

Model DPG80 Digital Pressure Gauges



Gauge pressure



Differential pressure

- Pressure ranges to 40,000 psi (2,800 bar)
- 0.02%, 0.05%, 0.1%, 0.2% FS or 0.1%RD accuracy
- % pressure indication with fan-shaped graph scale for visual reference
- Fully temperature compensated accuracy
- Panel mount gauges are available
- Intrinsically safe version (80S)
- Data logging option
- IP67 rated (80S)

PRODUCT OVERVIEW

With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the 80 series digital pressure gauges provide an accurate, reliable, and economic solution for a wide range of pressure applications. They are loaded with functionality and remarkably easy to use. To reach the best performance, every silicon pressure sensor in our gauges is specially aged, tested and screened before assembly. At Additel, fully temperature compensated accuracy means every sensor is pressure tested at several environmental temperatures from -10°C to 50°C. With this test data individual coefficients are generated and stored in the gauge characterizing its performance over the full temperature compensated range. And now the DPG80S comes with an IP67 rating meaning it is dust resistant and water proof, submersible in 1 meter of water.

Designed to fit your need

Volltel pressure gauges give you the widest variety of sensor choices on the market. Whether you require low inches of water measurement or very high pressure measurement, we have a gauge that will meet your need. We offer sensors which are ± 1 inH₂O (± 2.5 mbar) to 40K psi (2,800 bar) and everything in between.

Do your applications require you to measure both positive and vacuum pressure? Our compound gauges do not compromise accuracy and provides you with the same high accuracy specification on both positive and vacuum pressures. We offer a wide variety up to 300 psi (20 bar). If you need a higher range, just contact us and we can likely customize one to meet your need. We also offer absolute pressure sensors to 5K psi (350 bar) and a full range of differential pressure sensors from ± 1 inH₂O (± 2.5 mbar) to ± 300 inH₂O (± 700 mbar). Are you looking for a pressure gauge to use in hazardous areas? Our ATEX-certified intrinsically safe models (80S) are designed for pressure measurement in hazardous areas.

If you need to panel mount our sensors, we offer the option (see ordering information) for a back-mounted pressure port and gauge housing designed to fit in a panel. And most recently, we've added the option to do stand-alone data logging with the 80. Now you can record more than 21,000 records internal to the 80 series. Each record includes date, time, pressure and temperature readings. Download the logged data with our free Additel/Land software or you can purchase our Additel/Log II for real-time logging and data analysis. The 80 series digital pressure gauges are unmatched in performance and reliability. Best of all, they are very affordable.

FEATURES

- Pressure ranges to 40,000 psi (2,800 bar)
- 0.02% full scale accuracy (80-02)
- 0.05% full scale accuracy (80-05)
- 0.1% full scale accuracy (80-10)
- 0.2% full scale accuracy (80-20)
- 0.1% reading scale accuracy (80-RD)
- Ip67 rated: Submersible in 1 meter of water(80S)
- Fully temperature compensated accuracy from 14°F to 122°F (-10°C to 50°C)
- Up to eleven selectable pressure units
- Large, easy to read display with 5-digit resolution
- Backlit display
- % pressure indication with fan-shaped graph scale for visual reference
- Display flash warning when pressure over 120% of FS
- Bottom mount or panel mount
- ATEX certified intrinsically safe (Model 80S)
- NIST traceable calibration with data(included)
- 9V battery power or AC adapter (optional)
- Data logging to 21,843 records (includes date, time, pressure and temperature)

SPECIFICATIONS

Model

DPG80: Regular gauge
DPG80S: ATEX certified intrinsically safe

Accuracy

80(S)-02 : 0.02% of full scale
80(S)-05 : 0.05% of full scale
80(S)-10 : 0.1% of full scale
80(S)-20 : 0.2% of full scale
80(S)-RD: 0% to 20% of Range: 0.02% of full scale
20% to 110% of Range: 0.1% of reading
Vacuum: 0.25% of full scale ^{[1][2]}

[1] FS = -14.5 psi

[2] Applicable DPG80-RD-CPX

(For detailed accuracy, please see pressure range table)

Gauge Types

Gauge pressure
Compound pressure
Absolute pressure
Differential pressure

Fan-shaped Graph Scale

Similar to analog dials, including pressure swing, % indication with fan-shaped graph scale for visual reference, low/high alarm.

Display

Description: 5 full digit FSTN LCD
Display rate: 3 readings per second (Default setting).
Adjustable from 10 readings per second to 1 reading every ten seconds
Numeral display height: 16.5mm (0.65")

Pressure Units

Pa, kPa, MPa, psi, bar, mbar, kgf/cm², inH₂O@4°C
mmH₂O@4°C, inHg@0°C, mmHg@0°C

Environmental

Compensated Temperature: 14°F to 122°F (-10°C to 50°C)
Operating Temperature: 14°F to 122°F (-10°C to 50°C)
Storage Temperature: -4°F to 158°F (-20°C to 70°C)
Humidity: <95%

Pressure Port

1/4NPT male, 1/2NPT male, 1/4BSP male, 1/2BSP male, M20×1.5 male (≤15,000 psi)
1/4HP female or 1/4HP male (>15,000 PSI)

*1/4HP female: Autoclave F-250-C, 9/16" - 18 UNF-2B

*1/4HP male: Autoclave M-250-C, 9/16" - 18 UNF-2A

0.236 inch (Ø6 mm) test hose (for differential pressure)
Other connections available per request

Power

Battery: One 9V alkaline battery (included)
Battery life: 300 hours (10 readings/s), 600 hours (3 reading/s), or 6000 hours (1 reading/10s)
Power auto-off: 60 minutes power auto-off. Auto-off may be disable
External power: 110/220V external power adapter (optional)

Enclosure

Case material: Aluminum alloy
Wetted parts: 316L SS
Dimension: Ø110mm X 35mm depth X 176mm height (panel mount gauge: Ø140mm X 86mm depth)
Weight: 0.6kg

Compliance

Protection Level: IP67(available for 681IS GP15-40K)
Vibration: 5g (20-2000 Hz)
Shock Resistance: 100g/11ms

Data Logging

Data storage: 21,843 records (each record includes date, time, pressure and temperature)
Rate: user-selectable from 1 to 99,999 second intervals

Intrinsic Safety and European Compliance

CE marked
ATEX certified intrinsically safe (ADT681IS)
⚠ II 1G EX ia IIC T4 Ga

Communication: RS232

*(Do not use the RS-232 connector in a hazardous atmosphere)

Warranty: 1 year

Pressure Ranges

Gauge Pressure ^[1]						
P/N	Pressure Range		Media ^[2]	Accuracy		Burst Pressure
	(psi)	(bar)		%FS	%RD	
V15	-15	-1.0	G	0.02 (0.05, 0.1, 0.2)	N/A	3×
GP2	2	0.16	G	0.05 (0.1, 0.2)	N/A	3×
GP5	5	0.35	G	0.05 (0.1, 0.2)	0.1	3×
GP10	10	0.7	G	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP15	15	1.0	G, L ^[3]	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP30	30	2.0	G, L ^[3]	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP50	50	3.5	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP100	100	7.0	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP300	300	20	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP500	500	35	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP600	600	40	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP1K	1,000	70	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP2K	2,000	140	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP3K	3,000	200	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP5K	5,000	350	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP10K	10,000	700	G, L	0.02 (0.05, 0.1, 0.2)	0.1	3×
GP15K	15,000	1,000	G, L	0.05 (0.1,0.2)	0.1	2×
GP20K	20,000	1,400	G, L	0.05 (0.1,0.2)	N/A	1.5×
GP25K	25,000	1,600	G, L	0.1 (0.2)	N/A	1.5×
GP30K	30,000	2,000	G, L	0.1 (0.2)	N/A	1.5×
GP36K	36,000	2,500	G, L	0.1 (0.2)	N/A	1.5×
GP40K	40,000	2,800	G, L	0.1 (0.2)	N/A	1.1×

[1] Sealed gauge pressure for above 1,000 psi

[2] G=Gas, L=Liquid

[3] 0.02% FS for gas media only

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Absolute Pressure					
P/N	Pressure Range		Media [1]	Accuracy(%FS)	Burst Pressure
	(psi)	(bar)			
AP5	5	0.35	G	0.1 (0.2)	3×
AP10	10	0.7	G	0.1 (0.2)	3×
AP15	15	1.0	G	0.1 (0.2)	3×
AP30	30	2.0	G	0.1 (0.2)	3×
AP50	50	3.5	G	0.1 (0.2)	3×
AP100	100	7.0	G, L	0.05 (0.1, 0.2)	3×
AP300	300	20	G, L	0.05 (0.1, 0.2)	3×
AP500	500	35	G, L	0.05 (0.1, 0.2)	3×
AP1K	1,000	70	G, L	0.05 (0.1, 0.2)	3×
AP3K	3,000	200	G, L	0.05 (0.1, 0.2)	3×
AP5K	5,000	350	G, L	0.05 (0.1, 0.2)	3×

[1] G=Gas, L=Liquid

Differential Pressure						
P/N	Pressure Range		Media	Accuracy (%FS) ^[2]	Burst Pressure	Static Pressure Range
	(inH ₂ O)	(mbar)				
DP1	±1	±2.5	G	0.05 ^[2]	100×	±10 psi
DP2	±2	±5.0	G	0.05 ^[2]	100×	±10 psi
DP5	±5	±10	G	0.05 ^[2]	50×	±10 psi
DP10	±10	±25	G	0.05 ^[2]	20×	±10 psi
DP20	±20	±50	G	0.05	20×	±10 psi
DP30	±30	±75	G	0.05	20×	±10 psi
DP50	±50	±160	G	0.05	3×	±10 psi
DP150	±150	±350	G	0.02 (0.05)	3×	50 psi
DP300	±300	±700	G	0.02 (0.05)	3×	50 psi

[1] FS specification applies to the span of the range. Accuracy includes one year stability.

[2] 0.05%FS accuracy (incl 6 months stability). One year accuracy is 0.05%FS calibration accuracy combined with 0.05%FS one year stability.

Compound Pressure						
P/N	Pressure Range		Media [2]	Accuracy		Burst Pressure
	(psi)	(bar)		%FS ^[3]	%RD	
CP2	±2	±0.16	G	0.05 (0.1,0.2)	N/A	3×
CP5	±5	±0.35	G	0.02 (0.05,0.1,0.2)	0.1	3×
CP10	±10	±0.7	G	0.02 (0.05,0.1,0.2)	0.1	3×
CP15	±15	±1	G	0.02 (0.05,0.1,0.2)	0.1	3×
CP30	-15 to 30	-1 to 2	G	0.02 (0.05,0.1,0.2)	0.1	3×
CP100	-15 to 100	-1 to 7	G, L	0.02 (0.05,0.1,0.2)	0.1	3×
CP300	-15 to 300	-1 to 20	G, L	0.02 (0.05,0.1,0.2)	0.1	3×

[1] Sealed gauge pressure for above 1,000 psi.

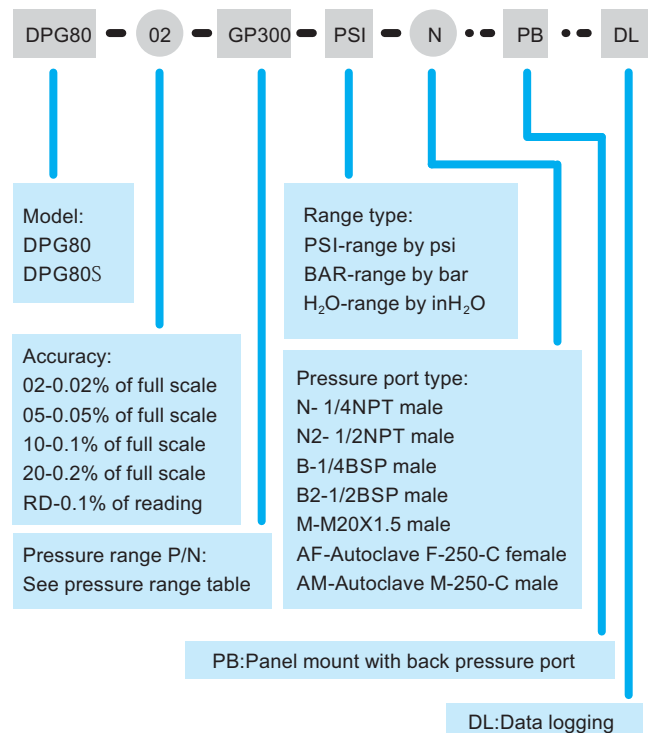
[2] G=Gas, L=Liquid

[3] FS specification applies to the span of the range.

ORDERING INFORMATION



Model Number



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