining output device will automatically be allocated to the second setpoint, SP2.*

Power Supply Options

Model Number	Description
-12V	12 Vac/dc
-24V	24 Vac/dc

Accessories

Model No.	Description
CN132-116	¹⁄₁₆ DIN panel adaptor
CN132-116-DUAL	¹⁄₁₆ DIN twin adaptor
CNQUENCHARC	Noise suppression RC snubber (2 leads), 110 to 230 Vac

Comes complete with operator's manual.

***Ordering Example: CN132-12V** is a ¹⁄₃₂ DIN autotune controller with thermocouple, 2-wire RTD, and process input capability, relay and dc pulse output, 12 Vac/dc power.*

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