



\$240
1/8 DIN meter
\$310
with 2 control outputs

- ✓ High Quality
- ✓ 5-Year Warranty
- ✓ High Accuracy $\pm 0.5^{\circ}\text{C}$ (0.9°F), 0.03% Reading
- ✓ User-friendly, Simple to Configure
- ✓ Free Software
- ✓ Full Autotune PID Control
- ✓ Universal Inputs: Thermocouple, RTD, Process Voltage/Current, Strain
- ✓ Totally Programmable Color Displays, Standard
- ✓ Built-in Excitation, Standard
- ✓ 2 Control or Alarm Outputs, Choice of dc Pulse, Mechanical Relays, Analog Voltage and Current
- ✓ Front Removable



The OMEGA® **DPI8/CNi8** is a 1/8 DIN size (96mm x 48mm) Digital Panel Meter featuring the big iSeries color-changing display. The digits are twice the size of typical 1/8 DIN panel meters. The iSeries meters feature the only LED displays that can be programmed to change color between Green, Amber, and Red at any set point or alarm point.

The "DPI8/CNi8" model is available as an extremely accurate programmable digital panel meter with no outputs or with dual outputs for controlling or alarming functions. Other options include isolated programmable analog output, serial communications, Modbus and Ethernet. The user can easily program the **DPI8/CNi8** for any control or alarming requirement from simple on-off to full autotune PID with a choice of Form C SPDT relays, Solid State Relays, DC pulse, and Analog (voltage and current) outputs. Fully Isolated Analog Output for retransmission of the process value is available in addition to the control and alarm relays (specify model CNi8A33).

The **DPI8/CNi8** covers a broad selection of transducer and transmitter inputs with two input models:

The UNIVERSAL TEMPERATURE & PROCESS instrument (model "i") handles ten common types of thermocouples, multiple RTD's, and several Process (DC) Voltage and Current ranges.

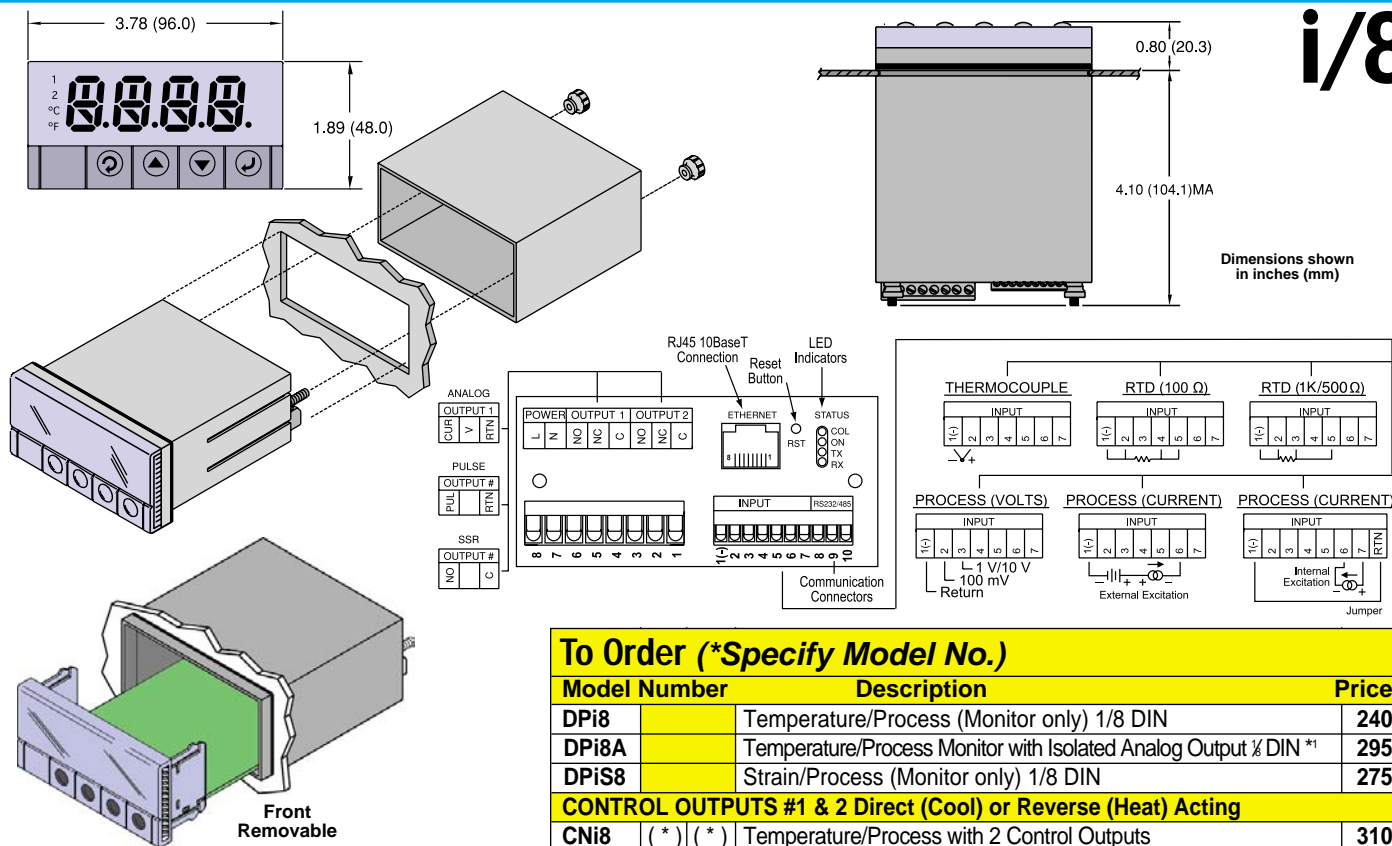
This model also features built-in excitation, 24 Vdc @ 25 mA. With it's wide choice of signal inputs, this model is an excellent choice for measuring or controlling temperature with a thermocouple, RTD, or 4-20mA transmitter.

The STRAIN & PROCESS instrument (model "iS") measures inputs from Load Cells, Pressure Transducers, and most any strain gauge sensor as well as Process Voltage and Current ranges.

The "iS" has built-in 5 or 10 Vdc excitation for bridge transducers, 5Vdc@ 40mA or 10 Vdc @ 60mA. (Any excitation voltage between 5 and 24 Vdc is available by special order). This "iS" model supports 4 and 6 wire bridge configurations, ratiometric and non-ratiometric measurements. The "iS" features fast and easy "in process" calibration/scaling of the signal inputs to any engineering units. This model also features 10 Point Linearization which allows the user to linearize the signal input from extremely nonlinear transducers of all kinds.

| | Input Type | Range | Accuracy |
|--|-------------------------------|--|--------------------------------|
| Universal Temperature / Process | | | |
| J | Iron-Constantan | -210 to 760°C / -346 to 1400°F | 0.4°C / 0.7°F |
| K | CHROMEGA®-ALOMEGA® | -270 to -160°C / -160 to 1372°C -454 to -256°F / -256 to 2502°F | 1.0°C / 0.4°C 1.8°F / 0.7°F |
| T | Copper-Constantan | -270 to -190°C / -190 to 400°C -454 to -310°F / -310 to 752°F | 1.0°C / 0.4°C 1.8°F / 0.7°F |
| E | CHROMEGA®-Constantan | -270 to -220°C / -220 to 1000°C -454 to -364°F / -364 to 1832°F | 1.0°C / 0.4°C 1.8°F / 0.7°F |
| R | Pt/13%Rh-Pt | -50 to 40°C / 40 to 1768°C -58 to 104°F / 104 to 3214°F | 1.0°C / 0.5°C 1.8°F / 0.9°F |
| S | Pt/10%Rh-Pt | -50 to 100°C / 100 to 1768°C -58 to 212°F / 212 to 3214°F | 1.0°C / 0.5°C 1.8°F / 0.9°F |
| B | 30%Rh-Pt/6%Rh-Pt | 100 to 640°C / 640 to 1820°C 212 to 1184°F / 1184 to 3308°F | 1.0°C / 0.5°C 1.8°F / 0.9°F |
| C | 5%Re-W/26%Re-W | 0 to 2320°C / 32 to 4208°F | 0.4°C / 0.7°F |
| N | Nicrosil-Nisil | -250 to -100°C / -100 to 1300°C -418 to -148°F / -148 to 2372°F | 1.0°C / 0.4°C 1.8°F / 0.7°F |
| L | J DIN | -200 to 900°C / -328 to 1652°F | 0.4°C / 0.7°F |
| RTD | Pt, 0.00385, 100, 500, 1000 Ω | -200 to 900°C / -328 to 1652°F | 0.4°C / 0.7°F |
| RTD | Pt, 0.00392, 100, 500, 1000 Ω | -200 to 850°C / -328 to 1562°F | 0.4°C / 0.7°F |
| Nickel RTD Input (FS required) | | | |
| RTD-1N | Nickel MIL-T-7990B | 0 to 200°C / 32 to 392°F | 0.1°C / 0.2°F |
| RTD-2N | Nickel MIL-T-7990B | -40 to 300°C / -40 to 572°F | 0.3°C / 0.5°F |

i/8



To Order (*Specify Model No.)

| Model Number | Description | Price |
|--------------|--|-------|
| DPi8 | Temperature/Process (Monitor only) 1/8 DIN | 240 |
| DPi8A | Temperature/Process Monitor with Isolated Analog Output 1/8 DIN *1 | 295 |
| DPiS8 | Strain/Process (Monitor only) 1/8 DIN | 275 |

CONTROL OUTPUTS #1 & 2 Direct (Cool) or Reverse (Heat) Acting

| Model | Output 1 | Output 2 | Description | Price |
|-------|----------|----------|--|-------|
| CNi8 | (*) | (*) | Temperature/Process with 2 Control Outputs | 310 |
| CNi8A | (*) | (*) | Temperature/Process with Isolated Analog Output and 2 Outputs*1,*4 | 365 |
| CNiS8 | (*) | (*) | Strain/Process with 2 Control Outputs | 370 |
| | 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 (Alarm Menu, PID Control) ^{3,4} | |
| | | | -SM Simplified Menu Version (ON/OFF Control, No PID) ⁵ | |

NETWORK OPTIONS (One Option Max.)

| Option | Description | Price |
|--------|--|-------|
| -EI | Ethernet with Embedded Internet | 55 |
| -C24 | Isolated RS-232 and RS-485 300 to 19.2 k baud ² | 60 |
| -C4EI | Ethernet with Embedded Web Server + Isolated RS-485/422 hub for up to 31 devices ^{*1} | 115 |

POWER SUPPLY (Select One)

| Option | Description | Price |
|--------|---|-------|
| * | Standard power input: 90-240 Vac/dc, 50-400 Hz (no entry required) | N/C |
| -DC | 12-36 Vdc (for CN/DPI8), 20-36 Vdc (for CN/DPI8A), 24 Vac ^{*2} | 25 |

FACTORY SETUP (Requires Network Option)

| Option | Description | Price |
|-------------|--|-------|
| -FS | Factory Setup and Configuration | N/C |
| -FS(RTD-1N) | Factory Scaled for MIL-T-7990B Nickel RTD input (0 to 200°C) | N/C |
| -FS(RTD-2N) | Factory Scaled for MIL-T-7990B Nickel RTD input (-40 to 300°C) | N/C |

SOFTWARE (Requires Network Option)

| Option | Description | Price |
|--------------------|------------------------------------|-------|
| OPC-SERVER LICENSE | OPC Server/Driver Software License | 295 |

*1 Analog Output (Option 5) and Ethernet Options are not available for the CN/DPI8A.

*2 -DC, -C24, or -C4EI not available with excitation.

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

4 For CNI8A0-AL: One Analog Retransmission and One Alarm (Output 1 is not available).

*5 Strain CN/DPI8 and/or Isolated Analog Output CN/DPI8A are not available with -SM units.

ORDERING EXAMPLES: DPi8A is a 1/8 DIN Meter with isolated scalable analog retransmission of the process value² \$295; CNI833-AL-C24 is a 1/8 DIN Indicator and Dual Alarm only with serial communication \$370. CNI833-C24-FS(RTD-1N) is a 1/8 DIN Controller with 2 relay outputs, serial communication and is factory scaled for MIL Standard MIL-T-7990B Nickel RTD input \$430.

iSeries

change color

at any set point



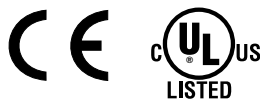
Totally Programmable Color Displays

The OMEGA® i/8, i/16, and i/32 are the first complete series of 1/8, 1/6 and 1/2 DIN process control instruments with totally programmable color displays. The display can be programmed to change color at any setpoint or alarm point.



1/8 DIN Dual Display
Temperature, Process &, Strain PID Controllers

\$340
Dual Output Controller



- ✓ High Quality
- ✓ 5-Year Warranty
- ✓ High Accuracy ±0.5°C (0.9°F), 0.03% Reading
- ✓ First 1/8 DIN Controller with Embedded Ethernet Connectivity (Optional)
- ✓ Dual Display with Bright Color Changing Feature
- ✓ Programmable Digital Filter
- ✓ 2 Control or Alarm Outputs. Choice of DC Pulse, Solid State Relays, Mechanical Relays, Analog Voltage and Current
- ✓ Full Autotune PID Control
- ✓ Built-In Excitation Standard
- ✓ Front Removable



The OMEGA **CNi8DH** and **CNi8DV** are high quality, highly accurate single loop Autotune PID Temperature and Process Controllers for 1/8 DIN (96mm x 48mm) horizontal or vertical panel cutouts. Both devices feature the same state of the art technology, uncompromising accuracy, and quality backed by an extended 5-year warranty. The **CNi8DH** and **CNi8DV** are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

The **CNi8DH** and **CNi8DV** come standard with your choice of two control or alarm outputs in almost any combination: solid state relays (SSR) rated at 0.5A @120/240 Vac; Form "C" SPDT (Single Pole Double Throw) relays rated at 3 amps @120/240 Vac; pulsed 10 Vdc output for use with an external SSR; or Analog Output (0-10 Vdc or 0-20mA) selectable for control or retransmission of the process value.

The UNIVERSAL TEMPERATURE & PROCESS instrument (model "I") offers a selection of 10 thermocouple types as well as 2, 3 or 4 wire RTD's, process voltage and current. The **CNi8DH** and **CNi8DV** are ideal controllers for use with transmitters and amplified transducers. Built in excitation is standard (24Vdc @ 25mA). The devices handle 0-20mA Process Current and Process Voltage in three scales: 0-100mV, 0-1V, and 0-10V. As with all iSeries devices, the Process Value display can be programmed to change color between Green, Amber and Red at any set point or alarm point. The LED's displaying the Process Value on the i8DH (horizontal 1/8 DIN) are the largest digits of any 1/8 DIN controller.

The STRAIN/PROCESS instrument (model "iS") meters and controllers measure inputs from Load Cells, Pressure Transducers, and most any strain gauge sensor. Input ranges include 0 to 100 mVdc, -100 mVdc to 1 Vdc, 0 to 10 Vdc in addition to 0-20 mA. Excitation for transducers of 5 Volt and 10 Volt is standard.

The highly recommended Networking and Communications options include direct Ethernet LAN connectivity with an Embedded Web Server, and serial communications.

The C24 serial communications option includes both RS-232 and RS-485 which can be selected from the menu as well as both a straightforward ASCII protocol or MODBUS. The C4EI option includes both Ethernet and RS-485 ASCII/MODBUS on one device.

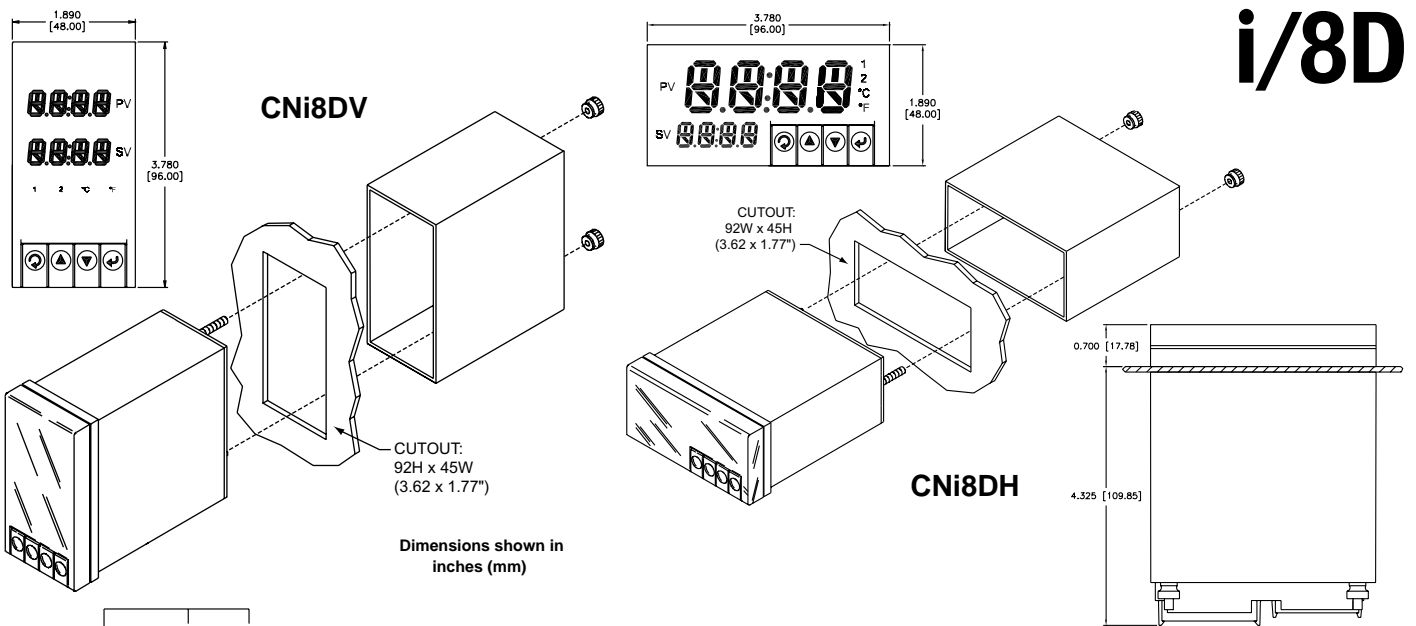
The iSeries, with the network option, are designed for easy integration with popular industrial automation, data acquisition and control programs as well as Microsoft Visual Basic and Excel. OMEGA provides free configuration software which makes it fast and easy to get up and running. Available on CD-ROM and for download off the Web.

| Input Type | Range | Accuracy |
|--|---------------------------------------|-----------|
| Universal Temperature / Process | | |
| Process Voltage | 0 to 100 mV, 0 to 1 V, 0 to 10 Vdc | 0.03% rdg |
| Process Current | 0 to 20 mA (4 to 20 mA) | 0.03% rdg |
| Excitation | 24 V @ 25 mA | - |
| Universal Strain / Process | | |
| Process Voltage | 0 to 100 mV, -100 to 1 V, 0 to 10 Vdc | 0.03% rdg |
| Process Current | 0 to 20 mA (4 to 20 mA) | 0.03% rdg |
| Excitation | 5 V @ 40 mA, 10 V @ 60 mV | - |

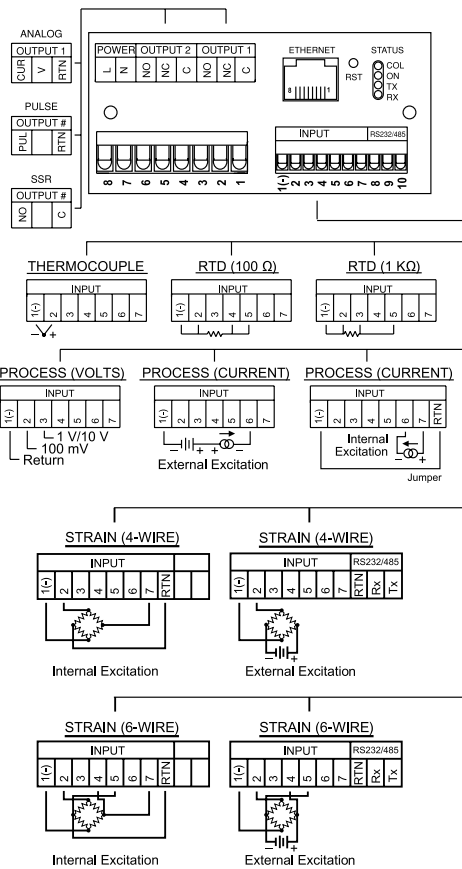
iSeries
change color
at any set point*

Totally Programmable Color Displays

RED
AMBER
GREEN



Dimensions shown in inches (mm)



The i/8 Series controllers feature plug/removable connectors and a sturdy panel mounting sleeve with adjustable thumb nuts for easy secure installation.

To Order (*Specify Model No.)

| Model Number | Description | Price |
|--|--|-------|
| CONTROL OUTPUTS #1 & 2 Direct (Cool) or Reverse (Heat) Acting | | |
| CNi8DH | (*) (*) Temperature/Process 1/8 DIN Dual Display Horizontal with 2 Control Outputs | 340 |
| CNi8DV | (*) (*) Temperature/Process 1/8 DIN Dual Display Vertical with 2 Control Outputs | 340 |
| CNiS8DH | (*) (*) Strain/Process 1/8 DIN Dual Display Horizontal with 2 Control Outputs | 400 |
| CNiS8DV | (*) (*) Strain/Process 1/8 DIN Dual Display Vertical with 2 Control Outputs | 400 |
| 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 | 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)an Solid State | |
| 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 (Alarm Menu, PID Control) ² | |
| | -SM Simplified Menu Version (ON/OFF Control, No PID) ³ | |

| NETWORK OPTIONS (One Option Max.) | | Price |
|-----------------------------------|---|-------|
| -EI | Ethernet with Embedded Internet | 55 |
| -C24 | Isolated RS-232 and RS-485 300 to 19.2 k baud ¹ | 60 |
| -C4EI | Ethernet with Embedded Web Server + Isolated RS-485/422 hub for up to 31 devices ¹ | 115 |

| POWER SUPPLY (Select One) | | Price |
|---------------------------|--|-------|
| * | Standard power input: 90-240 Vac/dc, 50-400 Hz (no entry required) | N/C |
| -DC | 20-36 Vdc, 24 Vac ¹ | 25 |

| FACTORY SETUP (Requires Network Option) | | Price |
|---|--|-------|
| -FS | Factory Setup and Configuration | N/C |
| -FS(RTD-1N) | Factory Scaled for MIL-T-7990B Nickel RTD input (0 to 200°C) | N/C |
| -FS(RTD-2N) | Factory Scaled for MIL-T-7990B Nickel RTD input (-40 to 300°C) | N/C |

| SOFTWARE (Requires Network Option) | | Price |
|------------------------------------|------------------------------------|-------|
| OPC-SERVER LICENSE | OPC Server/Driver Software License | 295 |

*1 -DC, -C24, or -C4EI not available with excitation.
 *2 Analog Output (Option 5) is not available with -AL units.
 *3 Strain CNiS8DH or CNiS8DV is not available with -SM units.
ORDERING EXAMPLES: CNi8DH43 is a horizontal 1/8 DIN Dual display with pulse and relay³340. CNiS8DH43-C24-FS(RTD-1N) is factory scaled for MIL Standard MIL-T-7990B Nickel RTD input \$460.