

Temperature, Process and Strain Meters

MONOGRAM®

iSeries

Panel Punches Available, Visit omega.com/panelpunches



DPI32, \$159, shown smaller than actual size.



DPI16, \$190, shown smaller than actual size.



DPI8, \$250, shown smaller than actual size.

DPI Series Starts at
\$159



- User Friendly, Simple to Configure
- High Quality
- Extended 5-Year Warranty
- Powerful Features
- Free Software, ActiveX Controls
- Totally Programmable Color Displays Standard
- High Accuracy: $\pm 0.03\%$ Reading, 0.5°C (0.9°F)
- Both RS232 and RS485 MODBUS on 1 Instrument Selectable from Menu Available
- Universal Inputs: Process, Voltage/Current, Strain RTD Thermocouple
- Built-In Excitation (Standard)
- Embedded Internet Connectivity Available
- Temperature Stability $\pm 0.04^{\circ}\text{C}/^{\circ}\text{C}$ RTD and $\pm 0.05^{\circ}\text{C}/^{\circ}\text{C}$ TC @ 25°C (77°F)

The innovative OMEGA® iSeries devices feature state-of-the-art technology, uncompromising accuracy, and quality backed by an extended 5-year warranty.

The iSeries family includes extremely accurate digital panel meters and single loop PID controllers that are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

Embedded Internet and Serial Communications

Featuring optional "embedded Internet" (specify EI option) the iSeries are the first instruments of their kind that connect directly to an Ethernet network and transmit data in standard TCP/IP packets, or even serve Web pages over a LAN or the Internet. The iSeries are also available with serial communications. With the C24 option, the user can select from the push-button menu between RS232, RS422, and RS485, with straightforward ASCII commands or MODBUS.

iSeries Family

The OMEGA® iSeries is a family of microprocessor-based instruments offered in 3, true DIN sizes with NEMA 4 (IP65) rated front bezels. All of the instruments share a similar set-up and configuration menu and method of operation, which is a tremendous time saver for integration of a large system.

Programmable Color Display

The OMEGA® iSeries are the first complete series of $\frac{1}{8}$, $\frac{1}{16}$ and $\frac{1}{32}$ DIN

process control instruments with totally programmable color displays. The display can be programmed to change color at any setpoint or alarm point.

For example, the instrument can be programmed to display the process value in **GREEN** during warm-up, switching to **AMBER** to signal the normal operating range, and in **RED** to signal an alarm condition. The changes in color are quickly seen from a distance, and machine operators can intuitively react to changing conditions. The colors can be programmed to change back when the value drops back below the alarm point or to "latch" on until being reset by the operator.

The instrument can also be programmed to display only 1 unchanging color: **GREEN**, **AMBER**, or **RED**. This is a useful way to let an operator identify, at a glance, process values in 3 separate locations, or to display 3 different measurements such as temperature, pressure, and flow.

Quality and Technology

The iSeries packs a wealth of power and features into the smallest of packages, utilizing COB and SMT assembly techniques and automation. Every iSeries instrument is thoroughly calibrated and tested at several stages throughout production. The iSeries offers the highest accuracy for industrial instrumentation at 0.03% of reading. The analog-to-digital conversion utilizes a proprietary 20-bit ASIC (application specific

Totally Programmable Color Displays

iSeries **change color**

at any
setpoint



PATENTED

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

*iSeries Controllers
Also Available!*



CNI16D, shown larger than actual size. See page P-17.

integrated circuit), patented algorithms and smart filtering.

Universal Inputs

The innovative iSeries offers the broadest selection of signal inputs available on one industrial instrument. The choices are easily selected from the menu with four front panel pushbuttons, or by serial or ethernet communications.

Process Voltage and Current

The iSeries measures process voltage: 0 to 100 mV, 0 to 1V, 0 to 10V ranges, and process current: 0 to 20 mA.

10 Thermocouple Types

The iSeries handles 10 thermocouple Types: K, J, T, E, R, S, B, C, N, and J DIN. The patented thermocouple linearization algorithms employed in the iSeries produce the highest standard of accuracy.

Most Accurate RTD Measurements

The iSeries works with the widest selection of RTDs and produces the most accurate RTD measurements. Handles both Pt 0.00385 and 0.00392 curves, 100 Ω, 500 Ω and 1000 Ω. A choice of 2-, 3- and 4-wire RTD connections ensures the absolute highest degree of accuracy. The MIL standard nickel RTD with MIL-T-7990B curve is available as a Factory Setup.

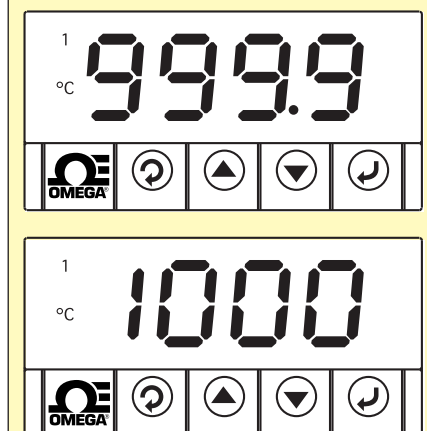
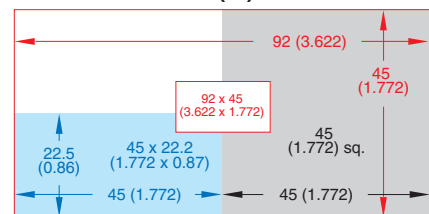
Strain Gage

The strain/process meters measure inputs from load cells, pressure transducers, and most any strain gage sensor. Input ranges include 0 to 100 mVdc, -100 mVdc to 1 Vdc and 0 to 10 Vdc in addition to 0 to 20 mA. Excitation for transducers of 5V and 10V is standard. Strain/process meters and controllers are available in all iSeries models.

Built-in Excitation Standard

The temperature/process instruments (models other than DPiS) come standard with built-in excitation (24 Vdc @ 25 mA). Any excitation voltage between 5 and 24 Vdc is available by special order. This means the same instrument can handle thermocouple, standard RTDs or process sensors and transmitters with the meter's built-in excitation. Strain/process models (DPiS) come standard with built-in excitation (10V @ 60 mA), 5V excitation is user selectable. (Built-in excitation is not available with optional RS232/RS485 serial communications or DC power option).

Dimensions: mm (in)



AutoScaling automatically shifts the decimal point right or left depending on the process value of the meter. AutoScaling is only active for temperature reading.

iSeries Meters

MONOGRAM®

DPI Series Starts at
\$159



The OMEGA® DPI Series are 1/8, 1/16 and 1/32 DIN digital panel meters featuring the big iSeries color-changing display. The digits on the DPI8 models 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**.

CNi Series Models with Control and Alarm Outputs, See Pages P-9 thru P-22



DPI8, \$250, shown smaller than actual size.

Options

Ordering Suffix	Add'l Price	Description
Network Options		
-EI	\$55	Ethernet with embedded internet
-C24	60	Isolated RS232 and RS485, 300 to 19.2 KB
-C4EI	115	Ethernet with embedded Web server + isolated RS485/422 hub for up to 31 devices
-DC	25	12 to 36 Vdc*, 24 Vac (standard power input: 90 to 240 Vac/dc, 50 to 400 Hz)
Factory Setup		
-FS	\$50	Factory setup and configuration
-FS(RTD-1N)	75	Factory scaled for MIL-T-7990B nickel RTD input, 0 to 200°C (32 to 392°F)
-FS(RTD-2N)	75	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

Note: "-DC", "-C24" and "-C4EI" not available with excitation. Models "-EI" and "-C4EI" are only offered on DPI8 and DPI8 models. * 20 to 36 Vdc for DPI8A.

Ordering Examples: DPI8A, 1/8 DIN meter with isolated scalable analog retransmission of process value, \$310. DPI8C, 1/8 DIN temp/process meter in compact case, \$285. DPI32, 1/32 DIN temp/process monitor, \$159.

Input Type		Range	Accuracy
Universal Strain/Process Input Models			
Process Voltage		0 to 100 mV, 0 to 1V, ±100 mV, 0 to 10V	0.03% rdg
Process Current		0 to 20 mA (4 to 20 mA)	0.03% rdg
Universal Temperature/Process Input Models			
J	Iron-Constantan	-210 to 760°C (-346 to 1400°F)	0.4°C (0.7°F)
K	CHROMEALLOY®-ALOMEGA®	-270 to -160°C (-454 to -256°F) -160 to 1372°C (-256 to 2502°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
T	Copper-Constantan	-270 to -190°C (-454 to -310°F) -190 to 400°C (-310 to 752°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
E	CHROMEALLOY®-Constantan	-270 to -220°C (-454 to -364°F) -220 to 1000°C (-364 to 1832°F)	1.0°C (1.8°F) 0.4°C (0.7°F)
R	Pt - Pt/13%Rh	-50 to 40°C (-58 to 104°F) 40 to 1768°C (104 to 3214°F)	1.0°C (1.8°F) 0.5°C (0.9°F)
S	Pt - Pt/10%Rh	-50 to 100°C (-58 to 212°F) 100 to 1768°C (212 to 3214°F)	1.0°C (1.8°F) 0.5°C (0.9°F)
B	Pt/30%Rh - Pt6%Rh	100 to 640°C (212 to 1184°F) 640 to 1820°C (1184 to 3308°F)	1.0°C (1.8°F) 0.5°C (0.9°F)
C	W/5%Re - W/26%Re	0 to 2320°C (32 to 4208°F)	0.4°C (0.7°F)
N	OMEGALLOY® Nicrosil-Nisil	-250 to -100°C (-418 to -148°F) -100 to 1300°C (-148 to 2372°F)	1.0°C (1.8°F) 0.4°C (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)
RTD-1N	(Nickel MIL-T-7990B) (FS required)	0 to 200°C (32 to 392°F)	0.1°C (0.2°F)
RTD-2N	(Nickel MIL-T-7990B) (FS required)	-40 to 300°C (-40 to 572°F)	0.3°C (0.5°F)
Process Voltage		0 to 100 mV, 0 to 1V, 0 to 10V	0.03% rdg
Process Current		0 to 20 mA (4 to 20 mA)	0.03% rdg

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)				
Model No.	Price	Size/Cutout	Input Type	Other Features
DPI8	\$250	1/8 DIN	Temperature/process	—
DPI8A	310	1/8 DIN	Temperature/process	Analog output
DPI8S	275	1/8 DIN	Strain/process	—
DPI16	190	1/16 DIN	Temperature/process	—
DPI16S	230	1/16 DIN	Strain/process	—
DPI32	159	1/32 DIN	Temperature/process	—
DPI32S	195	1/32 DIN	Strain/process	—
DPI8C	285	1/8 DIN	Temperature/process	Compact depth
DPI8SC	345	1/8 DIN	Strain/process	Compact depth

Each unit comes complete with operator's manual.

Accessory

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