

SANITARY/CLEAN-IN-PLACE DIGITAL PRESSURE GAUGE VERY HIGH ACCURACY

Ω OMEGA™

*Gauge, Absolute, Compound Gauge,
Vacuum and Barometric Models
0-10 inH₂O to 0-600 psi
(0-25 mb to 0-41 bar)*

Magnetic
stylus
(included).

DPG409S Series



Standard

- ✓ Easy to Read 25 mm (1") Backlit LCD Display
- ✓ High 0.08% Accuracy Typical
- ✓ 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
- ✓ Data Logging and Charting Software Included
- ✓ Wireless Transmitter Option Sends Reading to a Remote Location
- ✓ Tested to Industrial CE Standards
- ✓ Battery Powered with Long Battery Life
- ✓ Analog Output Standard
- ✓ Wireless Transmitter Optional

Omega's DPG409S Sanitary/CIP digital pressure gauges incorporate 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, 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.



NEMA 4X case.

DPG409S15-500G,
shown smaller than
actual size.

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

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

Accuracy: $\pm 0.08\%$ 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 Gage models calibrated in positive direction only)

Zero Balance: $\pm 0.5\%$ FS typical $\pm 1\%$ maximum (For ranges ≤ 2.5 psi $\pm 1\%$ Typical $\pm 2\%$ maximum)

Span Setting: $\pm 0.5\%$ FS typical $\pm 1\%$ maximum (For ranges ≤ 2.5 psi $\pm 1\%$ Typical $\pm 2\%$ maximum)

Storage/Operating Temperature Range:

Storage: -40 to 82°C (-40 to 180°F)

Operating: -18 to 66°C (0 to 150°F)

Compensated Temperature Range:

Ranges ≤ 5 psi: 4.4 to 60°C (40 to 140°F)

Ranges > 5 psi: -4 to 85°C (25 to 150°F)

Thermal Effect (Over Compensated Range):

Zero and Span shift over Compensated Range

Ranges ≤ 2.5 psi: Zero: 1.00%

Span: 0.70%

Range = 5 psi: Zero: 0.80%

Span: 0.50%

Ranges > 5 psi: Zero: 0.50%

Span: 0.50%

26B & 26HB Barometric Range:

Zero: 0.90% Span: 0.50%

Minimum Isolation Between Case and Output Terminations:

100M Ω @ 50 Vdc

Analog Output: User selectable 0 to 5 Vdc, 0 to 10 Vdc of 4 to 20 mA (external 24 Vdc power supply required for all analog output types)

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

Analog Output Cable: 2.7 m (8.9')

Analog Output Accuracy: 0.08% typical

Pressure Cycles: 250,000, minimum

Long Term Stability (1-Year): $\pm 0.1\%$ FS Typ.

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 with Tri-Clamp®): 600 psi using suitable clamp (600 psi on 1½" Tri-Clamp® only)

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

Secondary Containment: 6 x rated pressure to a maximum of 2000 psi (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 Rate: User selectable from 0.25 to 10 sec. (preset to 1/sec)

Power: One 3.6V lithium 8.4 Ah capacity (C cell) Included (Two included with Wireless Option)

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)

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, 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)

Analog Output: User Selectable 0 to 5 Vdc, 0 to 10 Vdc, or 4 to 20 mA (requires external 24 Vdc power)

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, Vista

Internal Battery: Two 3.6V lithium 8.4 Ah capacity (C-cell) included

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 (4.5 x 3.5 x 2.9")

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

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



DPG409S15-500G, shown smaller than actual size.



DPG409S15-500G, shown smaller than actual size.



Exploded view showing PX429S15-005GI. Standard Tri-Grip™ fitting works with commercially available sanitary pipes and fittings. Shown smaller than actual size.

To Order		
psi	bar	PSI RANGES MODEL NO.
GAUGE		
0 to 10 inH ₂ O	0 to 25 mbar	DPG409S[*]-10WG
0 to 1	0 to 70 mbar	DPG409S[*]-001G
0 to 2.5	0 to 175 mbar	DPG409S[*]-2.5G
0 to 5	0 to 350 mbar	DPG409S[*]-005G
0 to 15	0 to 1	DPG409S[*]-015G
0 to 30	0 to 2	DPG409S[*]-030G
0 to 50	0 to 3.5	DPG409S[*]-050G
0 to 100	0 to 7	DPG409S[*]-100G
0 to 150	0 to 10	DPG409S[*]-150G
0 to 250	0 to 17.5	DPG409S[*]-250G
0 to 500	0 to 35	DPG409S[*]-500G
0 to 600†	0 to 41	DPG409S[*]-600G
ABSOLUTE		
0 to 5	0 to 350 mbar	DPG409S[*]-005A
0 to 15	0 to 1	DPG409S[*]-015A
0 to 30	0 to 2	DPG409S[*]-030A
0 to 50	0 to 3.5	DPG409S[*]-050A
0 to 100	0 to 7	DPG409S[*]-100A
0 to 150	0 to 10	DPG409S[*]-150A
0 to 250	0 to 17.5	DPG409S[*]-250A
0 to 500	0 to 35	DPG409S[*]-500A
0 to 600†	0 to 41	DPG409S[*]-600A
VACUUM (NEGATIVE GAUGE)		
0 to -10 inH ₂ O	0 to -25 mbar	DPG409S[*]-10WV
0 to -1	0 to -70 mbar	DPG409S[*]-001V
0 to -2.5	0 to -175 mbar	DPG409S[*]-2.5V
0 to -5	0 to -350 mbar	DPG409S[*]-005V
0 to -15	0 to -1 bar	DPG409S[*]-015V
COMPOUND GAUGE		
± 10 inH ₂ O	± 25 mbar	DPG409S[*]-10WCG
± 1	± 70 mbar	DPG409S[*]-001CG
± 2.5	± 175 mbar	DPG409S[*]-2.5CG
± 5	± 350 mbar	DPG409S[*]-005CG
± 15	± 1000 mbar	DPG409S[*]-015CG
BAROMETRIC		
0 to 32 inHg		DPG409S[*]-32B
16 to 32 inHg		DPG409S[*]-16B
26 to 32 inHg		DPG409S[*]-26B
	0 to 1100 hPa	DPG409S[*]-32HB
	550 to 1100 hPa	DPG409S[*]-16HB
	880 to 1100 hPa	DPG409S[*]-26HB

[*] Insert "15" for 1.5" Tri-Grip™ or "20" for 2" Tri-Grip™ sanitary fitting, no extra charge.
† 1½ Tri-Grip™ only.

WIRELESS RECEIVERS (FOR WIRELESS OPTION "-W")	
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 display

Comes complete with operator's manual, set-up and configuration software, magnetic stylus, USB cable, 2.7 m (9') analog output cable, 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.

For wireless option add "-W" suffix.

Ordering Examples: DPG409S15-100G, digital pressure gauge with 1.5" sanitary fitting, 100 psi gauge range.

DPG409S20-001CG, digital pressure gauge with 2" sanitary fitting, ±1 psi compound gauge range.

DPG409S15-015V-W, digital pressure gauge with wireless transmitter option, 1.5" sanitary fitting, 0 to -15 psi vacuum range.