

iSeries 1/8 DIN Ultra Compact Case Temperature, Process and Strain PID Controllers

CNi8C Series
Starts at
\$355

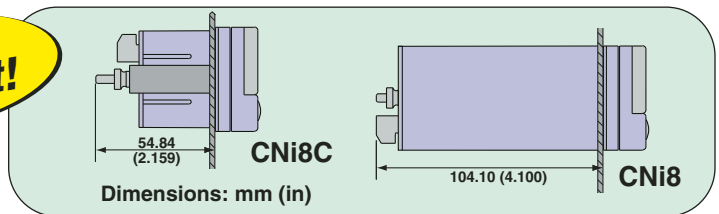


CNi8C33, \$355, shown smaller than actual size.

- ✓ Ultra Compact 1/8 DIN Controller
- ✓ Built-In Excitation
- ✓ NEMA 4 (IP65) Bezel
- ✓ RS232, RS422/485 or MODBUS Communication, Menu Selectable

The ultra-compact CNi8C and CNi8SC controllers are similar to the full size CNi8 in an ultra-compact enclosure. Only 51 mm (2") behind the panel.

Ultra Compact!



MOST POPULAR MODELS HIGHLIGHTED!

Options

Ordering Suffix	Add'l Price	Description
-AL	N/C	Limit alarm version (simplified menu, alarms only, no PID control) ²
-SM	N/C	Simplified menu (on/off control or alarms, no PID) ³
Network Options		
-C24	60	Isolated RS232 and RS485/422, 300 to 19.2 Kb ¹
Power Supply		
-DC	\$25	12 to 36 Vac/dc, 24 Vac ¹
Factory Setup (Requires Network Option)		
-FS	N/C	Factory setup and configuration
-FS(RTD-1N)	N/C	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	N/C	Factory scaled for MIL-T-7990B nickel RTD input, -40 to 300°C (-40 to 572°F)
Software (Requires Network Option)		
OPC-SERVER LICENSE	\$295	OPC server/driver software license

¹ Excitation not available with "-DC", "-C24" or "-C4EI" options.

² "-AL" option not available on models with analog (0 to 10V/0 to 20 mA) output.

³ "-SM" option not available on CNiS strain/process input models.

To Order (Specify Model Number)

Model No.	Price	Output 1	Output 2
Temperature/Process Input			
CNi8C22	\$355	0.5 A SSR	0.5 A SSR
CNi8C23	355	0.5 A SSR	Relay
CNi8C24	355	0.5 A SSR	DC pulse
CNi8C33	355	Relay	Relay
CNi8C34	355	Relay	DC pulse
CNi8C44	355	DC pulse	DC pulse
CNi8C52	355	Analog	0.5 A SSR
CNi8C53	355	Analog	Relay
CNi8C54	355	Analog	DC pulse
Strain/Process Input			
CNiS8C22	\$415	0.5 A SSR	0.5 A SSR
CNiS8C23	415	0.5 A SSR	Relay
CNiS8C24	415	0.5 A SSR	DC pulse
CNiS8C33	415	Relay	Relay
CNiS8C42	415	DC pulse	0.5 A SSR
CNiS8C43	415	DC pulse	Relay
CNiS8C44	415	DC pulse	DC pulse
CNiS8C52	415	Analog	0.5 A SSR
CNiS8C53	415	Analog	Relay
CNiS8C54	415	Analog	DC pulse

Comes complete with operator's manual.

Ordering Examples: CNi8C33, 1/8 DIN compact universal temperature process controller with 2 relay outputs, \$355.

CNiS8C43, 1/8 DIN compact strain/process controller with DC pulse and relay outputs, \$415.

Accessory

Model No.	Price	Description
DPP-5	\$525	1/8 DIN panel punch

iSeries Common Specifications (All i/8, i/16, i/32 DIN)

Universal Temperature and Process Input (DPi/CNi Models)

Accuracy: $\pm 0.5^{\circ}\text{C}$ temp; 0.03% rdg

Resolution: $1^{\circ}/0.1^{\circ}$; $10\ \mu\text{V}$ process

Temperature Stability:

RTD: $0.04^{\circ}\text{C}/^{\circ}\text{C}$

TC @ 25°C (77°F): $0.05^{\circ}\text{C}/^{\circ}\text{C}$

Cold Junction Compensation

Process: $50\ \text{ppm}/^{\circ}\text{C}$

NMRR: 60 dB

CMRR: 120 dB

A/D Conversion: Dual slope

Reading Rate: 3 samples/s

Digital Filter: Programmable

Display: 4-digit 9-segment LED

10.2 mm (0.40"); i32, i16, i16D, i8DV

21 mm (0.83"); i8 10.2 mm (0.40") and

21 mm (0.83"); i8DH **RED**, **GREEN**,

and **AMBER** programmable colors for

process variable, setpoint and

temperature units

Input Types: Thermocouple, RTD,

analog voltage, analog current

Thermocouple Lead Resistance:

$100\ \Omega$ max

Thermocouple Types (ITS 90):

J, K, T, E, R, S, B, C, N, L (J DIN)

RTD Input (ITS 68): 100/500/1000 Ω Pt

sensor, 2-, 3- or 4-wire; 0.00385 or

0.00392 curve

Voltage Input: 0 to 100 mV, 0 to 1V,

0 to 10 Vdc

Input Impedance: $10\ \text{M}\Omega$ for 100 mV

$1\ \text{M}\Omega$ for 1 or 10 Vdc

Current Input: 0 to 20 mA ($5\ \Omega$ load)

Configuration: Single-ended

Polarity: Unipolar

Step Response: 0.7 sec for 99.9%

Decimal Selection:

Temperature: None, 0.1

Process: None, 0.1, 0.01 or 0.001

Setpoint Adjustment:

-1999 to 9999 counts

Span Adjustment:

0.001 to 9999 counts

Offset Adjustment: -1999 to 9999

Excitation (Not Included with

Communication): 24 Vdc @ 25 mA

(not available for low-power option)

Universal Strain and Process Input (DPiS/CNiS Models)

Accuracy: 0.03% reading

Resolution: $10/1\ \mu\text{V}$

Temperature Stability: $50\ \text{ppm}/^{\circ}\text{C}$

NMRR: 60 dB

CMRR: 120 dB

A/D Conversion: Dual slope

Reading Rate: 3 samples/s

Digital Filter: Programmable

Input Types: Analog voltage and current

Voltage Input: 0 to 100 mVdc,

-100 mVdc to 1 Vdc, 0 to 10 Vdc

Input Impedance: $10\ \text{M}\Omega$ for 100 mV;

$1\ \text{M}\Omega$ for 1V or 10 Vdc

Current Input: 0 to 20 mA ($5\ \Omega$ load)

Linearization Points: Up to 10

Configuration: Single-ended

Polarity: Unipolar

Step Response: 0.7 sec for 99.9%

Decimal Selection: None, 0.1, 0.01 or 0.001

Setpoint Adjustment:

-1999 to 9999 counts

Span Adjustment: 0.001 to 9999 counts

Offset Adjustment: -1999 to 9999

Excitation (Optional In Place Of

Communication): 5 Vdc @ 40 mA;

10 Vdc @ 60 mA

Control

Action: Reverse (heat) or direct (cool)

Modes: Time and amplitude proportional

control; selectable manual or auto PID,

proportional, proportional with integral,

proportional with derivative and anti-reset

Windup, and on/off

Rate: 0 to 399.9 s

Reset: 0 to 3999 s

Cycle Time: 1 to 199 s; set to 0 for on/off

Gain: 0.5 to 100% of span; setpoints 1 or 2

Damping: 0000 to 0008

Soak: 00.00 to 99.59 (HH:MM), or OFF

Ramp to Setpoint:

00.00 to 99.59 (HH:MM), or OFF

Auto Tune: Operator initiated from

front panel

Control Output 1 and 2

Relay: 250 Vac or 30 Vdc @ 3 A (resistive

load); configurable for on/off, PID and ramp

and soak

Output 1: SPDT, can be configured as

alarm 1 output

Output 2: SPDT, can be configured as

alarm 2 output

SSR: 20 to 265 Vac @ 0.05 to 0.5 A

(resistive load); continuous

DC Pulse: Non-isolated; 10 Vdc @ 20 mA

Analog Output (Output 1 Only):

Non-isolated, proportional 0 to 10 Vdc or

0 to 20 mA; $500\ \Omega$ max

Network and Communications

Ethernet: Standards compliance

IEEE 802.3 10 Base-T

Supported Protocols:

TCP/IP, ARP, HTTPGET

RS232/RS422/RS485: Selectable from

menu; both ASCII and MODBUS protocol

selectable from menu; programmable

300 to 19.2 Kb; complete programmable

setup capability; program to transmit current

display, alarm status, min/max, actual

measured input value and status

RS485: Addressable from 0 to 199

Connection: Screw terminals

Alarm 1 and 2 (Programmable)

Type: Same as output 1 and 2

Operation: High/low, above/below,

band, latch/unlatch, normally open/normally

closed and process/deviation; front

panel configurations

Analog Output (Programmable):

Non-isolated, retransmission 0 to 10 Vdc or

0 to 20 mA, $500\ \Omega$ max (output 1 only);

accuracy is $\pm 1\%$ of FS when following

conditions are satisfied; input is not scaled

below 1% of input FS, analog output is not

scaled below 3% of output FS

General

Power: 90 to 240 Vac $\pm 10\%$, 50 to 400 Hz*,

110 to 375 Vdc, equivalent voltage

Low Voltage Power Option: 24 Vac**,

12 to 36 Vdc for i/8, i/16, 1/32; 20 to

36 Vdc for CNI8DH, CNI8DV, CNI16D

from qualified safety approved source

Isolation

Power to Input/Output: 2300 Vac

per 1 minute test

For Low Voltage Power Option:

1500 Vac per 1 minute test

Power to Relay/SSR Output:

2300 Vac per 1 minute test

Relay/SSR to Relay/SSR Output:

2300 Vac per 1 minute test

RS232/485 to Input/Output:

500 Vac per 1 minute test

Environmental Conditions:

All Models: 0 to 55°C (32 to 131°F)

90% RH non-condensing

CNI8DV, CNI8DH, CNI16D:

0 to 50°C (32 to 122°F), 90% RH

non-condensing (for UL only)

Protection:

CNI32, CNI16, CNI8C: NEMA 4X/

Type 4 (IP65) front bezel

CNI8, CNI8DH, CNI8DV:

NEMA 1/Type 1 front bezel

Approvals: UL, C-UL, CE per

EN61010-1:2001

Dimensions

i/8 Series: 48 H x 96 W x 127 mm D

(1.89 x 3.78 x 5")

i/16 Series: 48 H x 48 W x 127 mm D

(1.89 x 1.89 x 5")

i/32 Series: 25.4 H x 48 W x 127 mm D

(1.0 x 1.89 x 5")

Panel Cutout

i/8 Series: 45 H x 92 mm W

(1.772 x 3.622"), $\frac{1}{8}$ DIN

i/16 Series: 45 mm (1.772") square,

$\frac{1}{16}$ DIN

i/32 Series: 22.5 H x 45 mm W

(0.886 x 1.772"), $\frac{1}{32}$ DIN

Weight

i/8 Series: 295 g (0.65 lb)


i/16 Series: 159 g (0.35 lb)

i/32 Series: 127 g (0.28 lb)

* No CE compliance above 60 Hz.


** Units can be powered safely with 24 Vac power, but no certification for CE/UL are claimed.

iSeries change color at any setpoint



PATENTED

Totally Programmable Color Displays





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