

Surface Line Rotatable (SLR) Series

Pressure Transducer Display

User Guide

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1.1 FUNCTION

This manual covers the Surface Line Rotatable (SLR) Series Pressure Transducers as shown in Figure 1 below. Included herein is general information, operating specifications, installation and removal instructions, and product warranty information.



Figure 1. Surface Line Rotatable (SLR) Pressure Transducer Displays

1.2 INTENDED USE

The SLR Pressure Transducer Display is a miniature digital transducer display for use on 1.125 inch surface substrate. It is designed to interface (via 15-Pin D connector) to SS2 transducers with 30 and 100 PSI full scale pressure ranges. The SLR utilizes a 3.5 segment light emitting diode (LED) with two selectable engineering units (PSIA and KPa) and can be rotated to be positioned at all four quadrants. The SLR is electrically interfaced using a standard high-density 15-pin D-Sub (HD15P) connector. The device uses externally supplied 13.0 to 32VDC excitation and outputs 0 to 5VDC or 0 to 10VDC. A 4 to 20mA, self powered (from the line and requires no external supply) device is also available.

These units require no field calibration.

2.1 OPERATING SPECIFICATIONS

Materials

Display Type	Light Emitting Diode (LED)
Display Height	0.3 inches
Housing	Metallized Plastic

Connections

Electrical Connection	15-pin D-Sub
Transducer Connector	15-pin D-Sub

Performance

Accuracy	±1 Display Count
Linearity	±1 Display Count
Thermal Sensitivity	0.2 Display Counts/°C

Operating Conditions

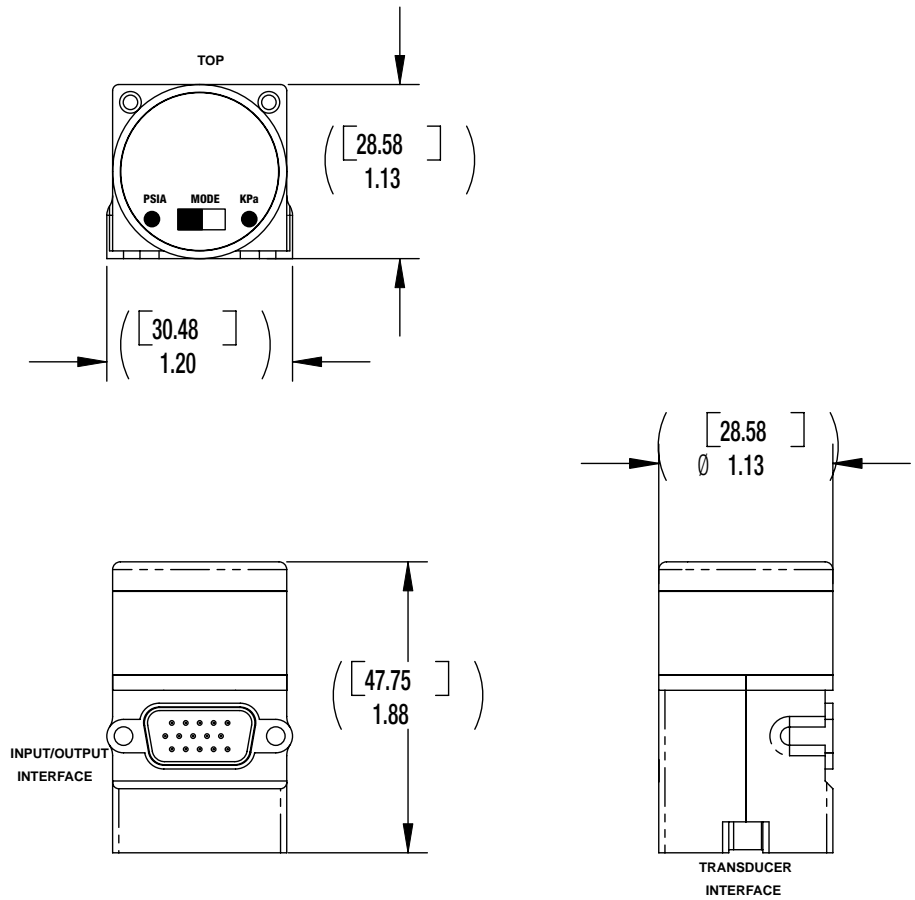
Range	30 PSI (207 KPa) 100 PSI (689 KPa)
Temperature Range	30° to 140°F (0° to 60°C)
Visual Display	290° Total Rotation

Electrical

Power Requirements	Current Powered: 3.92 - 20.4 mADC. Voltage Powered: 13.0 to 32 VDC		
Output	3 1/2 Digit Red 7 Segment LED, 0.30" (7.6mm) High		
Input Requirements	Minimum	Typical	Maximum
0-5 VDC	4.95	5.0	5.05
0-10 VDC	9.9	10	10.1
4-20mA	3.92mADC		20.4 mADC

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3.1 SLR PRESSURE TRANSDUCER DISPLAY DIMENSIONAL DRAWINGS & PINOUTS



⚠ CAUTION ⚠
 The connection should be conducted with no power being present to the available connections.

Figure 2. SLR Pressure Transducer Display Dimensional Drawing

Input/Output Interface Connector

Transducer Interface Connector

Voltage Mode Pinout

DB15 MALE PIN NUMBER	SIGNAL
1,3,4,6,8,11,13,14,15	Not Used
2	Pressure Signal
7	Power Input
5 & 12 ¹	Power Supply Common Signal Common

DB15 FEMALE PIN NUMBER	SIGNAL
1,3,4,6,8,11,13,14,15	Not Used
2	Pressure Signal
7	Power Input
5 & 12 ¹	Power Supply Common Signal Common

Current Mode Pinout

DB15 MALE PIN NUMBER	SIGNAL
1,2,3,4,6,8,9-15	Not Used
7	Pressure Signal
5 & 12 ¹	Signal Common

DB15 FEMALE PIN NUMBER	SIGNAL
1,2,3,4,6,8,9-15	Not Used
7	Pressure Signal
5 & 12 ¹	Signal Common

¹Pins 5 and 12 are internally jumpered together

⚠ CAUTION ⚠
Failure to follow these procedures may adversely affect the product's performance and could void the product warranty. Inspect but DO NOT unwrap any parts until installation. Contact your Celerity representative with any problems.

⚠ CAUTION ⚠
To prevent damage to the transducer or the display, do not over tighten the screws.

⚠ CAUTION ⚠
Dispose of a used display unit in compliance with local regulations.

3.2 MECHANICAL INSTALLATION

Install the SLR Pressure Transducer Display as follows:

1. Remove the display from the box. Remove the outer protective bag and discard.
2. Follow standard cleanroom entry procedures where applicable.
3. Install the display on the transducer. Be sure to hold the display with the D-Sub connector "in-line" with the D-Sub connector on the pressure transducer. The display should fully engage with the connector on the transducer. Insert the two screws supplied.
4. Snugly tighten the two screws on the transducer display

3.3 ELECTRICAL CONNECTION

SEE CAUTION

1. Connect the input/output connection using the D-Sub connector. (Connection pinouts are presented on Page 2 of this manual.
2. Power may now be applied to the display unit.

3.4 DISPLAY ALIGNMENT

Orient the display by rotating the bezel. The bezel can be rotated 290°.

3.5 MODE SETTING

The display's mode of operation can be switched from, or to, either PSIA or KPa. Full scale pressure range is factory set. Refer to the part number for the range of the unit installed.

3.6 CALIBRATION

Calibration is not required for the SLR Pressure Transducer Display. The pressure transducer potentiometers should be used to adjust the zero of the pressure transducer.

3.7 REMOVAL AND REPLACEMENT

1. Remove power to the display.
2. Disconnect the Input/Output connection.
3. Remove the two retaining screws located on the display unit. Keep the screws with the unit.
4. Pull the display unit upwards to release it from the pressure transducer.
5. If replacing the display, follow Mechanical Installation steps.

Product warranty information can be found on our Celerity website at www.Celerity.net. This information provides general warranty information, limitations, disclaimers, and applicable warranty periods according to product group.



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