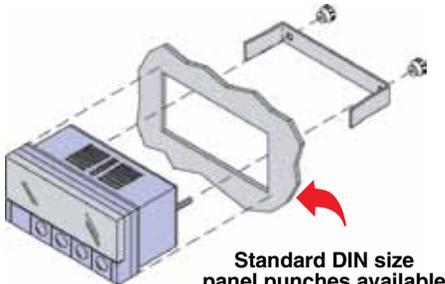




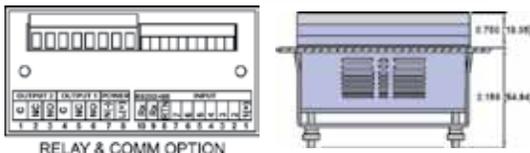
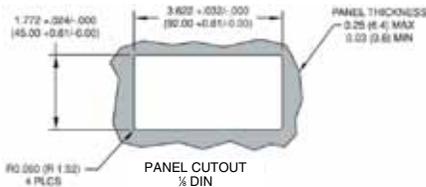
Shown actual size.

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

The Ultra Compact DPi8C/CNi8C and DPiS8C/CNiS8C Meters and Controllers are similar to the full size i8 in an Ultra Compact enclosure. Only 2 inches behind the panel.



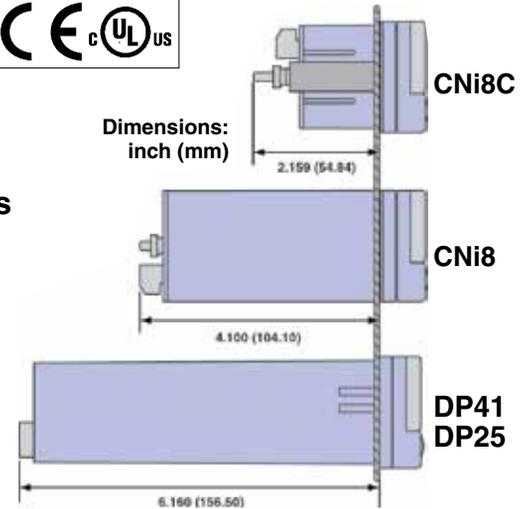
Standard DIN size panel punches available online.



RELAY & COMM OPTION

CNi8C Controllers

DPi8C Meters



To Order			
Model No.			Description
DPi8C			Temperature/process (monitor only) 1/8 DIN compact case
DPiS8C			Strain/process (monitor only) 1/8 DIN compact case
CONTROL OUTPUTS #1 & 2 Direct (Cool) or Reverse (Heat) Acting			
CNi8C	(*)	(*)	Temperature/process with 2 control outputs compact case
CNiS8C	(*)	(*)	Strain/process with 2 control outputs compact case
	2	2	Two solid state relays (SSR's): 0.5 A @ 120/240 Vac continuous
	2	3	SSR and relay: Form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac
	2	4	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)
	3	3	2 Relays: Form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac
	4	2	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR
	4	3	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay: Form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac
	4	4	Two pulsed 10 Vdc @ 20 mA (for use with external SSR)
	5	2	Analog output selectable as either control or retransmission of process value; 0 to 10 Vdc or 0 to 20 mA @ 500 Ω maximum and SSR
	5	3	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω maximum and relay
	5	4	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω maximum and pulse 10 Vdc
			-AL Limit alarm version (alarm menu, no PID control)*2
			-SM Simplified menu version (ON/OFF control, no PID)*3

NETWORK OPTIONS

-C24 Isolated RS232 and R485/422. 300 to 19.2k Baud *1

POWER SUPPLY

* Standard power input: 90 to 240 Vac/dc, 50-400 Hz (no entry required)

-DC 12 to 36 Vdc, 24 Vac *1

FACTORY SETUP

-FS Factory Setup and Configuration (req. -C24 Serial Communication option)

Model No. Description

EIT-D	iServer MicroServer, serves 32 devices, page D-12
EIT-W	iServer MicroServer for Serial to Ethernet applications visit omega.com/eit-w for Complete Details

SOFTWARE (Requires Network Option)

OPC-SERVER LICENSE | OPC Server/Driver Software License

*1 -DC, -C24, not available with excitation.
*2 Analog Output (Option 5) is not available with -AL units.
*3 Strain CN/DPiS8C is not available with -SM units.

Ordering Examples: **CNi8C33** is a 1/8 DIN Compact universal temperature process controller with 2 relay output.
DPiS8C, 1/8 DIN Strain/Process meter in compact case.

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 μV 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 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 Ω maximum

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 M Ω for 100 mV

1 M Ω for 1 or 10 Vdc

Current Input: 0 to 20 mA (5 Ω 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 μV

Temperature Stability: 50 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 M Ω for 100 mV;

1 M Ω for 1V or 10 Vdc

Current Input: 0 to 20 mA (5 Ω 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 Ω maximum

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 Ω 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, i/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



Totally Programmable Color Displays

