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	[mbar]	250 400 600		
	[bar]	1 1,6 2,5 4 6 10 16 25 40 60 100		
		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				
Process connection		Stainless steel 316 (1.4401)		
Sensor		Stainless steel 316 (1.4401)		
Case		300 series stainless steel, electropolished		
Display		Lexan		
Power supply		3 AAA alkaline batteries, battery life > 1000 hours		
Display				
Type		LCD with backlight		
Digits, resolution		5 digit, 99.999 counts, 16 mm high		
Features		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		Terminal point, total error band (TEB)		
including		Linearity, hysteresis, repeatability and temperature (-18 ... 63 °C)		
Engineering units		psi, in. Hg, in. H_2O, ftSW, bar, mbar, kPa, MPa, mmHg, cmH_2O, mmH_2O, kg/cm² (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	[min]	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		
Storage temperature		-40 ... 82 °C		
Approvals, explosion proof		Intrinsically safe FM and CSA (CENELEC ATEX 100 approvals pending)		
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	[kg]	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)		

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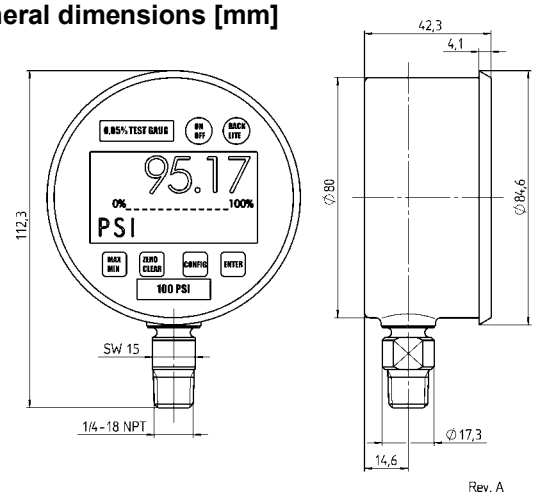
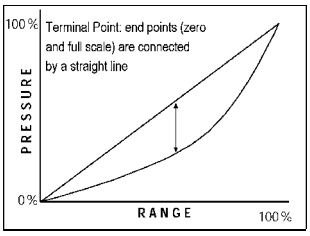
All specification are subject to change without notice.

General dimensions [mm]



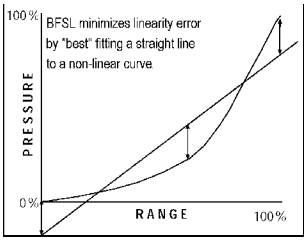
Compare of methods terminal point accuracy and best fit straight line (BFSL):

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 % **(3086)** Accuracy 0,1 % **(3089)** Accuracy 0,05 %	**(S)** 316 (1.4401)	**(D)** IP65	**(02)** ¼ NPT male **(13)** G ¼ B male **(KJ)** ¼" straight JIS, BSP others on request	**(L)** Lower **(D)** 3 o'clock **(E)** 9 o'clock	**-1/ 0** **-1/ 1** **-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** **0/ 1** **0/ 1,6** **0/ 3,4**	**(BAR)** **(BARABS)** psi and others on request	**(CD10)** 10 point calibration certificate (standard with type 3089) **(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

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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