



RLO Series

Precision compensated low pressure sensors

FEATURES

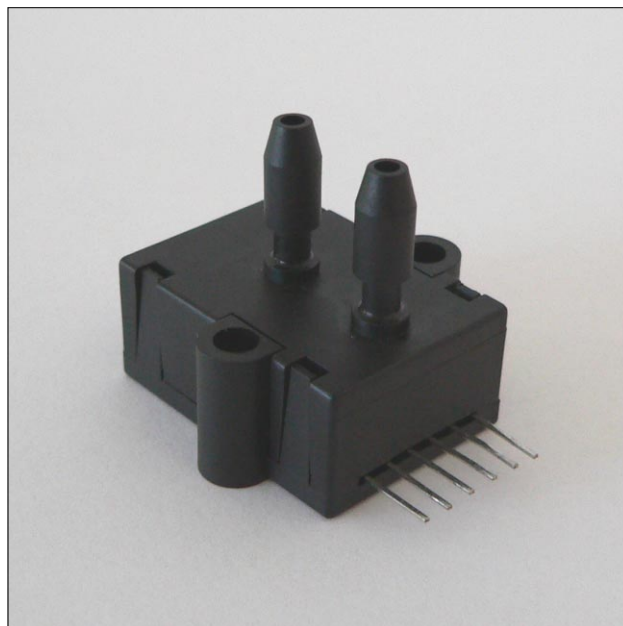
- Ranges from 1 to 30 inch H₂O gage or differential
- Precision temperature compensated
- Calibrated offset and span
- Extremely low position sensitivity
- Excellent long term stability
- Sensortech PRO services

MEDIA COMPATIBILITY

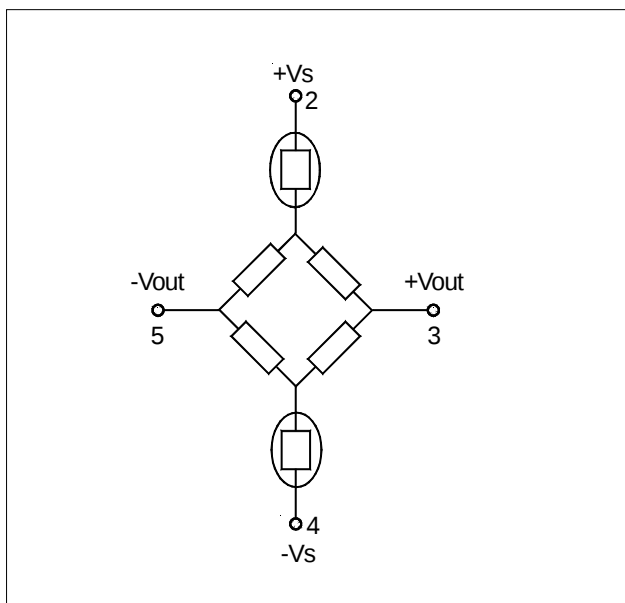
To be used with non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

The media wetted materials are:

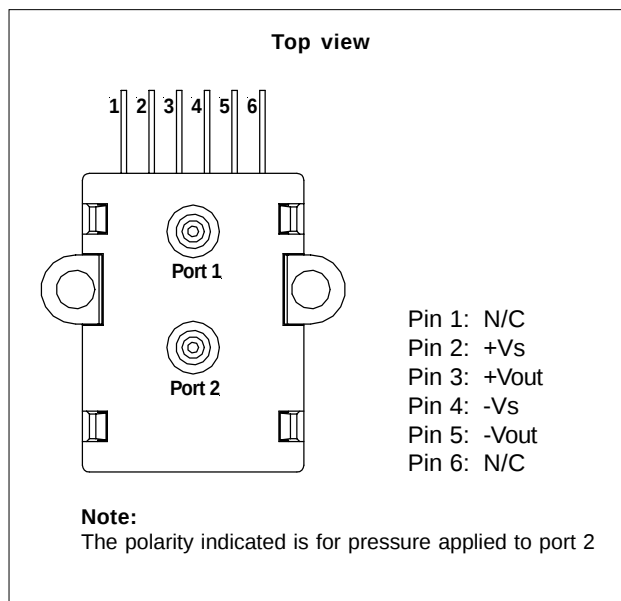
- silicon
- glass filled nylon
- silicone
- ceramic (Al₂O₃)
- gold



EQUIVALENT CIRCUIT



ELECTRICAL CONNECTION





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SPECIFICATIONS

Maximum ratings

Supply voltage V_s	0 to 16 V
Common-mode pressure	50 psig
Lead temperature (soldering 5 seconds)	315 °C

Environmental specifications

Temperature range	
Compensated	0 to 50 °C
Operating	-25 to 85 °C
Storage	-40 to 125 °C
Humidity limits (non-condensing)	0 to 95 %RH

PRESSURE SENSOR CHARACTERISTICS

Part no.	Operating pressure	Max. over pressure ¹
RLOH001D	1 "H ₂ O	5 psi
RLOH005D	5 "H ₂ O	5 psi
RLOH010D	10 "H ₂ O	5 psi
RLOH020D	20 "H ₂ O	5 psi
RLOH030D	30 "H ₂ O	5 psi

PERFORMANCE CHARACTERISTICS

($V_s = 12$ V, $T_A = 25$ °C, common-mode pressure = 0 psig, pressure applied to port 2)

RLOH001D

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	-0.5	0	+0.5	mV
Full scale span (FSS) ²	9	10	11	
Combined non-linearity and hysteresis ³			±0.25	%FSS
Temperature effects (0 to 50 °C) ⁴	Span		±200	μV
	Offset		±250	
Offset warm-up shift ⁵		±100		
Offset position sensitivity (±1 g)		±50		
Input resistance		4.5		kΩ
Output resistance		1.5		
Common mode voltage ⁶		6		V



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PERFORMANCE CHARACTERISTICS (cont.)

($V_s = 12\text{ V}$, $T_A = 25\text{ °C}$, common-mode pressure = 0 psig, pressure applied to port 2)

RLOH005D

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	-0.5	0	+0.5	mV
Full scale span (FSS) ²	19	20	21	
Combined non-linearity and hysteresis ³			±0.25	%FSS
Temperature effects (0 to 50°C) ⁴	Span		±200	μV
	Offset		±150	
Offset warm-up shift ⁵		±50		
Offset position sensitivity (±1 g)		±10		
Input resistance		10		kΩ
Output resistance		1.5		
Common mode voltage ⁶		6		V

RLOH010D

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	-0.5	0	+0.5	mV
Full scale span (FSS) ²	19	20	21	
Combined non-linearity and hysteresis ³			±0.25	%FSS
Temperature effects (0 to 50°C) ⁴	Span		±200	μV
	Offset		±150	
Offset warm-up shift ⁵		±50		
Offset position sensitivity (±1 g)		±10		
Input resistance		13		kΩ
Output resistance		1.5		
Common mode voltage ⁶		6		V



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PERFORMANCE CHARACTERISTICS (cont.)

($V_s = 12\text{ V}$, $T_A = 25\text{ °C}$, common-mode pressure = 0 psig, pressure applied to port 2)

RLOH020D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset		-0.5	0	+0.5	mV
Full scale span (FSS) ²		19	20	21	
Combined non-linearity and hysteresis ³				±0.25	%FSS
Temperature effects (0 to 50°C) ⁴	Span			±200	µV
	Offset			±150	
Offset warm-up shift ⁵			±50		
Offset position sensitivity (±1 g)			±5		
Input resistance			10		kΩ
Output resistance			2		
Common mode voltage ⁶			6		V

RLOH030D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset		-0.5	0	+0.5	mV
Full scale span (FSS) ²		19	20	21	
Combined non-linearity and hysteresis ³				±0.25	%FSS
Temperature effects (0 to 50°C) ⁴	Span			±200	µV
	Offset			±150	
Offset warm-up shift ⁵			±50		
Offset position sensitivity (±1 g)			±5		
Input resistance			12		kΩ
Output resistance			1.5		
Common mode voltage ⁶			6		V

Notes

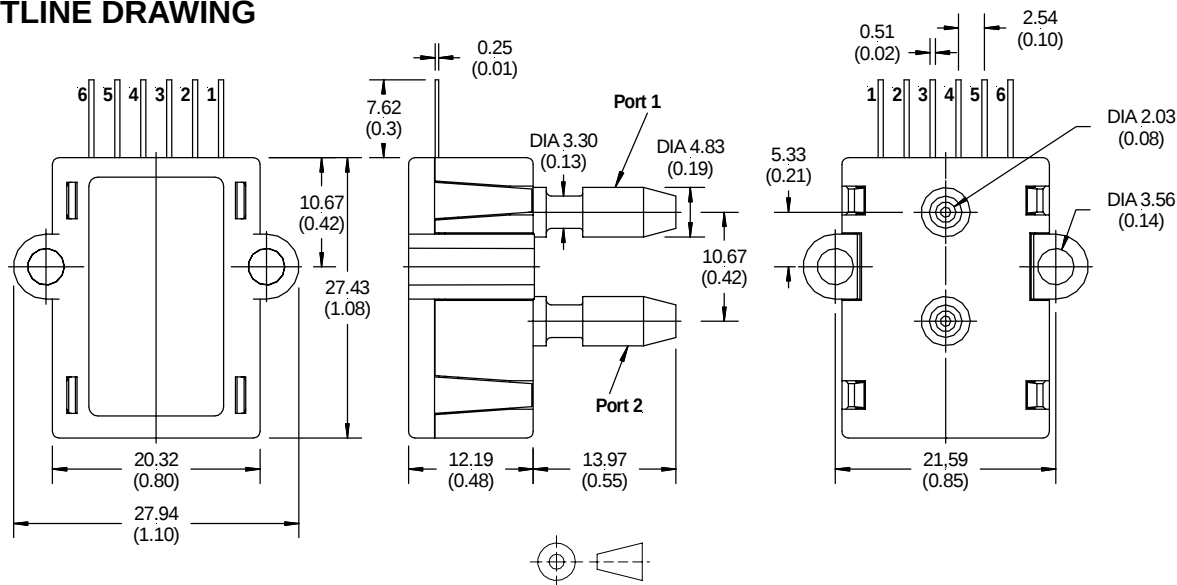
- ¹ The maximum over pressure may be applied without causing durable shifts of the electrical parameters of the sensing element.
- ² Full scale span (FSS) is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure.
- ³ Non-linearity refers to the **Best Straight Line** fit measured for offset pressure, full-scale pressure and ½ full-scale pressure.
- ⁴ Shift is relative to 25°C.
- ⁵ Shift within the first hour of excitation applied to the sensor.
- ⁶ This is the common mode voltage of the output arms (pin 3 and 5) for $V_s = 12\text{ V}$



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OUTLINE DRAWING



mass: approx. 10 g

third angle projection

dimensions in mm (inches)

ORDERING INFORMATION - AVAILABLE LISTINGS

Note: Preferred listings are highlighted in grey

Pressure range	Gage/differential devices
1 "H ₂ O	RLOH001D
5 "H ₂ O	RLOH005D
10 "H ₂ O	RLOH010D
20 "H ₂ O	RLOH020D
30 "H ₂ O	RLOH030D

Sensortech PRO services:

- Extended guarantee period of 2 years
- Improved performance characteristics
- Custom product modifications and adaptations even for small quantities
- Advanced logistics models for supply inventory and short delivery times
- Technical support through application engineers on the phone or at your site
- Fastest possible technical response for design and QA engineers
- ... plus other services on request

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