DIGITAL PRESSURE GAUGE FOR
SANITARY/CLEAN-IN-PLACE APPLICATIONS
HIGH 0.08% ACCURACY

Gauge, Absolute, Sealed Gauge
Compound Gauge, Vacuum and
Barometric Models
0-25 mb to 0-41 bar

OMEGA’s DPGM409S Sanitary/
CIP digital pressure gauges with
metric ranges 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 (36’).
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 connect to a pc via a
standard USB connection (cable
included) and select a variety of
user configurable features including
update rate, dampening, units,
backlight and auto off. The analog
output can also be independently
scaled from the display.

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.

### SPECIFICATIONS

**RoHS Compliant:**
CE Compliant: Meets industrial emissions and immunity standard IEC61326 for industrial locations

**Accuracy:** ±0.08% Best Straight Line Typ. (Linearity, Hysteresis and Repeatability combined)

**Calibration:** 5-Pt NIST traceable calibration with zero and span values, calibrated in horizontal direction (compound gauge models calibrated in positive direction only). calibrated in horizontal direction

**Zero Balance:** ±0.5% FS typical ±1% maximum (for ranges ≤170 mb ±1% Typical ±2% maximum)

**Span Setting:** ±0.5% FS typical ±1% maximum (for ranges ≤170 mb ±1% Typical ±2% maximum)

**Storage/Operating Temperature Range:** -15 to 115°C (-5 to 240°F)

**Compensated Temperature Range:**
- Ranges ≤350 mb: 4.4 to 60°C (40 to 140°F)
- Ranges > 350 mb: -4 to 85°C (25 to 150°F)

**Zero and Span shift over Ranges:**
- Zero: 1.00% Span: 0.70%
- Range = 350 mb: Zero: 0.80% Span: 0.50%
- Ranges > 350 mb: Zero: 0.50% Span: 0.50%
- 550 & 880HB Barometric Range: Zero: 0.90% Span: 0.50%

**Minimum Isolation Between Case and Electrical Termination:** 100MΩ @ 50 Vdc

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

**Note:** Compound gauge ranges have a unidirectional analog output equal to their full span; i.e. -1 to +1 bar = 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') with ferrite core included

**Analog Output Accuracy:** 0.08% typical (0.15% max in RF field @ 10V/m)

**Pressure Cycles:** 250,000, minimum

**Long Term Stability (1-Year):** ±0.1% FS Typical

**Fill Fluid:** NEOBEE M5 Food Grade

**Approved to 3A Sanitary Specification:**

**Environmental Protection:** NEMA 4X (IP65) depending upon electrical termination

**Pressure Rating:** 1½" and 2" Tri-Grip™ fitting (compatible the Tri-Clamp®): 40 bar using suitable clamp

**Over Pressure:** 4 x rated pressure to maximum rated flange pressure

**Secondary Containment:** 4 x rated pressure to a maximum of 138 bar (not in clamp)

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

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

**Sample/Display Range:** User selectable from 0.35 to 30 seconds (preset to 1/second)

**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 4-years

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

**Enclosure Finish:** Electropolished

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

**Connection Location:** Weatherproof, NEMA 4X (IP65)

**Over Pressure:** 4 x rated pressure to 72 mm L (2.8 to 3.5") below display

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

### Wireless Option Specifications

**Transmit Sample Rate:** User programmable from 1 sample/2 minute to 1 sample/2 seconds

**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, Vista

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

**Dimensions:**
- Display: 115 D x 89 W x 74 mm H
- Power: 4.5 x 3.5 x 2.9”
- Sensor: 72 to 89 mm L (2.8 to 3.5”)

**Battery Life (Typical):** 40 bar using suitable clamp

**Range of RF Link:**
- Indoors/Urban: Up to 120 m (400’)
- Outdoors (Line of Sight): Up to 120 m (400’)

**Interface:** USB connection

**Computer Interface:** 25 mm (1”) character height

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

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- Indoors/Urban: Up to 120 m (400’)
- Outdoors (Line of Sight): Up to 120 m (400’)

**Interface:** USB connection

**Computer Interface:** 25 mm (1”) character height

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

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

**Sample/Display Range:** User selectable from 0.35 to 30 seconds (preset to 1/second)

**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 4-years

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

**Enclosure Finish:** Electropolished

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

**Connection Location:** Lower (head rotates to position display)

**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, inH2O, bar, mbar

**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:** " _ _ _ _ "

**DPM409S15-17.5BG, shown smaller than actual size.**
Comes complete with operator’s manual, set-up and configuration software, magnetic stylus, USB cable, 2.7 m (9') analog output cable with ferrite core, one 3.6V lithium C cell battery (two with wireless option) and 5-pt NIST traceable calibration. Wireless option also includes charting and databasing software.

**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, no extra charge. For wireless option add "-W" suffix for additional cost (includes data logging and graphing software).

**Ordering Examples:**
- DPGM409S15-007BG, digital pressure gauge with 1.5" sanitary fitting, 7 bar gauge range.
- DPGM409S20-070HCG, digital pressure gauge with 2" sanitary fitting, ± 70 mb compound gauge range.
- DPG409S15-001BV-W, digital pressure gauge with wireless transmitter option, 1.5" sanitary fitting, 0 to -1 bar vacuum range.