

MicroCal™

Advanced Modular
Pressure Calibrator

Features

- Modular pressure references
- Up to 8 hours of battery life
- Easy step-by-step user interface process
- Pressure generation & monitoring modes to verify system performance
- True low range dual reference pressure sensors with NIST traceability
- Best-in-class pressure generation
- Immediate ROI
- Increased calibration ratios

Applications

- Analog pressure transducers
- Pressure switches
- Analog dial gauges

1 YEAR WARRANTY

RoHS

CE

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The MicroCal™ automated pressure calibrator is used as a stand-alone calibration standard for differential and gauge pressure sensors found in critical environments. Setra partnered with NASA to develop the industry's quickest and most stable pressure control for low range applications. The MicroCal™ combines precise pressure control with high accuracy modular pressure references providing the quickest and most accurate calibration solution available on the market today. The MicroCal™ is an easy-to-use solution that significantly improves labor productivity and efficiency when compared to the leading competitors, providing immediate ROI.

Modular design to cover many applications

The MicroCal™ utilizes modular pressure references, enabling the user to select the most accurate reference for calibrating the unit under test. Competitive calibrators often use fixed higher range reference sensors that do not allow for proper calibration ratios at the low end of the pressure range. The modular rechargeable battery offers further flexibility to extend available calibration time beyond the standard 8 hours.

NASA patented technology

The MicroCal™ is designed to perform calibration checks on installed sensors, pressure switches and gauges that monitor critical applications. The on-board pressure generation system allows for stable & accurate pressure to be applied to the unit under test during calibration, while providing isolation from process background disturbances. This NASA patented technology achieves 0.0002 "W.C./step resolution; when combined with the high accuracy MCPM pressure module the MicroCal™ is the ultimate low-pressure calibration device.

Reduced calibration time

When the fast and stable pressure control is combined with high accuracy reference modules and easy to use interface, the MicroCal™ can reduce overall calibration time up to 80%. This time savings provides almost immediate ROI based on the number of calibrations performed annually.

7" Touchscreen with intuitive user interface

The easy to use 7" touchscreen interface, combined with an intuitive menu structure, provides the user with all the features needed for verification and calibration of differential pressure instrumentation. The MicroCal™ offers the Expert System feature, which detects and automatically calibrates Setra's Model 269 digital pressure transducer.

Specifications

Physical description

Operating temperature	50° to 95°F (10° to 35°C)
Storage temperature	32° to 160°F (0° to 71°C)
Power requirements	24 VDC (110/220V power adapter included)
Battery (included)	Li-ion, 6.75 AH, recharge time < 3 hours
Case dimensions	18.6" x 14.7" x 7.1"
Weight	18-22 lbs.

Temperature effect

Zero	None, zero tare
Span	Additional ±0.005% FS/°F

Control

Controlled pressure stability	0.02% FS (Typ)
Minimum controlled pressure	0.00005" W.C.

General

Engineering units	Field selectable (20 options)
Warm up	20 minutes (Typ)
Communications	RS232
Display	7" Touchscreen
Pressure connections	Plug-in O-ring quick connects
Electrical connections	Banana plug jacks

Measurement Uncertainty (1 YR)[1]

Pressure	High range: max range ≥1"W.C.: ±0.1% reading ±0.016% FS Low range: max range <1"W.C.: ±0.12% reading ±0.028% FS
Voltage	±0.015% reading ±0.002V
Current	±0.015% reading ±0.002 mA

[1] 1 year specification is instrumental uncertainty that includes linearity, hysteresis, resolution reference uncertainty, 1 year stability and span error. The uncertainties are provided at 95% confidence, k=2, normally distributed.

Specifications subject to change.

Accessories

869782-G	Spare battery
869974-G	Desktop charger
869923	Accessory kit (screwdriver, silicon tube, misc. fittings)
869920	Harness cable end ass'y , 2-wire
869904-10	2-wire electro-pneumatic harness: 10 ft.
869921	Harness cable end ass'y, 4-wire
869905-10	4-wire electro-pneumatic harness: 10 ft.

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Ordering information

Example part number: MCALLMN
MicroCal™, Range 30" W.C., Std. user interface with 12' tubing.

M	C	A	L			
[1]				[3]	[4]	[8]

[1]

Model	
MCAL	MicroCal™

[2]

Pressure control range	
L	Low-up to 0-30" W.C

[3]

Electro-pneumatic interface	
N	Std. user interface with 6' tubing
M	Std. user interface with 12' tubing
E	Expert system interface with 6' cable and tubing
L	Expert system interface with 12' cable and tubing

[4]

Options	
N	None

Reference modules

Example part number: MCPMR25WB
MicroCal™ Pressure Module, Range ±0.25" W.C.

M	C	P	M					
[1]				[2]				

[1]

Model	
MCPM	MicroCal™ pressure modules

[2]

Range							
W.C.		***Pascal***		***W.C.***		***Pascal***	
Unidirectional				**Bidirectional**			
OR5WD[1]	0 to 0.5	**100LD**[1]	0 to 100	**R25WB**[1]	±0.25	**050LB**[1]	±50
001WD[2]	0 to 1	**250LD**[2]	0 to 250	**OR5WB**[1]	±0.5	**100LB**[1]	±100
005WD[2]	0 to 5	**500LD**[2]	0 to 500	**001WB**[2]	±1	**250LB**[2]	±250
2R5WD[2]	0 to 2.5	**10CLD**[2]	0 to 1000	**2R5WB**[2]	±2.5	**500LB**[2]	±500
015WD[2]	0 to 15	**35CLD**[2]	0 to 3500	**005WB**[2]	±5	**10CLB**[2]	±1000
				015WB[2]	±15	**35CLB**[2]	±3500
				030WB[2]	±30	**75CLB**[2]	±7500

[1]Low range
[2]High range



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