

DATUM 2000™

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DATUM 2000™

Dual Channel Meter

The DATUM 2000™ is a self-contained dual channel system for accurately displaying an output from one or two transducers (or transmitters) located at a remote location. It features an analog to digital converter with an LED display.

Programmed with a selectable menu, the DATUM 2000™ can be calibrated by the user to the pressure ranges of the various Setra pressure transducers and transmitters or other analog instruments.

Two buttons conveniently located on the front panel allow the user to access the menu. The menu includes: selecting a channel, adjusting or

calibrating the output of the meter, setting the decimal point, zero adjustment and Hi/Lo Alarms.

DATUM 2000™ Meter and Manometer Specifications

Display

Type	Light emitting diode
Color	Red
Height of Digits	0.56 inch
Maximum Readout	- 9999 to + 31999
Reading Rate	2 to 3 times per second depending on input voltage
Overload Signal (over range reading)	OVER
Underload Signal (under range reading)	UndEr
Polarity Sign	Negative only
Brightness	Constant

Physical

Operating Temperature	+32° to +130°F (0° to +55°C)
Storage Temperature	-40° to +185°F (-40° to +85°C)
Width	3.61 inches (92 mm)
Height	
Meter	1.74 inches (44 mm)
Manometer	3.50 (89mm)

Depth (incl. connector)

7 inches (178 mm)
(Allow at least 1/2" more for wires attached to terminal strip)

Cutout Dimensions

Meter	1/8 DIN: 3.67 in. x 1.80 in. (93 x 46 mm)
Manometer	1/4 DIN: 3.67 in. x 3.56 in. (93 x 90 mm)

Front Panel Dimensions

Meter	3.82 in. x 1.97 in. (98 x 50 mm)
Manometer	3.82 in. x 3.74 in. (98 x 95 mm)

Electrical Data

Power	
Domestic	24 VDC (115 VAC 60 Hz 12 watt adapter provided w/-1 models)
European	24 VDC (220 VAC 50 Hz 14 watt adapter provided w/-2 models)
	Adapter has European 2 prong plug with turret
Power Cord Length (Domestic and European)	6 feet (approx.)

Accuracy (Readout Only)

At 73°F (23°C)	± 0.01%R ± 1 digit
At 60° to 95°F (16° to 35°C)	± 0.04%R ± 1 digit

Analog Output

Transducers	Same as transducer output voltage
Transmitters	No analog output; the DATUM 2000™ terminates the current loop

Adjustment Capabilities (accessible through the user setup menus)

Voltage Inputs	+11 to -11 volts
Current Inputs	0 to 20 mA
Maximum Reading	+ 31999
Minimum Reading	- 9999

Input Specifications

Transmitter input signal	4 - 20 mA
Transmitter input impedance	150 ohm
Transmitter input voltage drop	3 VDC (max.)
Transducer input signal	+11 VDC to -11 VDC
Transducer input impedance	45K ohm



DATUM 2000™

Manometer w/Transducer Installed

The DATUM 2000™ Manometer is a complete system with built-in pressure or vacuum transducer. A wide selection of standard pressure ranges is available for gauge, absolute, differential and vacuum measurements from ± 0.25 inches WC to 1000 psi.

The transducer installed in the Manometer operates on channel one of the two channel meter. Channel two is available for any other voltage or current input from another remote instrument.

Setra pressure transducer Models 204, 204D, 239 and 270 are available for installation in the 1/4 DIN Datum Manometer.

DATUM 2000™ Manometer Transducer Specifications

Type of Pressure Measurement	w/Models 204/204D	w/Model 239	w/Model 270
Gauge		Differential	Gauge
Absolute		Gauge	Absolute
Vacuum			Barometric
Differential			
Standard Ranges	0 to 25, 50, 100, 250, 500, 1000 psig 0 to 25, 50, 100, 250, 500, 1000 psia 0 to 25, 50, 100 psid 0 to 14.7 psiv 0 to ± 10 , ± 25 , ± 50 , ± 100 psid	0 to 0.5, 1.0, 2.5, 5, 15, 30 inch WC 0 to ± 0.25 , ± 5 , ± 1.0 , ± 2.5 , ± 7.5 , ± 15 inch WC 0 to 5, 10 psid 0 to ± 2.5 , ± 5 psid	0 to 5, 10, 20, 50, 100 psig 0 to 10, 20, 50, 100 psia 600-1100 millibar 800-1100 millibar
System Accuracy (RSS)	$\pm 0.11\%$ FS ± 2 digits $\pm 0.22\%$ FS ± 2 digits* * For ± 100 , ± 250 , ± 500 PSID Ranges	$\pm 0.14\%$ FS ± 2 digits	$\pm 0.05\%$ FS ± 2 digits
Thermal Effects			
%FS +60° to +95°F			
Thermal Zero Shift	0.14 max. ± 4 digits	0.35 max. ± 4 digits	0.07 max. ± 4 digits
Thermal Span Shift	0.11 max. ± 4 digits	0.35 max. ± 4 digits	0.04 max. ± 4 digits
Pressure Fittings			
Positive	1/4"-18 NPT internal	1/8"-27 NPT internal	1/8"-27 NPT internal
Reference	1/8"-27 NPT internal	1/8"-27 NPT internal	N/A
Pressure Media			
Positive	Gas compatible with 17-4 PH stainless steel.** **Note: Hydrogen not recommended for use with 17-4 PH stainless steel.	Gases compatible with stainless steel, hard anodized 6061 aluminum, Buna N O-ring.	Non-condensing air or gas compatible with aluminum, alumina, ceramics, gold, fluorocarbon elastomer sealant and Buna-N O-Ring.
Reference	Clean dry air or other gases. (Non-corrosive, non-condensable.)	Clean dry air or other gases. (Non-corrosive, non-condensable.)	N/A
Analog Output	Normally 0 to 5 VDC for unidirectional pressure or vacuum ranges. 0 to ± 2.5 VDC for bidirectional ranges.	Normally 0 to 5 VDC for unidirectional pressure. 0 to ± 2.5 VDC for bidirectional ranges.	0 to 5 VDC for gauge and absolute ranges.

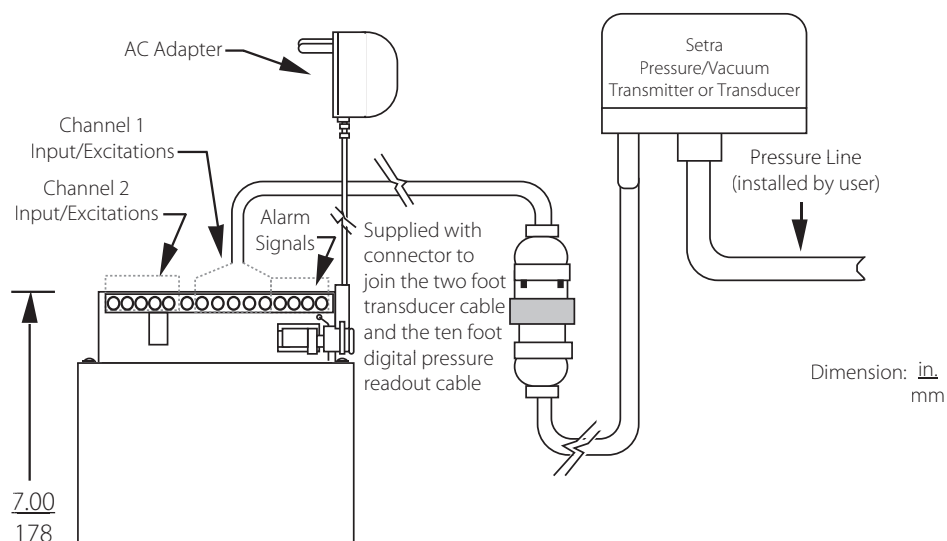
DATUM 2000™ Meter and Manometer

- Dual Channel
- User Adjustable Hi/Lo Alarms
- Easy Front Panel Setup
- Pressure Displayed in Desired Engineering Units
- Tabletop or Panel Mount
- Use with Voltage or Current Output Devices
- Internal Ground Referenced 12 VDC and 24 VDC Power Supply Provides Excitation Power for the Setra Pressure Transducer
- UL Approved Power Supply
- 1/8 DIN Package (Meter)
- 1/4 DIN Package (Manometer)
- High Accuracy
- Internal Reference Voltage for Easy Calibration

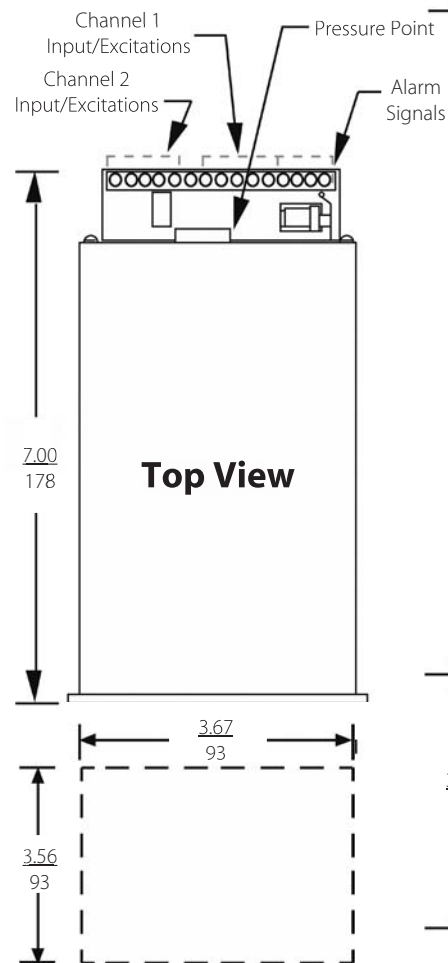
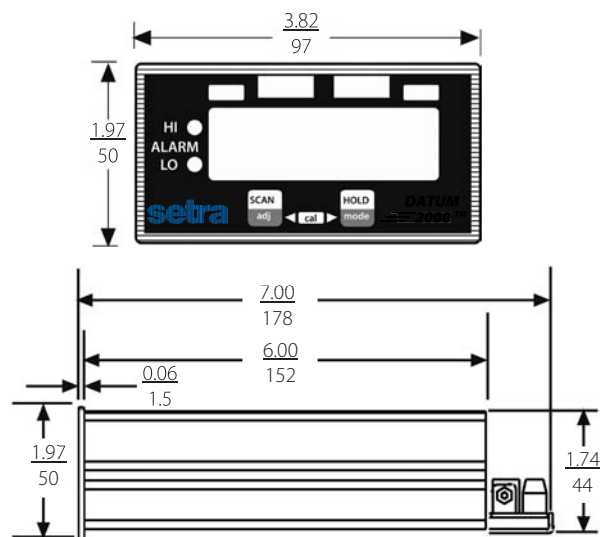
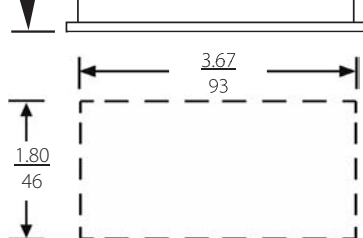


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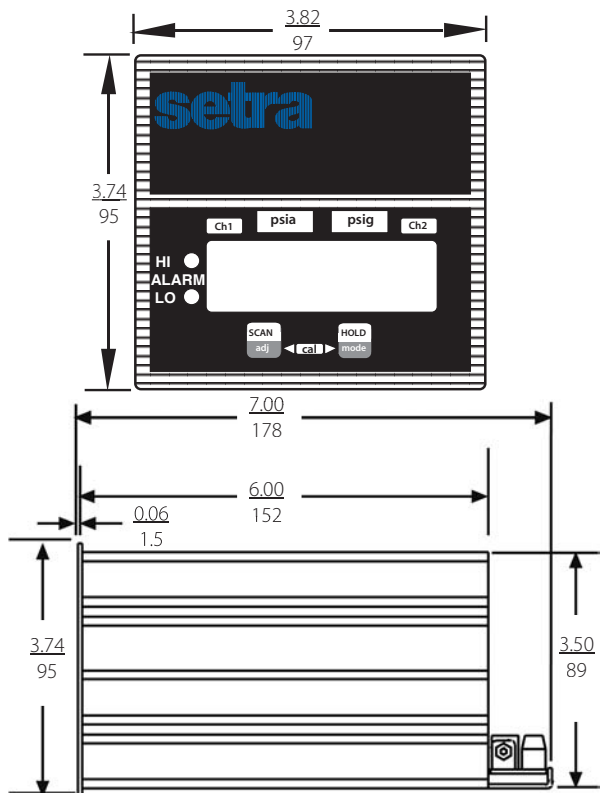
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800-257-3872



Top View



Top View



Ordering Instructions

DATUM 2000™ Meter Only

Order as DATUM 2000-1 meter for 115 VAC converter or DATUM 2000-2 for 220 VAC converter with European 2 prong turret.

DATUM 2001 Meter with One Transducer or Transmitter Setup

To order factory setup with one transducer or transmitter and 10ft. cable/connector assembly, specify option 2001-1 for 115 VAC converter or 2001-2 for 220 VAC European converter. Transducer or transmitter separately not included w/meter, order separately.

DATUM 2002 Meter with Two Transducers or Transmitters Setup

For two factory setups and cable assemblies with two transducers or transmitters specify option 2002-1 for 115 VAC or 2002-2 for 220 VAC European converter. Transducer or transmitter not included w/meter, order separately.

DATUM Manometer with Transducer Installed

To order a manometer with a Model 204 Pressure transducer, order part #2204; with a Model 239, order part #2239, with a Model 270, order part #2270. Specify pressure range.

Options:

- 602 1-5 VDC Output (2204, 2239 only)
- 603 1-6 VDC Output (2204, 2239 only)
- 607 0-5 VDC Output (2239 bidirectional only)
- 653 220 VAC converter (Manometer only)
- 654 RS-232 Output
- 811-825 11-25 Ft. of cable*

*Consult factory for lengths above 25 ft. of cable.

Specifications subject to change without notice.

setra

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