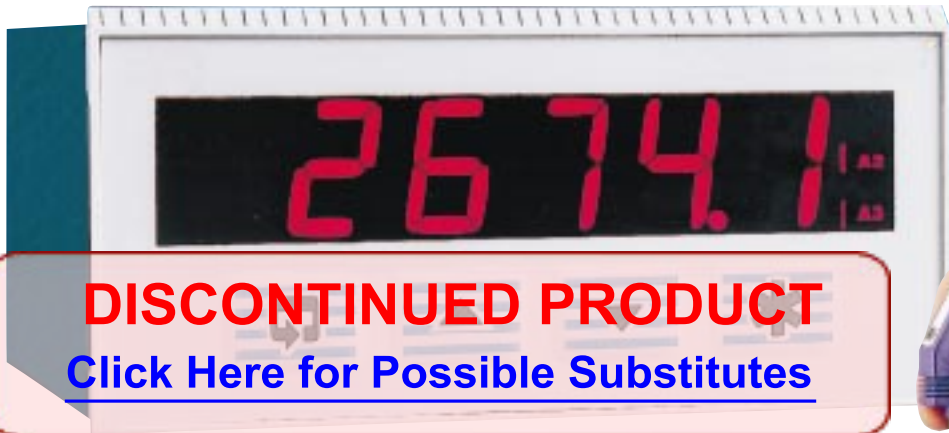




1/8 DIN Panel Mount Universal Temperature Process Indicators



DP3409 Series
\$340
Basic Unit



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- ✓ High Visibility 6-Digit LED Display
- ✓ Universal Inputs
- ✓ 0.1% Input Accuracy
- ✓ Analog, Relay and Logic Outputs Are Standard
- ✓ Transmitter Power Supply
- ✓ NEMA-3 (IP65) Front Panel
- ✓ RS-485/RS-422 Digital Communications
- ✓ Totalization

The DP3409 universal process indicator is a highly versatile, 6-digit industrial display indicator, with the capability of measuring and indicating temperature, pressure, flow, level and other process variables.

The standard DP3409 provides a retransmission output and alarm relay. Further relay outputs and RS-485/RS-422 communications can be added to suit your applications. The configuration of the DP3409 is achieved simply by moving the security switch and entering a 4-digit code from the front panel keys. No passwords, no input links, no complications.

With NEMA-3 front panel protection standard and superior RF immunity, the DP3409 has been designed to provide reliable indications in the harshest environments.

Shown larger than actual size

GEQSS-14G-12, \$30 Miniature Low Noise Thermocouple Probes. See Section A.

Standard Input Ranges

Thermocouple	Maximum Range	Accuracy (% of reading)
J Iron-Constantan	-100 to 900°C -140 to 1650°F	0.1% or ±0.5°C
K CHROMEALLOM [®] -ALOMEGA [®]	-100 to 1300°C -140 to 2350°F	0.1% or ±0.5°C
T Copper-Constantan	-250 to 300°C -400 to 550°F	0.1 %or ±0.5°C
E CHROMEALLOM [®] -Constantan	-100 to 900°C -140 to 1650°F	0.1% or ±0.5°C
N OMEGALLOY [®]	-200 to 1300°C -325 to 2350°F	0.1% or ±0.5°C
R Pt/13%Rh-Pt	-18 to 1700°C 0 to 3000°F	0.1% or ±1.0°C (above 300C)
S Pt/10%Rh-Pt	-18 to 1700°C 0 to 3000°F	0.1% or ±1.0°C (above 200°C)
B Pt/30% Rh Pt/6% Rh	-18 to 1800°C 0 to 3270°F	0.1% or ±2.°C (above 200°C)

RTD	Maximum Range	Accuracy (% of reading)
RTD Pt100	-200 to 600°C -325 to 1100°F	0.1% or ±0.5°C

Linear Inputs	Range	Accuracy (% of reading)
Current	0 to 20 mA	0.2% or ±2µA
	4 to 20 mA	0.2% or ±2µA
Voltage	0 to 5 V	0.1% or ±200µV
Voltage	1 to 5 V	0.1% or ±200µV
Voltage	0 to 50 mV	0.1% or ±20µV

Input	Range	Accuracy (% of reading)
Square Root	4 to 20 mA	0.2% or ±2µA

Notes: Performance accuracy is not guaranteed at extreme low end of thermocouple ranges. RTD, 3-wire platinum, 100 ohm per DIN 43760 standard (IEC751), with range of 0 to 400 ohm. Min span below zero: Type T: 70°C/126°F, Type N: 105°C/189°F; T/C standards: DIN 43710 IEC 584, RTD standards: DIN 43760 IEC 751

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Companion Indicator:
CN3410 Wall Mount Indicator
available in Section M.



Specifications

Operation

Display: High-intensity 7-segment, 1 x 6-digit LED display, three alarm LED indicators:

- Display Range: -9999 to +99999
- Display Resolution: ±1 digit
- Display Height: 14mm (0.56")

Configuration:

User defined via front panel

Standard Functions

Totalizer:

Six-digit, batch and secure totals

Alarms:

Three user-defined
Types: High/low process, High/low latch, Fast/slow rate

Math Function:

Maximum & minimum value detection
Average value calculation

Analog Input

Input Sampling Rate:

250 ms per channel

Type:

Universally Configurable to Provide:
Thermocouple, RTD, Millivolt, Current, and DC Volts.

Input Impedance:

mA 100 Ω
mV, V >10 MΩ

Linearizer Functions:

Programmable for: SqRoot, TC types: B, E, J, K, N, R, S, T or Pt100 RTDs

Broken Sensor Protection:

Upscale drive on thermocouple and RTD. Downscale drive on milliamps and voltage

Cold Junction Compensation:

Automatic CJC incorporated as standard

Stability: < 0.05°C/°C change in ambient temperature

Input Protection:

Common mode isolation:
> 120dB at 50/60 Hz with 300 Ω imbalance resistance
Series mode rejection:
> 60db at 50/60 Hz

Transmitter Power Supply:

24 V, 30 mA max. powers one 2-wire transmitter

Outputs

Retransmission: Analog, configurable in the range of 4 to 20 mA
Max. Load: 15 V (750Ω at 20 mA)

Accuracy: ≤ 0.25% of span
Isolation: 500 Vdc from input (not isolated from logic output)

Logic Output:

18 Vdc at 20 mA
Min. Load: 400Ω
Isolation: 500 V from input (not isolated from retransmission output)

Relay Output: One relay as standard (SPDT) 5 A at 115/230 Vac

Assignable to alarms, totalizer count pulse, totalizer wrap

Options

One option board can be installed from:

- Type 1 One relay
- Type 2 Two relays + one digital input
- Type 3 One relay + one digital input + MODBUS serial communications

Relay Output:

SPDT: 5A at 115/230 Vac
Assignable to: alarms

Digital Input Type: Volt-free
Minimum Pulse: 250 ms

MODBUS Serial Communications:

Connections:
RS-422/RS-485, 2 or 4-wire
Speed: 2.4 k or 9.6 k baud rate
Protocol: MODBUS RTU slave

Physical

Size ½ DIN:
96 W x 48 H x 125 mm D
(3.78 x 1.89 x 4.92")
Weight: 250 g (0.5 lb) approximate

IN STOCK FOR FAST DELIVERY!

To Order (Specify Model Number)

Model Number	Price	Description
DP3409	\$340	Universal process indicator

Output Options (Not Field Installable)

Ordering Suffix	Price	Description
-1	\$65	One additional relay
-2	110	Two additional relays and one digital input
-3	140	One additional relay, one digital input and RS-485/RS-422 Communications

Note: Only one of the above options may be ordered on any one unit

Options

Ordering Suffix	Price	Description
-24VDC	\$ 22	24 Vdc power

Model Number	Price	Description
CN34-SW	\$ 150	RS-232 Configuration Software Package

OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order.

Ordering Example: DP3409-3, ½ DIN panel mount indicator with analog output, transmitter power supply, and one relay standard, plus one additional relay, one digital input and RS-485/RS-422 digital communications. \$340 +140 = **\$480**

OCW-1 OMEGACARESM extends standard 3-year warranty to a total of 4 years (\$48), \$480 + 48 = **\$528**

Electrical

Voltage: 85 to 265 Vac 50/60 Hz

Power Consumption: < 6 VA ac

Power Interruption Protection:

< 60 ms/< 3 cycles, no effect
> 60 ms/>3 cycles, instrument returns to operation after a controlled reset

Environmental

Operating Limits:

0 to 55°C (32 to 131°F)
5 to 95% RH non-condensing

Temperature Stability:

< 0.02% of reading or
2 μV/°C (1 μV/°F)

Front Face: NEMA-3 (IP65), case rear IP20



M

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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

• Pressure, Strain and Force

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• 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