

DPG509



Advanced Digital Pressure Gauge

- **Configurable - 40,000+ Possibilities**
- **Large 1" digits for high visibility**
- **User friendly, 4-button interface**
- **Differential pressure available**
- **High accuracy (0.08%) options**
- **Data logging with SD card optional**



Overview

We've created a new, user-friendly interface with four clearly labeled buttons and a large 4-digit, backlit display. Full-scale accuracy as high as 0.08% is perfect for applications where accuracy is critical, and 0.25% accuracy is also available for those times when a reliable, easy-to-use gauge is most important. Configure a basic gauge with long-lasting battery power or choose an externally powered option to support a robust unit with voltage and/or current outputs.

Another powerful feature is the data logging option. Log your important data as fast as four readings per second so that you don't miss a thing. Data analysis is straightforward with an included SD card that is easily accessible for data retrieval.

All options are built with an engineered thermoplastic housing with an IP65 rating for durability in harsh environments. A protective rubber boot is also an option for additional protection.

Configurable Menu Features

Users have four different operation modes to select from. Normal mode displays the last pressure reading. Tare mode zeros the unit at an applied pressure. Minimum and maximum modes display the lowest and highest recorded pressure readings respectively. There are also additional settings that can be adjusted to best suit your process including the shut-off timer, sampling rate, range plotting, pressure units, and zero-point adjustment.

With the advanced menu, additional features include custom units, dampening mode, password protection, and backlight adjustment. If the 15 engineering unit options don't cover what you need, up to five custom pressure units can be programmed. Dampening mode filters the raw data into a smoother output.

Password protection allows only authorized users to change DPG settings to help avoid accidental button presses and setting changes. Backlight adjustment provides five options to adjust how long the backlight remains on, from 10 seconds to always on to balance both visibility and battery life.

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Specifications

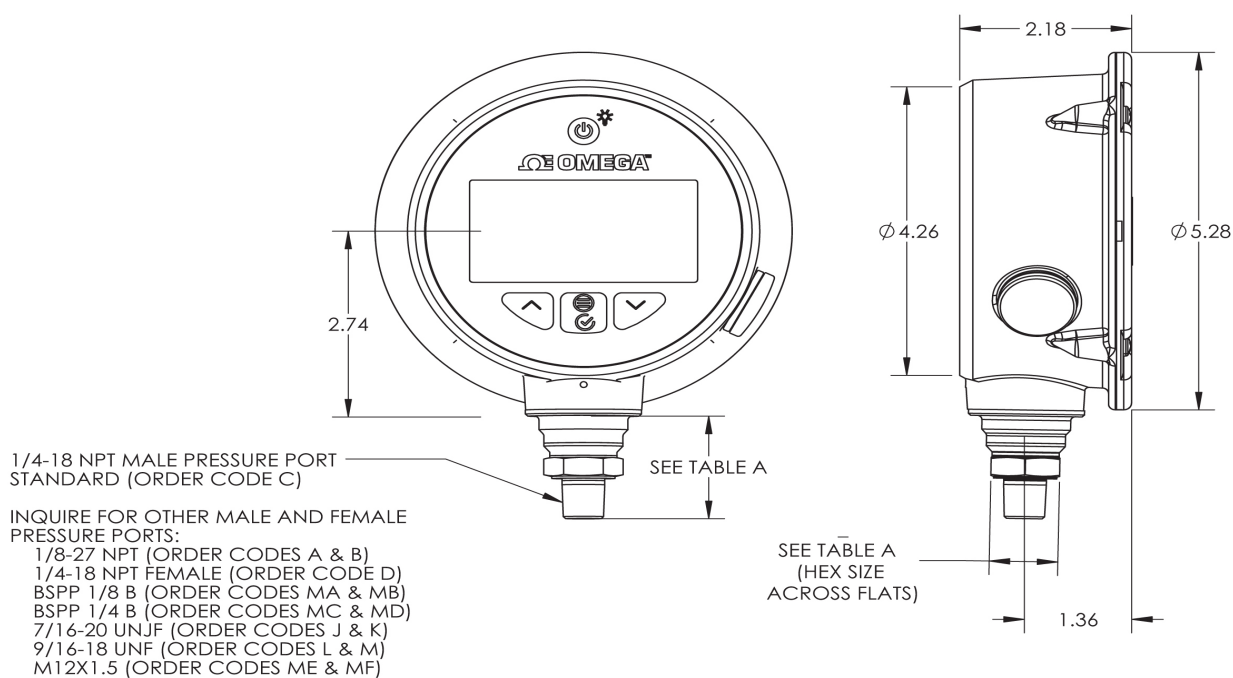
	Configuration Option	
Accuracy (Combined Linearity, Hysteresis and Repeatability)	25	±0.25% Full Scale Span
	08	±0.08% Full Scale Span
Power Supply	B	4 Alkaline AA Batteries are included with all configurations
	D	DC Power through M12 connection and 4 Alkaline AA Batteries 6' M12 connector cable included with all configurations that have DC power option
Output	N	None
	I	4 to 20 mA
	V	0 to 5 Vdc and 0 to 10 Vdc
	IV	4 to 20 mA, 0 to 5 Vdc, and 0 to 10 Vdc
Pressure Type	A	Absolute
	D	Differential
	G	Gauge
Engineering Units	B	psi, bar, mbar, inH2O, ftH2O, mmH2O, inHG, mmHG, cmHG, Pa, hPa, kPa, MPa, ATM, TORR
	A	Includes units listed above and programmable custom units
Protective Rubber Boot	B	Adds another layer of durability to the pressure gauge
Calibration	C	5-point NIST traceable calibration is a configurable option (it does not come standard)
Data Logging	D	8 Gb Micro SD card micro SD is included with configurations that have data logging option Can accept up to 32 Gb Micro SD
Pressure Connection Options	14 options available in configurator	1/4-18 NPT, 1/8-27 NPT, BSPP 1/8 B, BSPP 1/4 B, 7/16-20 UNF (MS33656-04), 9/16-18 UNF, M12x1.5 All connections available as male or female types.
Long Term Stability	Standard for all units	±0.3% Span/Year
Battery Life (Typical)		1,000 hours (no backlight usage)
Display		4-digit LCD with backlight and 25 mm (1") character height
User Interface		4 membrane key switches
Minimum Resistance Between Transducer Body and any Wire		100 MOhms @100 VDC
Operating Temperature		-17°C to 54°C (0°F to 130°F)
Storage Temperature (without batteries)		-40°C to 82°C (-40°F to 180°F)
Pressure Cycles		1 million
Over Pressure		1.5 x rated pressure
Materials		Enclosure: Engineered Thermoplastic Sensor Wetted Parts: 316L Stainless Steel, Viton Seal
Enclosure rotation after securing fluid connection		±150°
Weight		1.25 lbs
Environmental Rating		IP65
CE		EN61326-1: 2012
RoHS		2015/863
Vibration		ASME B40.7

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Keypad Table

	Power / Backlight	Turns the unit on and off / Turn backlight on
	Max / Scroll Up	Displays the maximum reading / Scroll up in menu navigation
	Menu / Enter	Enter / Access the menu / Exit the menu
	Min / Scroll Down	Displays the minimum reading / Scroll down in menu navigation

DPG509 Dimensions & Pressure Ports



STANDARD (SINGLE-POINT) PRESSURE
0.3 TO 1000 PSI (LOW AND MID RANGE)
0.08% ACCURACY

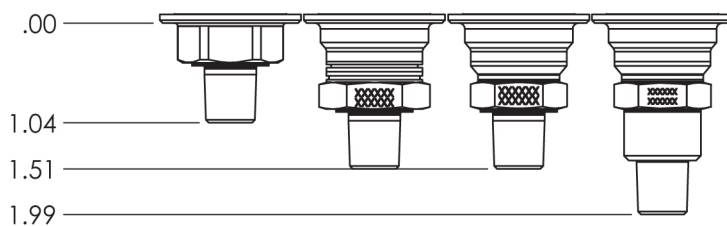
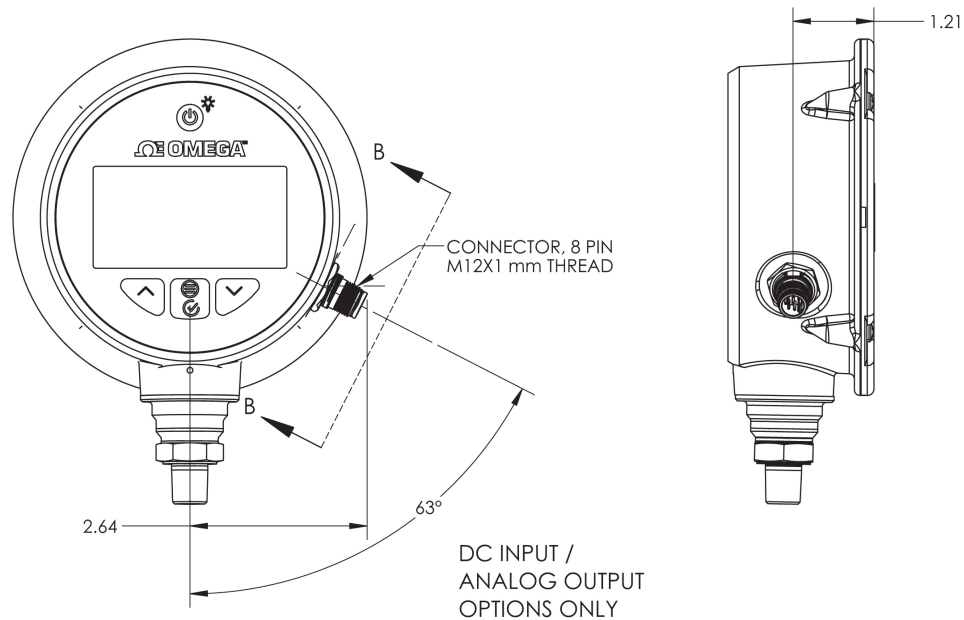


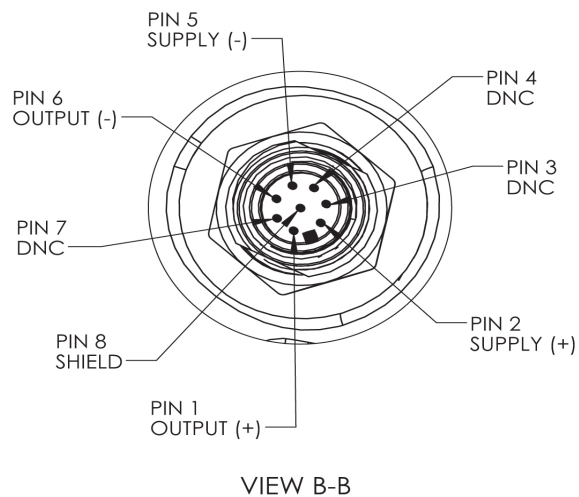
	TABLE A			
PRESSURE RANGES (PSI)	0 TO 500	0 TO 15	30 TO 1000	1500 TO 5000
ACCURACY	±.25 %	±.08 %		
HEX SIZE ACROSS FLATS	1.0		.87	

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DPG509 Dimensions for Units with DC Power

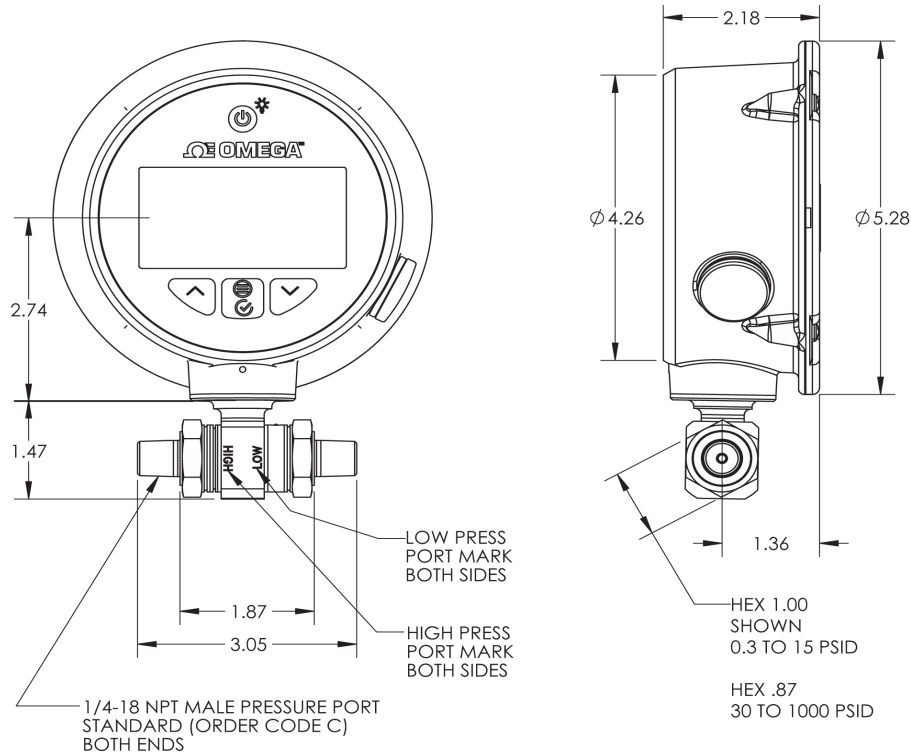


M12 Pin-Out for DC Power and Analog Output

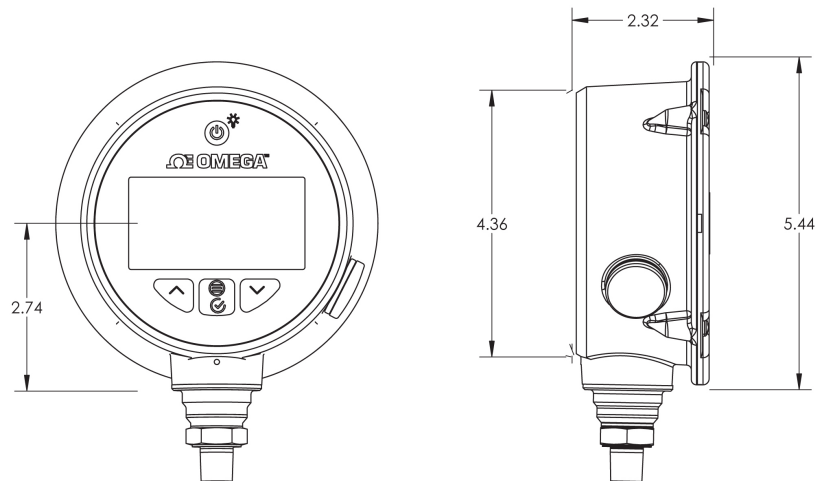


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DPG509 Differential Unit Dimensions



DPG509 Protective Boot Dimensions



PROTECTIVE BOOT OPTION -
ENCLOSURE DIMENSIONS

Part number value	Description	Example:	DPG509	-	P	100	G	25	V	B	C	B	-	B
Pressure Unit	P PSI													
Pressure Range	10IW 10 Inches of Water													
	001 1 PSI													
	2.5 2.5 PSI													
	005 5 PSI													
	015 15 PSI													
	030 30 PSI													
	050 50 PSI													
	100 100 PSI					100								
	150 150 PSI													
	200 200 PSI													
	250 250 PSI													
	300 300 PSI													
	500 500 PSI													
	750 750 PSI													
	1K 1000 PSI													
	1.5K 1500 PSI													
	2.5K 2500 PSI													
	3.5K 3500 PSI													
	5K 5000 PSI													
Pressure Type	A Absolute *(unavailable in 10IW, 001, 2.5, 005, and 015 pressure ranges)													
	G Gauge						G							
	D Differential *(unavailable in $\pm 0.25\%$ B.S.L. accuracy and pressure ranges greater than 1K psi)													
Accuracy	25 $\pm 0.25\%$ B.S.L.							25						
	08 $\pm 0.08\%$ B.S.L.													
Electrical Output	N None													
	I 4 to 20 mA *(requires DC power source)													
	V 0 to 5 Vdc, and 0 to 10 Vdc *(requires DC power source)							V						
	IV 0 to 5 Vdc, 0 to 10 Vdc, and 4 to 20 mA *(requires DC power source)													
Power Source	B Battery									B				
	D Battery and DC Power through M12													
Process Fitting	A 1/8-27 NPT Male													
	B 1/8-27 NPT Female													
	C 1/4-18 NPT Male										C			
	D 1/4-18 NPT Female													
	J 7/16-20 UNF Male													
	K 7/16-20 UNF Female													
	L 9/16-18 UNF Male													
	M 9/16-18 UNF Female													
	MA G 1/8 Male													
	MB G 1/8 Female													
	MC G 1/4 Male													
	MD G 1/4 Female													
	ME M12 X 1.5 Male													
	MF M12 X 1.5 Female													
Menu Complexity	B Basic Menu Options Only											B		
	A Advanced + Basic Menu Options													
Additional Options**	B Protective Rubber Boot												B	
	D Data Logging													
	C Calibration Service													

** Multiple options can be selected and added to end to part number in alphabetical order (i.e. "-BD" to include both boot and data logging)