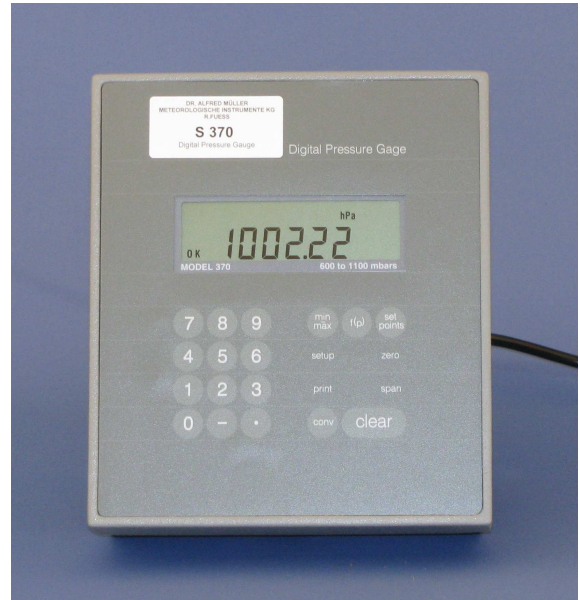


**DR. ALFRED MÜLLER**  
**METEOROLOGISCHE INSTRUMENTE KG**  
**R. FUESS**

## S 370    DIGITAL PRESSURE GAUGE

The Setra Model 370 offers extremely high accuracy and unmatched stability in a digital output configuration. Environmental monitoring and test & measurement systems around the world rely on Setra's experience in barometric pressure measurement instrumentation, as well as high accuracy measurements of higher pressures. The models utilize Setra's unique SETRACERAM™ sensor, which is combined with advanced microprocessor based circuitry and sophisticated firmware to provide system accuracy to better than  $\pm 0.02\%$  full scale.

The Model 370 Digital Pressure Gauge is an extremely versatile instrument. Pressure and altitude data is displayed on a 6 digit LCD and is also accessible through a bidirectional RS-232 port. A numeric key pad is provided for easy access to engineering unit conversions, min/max tracking, entry of Hi/Lo alarm setpoints, nonlinear functions and calibration procedures. The 370 is also available with an optional rechargeable battery pack to bring lab accuracy to the field.



### Pressure Ranges

Type of Pressure	Pressure Range	Readout or Report	Altitude Range <sup>1</sup>
Barometric	600 to 1100 hPa/mb	600.00 to 1100.00	-1000 to 13,800 ft.
	800 to 1100 hPa/mb	800.00 to 1100.00	-1000 to 6,400 ft.
Absolute	0 to 10 psia	10.0000	10,300 to 100,000 ft.
	0 to 20 psia	20.0000	-1000 to 100,000 ft.
	0 to 50 psia	50.0000	-1000 to 100,000 ft.
	0 to 100 psia	100.0000	-1000 to 100,000 ft.

Proof Pressure: 150% of full scale pressure range

Pressure Media: Clean dry air or other gases (non-condensable)

### Performance Data

Accuracy	$\pm 0.02\%$ FS <sup>3</sup> at 70°F (21°C)
Non-Linearity	$\pm 0.012\%$ FS (End Point)
Hysteresis	0.010% FS
Non-Repeatability	0.010% FS
<b>Thermal Effects<sup>4</sup></b>	
Compensated Range °F (°C)	+32 to +110 (0 to +45)
Zero Shift %FS/°F (°C)	0.002 (0.004)
Span Shift %FS/°F (°C)	0.001 (0.002)
Altitude Resolution	1 ft. (4 ft. for 100 psi range)
Stability	0.005% FS, 24 hours
	0.02% FS, 30 days
	0.05% FS, 1 year

- Notes:
- Altitude is calculated using a polynomial from "Smithsonian Meteorological Tables, Vol. 114". Ranges greater than 20 psia not recommended for altimeter certification.
  - RSS of Non-Linearity, Non-Repeatability and Hysteresis.
  - FS = 300 hPa/mb for 800-1100 hPa/mb range; 500 hPa/mb for 600-1100 hPa/mb range.
  - Unit calibrated at 70°F. Maximum thermal error is computed from this datum.

### Operating Power

Model 370: 110/220 VAC (-10% to +20%), 50/60 Hz., optional 12 VDC internal rechargeable battery pack (approx. 8 hours between charges). Approximately 4 watts power consumption.  
 Model 470 5 VDC  $\pm 1\%$ , 70 mA max.

# DR. ALFRED MÜLLER METEOROLOGISCHE INSTRUMENTE KG R. FUESS

## Output Data

Model 370

Display

6 digit Liquid Crystal Display (LCD) with annunciators for pressure/altitude engineering units (PSI, mbar, hPa, mmHg, in.Hg, mmH<sub>2</sub>O, in.H<sub>2</sub>O, ft, m, units), HI/LO ALARM, pressure signal stability (O.K.) and barometric pressure corrected to sea level (SEA LEVEL).

Digital Output

Bidirectional RS-232 interface. All display data can be transmitted on the interface (Model 370) and all keyboard functions and commands can be duplicated using a remote terminal or keyboard.



## Digital Interface

Bidirectional RS-232 interface. Access data, functions and commands via an RS-232 compatible remote terminal, data acquisition system or data storage device. 300, 600, 1200, 2400, 4800, 9600 Baud Rate, adjustable. Typical data printouts are listed on the right:

System Status	Datalogging
Elev: + 120 feet	600. sec/reading
Max: + 15.552 PSI A	14.595 PSI A
Min: + 11.793 PSI A	14.596 PSI A
Hi A: + 16.000 PSI A	14.598 PSI A
Lo A: + 11.000 PSI A	

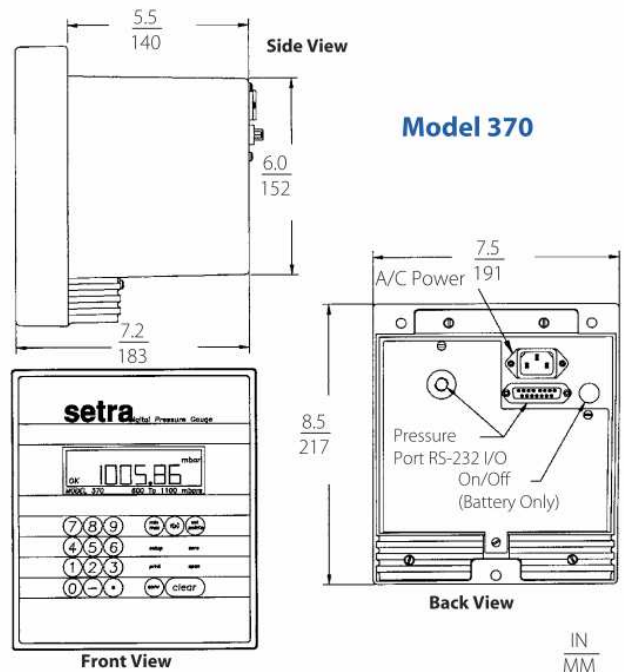
## Model 370 Physical Description

Pressure Fitting 1/8" - 27 NPT Internal  
Power Cord 5 Foot Length, 3-Prong  
Weight 12 lbs. (with Battery Pack)

## Available Options

624 Installed Rechargeable Battery Pack  
864 19 inch Rack Mount Kit

## Outline Drawings



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