ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *OMEGA DP41-E* at our website: *Click HERE*

1/8 DIN HIGH-PERFORMANCE METERS
ALARM/CONTROL CAPABILITIES
STRAIN GAGE, PROCESS VOLTAGE AND CURRENT, TEMPERATURE

DP41 Series

5 YEAR WARRANTY



DP41-S strain meter shown actual size.

All Units Feature:
- 5-Year Warranty
- 6-Digit Display
- Min/Max Storage
- 4 Isolated Open-Collector Outputs
- NEMA 4 (IP65) Front Panel
- 12 Readings per Second
- Alarm/Control Capabilities
- Smart Filtering Detects the Difference Between a Spike or Process Change (Patent Applied for)
- Peak and Valley Detection
- Digital Tare
- Easy Front-Panel Programming
- Optional BCD Output
- Optional Analog Output
- Optional RS232/RS485 Communications
- Optional Mechanical Relays

Thermocouple Input:
- 0.01° Resolution
- 0.2°C Accuracy
- 9 Thermocouple Types
- °C/°F/K Units
- Uses Complete NIST Calibration Tables

RTD Input:
- 0.01° Resolution
- 0.2°C Accuracy
- 2-, 3-, or 4-Wire
- 385 and 392 Pt Curves

Voltage/Current Inputs:
- ±0.005% Rdg Accuracy
- 10 User-Selectable Voltage or 4 to 20/ 0 to 20 mA Input Ranges
- Fully Scalable Display Up to 500,000 Counts
- 1.5 to 11 Vdc or 24 Vdc Sensor Excitation
- Adjustable Decimal Point

The OMEGA® DP41 Series of digital panel meter/controllers has set the world standard for accuracy and quality in industrial instrumentation. These meters can measure a broad spectrum of DC voltage and current ranges as well as inputs from 9 thermocouple types and from most RTDs, pressure transducers, load cells, strain gages, and potentiometers. Models include the DP41-W, a legal-for-trade, NTEP-certified strain meter with enhanced features, and the DP41-U, which covers all the input types.

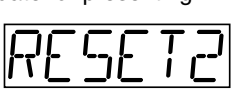
Standard features include 6-digit display; 5 front-panel pushbutton keys; 4 open-collector outputs; and alarm/control, BCD, and analog outputs. Configurable analog output ranges are 0 to 20 mA, 4 to 20 mA, 0 to 5 Vdc, and 0 to 10 Vdc.

On-board excitation allows these meters to power virtually any sensor or transmitter, and 4 setpoints give the user numerous control/alarm possibilities. Setpoint configurations include active above or below; latching or non-latching; and high deviation, low deviation, or band deviation.

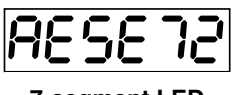
With the RS232/485 serial communications option, the user can set the display parameters and read the current, max, and min values remotely. The DP40-R board option provides dual 7 A mechanical relays, activated by the selected setpoint.

OMEGA™ MONOGRAM™ SERIES

The DP41 displays feature 14-segment LED characters, which greatly improves alphanumeric representations. The 7-segment LED characters found on most instruments are adequate for presenting numbers, but not letters. Words are easier to read with the 14-segment LED characters on the DP41, which, in turn, simplifies operating and programming.



14-segment LED



7-segment LED



Red LED display standard. Also available with green LED at no charge.

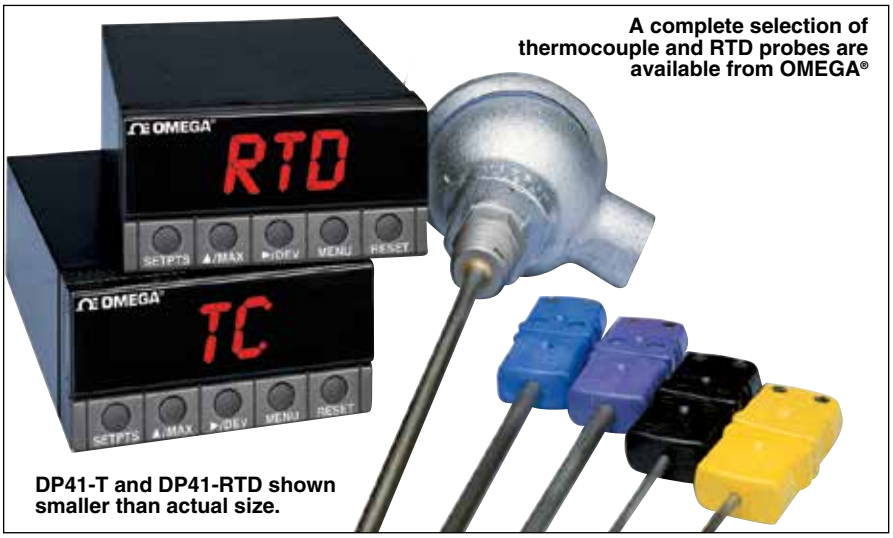
SPECIFICATIONS

Accuracy: ±0.005% rdg
Span Temperature Coefficient: ±20 ppm
Step Response: 1 s to 99.9%
Warm-Up to Rated Accuracy: 50 minutes
Operating Environment: 0 to 50°C (32 to 122°F); 95% RH, non-condensing
Storage Temperature: -40 to 85°C (-40 to 185°F)
Power: 115 or 230 Vac, 49 to 400 Hz; 10 to 32 Vdc
Power Consumption: 6 W nom., 10 W max
Normal-Mode Rejection: 60 dB
Common-Mode Rejection: 120 dB
Common-Mode Voltage: 1500 Vp per HV test
Resolution: 15-bit
Conversion: Dual-slope technique
Reading Rate: 3/s or 13/s, 60 Hz; 3/s or 12/s, 50 Hz
Display: Red or green 6-digit, 14-segment, 13.7 mm (0.54") high; 4 alarm indicators
Dimensions: 48 H x 96 W x 165 mm D (1.89 x 3.78 x 6.5")
Panel Cutout: 45 H x 92 mm W (1.772 x 3.622"); ⅛ DIN
Weight: 574 g (1.27 lb)
Setpoint Outputs: 4 isolated open collector; rated 150 mA at 1V sink, 30V open
BCD Output: Isolated, tri-state, TTL/CMOS compatible; external 5V supply required for isolated; internal 5V supply for non-isolated
Dual Relays: Form "C", 7 A @ 30 Vdc or 230 Vac
4-Relay Option: Dual 7 A relays and dual 1 A relays
Analog Output: 0 to 5V/1 to 5V/ 0 to 10V/0 to 20 mA/4 to 20 mA, user selectable; 354 Vp isolation; 15-bit resolution; 0.1% accuracy; 50 ms step response
RS232 Communications: 300/600/1200/2400/4800/9600/ 19.2K baud; RJ11 4-wire connection; programmable to transmit current display, alarm status, min/max, actual measured input value and status
RS485 Communications: 300/600/1200/2400/4800/9600/ 19.2K baud; RJ12 6-wire connection; addressable from 0 to 199
Voltage Input Ranges: 0 to 100 mV, 0 to 1V, 0 to 5V, 1 to 5V, 0 to 10V, 0 to 100V, ±50 mV, ±500 mV, ±5V, ±50V
Current Input Ranges: 0 to 20 mA, 4 to 20 mA
Input Configuration: Single-ended
Polarity: Unipolar/bipolar, programmable
Span Adjustment: 0.00001 to 500,000, programmable
Offset Adjustment: 0 to 999,999 or 0 to -99,999, programmable
Thermocouple Input Types: J, K, T, E, R, S, B, N, J DIN
RTD Input: Any 6 Ω to 6 kΩ NIST or DIN platinum and any linear RTD
RTD Connection: 2-, 3- or 4-wire
Sensor Break Protection: Up-scale or down-scale, programmable
Sensor Excitation: 10 V at 30 mA; 24V at 25 mA

The DP41 thermocouple meter offers very high accuracy ensured by an advanced (patent applied for) thermocouple linearizing system. Accuracy for most thermocouple types is 0.2°C (3.6°F). The meter is front-panel programmable for any of 9 thermocouple types. The DP41 RTD input meter is programmable for any 6 to 6000 Ω DIN or NIST platinum RTD. It provides a precision ultra-low constant current excitation to minimize self-heating errors and maximize stability.

INPUT TYPE		RANGE, °C	RANGE, °F	ACCURACY
J	Iron-constantan	-210 to 760	-346 to 1400	0.2°C/0.3°F
K	CHROMEGA®-ALOMEGA®	-270 to 1372	-454 to 2500	0.2°C/0.3°F
T	Copper-constantan	-270 to 400	-454 to 752	0.2°C/0.3°F
E	CHROMEGA®-constantan	-270 to 1000	-454 to 1832	0.2°C/0.3°F
R/S	Pt/Rh	-50 to 1768	-58 to 3214	0.2°C/0.3F
B	Pt/30% Rh-Pt/6° Rh	100 to 1820	212 to 3300	0.3°C/0.5F
N	OMEGALLOY®	-270 to 1300	-454 to 2372	0.2°C/0.3F
J DIN	Iron-constantan	-200 to 900	-328 to 1652	0.6°C/1.0F
RTD	All curves	-200 to 850	-328 to 1562	0.2°C/0.3F

INPUT TYPE		RANGE, °C	RANGE, °F	RANGE, K	ACCURACY
RTD 1	10 Ω copper	-200 to 200	-328 to 392	73.2 to 473.2	1.0°C/2.0°F/1.0 K
RTD 2	100 Ω Pt 0.00385	200 to 900	-328 to 1652	73.2 to 1173.2	0.2°C/0.3°F/0.2 K
RTD 3	100 Ω Pt 0.00392	-200 to 850	-328 to 1562	73.2 to 1123.2	0.2°C/0.3°F/0.2 K



A complete selection of thermocouple and RTD probes are available from OMEGA®

DP41-T and DP41-RTD shown smaller than actual size.

HIGH-PERFORMANCE METERS



DP41Z-E split meter with remote display, panel mount or surface mount with bracket shown smaller than actual size.



DP41-TBS bench stand, sold separately.

DP41-TC with thermocouple probe, sold separately from OMEGA, shown smaller than actual size.

To Order

MODEL NO.	DESCRIPTION
DP41-E	Process voltage/current indicator
DP41-S	Strain gage indicator
DP41-W	Weight NTEP strain indicator
DP41-TC	Thermocouple indicator
DP41-RTD	RTD indicator
DP41-U	Universal input indicator
DP41Z-E	Split-display voltage/current indicator
DP41Z-S	Split-display strain gage indicator
DP41Z-W	Split-display weight NTEP strain indicator
DP41Z-TC	Split-display thermocouple indicator
DP41Z-RTD	Split-display RTD indicator
DP41Z-U	Split-display universal input indicator

POWER AND DISPLAY OPTIONS

SUFFIX	DESCRIPTION
-230	230 Vac power
-DC	10 to 32 Vdc isolated power
-GN	Green LED display

ANALOG OUTPUT/COMPUTER COMMUNICATIONS

MODEL NO.	DESCRIPTION
DP40-A3	Analog output
DP40-S24	Isolated RS232/485 communications

DP40-S24 option comes with communications cable with phone plug termination. For proper termination to a computer, 9-pin and 25-pin connectors are offered below.

ACCESSORIES FOR COMPUTER COMMUNICATIONS

MODEL NO.	DESCRIPTION
DP40-9SC2	9-pin serial connector for RS232
DP40-9SC4	9-pin serial connector for RS485
DP40-25SC2	25-pin serial connector for RS232
DP40-25SC4	25-pin serial connector for RS485

CONTROL/BCD OUTPUTS

MODEL NO.	DESCRIPTION
DP40-B	Isolated BCD output board*
DP40-R	Dual 7 A mechanical relays*
DP40-R4	Dual 7 A and Dual 1 A relays*

***Note:** Order DP40-B, DP40-R or DP40-R4; only 1 option can be used per unit. DC power option not available on models with DP40-R or DP40-R4.*

***Ordering Example: DP41-TC-DC-S2A** and **DP40-9SC2,** DP41 unit for thermocouple inputs, with 10 to 32 Vdc power, RS232 communications, analog output and 9-pin serial connector.*

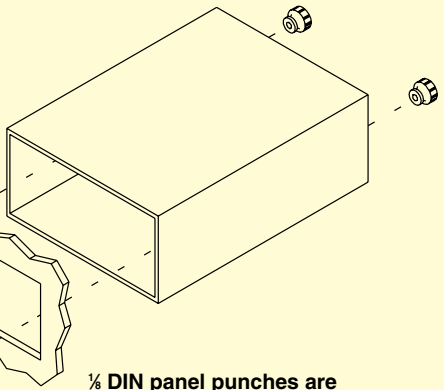
ACCESSORIES FOR DP41 METERS

MODEL NO.	DESCRIPTION
SPC4	NEMA 4 (IP65) heavy-duty splashproof lens, screw clamp
SPC18	NEMA 4 (IP65) splashproof lens, spring clip
DP41-TBS	Economical bench stand
DPP-5	⅛ DIN panel punch

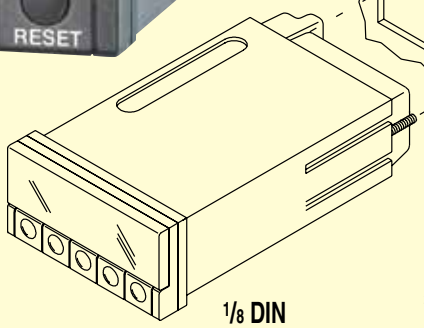
⅛ DIN HIGH-PERFORMANCE PROCESS INDICATORS
DP41 SERIES



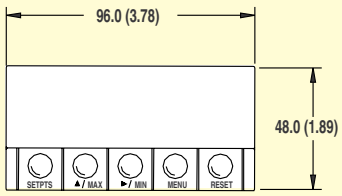
DP41-S shown smaller than actual size.



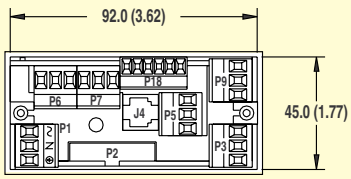
⅛ DIN panel punches are available from OMEGA.



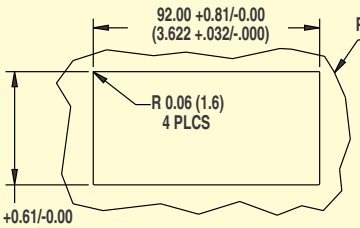
⅛ DIN



FRONT VIEW
TYP

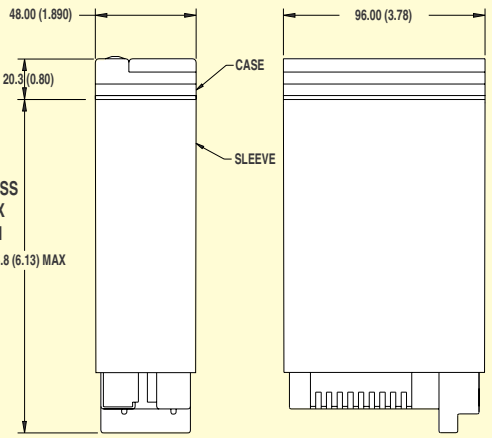


REAR VIEW
TYP



PANEL CUTOUT

PANEL THICKNESS
6.4 (0.25) MAX
0.8 (0.03) MIN



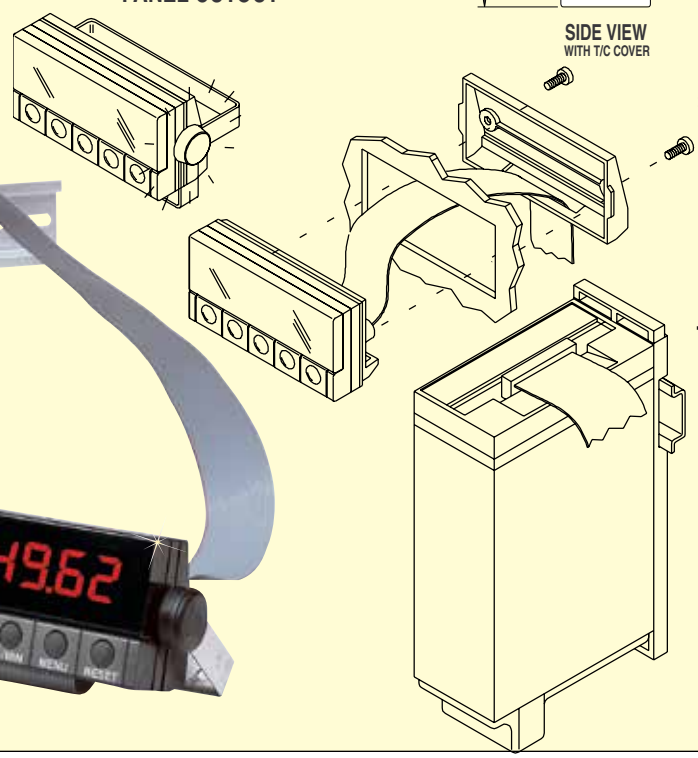
SIDE VIEW
WITH T/C COVER

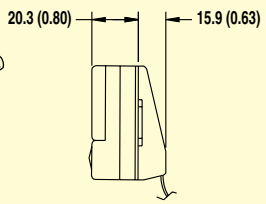
TOP VIEW
WITH T/C COVER

Dimensions:
mm (in)

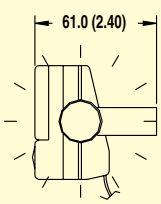


DP41Z-E shown smaller than actual size.





SIDE VIEW
THROUGH PANEL MOUNT



SIDE VIEW OF
SURFACE MOUNT

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP