

Precision Digital Test Gauge

Models 2084, 2086 and 2089

Piezoresistive sensor element

Accuracy 0,25%, 0,1% or 0,05% F.S. **Total Error Band**

includes all effects of linearity, hysteresis, repeatability and temperature from -18 up to 63°C

Features

- Industry leading accuracy
- Big display with bar graph
- Rugged stainless steel case
- 12 Engineering units
- Min. / max. recall
- 7 Languages
- Adjustable update and dampen modus
- Display backlight
- Field calibration capability
- Disable mode



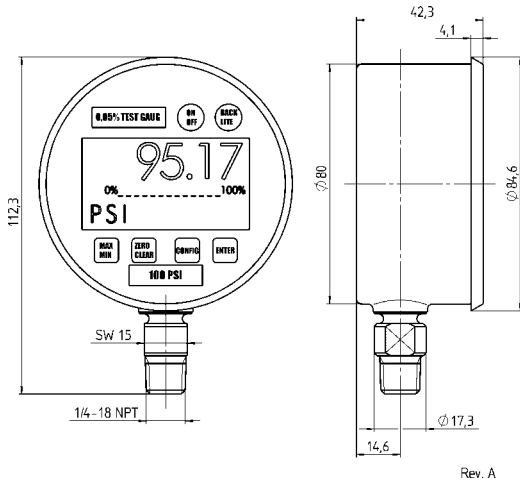
Ranges

-1 ... 0 bar up to 0 ... 500 bar

-30 ... 0 Inch Hg up to 0 ... 7.000 psi

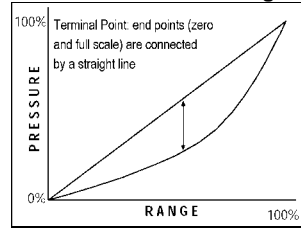
Technical specification	2084	2086	2089	
Measuring principle	Piezoresistive sensor element with internal stainless steel diaphragm			
Range	[mbar] [bar] [barabs]	250 1 160 1	400 1,6 250 1,6	600 4 500 3,4
Overpressure limit	100% F.S.			
Pressure type	Gauge, vacuum, compound and absolute			
Case size	3 Inch (75 mm)			
Process connection	G ¼ B according to EN 837-1, ¼ NPT according to ANSI/ASME B1.20.1, ¼ JIS, ¼ SAE, others on request			
Connection orientation	Lower, optional 3, 9 or 12 o'clock			
Material	Stainless steel 316 (1.4401) Stainless steel 316 (1.4401) 300 series stainless steel, electropolished Lexan			
Power supply	3 AAA alkaline batteries, battery life > 1000 hours			
Display	LCD with backlight 4 ½ digit, 19.999 counts, 16 mm high Bar graph 0 ... 100% F.S., battery level indicator, warning if pressure is out of range			
Accuracy	0,25% F.S. 0,1% F.S. 0,05% F.S.			
Method including	Terminal point, total error band (TEB) Linearity, hysteresis, repeatability and temperature (-18 ... 63°C)			
Engineering units	psi, in. Hg, in. H ₂ O, ftSW, bar, mbar, kPa, MPa, mmHg, cmH ₂ O, mmH ₂ O, kg/cm ² (Inches of water ranges for 3 reference temperatures: 4°C, 20°C and 60°F)			
Update rate	[sec ⁻¹] 4 options: 10, 5, 2 or 1			
Damping	5 options: none, average 2, 4, 6 or 8 readings			
Auto off	[min] 5 options: never, 2, 5, 15 or 30			
Language of setup menu	English, German, French, Spanish, Portuguese, Italian and Dutch			
Permissible	Ambient temperature Storage temperature			
Approvals, explosion proof	Intrinsically safe FM, (CSA- and CENELEC ATEX 100 approvals pending)			
CE-mark/EMC	Immunity according to EN 50 082-1 (March 1997) Emission according to EN 50 022 (1995)			
Protection according EN 60 529/IEC 529	IP65			
Weight	[kg] 0,5			
Accessories, Options	Protective carrying pouch, optional 10 point individual calibration chart		Protective carrying pouch, 10 point individual calibration chart	

General dimensions [mm]



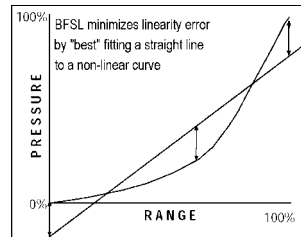
Compare of methods terminal point accuracy and best fit straight line (BFSL):

ASHCROFT Precision digital test gauges with terminal point accuracy



- All points between zero and full-scale will be within stated accuracy.
- Allows zeroing of gauge at start-up to eliminate any sensor offset.

Competitive digital gauges with best fit straight line (BFSL) accuracy



- Linearity error minimized by "best" fitting a straight line to a non-linear curve.
- BFSL gauges have a zero offset at calibration that must be maintained to ensure accuracy throughout range.

Accuracy full scale total error band (TEB) includes:

- Linearity
- Hysteresis
- Repeatability
- temperature influence from -18 up to 63°C according terminal point method

Order information

Size	Type	System material	Execution	Process connection	Connection orientation	Range	Engineering unit	Options			
(30) 3 Inch (75 mm)	(2084) Accuracy 0,25%	(S) 316	(D) IP65	(02) ¼ NPT male	(L) Lower	-1/ 0	(BAR)	(CD10) 10 point calibration certificate (standard with type 2089)			
						-1/ 1					
						-1/ 2					
	(2086) Accuracy 0,1%				(13) G ¼ B male	(E) 9 o'clock			(KJ) ¼" straight JIS, BSP	(D) 3 o'clock	0/ 0,25 ¹⁾
											0/ 0,4
											0/ 0,6
											0/ 1
	(2089) Accuracy 0,05%				(T) 12 o'clock	0/ 1,6			(6B) Cleaned for gaseous oxygen service		
						0/ 2,5 ¹⁾					
						0/ 4					
0/ 6	(S7) Weather-proof ABS carrying case										
0/ 10											
0/ 16											
0/ 25 ¹⁾											
0/ 40											
0/ 60											
0/ 100											
0/ 160											
0/ 250 ¹⁾											
0/ 400											
0/ 500											
0/ 1	(BARABS)										
0/ 1,6 ¹⁾											
0/ 3,4											

others on request

¹⁾ not for 2089

psi and others on request

How to order

Size	Type	System material	Execution	Process connection	Connection orientation	Range	Engineering unit	Options
30	2089	S	D	02	L	0/16	BAR	S7