

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



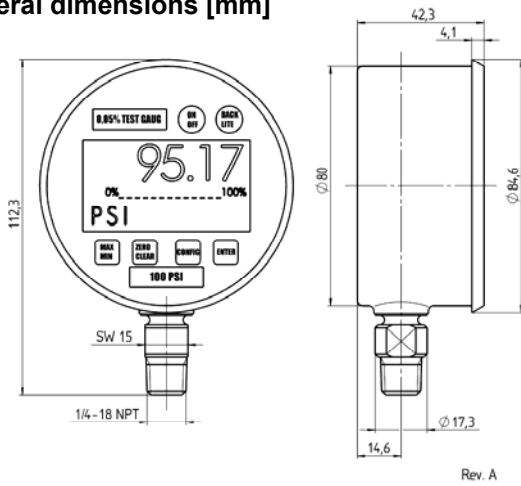
Ranges

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

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

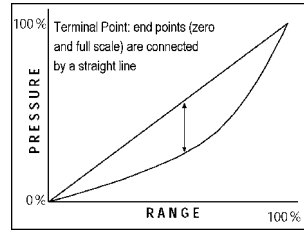
Technical specification	3084	3086	3089
Measuring principle	Piezoresistive sensor element with internal stainless steel diaphragm		
Range	250 400 600		
[mbar]	1 1,6 2,5 4 6 10 16 25 40 60 100		
[bar]	160 250 400 500 -1/0 -1/1 -1/2		
[barabs]	1 1,6 3,4		
Overpressure limit	100 % F.S.		
Pressure type	Gauge, vacuum, compound and absolute		
Case size	3 inch (75 mm)		
Process connection	G 1/4 B according to EN 837-1, 1/4 NPT according to ANSI/ASME B1.20.1, 1/4 JIS, 1/4 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: -18 ... 63 °C, temperature compensated		
Ambient temperature	Storage temperature: -40 ... 82 °C		
Storage temperature	Intrinsically safe FM and CSA		
Approvals, explosion proof	Immunity according to EN 50 082-1 (March 1997)		
CE-mark/EMC	Emission according to EN 50 022 (1995)		
Mounting	Direct mounting, optional panel mounting		
Protection according EN 60 529/IEC 529	IP65		
Weight	0,5 [kg]		
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]



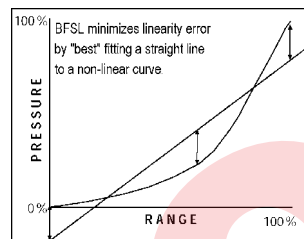
Compare of methods terminal point accuracy and best fit straight line (BFSL):

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) (FF) Front flange
				others on request		0/ 1 0/ 1,6 0/ 3,4	(BARABS)	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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