



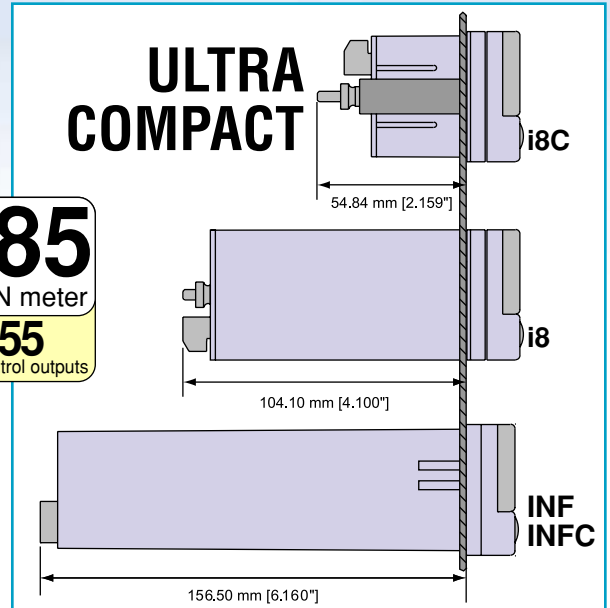
1/8 DIN Ultra Compact Case i/8C

Temperature, Process & Strain Meters & PID Controllers



- Ultra Compact 1/8 DIN Meter and Controller
- Built-in Excitation
- NEMA 4 (IP65) Bezel
- RS-232, RS 422/485 or Modbus Communication, Menu Selectable

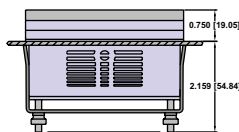
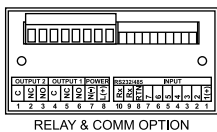
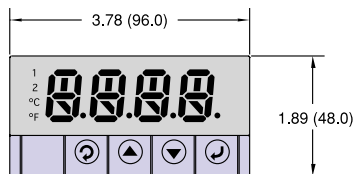
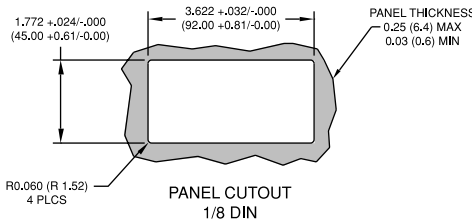
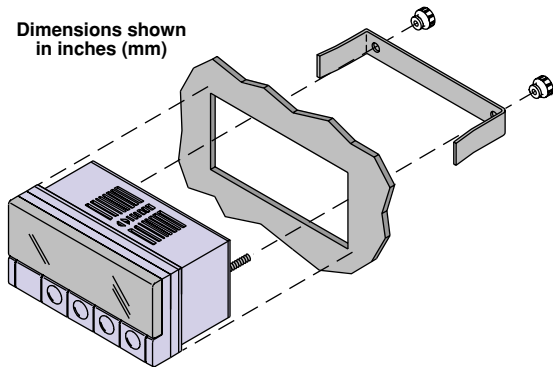
The Ultra Compact i8C Meters and Controllers are similar to the full size i8 in an Ultra Compact enclosure. Only 2 inches behind the panel.



\$285
1/8 DIN meter

\$355
with 2 control outputs

Dimensions shown in inches (mm)



To Order (*Specify Model No.)

Model Number	Description	Price
i8C00	Temperature/Process (Monitor only) 1/8 DIN Compact Case	285
iS8C00	Strain/Process (Monitor only) 1/8 DIN Compact Case	345
CONTROL OUTPUTS #1 & 2 Direct (Cool) or Reverse (Heat) Acting		
i8C	(*) (*) Temperature/Process with 2 Control Outputs Compact Case	355
iS8C	(*) (*) Strain/Process with 2 Control Outputs Compact Case	415
2	2 Two solid state relays (SSR's): 0.5 A @ 120/240 Vac continuous	N/C
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 0-20 mA @ 500 ohm max. and SSR	
5	3 Analog Output 0 to 10 Vdc or 0-20 mA @ 500 ohm max. and Relay	
5	4 Analog Output 0 to 10 Vdc or 0-20 mA @ 500 ohm max. and Pulse 10 Vdc	
-AL Limit Alarm Version (Simplified Menu; No PID Control)*2		

NETWORK OPTIONS Price

-C24	Isolated RS-232 and R-485/422. 300 to 19.2k Baud *1	60
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POWER SUPPLY

*	Standard power input: 90-240 Vac/dc, 50-400 Hz (no entry required)	N/C
-DC	12-36 Vdc, 24 Vac *1	25

FACTORY SETUP

-FS	Factory Setup and Configuration (req. -C24 Serial Communication option)	N/C
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Model Number	Description	Price
EIS-W	iServer MicroServer, serves 32 devices See iServer MicroServer Products for Complete Details	195

SOFTWARE (Requires Network Option) Price

OPC-SERVER LICENSE	OPC Server/Driver Software License	295
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*1 -DC, -C24, not available with excitation.

*2 Analog Output (Option 5) is not available with -AL units.

ORDERING EXAMPLES: i8C33 is a 1/8 DIN Compact universal temperature process controller with 2 relay output *295

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

Universal Temperature & Process Input (Model "i")

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

Resolution: $1^{\circ}/0.1^{\circ}$; 10 μV process

Temperature Stability:

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

2) TC @ 25°C (77°F): $0.05^{\circ}\text{C}/^{\circ}\text{C}$ - Cold Junction Compensation

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

NMRR: 60 dB

CMRR: 120 dB

A/D Conversion: Dual slope

Reading Rate: 3 samples per second

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, set point and temperature units

Input Types: Thermocouple, RTD, Analog Voltage, Analog Current

Thermocouple Lead Resistance:

100 ohm max

Thermocouple Type (ITS 90): J, K, T, E, R, S, B, C, N, L

RTD Input (ITS 68): 100/500/1000 ohm Pt sensor, 2-, 3- or 4-wire; 0.00385 or 0.00392 curve

Voltage Input: 0 to 100 mV, 0 to 1 V, 0 to 10 Vdc

Input Impedance: 10 Mohm for 100 mV 1 Mohm for 1 or 10 Vdc

Current Input: 0 to 20 mA (5 ohm load)

Configuration: Single-ended

Polarity: Unipolar

Step Response: 0.7 sec for 99.9%

Decimal Selection: None, 0.1 for temperature. None, 0.1, 0.01 or 0.001 for process

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 & Process Input (Model "iS")

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 per second

Digital Filter: Programmable

Input Types: Analog Voltage, Analog Current

Voltage Input: 0 to 100 mVdc,

-100 mVdc to 1 Vdc, 0 to 10 Vdc

Input Impedance: 10 Mohm for 100 mV; 1 Mohm for 1 V or 10 Vdc

Current Input: 0 to 20 mA (5 ohm load)

Linearization Points: Up to 10

Linearization Points

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;

10Vdc@60mA

Control

Action: Reverse (heat) or direct (cool)

Modes: Time and Amplitude Proportional Control Modes; selectable Manual or Auto PID, Proportional, Proportional with Integral, Proportional with Derivative with Anti-reset Windup and ON/OFF

Rate: 0 to 399.9 seconds

Reset: 0 to 3999 seconds

Cycle Time: 1 to 199 seconds; set to 0 for ON/OFF operation

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 & 2

Relay: 250 Vac or 30 Vdc @ 3 A (Resistive Load); configurable for on/off, PID and Ramp and Soak

Output 1: SPDT type, can be configured as Alarm 1 output

Output 2: SPDT type, can be configured as Alarm 2 output

SSR: 20-265 Vac @ 0.05 - 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 max

Network and Communications (Optional -C24, -C4EI, -EI)

Ethernet: Standards Compliance

IEEE 802.3 10Base-T

Supported Protocols:

TCP/IP, ARP, HTTPGET

RS-232/RS-422/RS-485: selectable from menu; both ASCII and Modbus protocol selectable from menu. Programmable 300 to 19.2 K baud; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status

RS-485: Addressable from 0 to 199

Connection: Screw terminals

Alarm 1 & 2 (programmable)

Type: Same as Output 1 & 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.

- 1) Input is not scaled below 1% of Input FS.
- 2) Analog Output is not scaled below 3% of Output FS.

General

Power: 90-240 Vac $\pm 10\%$, 50-400 Hz*, 110-375 Vdc, equivalent voltage

Low Voltage Power Option: 24 Vac** $\pm 10\%$, 12 - 36 Vdc, from qualified safety approved source

Isolation

Power to Input or Output: 2500 Vac per 1 minute test (RS-232/485, Input or Output)

For Low Voltage Power Option:

1500 Vac per 1 minute test (RS-232/485, Input or Output)

Power to Relay/SSR Option:

2500 Vac per 1 minute test

Relay/SSR to Relay/SSR Option:

2500 Vac per 1 minute test

RS-232/485 to Input/Options:

500 Vac per 1 minute test

Environmental Conditions:

0 to 50°C (32 to 122°F), 90% RH non-

condensing - i8DV, i8DH, i16D;

0 to 55°C (32 - 131°F) 90% RH non-condensing- i8, i16, i32.

Installation Category:

II per EN61010-1

Equipment Class: II per EN61010-1

Pollution Degree: 2 per EN61010-1

Protection:

NEMA-4 (IP65) front bezel

Approvals: UL, C-UL, CE per EN50081-1, EN50082-2, EN61010-1

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"), 1/8 DIN

i/16 Series: 45 mm (1.772") square, 1/16 DIN

i/32 Series: 22.5 H x 45 mm W

(0.886" x 1.772"), 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 24Vac power, but no certification for CE/UL are claimed

i Series
change color
at any
set point*

Totally Programmable Color Displays

RED
AMBER
GREEN