

DG25 General Purpose Digital Gauge

FEATURES

- 9 engineering units, with 1 field-programmable
- Min./Max. function feature records low and high pressure events
- Bar graph display
- Customized keypad (optional)
- All SS laser welded wetted parts



SPECIFICATIONS

Accuracy:	±0.5% of span standard, ±0.25% of span optional
Process Connection Location:	Lower
Enclosure Rating:	IP67
Display:	Full 5 digital LCD
Backlight:	optional
Bar Graph:	20 segment
Battery Life:	2000+ hours continuous operation (no backlight) (2) AA alkaline batteries
Shock:	MIL-STD-202G, Method 201A
Vibration:	MIL-STD-202G, Method 213B, Test Condition K
Timer:	Auto off time programming None, 1, 5, 20 min
Z-Lock:	Prevent inadvertent zero of gauge
Update Rate:	1 second, 500 ms, 250 ms

WETTED COMPONENTS

Model	Diaphragm	Process Connection	Joints
DG25	17-4 SS	316L SS	Laser weld

NON-WETTED COMPONENTS

Model	Case	Windows
DG25	Polycarbonate/ABS	Polycarbonate

MIN/MAX TEMPERATURE LIMITS

Version	Process	Storage
DG25	-4°F to 140°F (-20°C to 60°C)	-4°F to 140°F (-20°C to 60°C)
Batteries removed	—	-4°F to 176°F (-20°C to 80°C)

PRESSURE RATINGS

Overpressure:	Proof:	Burst:
15 to ≤2,000 psi	2 X Range	8 X Range
≥3,000 to ≤5,000 psi	1.5 X Range	3 X Range
≥7,500 to ≤20,000 psi	1.2 X Range	1.5 X Range



DG25
2.73", 70mm nominal case diameter



DG25
without protective boot

AGENCY APPROVALS

CE, UL 61010-1, CUL



ORDERING CODE	Example:	DG	25	3	1	L	1	NA	M02	1000#	XB3
Model											
DG - DG25 Digital general purpose		DG									
Dial Size											
25 - 2.5"			25								
Accuracy											
3 - 0.25%				3							
5 - 0.5%											
Type											
1 - Battery					1						
Backlight											
L - Backlight						L					
N - No backlight											
Protective Boot											
0 - None											
1 - Black							1				
2 - Orange											
Electrical Connection											
NA - Not Applicable								NA			
Pressure Connection Size											
M01 - 1/8 NPT Male											
M02 - 1/4 NPT Male									M02		
M04 - 1/2 NPT Male											
MG2 - G1/4 B Male											
MGA - G1/4 A											
F09 - 9/16-18 UNF-2B int. thread											
MR4 - R 1/4 Male											
MD2 - 1/4 NPT Male											
Range (coding example, see range table below for all standard ranges)											
1000# - 0-1000 psi										1000#	
Options (if choosing an option(s), must include an "X")											X__
B3 - Gauge pouch with Ashcroft logo											B3
C4 - Individual certified calibration chart											
6B - Cleaned for oxygen service											
NH - Metal tag wired to case											

DG25-SINGLE SCALE		
psi	bar	Notes
Vacuum		
0#&V	0BR&V	0.5% accuracy only
Compound		
15#&V	1BR&V	0.5% accuracy only
30#&V	1.6BR&V	0.5% accuracy only
60#&V	4BR&V	
100#&V	6BR&V	
300#&V	-1&3BR&V	

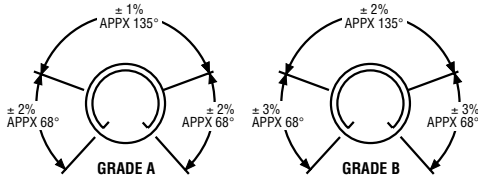
DG25-SINGLE SCALE		
psi	bar	Notes
Pressure		
15#	1BR	0.5% accuracy only
30#	1.6BR	0.5% accuracy only
60#	2.5BR	
100#	4BR	
200#	6BR	
300#	10BR	
500#	16BR	
1000#	25BR	
1500#	40BR	
2000#	60BR	
3000#	100BR	
5000#	160BR	
10000#	250BR	
15000#	400BR	
20000#	600BR	Requires use of pressure connections F09 or MD2
25000#	1000BR	Requires use of pressure connections F09 or MD2
-	1600BR	Requires use of pressure connections F09 or MD2

Consult factory for additional ranges and engineering units of measure.

ACCURACY:

Accuracy – the conformity of indication to an accepted standard or true value. Accuracy is the difference (error) between the true value and the indication expressed as a percent of the span. It includes the combined effects of method, observer, apparatus and environment. Accuracy error includes hysteresis and repeatability errors but not friction error. It is determined under specific conditions. (Normal position, 73.4°F (23°C), and 29.92 in Hg barometric pressure.)

The following tables define the ASME B40.1* accuracy grades used by Ashcroft products.



Accuracy of a pressure gauge may be expressed as percent of span or percent of indicated reading. Percent of span is the most common method. Percent of indicated reading is usually limited to precision test gauges and unless specifically spelled out, it may be assumed that an accuracy of $\pm 0.5\%$ means $\pm 0.5\%$ of span.

GRADE 4A:

Gauges offering the highest accuracy and calibrated to $\pm 0.1\%$ of span over the entire range of the gauge. These gauges are called laboratory precision test gauges and are generally 8½", 12" or 16" dials. These high-accuracy gauges may be temperature compensated. They must be handled carefully in order to retain accuracy.

ACCURACY EXAMPLES

Range	Accuracy Span	Grade	Permissible Error % of Span
0/100 psi	100 psi	1A	1.0
0/400 kPa	400 kPa	2A	0.5
0/1000 bar	1000 bar	B	3 (0/250 & 750/1000 bar) 2 (250/750 bar)
-100/400	400 kPa	2A	0.5
30 inHg/ 30 psi	44.7 psi	4A	0.1

The last item (30 inHg/30 psi) deserves some explanation. The span is defined as the algebraic difference between the limits of the scale. 30 inHg = -14.7 psi Span = 30 psi - (-14.7) = 44.7 psi. 0.1% of 44.7 psi = 0.045 psi or 0.022 Hg.

*ASME B40.1 may be ordered from:
 American Society of Mechanical Engineers
 Three Park Avenue, New York, NY 10016

GRADE 3A:

Gauges are calibrated to an accuracy of $\pm 0.25\%$ of span over the entire range of these gauges. These gauges are called test gauges and are generally 4½", 6" or 8½" dials. The gauges are generally not temperature compensated (except Ashcroft Type 1082).

GRADE 2A:

Gauges are calibrated to an accuracy of $\pm 0.5\%$ of span over the entire range of the gauge. They are often referred to as process gauges and are usually supplied as 4½" and 6" cases and are not temperature compensated.

GRADE 1A:

Gauges are calibrated to an accuracy of $\pm 1\%$ over the entire range of the gauge. These gauges are high-quality industrial gauges and are supplied in 2½", 3½" and 4½" sizes.

GRADE A:

Gauges are calibrated to an accuracy of $\pm 1\%$ of span over the middle half of the scale and $\pm 2\%$ of span over the first and last quarters of the scale.

GRADE B:

Gauges are calibrated to an accuracy of $\pm 2\%$ of span over the middle half of the scale and $\pm 3\%$ of span over the first and last quarters of the scale. These gauges are often referred to as commercial or utility gauges and are supplied in 1½", 2", 2½", 3½" and 4½" case sizes.

GRADE C:

Gauges are calibrated to an accuracy of $\pm 3\%$ of span over the middle half of the scale and $\pm 4\%$ of span over the first and last quarters of the scale.

GRADE D:

Gauges are calibrated to an accuracy of $\pm 5\%$ of span over the entire scale.

ACCURACY EXAMPLES

Type of Gauge	Grade	Permissible Error % of Span			Max. Friction (% of Span)
		Lower 25%	Middle 50%	Upper 25%	
Precision Test (A4A)	4A	0.1	0.1	0.1	See Note
Test (1082)	3A	0.25	0.25	0.25	0.25
Process (1279)	2A	0.5	0.5	0.5	0.5
Industrial/Hydraulic (1009)	1A	1.0	1.0	1.0	1.0
Industrial/Hydraulic (1010, 1188, 1490)	A	2.0	1.0	2.0	1.0
Commercial/Utility (1005, 3005, 1008A)	B	3.0	2.0	3.0	2.0

Note: Grade 4A gauges must remain within 0.1% before and after being lightly tapped.