

# VERY HIGH ACCURACY DIGITAL PRESSURE GAUGE STAINLESS STEEL WETTED PARTS AND BODY

**Ω OMEGA®**

PRESSURE  
GAUGES  
G

**Gauge, Absolute, Sealed Gauge,  
Compound Gauge, Vacuum and  
Barometric Models**  
0-10 inH<sub>2</sub>O to 0-5000 psi  
(0-25 mb to 0-345 bar)

## DPG409 Series



Magnetic  
stylus  
(included).

DPG409-500G, shown  
smaller than actual size.

NEMA 4X  
case.

Standard integral  
pressure sensor.

- ✓ 5-PT NIST Traceable Calibration Included
- ✓ Easy to Read 25 mm (1") Backlit LCD Display
- ✓ High 0.08% Accuracy
- ✓ Hi and Lo Alarms Standard
- ✓ MIN/MAX/AVG Reading
- ✓ User Selectable Analog Output 0 to 5 Vdc, 0 to 10 Vdc or 4 to 20 mA
- ✓ Included Setup and Service Software Allows for Fast Maintenance and Calibration via USB Connection
- ✓ Wireless Transmitter Option Sends Reading to Remote Location and Includes Charting and Data Logging Software
- ✓ CE Certified
- ✓ Battery Powered with Long Battery Life

OMEGA's DPG409 digital pressure gauge incorporates a rugged 316 SS enclosure designed for washdown and marine applications with a precision 0.08% accuracy pressure transducer with 316L SS wetted parts and body. The result is an extremely durable digital pressure gauge designed to survive harsh industrial environments. The large 25 mm (1") display is easy to read at a distance up to 11 m (35'). Models are available in Gauge, Sealed Gauge, Compound Gauge, Absolute, Vacuum and Barometric pressure ranges. Standard features include a highly stable silicon sensor, selectable MIN/MAX and AVG readings, Hi and LO alarms and an externally powered user

selectable analog output. An optional wireless transmitter feature with software allows the signal to be transmitted to a remote location such as a PC for charting and data logging. Power is from an internal long life battery (included) or an externally supplied dc voltage source. Each unit is supplied with configuration software that allows the user to connect to a PC via a standard USB connection (cable included) and select a variety of user configurable features including sample interval, units and backlight.

**Note:** Because of transmission frequency regulations, wireless models may only be used in the US, Canada and Europe.

## SPECIFICATIONS

**CE Compliant:** Meets EN61326-1: 2006 for industrial locations with analog output cables less than 30 m (98')

**Accuracy (Combined Linearity, Hysteresis and Repeatability):**  $\pm 0.08\%$  BSL (compound gauge calibrated in positive direction only)

### Temperature:

**Storage:** -40 to 82°C (-40 to 180°F)

**Operating:** -18 to 66°C (0 to 150°F)

**Thermal Effects (Over Operating Range):**

### Zero Balance:

**Ranges >5 psi:**  $\pm 0.3\%$  span

**Ranges  $\leq 5$  psi:**  $\pm 0.5\%$  span

### Span Setting:

**Ranges >5 psi:**  $\pm 0.3\%$  span

**Ranges  $\leq 5$  psi:**  $\pm 0.5\%$  span

**Minimum Resistance Between Transducer Body and Any Wire:** 100M $\Omega$  @ 50 Vdc

**Pressure Cycles:** 1 million minimum

**Long Term Stability (1-yr):**  $\pm 0.1\%$  FS typical

**Analog Output:** User selectable 0 to 5 Vdc, 0 to 10 Vdc or 4 to 20 mA (external 24 Vdc power supply required)

**Note:** Compound gauge ranges have a unidirectional analog output equal to their full span; i.e. -15 to +15 psi = 0 to 10 Vdc.

Set jumper to select current or voltage

Software selection of 0 to 5 Vdc,

0 to 10 Vdc, or 4 to 20 mA

### Analog Output

**Cable:** 2.7 m (8.9')

**Accuracy:** 0.08% typical

**Overpressure:** Gauge and sealed gauge

**10 inH<sub>2</sub>O:** 10 times span

**1 psi:** 6 times span

**2.5 to 1000 psi:**

4 times span

**1500 to 5000 psi:**

7250 psi max

### Absolute/Barometric Ranges

**5 psi:** 6 times span,

**15 to 1000 psia:** 4 times span

**1500 to 5000 psi range:** to 7250 psia

**Containment Pressure:** Gauge pressure

**10 inH<sub>2</sub>O to 5 psi:** To 1000 psi

**15 to 1000 psi:** To 3000 psi

**1500 to 5000 psi:** To 10,000 psi

**Absolute/Barometric Pressure:**

5 to 1000 psi: to 6000 psia

**Display:** 4-digit LCD with user selectable backlighting, (9999 count) 25 mm (1") character height

**Computer Interface:** USB connection for set-up, cable included

**Sample/Display Range:** User selectable from 0.38 to 30 sec. (preset to 1/sec)

**Power:** One 3.6V lithium 8.4 Ah capacity (C cell) Included (two with wireless option), (replacement battery part no. BATT-C-3.6V)

**Battery Life (Typical):** Up to 9 months

### Enclosure:

**Material:** 316 stainless steel and ABS center gasket

**Finish:** Brushed 316 stainless steel

**Environmental Rating:**

Weatherproof, NEMA 4X (IP65)

### Sensor Wetted Parts:

316L stainless steel

**Pressure Connection:** 1/4-18 NPT male

**Connection Location:** Lower

### Dimensions:

**Display:** 115 H x 89 W x 74 mm D (4.5 x 3.5 x 2.9")

**Sensor:** 72 to 89 mm L (2.8 x 3.5") below display

**Weight:** 900 g (2 lb) Typical depending upon configuration

### Front Panel Functions

**Backlight:** Manually turns backlight on/off

**Min/Max:** Recalls min/max values

**Zero/Clear:** Zeros display or clears min/max

### Software Settings (via USB)

**Update Rate:** 4 options, 10, 5, 2, 1 times per second

**Units:** psi, inHg, inH<sub>2</sub>O, bar, mbar, hPa units; must be specified at time of order

**Lock:** Allows the lock-out of front panel functions

**Alarms:** User selectable "High" and "Low" alarm limits (open collector)

**Backlight:** On/off, 10 sec, 30 sec, 1 min, 5 min

**Wireless Transmitter (Optional):** Channel number, transmission rate, alarms, sensor offset, chart recording, data logging

**Calibrate:** Zero and Span

**Overrange Indication:** " \_ \_ \_ \_ "

### Wireless Option Specifications

**Transmit Sample Rate:** User programmable from 1 sample/2 min to 1 sample/2 sec

**Radio Frequency (RF) Transceiver**

**Carrier:** ISM 2.4 GHz

**RF Output:** 10 dBm (10 mW)

**Range of RF Link:**

**Outdoors (Line of Sight):**

Up to 120 m (400')

**Indoors/Urban:** Up to 40 m (130')

**Included Software:** Requires Windows® 7 (32 bit); XP or Vista

**Data Transmission to Host:** Pressure reading, ambient temperature reading, RF transmit strength and battery level



Wireless model shown,  
DPG409-500G-W.

New security feature uses  
magnetic stylus (included) for  
keypad activation. No accidental  
button presses. Perfect for dirty  
hands or if wearing gloves.

**For calibration and to setup your DPG409 device please go to**

**<ftp://ftp.omega.com/public/DASGroup/products/dpg409/>**

The DPG configuration wizard provides a convenient USB interface with your device. Please refer to the manual for details on setting up your device.



**UWTC-REC2-D,  
48-channel wireless receiver  
with analog output and display.**

**Wireless Receivers (For Use with  
Wireless Transmitter Option)**

MODEL NO.	DESCRIPTION
UWTC-REC1	48-channel wireless receiver, USB powered
UWTC-REC2-(*)	48-channel wireless receiver with analog output
UWTC-REC2-D-(*)	48-channel wireless receiver with analog output and digital display

\* Specify analog output signal: "V1" for 0 to 5 Vdc; "V2" for 0 to 10 Vdc, "TC" for Type K thermocouple, or "MA" for 4 to 20 mA.

Comes complete with operator's manual, set-up and configuration software, (charting and databasing software with common drivers), USB cable, 2.7 m (8.9') analog output cable, one 3.6V lithium C cell battery (two with wireless option), and 5-point NIST traceable calibration.

To order wireless option add suffix "-W" to model number, for additional cost.

To order sealed gauge models change suffix "G" to "SG", available on gauge ranges  $\geq 100$  psi, no extra charge.

**Ordering Examples:** DPG409-100G-W, digital pressure gauge with 100 psig range and wireless transmitter option, and UWTC-REC1, wireless USB receiver.

DPG409-015V, digital pressure gauge with 15 psi vacuum range.

DPG409-100SG, digital pressure gauge with 100 psi sealed gauge range.

**To Order**

RANGE (RESOLUTION)		PSI RANGES MODEL NO.
psi	Bar	
<b>GAUGE PRESSURE</b>		
0 to 10.00 inH <sub>2</sub> O	0 to 25 mbar	DPG409-10WG
0 to 1.000	0 to 70 mbar	DPG409-001G
0 to 2.500	0 to 175 mbar	DPG409-2.5G
0 to 5.000	0 to 350 mbar	DPG409-005G
0 to 15.00	0 to 1	DPG409-015G
0 to 30.00	0 to 2	DPG409-030G
0 to 50.00	0 to 3.5	DPG409-050G
0 to 100.0	0 to 7	DPG409-100G
0 to 150.0	0 to 10	DPG409-150G
0 to 250.0	0 to 17	DPG409-250G
0 to 500.0	0 to 35	DPG409-500G
0 to 750.0	0 to 52	DPG409-750G
0 to 1000	0 to 70	DPG409-1KG
0 to 1500	0 to 100	DPG409-1.5KG
0 to 2500	0 to 170	DPG409-2.5KG
0 to 3500	0 to 240	DPG409-3.5KG
0 to 5000	0 to 345	DPG409-5.0KG
<b>ABSOLUTE PRESSURE</b>		
0 to 5.000	0 to 350 mbar	DPG409-005A
0 to 15.00	0 to 1	DPG409-015A
0 to 30.00	0 to 2	DPG409-030A
0 to 50.00	0 to 3.5	DPG409-050A
0 to 100.0	0 to 7	DPG409-100A
0 to 150.0	0 to 10	DPG409-150A
0 to 250.0	0 to 17	DPG409-250A
0 to 500.0	0 to 35	DPG409-500A
0 to 750.0	0 to 52	DPG409-750A
0 to 1000	0 to 70	DPG409-1KA
<b>VACUUM (NEGATIVE GAUGE, (ZERO OUTPUT = AMBIENT))</b>		
0 to 10.00 inH <sub>2</sub> O	0 to 25 mbar	DPG409-10WV
0 to 1.000	0 to 70 mbar	DPG409-001V
0 to 2.500	0 to 175 mbar	DPG409-2.5V
0 to 5.000	0 to 350 mbar	DPG409-005V
0 to 15.00	0 to 1 bar	DPG409-015V
<b>BAROMETRIC PRESSURE (ABSOLUTE PRESSURE)</b>		
0 to 32.00 inHg	-	DPG409-32B
16.00 to 32.00 inHg	-	DPG409-16B
26.00 to 32.00 inHg	-	DPG409-26B
-	0 to 1100 hPa	DPG409-32HB
-	550 to 1100 hPa	DPG409-16HB
-	880 to 1100 hPa	DPG409-26HB
<b>COMPOUND GAUGE PRESSURE</b>		
$\pm 10.00$ inH <sub>2</sub> O	$\pm 25.00$ mbar	DPG409-10WCG
$\pm 1.000$	$\pm 69.00$ mbar	DPG409-001CG
$\pm 2.500$	$\pm 172.0$ mbar	DPG409-2.5CG
$\pm 5.000$	$\pm 345.0$ mbar	DPG409-005CG
$\pm 15.00$	$\pm 1$ bar	DPG409-015CG

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