

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 | Description |
|--|--|
| 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

| | w/Models 204/204D | w/Model 239 | w/Model 270 |
|-------------------------------------|---|---|---|
| Type of Pressure Measurement | Gauge Absolute Vacuum Differential | Differential Gauge | Gauge Absolute Barometric |
| 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 $+60^\circ$ to $+95^\circ$ F Thermal Zero Shift Thermal Span Shift | 0.14 max. ± 4 digits 0.35 max. ± 4 digits | 0.07 max. ± 4 digits 0.04 max. ± 4 digits |
| Pressure Fittings | Positive Reference | 1/4"-18 NPT internal 1/8"-27 NPT internal | 1/8"-27 NPT internal N/A |
| Pressure Media | Positive Reference | Gases compatible with stainless steel, hard anodized 6061 aluminum, Buna N O-ring. Clean dry air or other gases. (Non-corrosive, non-condensable.) | Non-condensing air or gas compatible with aluminum, alumina, ceramics, gold, fluorocarbon elastomer sealant and Buna-N O-Ring. 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. |

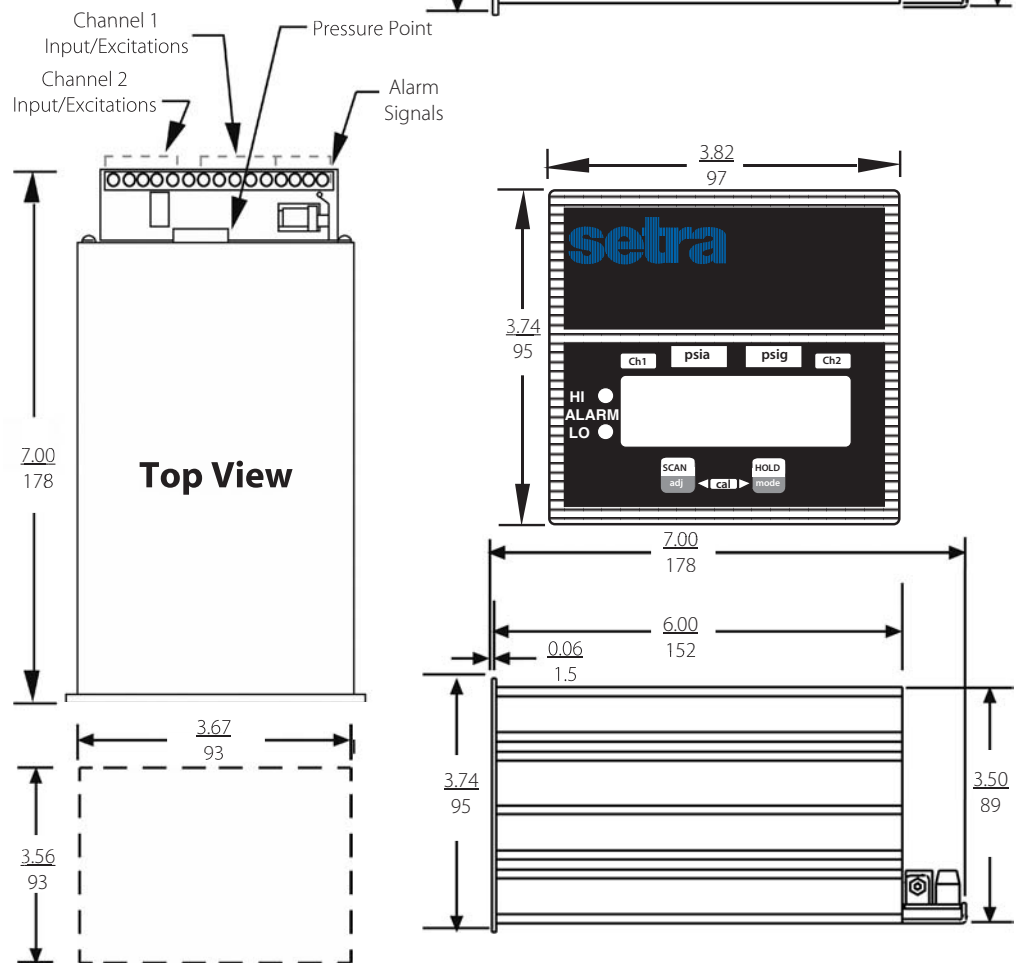
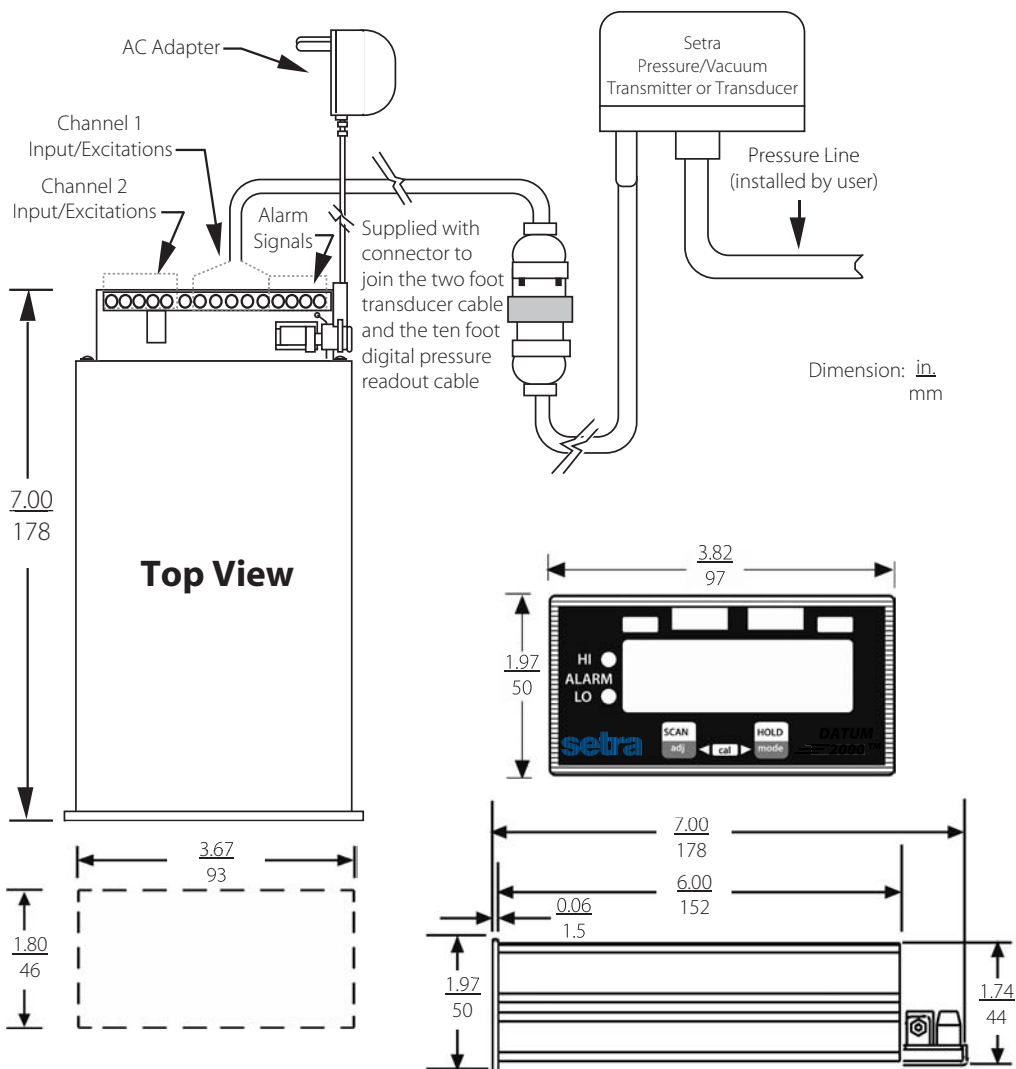
DATUM 2000™ Meter and Manometer

- 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



Visit Setra Online:
<http://www.setra.com>

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800-257-3872



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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