DS-PR-LR056-PD-eng
January, 2017

Data Sheet

Model LR056 Transducer Display

Pressure

LR056 Pressure Transducer Display

Accurate, Miniature Displays for Point-of-Use Pressure Monitoring

Overview

Local display of process pressure improves safety and quality control of gas delivery systems. The LR056 allows a sensor to digitally display its pressure and send its signal to a final destination. The sensor, such as the Brooks® SolidSense II® pressure transducer, connects to the back of the LR056 with a 4-pin Bendix® connector. The LR056 connects to the loop through a pigtail cable and offers a real-time reading. The LR056 has two user-programmable setpoints that define a window; if the window is entered or left, an output signal is generated.

Product Features

- Local indication of process pressure measurement
- 4-digit LED display in durable metal enclosure
- Available to display pressure measurement in psia, psig, bar, kg/cm2, or Mpa
- Setpoint indication and contact switching available
- Password protected
- CE (EN 61326) compliant
- Programmable via up and down switches
- Point-of-use monitoring
- Extremely accurate reading with outstanding noise immunity
- Low-power electronics
- Ease of use and installation

Applications

Gas delivery systems and tools including:

- Gas cabinets
- Gas panels
- Bulk gas

Product Specifications

Analog Signal	LR056
2-Wire System	4 - 20 mA
3-Wire System	0.05 - 5.05 V

Supply

2-Wire System	Supplied by current loop; voltage drop ≤ 6 V; $V_S = (V_{T\,min}...V_{T\,max}) + 6V_{DC}$ with V_T = supply of the used transmitter
3-Wire System	Display is supplied parallel with transmitter $V_{S\,min} = 12\ V_{DC} ... V_{Tmin}$; $V_{S\,max} = V_{T\,max} ... 30\ V_{DC}$ with V_T = supply of the used transmitter

Contact

Number, Type	Two independent optocoupler outputs
Max. Switching Type	I_{max} = 50 mA (R_{min} = 450 Ω @ 24 V_{DC}) resistive load
Max. Switching Performance	Pmax = 200 mW
Repeatability	≤ ±0.1% FSO
Switching Frequency	Max. 5 Hz
Switching Cycles	> 100 x 10^6
Delay Time	0 - 100 sec

Electrical Protection

Short-circuit Protection	Permanent
Reverse Polarity Protection	No damage, but also no function
Electromagnetic Compatibility	Emission and immunity according to EN 61326

Mechanical Stability

Vibration	10 g RMS (20 - 2000 Hz)
Shock	100 g/11 msec

Materials

Display Housing	Aluminum, black anodized

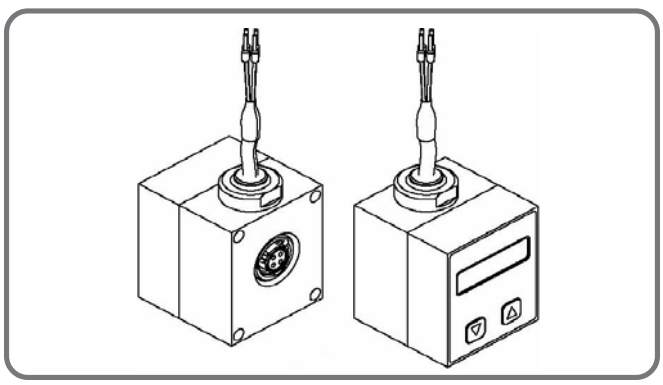
Display

Type	4-digit, red LED display, digit height 7 mm, digit width 4.85 mm (angle 10°)
Range	-1999 to +9999 (Automatic indication of minus for negative values)
Accuracy	0.1% ± 1 digit
Temperature and Coefficient	0.01% FS/°C
Digital Damping	0.4 - 30 sec (programmable)
Measured Value Update	0.2 - 10 sec (programmable)

Miscellaneous

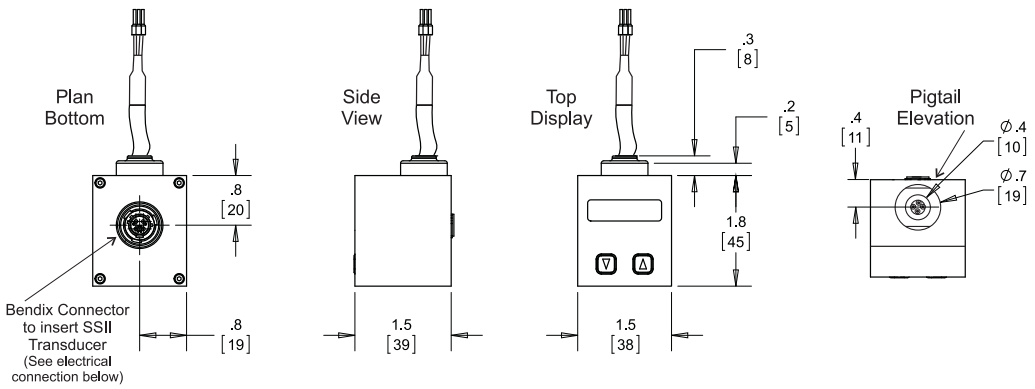
Permissible Temperature	Electronics: Environment:-25 - 85°C (-13 - 185°F); Storage: -40 - 85°C (-40 - 185°F)
Cable Length	Standard: 2 m
Weight	Approx. 200 g / .44 lbs
Data Memory	Non-volatile EEPROM

Product Design

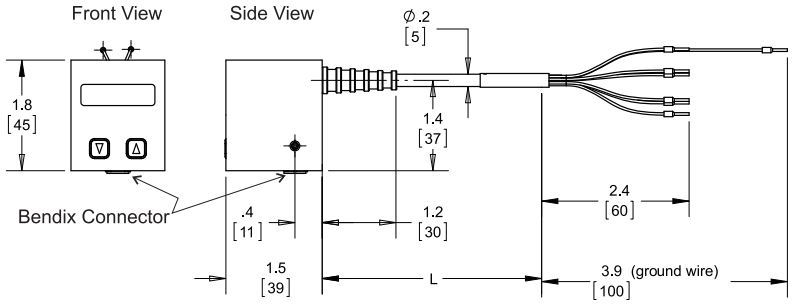


Product Dimensions

Top Display Orientation Versions

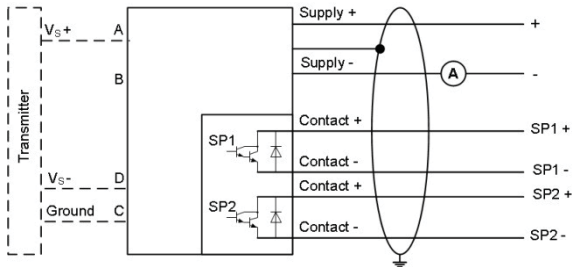


Side Display Orientation Versions

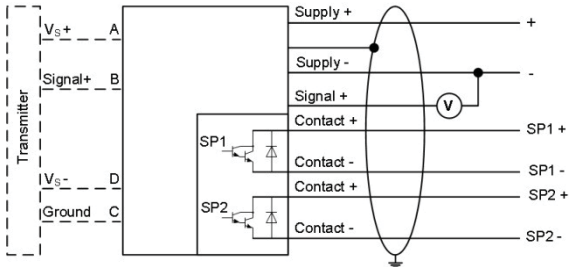


Wiring Diagrams

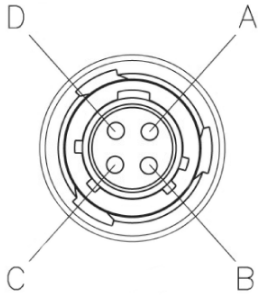
2-Wire System (Current)



3-Wire System (Voltage)



Electrical Connections



MIL- / Bendix - plug
PT06A8-4S

Pin Configurations

Sensor-Sided Input: MIL-/Bendix Connection (4-Pin)

Supply +	A
Supply -	D
Signal + (for 3-wire)	B
Ground	C

Cable-Sided Output: 6-Wire Cable (2-wire system), 7-wire cable (3-wire system), top mounted (cable colors DIN 47100)

Supply +	Red
Supply -	Black
Signal + (for 3-wire)	Green
SP 1 +	Blue
SP 2 +	Yellow
SP 1 -	White
SP 2 -	Brown
Ground	Yellow/Green (shield)

Model Code

Code Description	Code Option	Option Description
I. Base Model Number	**LR056**	Pressure Transducer Digital Display
II. Setpoint Configuration	**0**	None
	1	1
	2	2
III. Configuration	**Z**	By Customer
IV. Display Orientation	**1**	Top
	2	Side
V. External Connector	**1**	2 m pigtail
VI. Input	**1**	4 -20 mA
	2	0.05 - 5.0 V

Sample Standard Model Code

I	II	III	IV	V	VI
LR056	1	Z	1	1	1

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Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

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Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

Global Headquarters
Brooks Instrument
407 West Vine Street
Hatfield, PA
19440-0903 USA

Toll-Free (USA): 888-554-FLOW
T: 215-362-3500
F: 215-362-3745
BrooksAM@BrooksInstrument.com

A list of all Brooks Instrument locations and contact details can be found at www.BrooksInstrument.com