

# DIGITAL DIFFERENTIAL PRESSURE GAUGE VERY HIGH ACCURACY

## 316L SS WETTED PARTS AND BODY

**Uni-Directional Ranges**  
**0-10 inH<sub>2</sub>O to 0-1000 psi**  
**(0-25 mb to 0-70 bar)**

### DPG409 Differential Pressure Series



- ✓ Wet/Wet Differential Pressure Measurement
- ✓ 5-Point 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
- ✓ Wireless Transmitter Option Sends Reading to Remote Location and Includes Charting and Data Logging Software
- ✓ CE Certified
- ✓ Battery Powered with Long Battery Life
- ✓ NEMA 4X (IP65) Enclosure

OMEGA's DPG409 digital differential pressure gauge incorporates a rugged 316 SS enclosure designed for washdown and marine applications with a precision 0.08% accuracy pressure transducer and 316L SS wetted parts and body. The result is an extremely durable digital pressure gauge. You get all the durability and stability of the micromachined silicon sensor in a rugged NEMA 4X (IP65) package.

Magnetic stylus included.

### SPECIFICATIONS

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

**Accuracy (Combined Linearity, Hysteresis and Repeatability):**  
 ±0.08% BSL

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

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

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

Ranges 10 inH<sub>2</sub>O to 1 psi: ±1% span  
 Ranges >1 psi: ±0.5% span

**Span Setting:**  
 Ranges 10 inH<sub>2</sub>O to 1 psi: ±1% span  
 Ranges >1 psi: ±0.5% span

**Minimum Resistance Between Transducer Body and Any Wire:**  
 100M Ω @ 50 Vdc

**Pressure Cycles:** 1 million min  
**Long Term Stability (1-Yr.):** ±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:** Analog output is independently scalable

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 (9')

**Analog Output Accuracy:**  
 0.08% typical

**Line/Static Pressure:** 500 psi maximum applied to both sides simultaneously

**Proof Pressure (Differential):**  
 10 inH<sub>2</sub>O = 10 times range  
 1 psi = 6 times range  
 2.5 to 750 psi = 4 times range  
 1000 psi Range = 3 times range

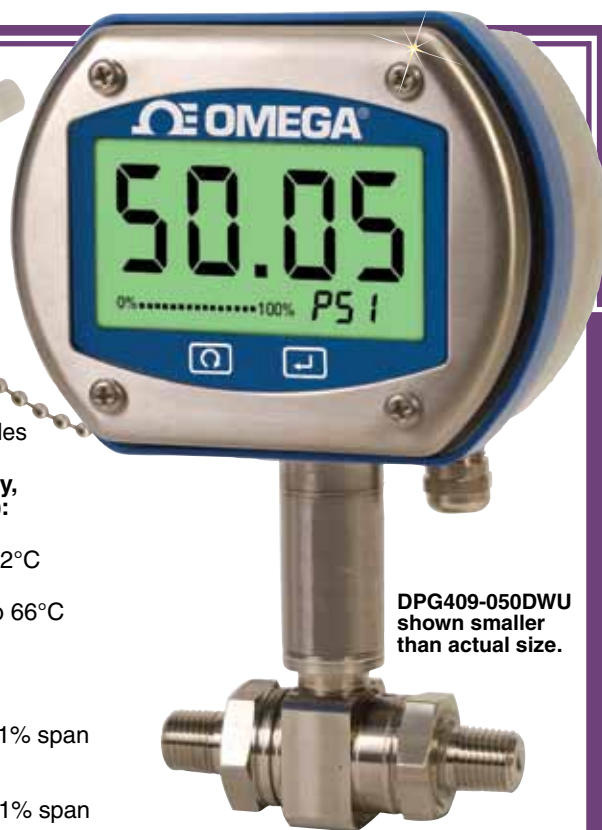
**Hi-Side Containment Pressure (Differential):**

10 inH<sub>2</sub>O to 5 psi: To 1000 psi  
 15 to 1000 psi: To 3000 psi

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

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

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



DPG409-050DWU shown smaller than actual size.

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

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

**Enclosure Material:** 316 Stainless Steel and ABS center gasket

**Enclosure Finish:** Brushed 316 stainless steel

**Enclosure Environmental Rating:** Weatherproof, NEMA 4X (IP65)

**Sensor Wetted Parts:** 316L stainless steel

**Pressure Connection:** ¼-18 NPT male

**Dimensions:**

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

**Sensor:** 72 to 89 mm L (2.8 to 3.5") below display, 80 mm (3.1") wide

**Weight:** 1 kg (2.2 lb) Typical depending upon configuration

**Front Panel Functions**

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

**Min/Max:** Recalls minimum/maximum values

**Zero/Clear:** Zeros display or clears minimum/maximum

**Software Settings (via USB)**

(USB connection is for set-up only)

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

**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.

**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**

**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:** Up to 120 m (400') outdoors (line of sight); Up to 40 m (130') indoors/urban

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

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

**To Order**

RANGE/ RESOLUTION psi	BAR	MODEL NO. ¼ NPT MALE THREAD
<b>WET/WET UNI-DIRECTIONAL DIFFERENTIAL PRESSURE MODELS</b>		
0 to 10.00 inH <sub>2</sub> O	0 to 25 mbar	<b>DPG409-10WDWU</b>
0 to 1.000 psi	0 to 70 mbar	<b>DPG409-001DWU</b>
0 to 2.500	0 to 170 mbar	<b>DPG409-2.5DWU</b>
0 to 5.000	0 to 350 mbar	<b>DPG409-005DWU</b>
0 to 15.00	0 to 1	<b>DPG409-015DWU</b>
0 to 30.00	0 to 2	<b>DPG409-030DWU</b>
0 to 50.00	0 to 3.5	<b>DPG409-050DWU</b>
0 to 100.0	0 to 7	<b>DPG409-100DWU</b>
0 to 150.0	0 to 10	<b>DPG409-150DWU</b>
0 to 250.0	0 to 17.5	<b>DPG409-250DWU</b>
0 to 500.0	0 to 35	<b>DPG409-500DWU</b>
0 to 750.0	0 to 50	<b>DPG409-750DWU</b>
0 to 1000	0 to 70	<b>DPG409-1KDWU</b>
<b>WET/WET UNI-DIRECTIONAL DIFFERENTIAL PRESSURE MODELS WITH WIRELESS TRANSMITTER</b>		
0 to 10.00 inH <sub>2</sub> O	0 to 25 mbar	<b>DPG409-10WDWU-W</b>
0 to 1.000 psi	0 to 70 mbar	<b>DPG409-001DWU-W</b>
0 to 2.500	0 to 170 mbar	<b>DPG409-2.5DWU-W</b>
0 to 5.000	0 to 350 mbar	<b>DPG409-005DWU-W</b>
0 to 15.00	0 to 1	<b>DPG409-015DWU-W</b>
0 to 30.00	0 to 2	<b>DPG409-030DWU-W</b>
0 to 50.00	0 to 3.5	<b>DPG409-050DWU-W</b>
0 to 100.0	0 to 7	<b>DPG409-100DWU-W</b>
0 to 150.0	0 to 10	<b>DPG409-150DWU-W</b>
0 to 250.0	0 to 17.5	<b>DPG409-250DWU-W</b>
0 to 500.0	0 to 35	<b>DPG409-500DWU-W</b>
0 to 750.0	0 to 50	<b>DPG409-750DWU-W</b>
0 to 1000	0 to 70	<b>DPG409-1KDWU-W</b>

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

MODEL NO.	DESCRIPTION
<b>UWTC-REC1</b>	48-channel wireless receiver, USB powered
<b>UWTC-REC2-(*)</b>	48-channel wireless receiver with analog output
<b>UWTC-REC2-D-(*)</b>	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, one 3.6V lithium C cell battery (two with wireless option), set-up and configuration software (charting and databasing software with common drivers) USB cable, 2.7 m (9’) analog output cable and 5-point NIST traceable calibration certificate.

To order wireless option add suffix “-W” to model number for additional cost.

**Ordering Examples:** DPG409-015DWU, 0 to 15 psi uni-directional differential pressure gauge with analog output.

DPG409-100DWU-W, 0 to 100 psi uni-directional differential pressure gauge with analog output and wireless transmitter.

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