

Data Sheet

2084, 2086 & 2089 Digital Test Gauge

FEATURES

- Full Scale Total Error Band (TEB) includes the effects of linearity, hysteresis, repeatability and temperature from 0 °F to 150 °F (-18 °C to 63 °C)
- Weatherproof IP65
- Large LCD display
- Seven languages
- Field calibration capability

TYPICAL USES

- Test bench / gauge repair facilities
- Calibration laboratories
- Mobile calibration labs
- Test measurement and validation

SPECIFICATIONS

Accuracy:	2089: $\pm 0.05\%$ of span accuracy 2086: $\pm 0.10\%$ of span accuracy 2084: $\pm 0.25\%$ of span accuracy Terminal Point, Total Error Band (TEB) Including Hysteresis, Linearity, Repeatability and Temperature (0 °F to 150 °F)
Size:	3"
Case Material:	300 Stainless Steel
Case Finish:	Tumble polished
Storage/Protection:	Stainless steel face cover (included) Zippered gauge pouch (included) Black or orange rubber boot (optional)
Carrying Case:	Weatherproof ABS gauge carrying case (optional)
Process Connection:	1/4 NPT Male
Process Connection Location:	Lower, left or right
Mounting:	Stem
Ranges:	Gauge, compound, absolute and vacuum thru 7,000 psi (see engineering units on page 3 for other units of measurement)
Temperature Corrected:	Yes
Calibration Chart:	10 point traceable calibration chart included. ISO/IEC 17025 certified calibration with chart (optional)
Enclosure Rating:	Weatherproof, IP65

WETTED COMPONENTS

Model	Process Connection and Sensor
2084, 2086, 2089	316 Stainless steel

NON-WETTED COMPONENTS

Model	Case
2084, 2086, 2089	304 Stainless steel

MIN/MAX TEMPERATURE LIMITS

Version	Process	Storage
2084, 2086, 2089	0 °F to 150 °F (-18 °C to 65 °C)	-40 °F to 180 °F (-40 °C to 82 °C)



2084, 2086 & 2089
3" dial size



KEY BENEFITS

- Highly accurate test instruments
- Silicone MEMS sensor technology provides accuracy and long term stability
- Rugged and portable design
- Twelve engineering units

DISPLAY

Type:	LCD
Display Digits:	5
Character Height:	0.66"
Backlight:	Off by default, programmable Manually turns backlight on and off
Bar Graph:	10 segment
Battery Life:	1,000 hrs. (3 AAA alkaline batteries)

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PRESSURE RATINGS

Overpressure:	Proof:	Burst:
Vac to ≤300 psi	2 X Range	3 X Range
≥300 to ≤3,000 psi	2 X Range	5 X Range
≥5,000 to ≤7,000 psi	2 X Range	2 X Range

AGENCY APPROVALS

FM and CSA Intrinsically Safe.

FM Class I to III, Div. 1 Groups A-G

CSA Class I, Div. 1, Groups A-D, Class II Div. 1, Groups E-G, Class 2 Div. 2 Groups F and G, Class III

Note: FM/CSA approval not valid on vacuum to 15 psi and vacuum to 30 psi ranges

ORDERING CODE	Example:	30	2089	S	D	02	L	XS7	1000#
Dial Size									
30 - 3.0"		30							
Model (Accuracy)									
2089 - ±0.05% of span (Traceable calibration certificate)			2089						
2086 - ±0.10% of span									
2084 - ±0.25% of span									
System									
S - 316 Stainless Steel				S					
Case									
D - Dry					D				
Process Connection Size									
02 - ¼ NPT Male						02			
Process Connection Location									
L - Lower							L		
E - Left (9 o'clock)									
D - Right (3 o'clock)									
T - Top									
Options (if choosing an option(s) must include a "X")								X	
B1 - Protective rubber boot (black) (not available with FF option)									
B2 - Protective rubber boot (orange) (not available with FF option)									
C4 - Traceable calibration certificate (included on 2089, no code required)									
FF - Flange for panel mounting (not available with B1 and B2 options)									
MF - Free from mercury certificate									
MN - Mylar tag bonded to case									
NH - Metal Tag wired to case									
NN - Paper Tag bonded to case									
S7 - Weatherproof ABS gauge carrying case									
TU - Throttle plug									
25 - ISO/IEC 17025 certified calibration									
6W - Cleaned to ASME B40.100 level IV NOT marked for oxygen service (6B oxygen cleaning not available)									
Range (coding example, see range table below for all standard ranges)									
1,000# - 0-1,000 psi									1000#

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MENU MODE

Engineering Units:	psi, inHg, inH ₂ O, ftSW, Bar, mBar, kPa, mPa, mmHg, cmH ₂ O, mmH ₂ O and kg/cm ²
Configuration Mode (Config):	Access configuration menus to select available options
Auto Off (Off):	Allows for changes to auto off of gauge, five options: Never, 2 min., 5 min., 15 min., 30 min.
Update Rate (Update):	100 ms, 200 ms, 500 ms or 1 sec
Dampening (Damp):	None, average, 2, 4, 6 or 8 times per 100 ms
Backlite:	Never, 10 sec., 30 sec., 1 min. or 5 min.
Field Recalibration:	Allows for recalibration of zero, midscale and span (password protected)

KEYPAD FUNCTIONS

On/Off:	Manually turns unit on and off (auto off options in configuration menu)
Min./Max. (down) Arrow Key:	Stores Min. and Max. values, arrow key allows for scrolling thru menu items
Zero/Clear:	Zeros display and clears Min. and Max. values
Zero Disable:	Allows for disabling of Zero button
Contrast:	Seven options available
Disable:	Allows for "lock-out" of CONFIG options
Menu Key:	Provides access to menu options
Enter:	Selects items in the configuration menu

STANDARD PRESSURE RANGES

SINGLE SCALE		SINGLE SCALE	
psi	bar	psi	bar
Pressure		Absolute	
5#	1 BR	15#A	1.0 BRA
10#	1.6 BR	25#A	1.6 BRA
15#		50#A	2.5 BRA
30#	2.5 BR	Compound	
60#	4 BR	15#&V	
100#	6 BR	30#&V	1 BR & V
160#	10 BR	60#&V	2 BR & V
200#	16 BR	100#&V	3 BR & V
	25 BR	Vacuum	
	40 BR	0#&V	0 BR & V
300#	60 BR	Consult factory for additional ranges and units of measure.	
500#			
600#	160 BR		
800#	250 BR		
1000#	400 BR		
2000#	500 BR		
2500#			
3000#			
5000#			
7000#			

DIMENSIONS in inches

For reference only, consult Ashcroft for specific dimensional drawings

