

1/16, 1/8, and 1/4 DIN Temperature/Process Controllers with Fuzzy Logic

CN4000 Series
Starts at
\$69



CN418V-R1-R2, \$79.

CN414-R1-R2, \$99.

CN4116-R1-R2, \$69.

CN418H-R1-R2, \$79.



- ✓ Dual Display
- ✓ Single Control Output
- ✓ Fuzzy Logic
- ✓ Autotune
- ✓ Dual 4-Digit LED Display and Indicators for Output and Alarm Status
- ✓ Single Alarm Output
- ✓ Universal Power Supply
- ✓ Isolated Analog Control Output (Selected Models)
- ✓ 10 Segments of Ramp/Soak (Selected Models)

The CN4000 Series temperature/process controllers set a new standard for ease-of-use and value. Units feature dedicated input models with thermocouple and RTD inputs, and models with universal inputs for both temperature and process inputs. Standard features include autotune, fuzzy logic, fully adjustable PID or on/off single control output with one alarm. Selected thermocouple and RTD input models can show whole or tenth of degree display resolution. Output types include relay, dc pulse, or an isolated analog 0 to 20 mA output.

Universal Input Models

	K	S	R	E	J	N
T/C	0 to 1300°C 32 to 2372°F	0 to 1700°C 32 to 3092°F	0 to 1700°C 32 to 3092°F	0 to 1000°C 32 to 1832°F	0 to 1200°C 32 to 2192°F	0 to 1300°C 32 to 2372°F
RTD	PT100	Cu50				
	-200 to 800°C -328 to 1472°F	-50 to 150°C -58 to 302°F				
Current	0 to 20 mA	4 to 20 mA				
Voltage	0 to 20 mV 1 to 5V	0 to 100 mV 0 to 5V	0 to 60 mV 0 to 10V	0 to 500 mV 2 to 10V	100 to 500 mV 0 to 20V	
Resistor	0 to 80 Ω	0 to 400 Ω				

Inputs

Dedicated Thermocouple/RTD Models

Input Type	Thermocouple						RTD
	K	S	R	E	J	N	PT100
Range	0 to 1300°C (32 to 2372°F)	0 to 1700°C (32 to 3092°F)	0 to 1600°C (32 to 2412°F)	0 to 1000°C (32 to 1832°F)	0 to 1200°C (32 to 2192°F)	0 to 1300°C (32 to 2372°F)	-200 to 800°C (-328 to 1472°F)

Specifications

Selectable Inputs: Thermocouple, RTD, DC voltage, DC current, resistance (dependent on model)

Display: Two 4-digit, 7 segment, LED (red PV, green SV)

Resolution: 1.0, 0.1 (dependent on model)

Sample Rate: 8 per second

Accuracy: ±0.3% FS (thermocouple and RTD dedicated models), ±0.2% FS (universal input models)

Supply Voltage: 100 to 240 Vac (-15%, +10%); 50 to 60 Hz or optional 24 Vdc

Power Consumption: 3 W (thermocouple and RTD dedicated models), 6 W (universal input models)

Operating Temperature: -10 to 60°C (14 to 140°F)

Humidity: 0 to 90 RH%

Control Output Ratings:

Relay: SPDT, 30 Vdc/1A, 250 Vac/1A (1/8 and 1/4 DIN models)

Relay: SPST, 30 Vdc/1A, 250 Vac/1A (1/16 DIN models)

Proportional Current (Isolated): 0 to 20 mA DC, **DC Pulse:** 12 Vdc/30 mA

Alarm Output Ratings:

Relay: SPDT, 30 Vdc/1A, 250 Vac/1A

DC Pulse: 12 Vdc/30 mA

Dimensions

Size	Front Panel W x H mm (in)	Cut Out W x H mm (in)	Depth Behind Mounting Surface mm (in)
1/6 DIN	48 x 48 (1.89 x 1.89)	45 x 45 (1.77 x 1.77)	95 (3.74)
1/6 DIN Vertical	48 x 96 (1.89 x 3.77)	45 x 92 (1.77 x 3.62)	100 (3.94)
1/6 DIN Horizontal	96 x 48 (3.77 x 1.89)	92 x 45 (3.62 x 1.77)	100 (3.94)
1/4 DIN	96 x 6 (3.77 x 0.23)	92 x 92 (3.62 x 3.62)	100 (3.94)

 **MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)			
Model No.	Price	Description	Input Type/Resolution
1/6 DIN models (single control output with one alarm)			
CN4116-R1-R2	\$69	Relay/relay	T/C, RTD/1.0
CN4116-R1-R2-LV	75	Relay/relay, low voltage	T/C, RTD/1.0
CN4116-DC1-R2	69	DC pulse/relay	T/C, RTD/1.0
CN4116-DC1-DC2	69	DC pulse/DC pulse	T/C, RTD/1.0
CN4216-R1-R2	69	Relay/relay	T/C, RTD/0.1
CN4216-R1-R2-LV	75	Relay/relay, low voltage	T/C, RTD/0.1
CN4216-DC1-R2	69	DC pulse/relay	T/C, RTD/0.1
CN4216-DC1-DC2	69	DC pulse/DC pulse	T/C, RTD/0.1
CN4316-R1-R2	69	Relay/relay	Universal/0.1
CN4316-R1-R2-LV	75	Relay/relay, low voltage	Universal/0.1
CN4316-DC1-R2	69	DC pulse/relay	Universal/0.1
CN4316-DC1-DC2	69	DC pulse/DC pulse	Universal/0.1
CN4316-F1-R2	69	0 to 20 mA/relay	Universal/0.1
CN4416-R1-R2	128	Ramp and soak, relay/relay	Universal/0.1
CN4416-R1-R2-LV	134	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN4416-DC1-R2	127	Ramp and soak, DC pulse/relay	Universal/0.1
CN4416-DC1-DC2	126	Ramp and soak, DC pulse/DC pulse	Universal/0.1
CN4416-F1-R2	134	Ramp and soak, 0 to 20 mA/relay	Universal/0.1
1/6 DIN horizontal models (single control output with one alarm)			
CN418H-R1-R2	\$79	Relay/relay	T/C, RTD/1.0
CN418H-R1-R2-LV	85	Relay/relay, low voltage	T/C, RTD/1.0
CN418H-DC1-R2	79	DC pulse/relay	T/C, RTD/1.0
CN418H-DC1-DC2	79	DC pulse/DC pulse	T/C, RTD/1.0
CN428H-R1-R2	79	Relay/relay	T/C, RTD/0.1
CN428H-R1-R2-LV	85	Relay/relay, low voltage	T/C, RTD/0.1
CN428H-DC1-R2	79	DC pulse/relay	T/C, RTD/0.1
CN428H-DC1-DC2	79	DC pulse/DC pulse	T/C, RTD/0.1
CN438H-R1-R2	79	Relay/relay	Universal/0.1
CN438H-R1-R2-LV	85	Relay/relay, low voltage	Universal/0.1
CN438H-DC1-R2	79	DC pulse/relay	Universal/0.1
CN438H-DC1-DC2	79	DC pulse/DC pulse	Universal/0.1
CN438H-F1-R2	79	0 to 20 mA/relay	Universal/0.1
CN448H-R1-R2	133	Ramp and soak, relay/relay	Universal/0.1
CN448H-R1-R2-LV	139	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN448H-DC1-R2	132	Ramp and soak, DC pulse/relay	Universal/0.1
CN448H-DC1-DC2	131	Ramp and soak, DC pulse/DC pulse	Universal/0.1
CN448H-F1-R2	139	Ramp and soak, 0 to 20 mA/relay	Universal/0.1

Comes complete with operator's manual.

Ordering Examples: CN4116-R1-R2-LV, 1/6 DIN universal input controller, single control relay output with one alarm relay, ramp and soak, low voltage, \$75.

CN428H-DC1-R2, 1/6 DIN horizontal universal input controller, single DC pulse control output with one alarm relay, low voltage, \$79.

1/16, 1/8, and 1/4 DIN Temperature/Process Controllers with Fuzzy Logic

 **MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)			
Model No.	Price	Description	Input Type/Resolution
1/8 DIN Vertical Models (single control output with one alarm)			
CN418V-R1-R2	\$79	Relay/relay	T/C, RTD/1.0
CN418V-R1-R2-LV	85	Relay/relay, low voltage	T/C, RTD/1.0
CN418V-DC1-R2	79	DC pulse/relay	T/C, RTD/1.0
CN418V-DC1-DC2	79	DC pulse/DC pulse	T/C, RTD/1.0
CN428V-R1-R2	79	Relay/relay	T/C, RTD/0.1
CN428V-R1-R2-LV	85	Relay/relay, low voltage	T/C, RTD/0.1
CN428V-DC1-R2	79	DC pulse/relay	T/C, RTD/0.1
CN428V-DC1-DC2	79	DC pulse/DC pulse	T/C, RTD/0.1
CN438V-R1-R2	79	Relay/relay	Universal/0.1
CN438V-R1-R2-LV	85	Relay/relay, low voltage	Universal/0.1
CN438V-DC1-R2	79	DC pulse/relay	Universal/0.1
CN438V-DC1-DC2	79	DC pulse/DC pulse	Universal/0.1
CN438V-F1-R2	79	0 to 20 mA/relay	Universal/0.1
CN448V-R1-R2	133	Ramp and soak, relay/relay	Universal/0.1
CN448V-R1-R2-LV	139	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN448V-DC1-R2	132	Ramp and soak, DC pulse/relay	Universal/0.1
CN448V-DC1-DC2	131	Ramp and soak, DC pulse/DC pulse	Universal/0.1
CN448V-F1-R2	139	Ramp and soak, 0 to 20 mA/relay	Universal/0.1
1/4 DIN Models (single control output with one alarm)			
CN414-R1-R2	\$99	Relay/relay	T/C, RTD/1.0
CN414-R1-R2-LV	105	Relay/relay, low voltage	T/C, RTD/1.0
CN414-DC1-R2	99	DC pulse/relay	T/C, RTD/1.0
CN414-DC1-DC2	99	DC pulse/DC pulse	T/C, RTD/1.0
CN424-R1-R2	99	Relay/relay	T/C, RTD/0.1
CN424-R1-R2-LV	99	Relay/relay, low voltage	T/C, RTD/0.1
CN424-DC1-R2	99	DC pulse/relay	T/C, RTD/0.1
CN424-DC1-DC2	99	DC pulse/DC pulse	T/C, RTD/0.1
CN434-R1-R2	99	Relay/relay	Universal/0.1
CN434-R1-R2-LV	105	Relay/relay, low voltage	Universal/0.1
CN434-DC1-R2	99	DC pulse/relay	Universal/0.1
CN434-DC1-DC2	99	DC pulse/DC pulse	Universal/0.1
CN434-F1-R2	99	0 to 20 mA/relay	Universal/0.1
CN444-R1-R2	149	Ramp and soak, relay/relay	Universal/0.1
CN444-R1-R2-LV	155	Ramp and soak, relay/relay, low voltage	Universal/0.1
CN444-DC1-R2	149	Ramp and soak, DC pulse/relay	Universal/0.1
CN444-DC1-DC2	149	Ramp and soak, DC pulse/DC pulse	Universal/0.1
CN444-F1-R2	155	Ramp and soak, 0 to 20 mA/relay	Universal/0.1

Comes complete with operator's manual.

Ordering Examples: CN444-F1-R2, 1/4 DIN universal input controller, single 0 to 20 mA control output with one alarm relay, \$155.

CN448V-R1-R2, 1/8 DIN vertical universal input controller, ramp and soak, relay/relay, \$133.

Accessory (Field Installable)

Model Number	Price	Description
CNQUENCHARC	\$8	Noise suppression, RC snubber (2 leads), 110 to 230 Vac



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