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[DPI16-DC](#)

[DPI16-DC.](#)

**EN**

This Datasheet is presented by  
the manufacturer

**DE**

Dieses Datenblatt wird vom  
Hersteller bereitgestellt

**FR**

Cette fiche technique est  
présentée par le fabricant

# 1/16 DIN Temperature, Process and Strain Meters and PID Controllers



- ✓ High Quality
- ✓ 5-Year Warranty
- ✓ High Accuracy  $\pm 0.5^{\circ}\text{C}$  ( $0.9^{\circ}\text{F}$ ), 0.03% Reading
- ✓ First 1/16 DIN Controller with Totally Programmable Color Displays (Standard)
- ✓ User-Friendly, Simple to Configure
- ✓ Free Software
- ✓ Full Autotune PID Control
- ✓ Universal Inputs: Thermocouple, RTD, Process Voltage/Current, Strain
- ✓ Embedded Ethernet Connectivity

The OMEGA<sup>®</sup> DPi16/CNi16 is the popular 1/16 DIN size (48 mm square) meter or controller. The meter (model "DPi16") displays the process value and has no control outputs.

The controller is available with a single (model "CNi16") or dual display (model "CNi16D") that displays a set point along with the process value. The DPi16/CNi16 display can be programmed to change color at any set point or alarm point.

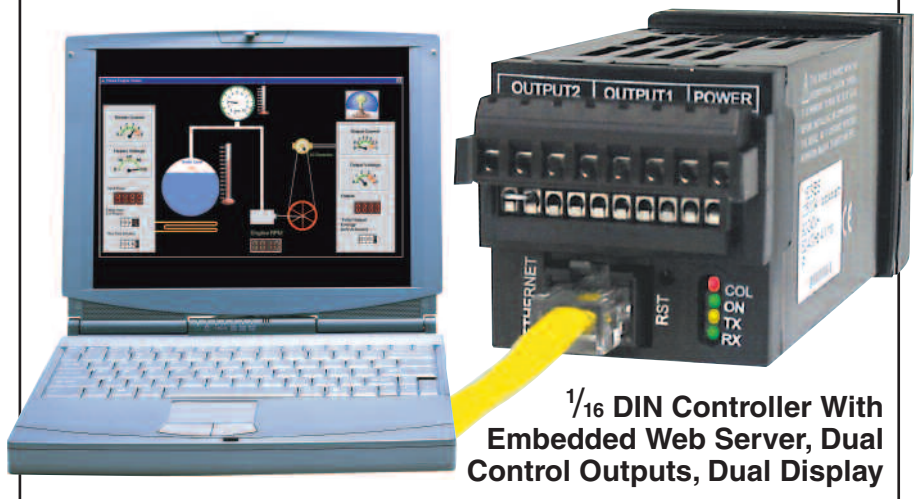
The CNi16 is the first 1/16 DIN controller with the option of both RS232 and RS485 in one instrument with both MODBUS<sup>®</sup> serial protocol and the straightforward OMEGA<sup>®</sup> ASCII protocol. And of course the CNi16 is the first 1/16 DIN Controller that can connect directly to an ethernet network and features an embedded web server. OMEGA<sup>®</sup> provides free configuration and data acquisition software for the iSeries on CD-ROM and for download off the Web.

The DPi16/CNi16 enclosure has a NEMA 4 (IP65) rated front bezel. The electronics are removable from the front panel.

- ✓ First 1/16 DIN Controller Offering Both RS232 and RS485 Serial Communications in One Instrument (Optional)
- ✓ First 1/16 DIN Controller with Built-in Excitation, 24 Vdc, Standard
- ✓ First 1/16 DIN Instrument with Analog Output Selectable as a Control Output or as a Calibrated Retransmission of Process Variable

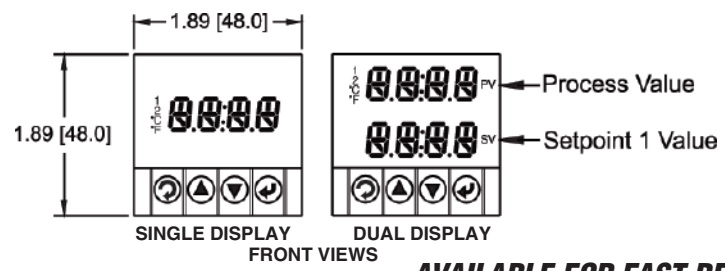
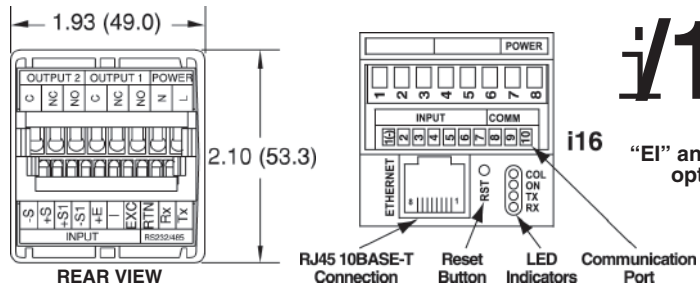
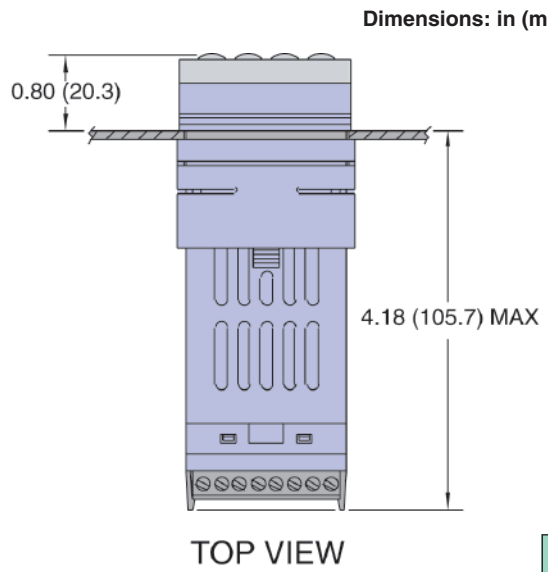
- ✓ NEMA-4 (IP65) Front Bezel
- ✓ 2 Control or Alarm Outputs (Optional) dc Pulse, Solid State Relays (SSR's), Mechanical Relays, Analog Voltage & Current
- ✓ Temperature Stability  $\pm 0.04^{\circ}\text{C}/^{\circ}\text{C}$  RTD and  $\pm 0.05^{\circ}\text{C}/^{\circ}\text{C}$  TC @  $25^{\circ}\text{C}$  ( $77^{\circ}\text{F}$ )
- ✓ Front Removable and Plug Connectors

## Access Vital information Anytime, Anywhere, On the World Wide Web

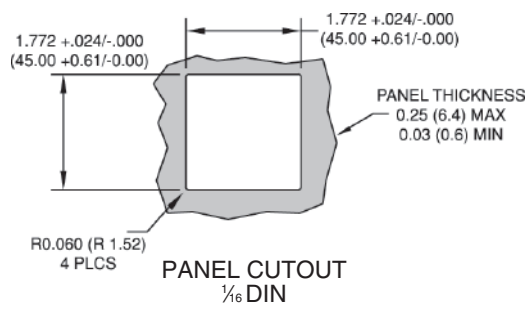


1/16 DIN Controller With Embedded Web Server, Dual Control Outputs, Dual Display

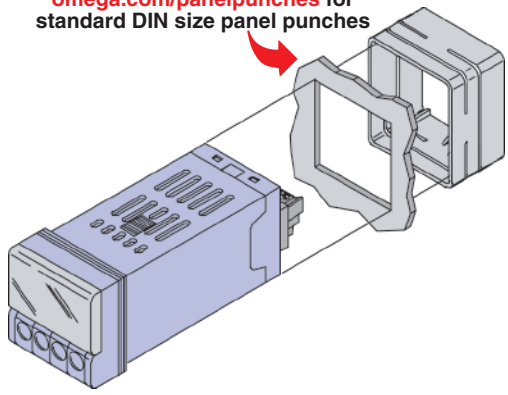
# i16



**AVAILABLE FOR FAST DELIVERY!**



Please visit [omega.com/panelpunches](http://omega.com/panelpunches) for standard DIN size panel punches



## To Order (\*Specify Model Number)

Model No.	Description
DPi16	Temperature/Process (Monitor only) 1/16 DIN
DPiS16	Strain/Process (Monitor only) 1/16 DIN
<b>CONTROL OUTPUTS #1 &amp; 2 Direct (Cool) or Reverse (Heat) Acting</b>	
CNi16	Temperature/Process with 2 Control Outputs
CNi16D	Temperature/Process Dual Display with 2 Control Outputs *1
CNiS16	Strain/Process with 2 Control Outputs
CNiS16D	Strain/Process Dual Display with 2 Control Outputs *1
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 0-20 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, No PID Control)*3
	-SM Simplified Menu Version (ON/OFF Control, No PID)*4

## NETWORK OPTIONS (One Option Max)

-EI	Ethernet with Embedded Internet*1
-C24	Isolated RS232 and RS485 300 to 19.2 k baud *2
-C4EI	Ethernet with Embedded Web Server + Isolated RS485/422 hub for up to 31 devices *1,*2

## POWER SUPPLY (Select One)

*	Standard power input: 90 to 240 Vac/dc, 50-400 Hz (no entry required)
-DC	12 to 36 Vdc (for CN/DPi16), 20 to 36 Vdc (for CNi16D), 24 Vac *2

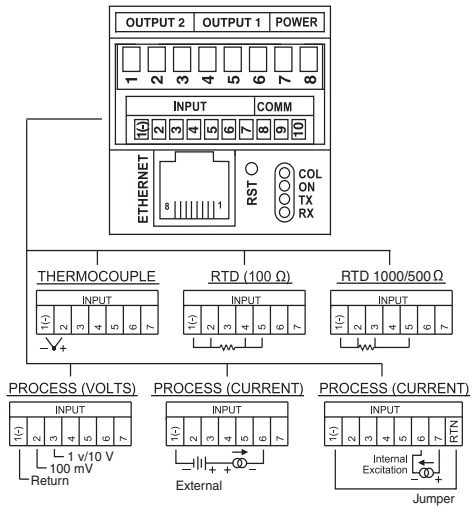
## FACTORY SETUP (Requires Network Option)

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

## SOFTWARE (Requires Network Option)

OPC-SERVER LICENSE	OPC Server/Driver Software License
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\*1 Ethernet options are available for the CNi16D and CNiS16D Controller only.  
 \*2 -DC, -C24 or -C4EI not available with excitation.  
 \*3 Analog Output (Option 5) is not available with -AL units.  
 \*4 Strain DP/CNiS16 or CNiS16D is not available with -SM units.  
**Ordering Examples:** CNi16D44 1/16 DIN dual display PID Controller with two pulse control outputs  
 CNiS16DH44-C24-FS(RTD-1N) factory scaled for MIL Standard MIL-T-7990B Nickel RTD input





#### UNITED STATES

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)  
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#### GERMANY

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### • Flow and Level

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### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

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Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters

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