

Precision Digital Test Gauge Models 3084, 3086 and 3089

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



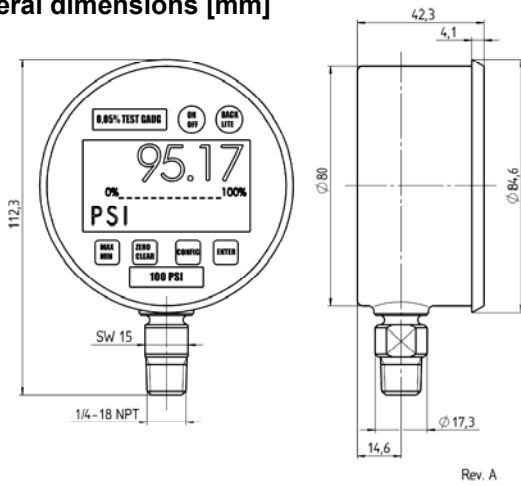
Ranges

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

-30 ... 0 in. Hg up to 0 ... 7000 psi

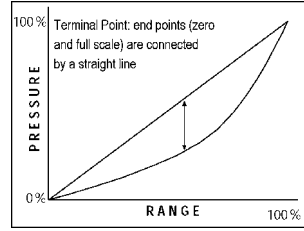
Technical specification	3084	3086	3089
Measuring principle	Piezoresistive sensor element with internal stainless steel diaphragm		
Range	250 400 600		
[mbar]	1 1,6 2,5 4 6 10 16 25 40 60 100		
[bar]	160 250 400 500 -1/0 -1/1 -1/2		
[barabs]	1 1,6 3,4		
Overpressure limit	100 % F.S.		
Pressure type	Gauge, 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 or 9 o'clock		
Material	Stainless steel 316 (1.4401)		
Process connection	Stainless steel 316 (1.4401)		
Sensor	300 series stainless steel, electropolished		
Case	Lexan		
Display			
Power supply	3 AAA alkaline batteries, battery life > 1000 hours		
Display	LCD with backlight		
Type	5 digit, 99.999 counts, 16 mm high		
Digits, resolution	Bar graph 0 ... 100 % F.S., battery level indicator, warning if pressure is out of range		
Features	0,25 % F.S. 0,1 % F.S. 0,05 % F.S.		
Accuracy	Terminal point, total error band (TEB)		
Method including	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	4 options: 10, 5, 2 or 1 times per second		
Damping	5 options: none, average 2, 4, 6 or 8 readings		
Auto off	5 options: never, 2, 5, 15 or 30		
Language of setup menu	English, German, French, Spanish, Portuguese, Italian and Dutch		
Permissible	Ambient temperature		
Ambient temperature	-18 ... 63 °C, temperature compensated		
Storage temperature	-40 ... 82 °C		
Approvals, explosion proof	Intrinsically safe FM and CSA		
CE-mark/EMC	Immunity according to EN 50 082-1 (March 1997)		
	Emission according to EN 50 022 (1995)		
Mounting	Direct mounting, optional panel mounting		
Protection according EN 60 529/IEC 529	IP65		
Weight	0,5		
Accessories, Options	Protective carrying pouch, optional 10 point individual calibration chart (standard on type 3089), weatherproof ABS gauge carrying case, protective rubber boot (black or orange)		

General dimensions [mm]



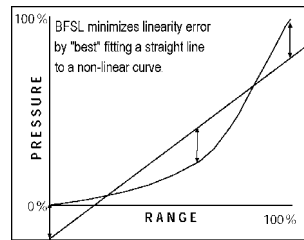
Compare of methods terminal point accuracy and best fit straight line (BFSL):

HEISE 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" (75 mm)	(3084) Accuracy 0,25 %	(S) 316 (1.4401)	(D) IP65	(02) 1/4 NPT male	(L) Lower	-1/ 0	(BAR)	(CD10) 10 point calibration certificate (standard with type 3089)		
	(3086) Accuracy 0,1 %					(13) G 1/4 B male			(D) 3 o'clock	-1/ 1
	(3089) Accuracy 0,05 %					(KJ) 1/4" straight JIS, BSP			(E) 9 o'clock	-1/ 2
						0/0,25 0/ 0,4 0/ 0,6 0/ 1 0/ 1,6 0/ 2,5 0/ 4 0/ 6 0/ 10 0/ 16 0/ 25 0/ 40 0/ 60 0/100 0/160 0/250 0/400 0/500		(6B) Cleaned for gaseous oxygen service		
								(TU) Throttle plug		
								(S7) Weather-proof ABS carrying case		
								(B1) Protective EPDM boot (black)		
								(B2) Protective EPDM boot (orange)		
						0/ 1 0/ 1,6 0/ 3,4	(BARABS)	(FF) Front flange		
				others on request				psi and others on request		

How to order

Size	Type	System material	Execution	Process connection	Connection orientation	Range	Engineering unit	Options
30	3089	S	D	02	L	0/16	BAR	S7

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