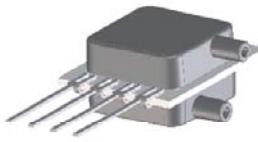


Miniature Amplified Low Pressure Sensors

Low Pressure (0.5" H₂O to 30 " H₂O) Sensors



Features

- 0 to 0.5" H₂O to 0 to 30 " H₂O Pressure Ranges
- Temperature Compensated
- Calibrated Zero and Span

Applications

- Medical Instrumentation
- Environmental Controls
- HVAC

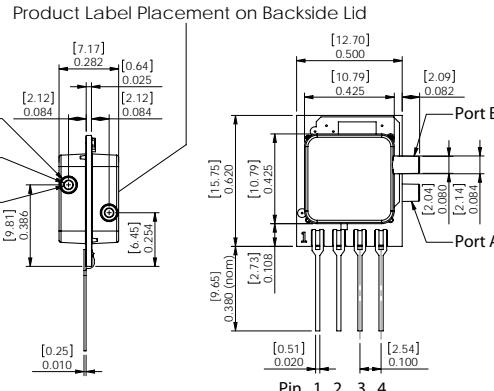
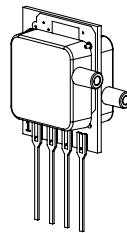
General Description

The Miniature Amplified Output pressure sensor is based upon a proprietary technology to reduce all output offset or common mode errors. This model provides a calibrated amplified output with superior output offset characteristics. Output offset errors due to change in temperature, stability to warm-up, stability to long time period, and position sensitivity are all significantly reduced when compared to conventional compensation methods. In addition the sensor utilizes a silicon, micromachined, stress concentration enhanced structure to provide a very linear output to measured pressure.

These calibrated and temperature compensated sensors give an accurate and stable output over a wide temperature range. This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like.

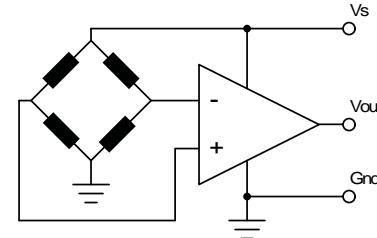
The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage between 4.5 and 5.5

Physical Dimensions



D1 version, D2 version, G verison

Equivalent Circuit



Pin 1: Vs
 Pin 2: Gnd
 Pin 3: Vout
 Pin 4: Do Not Connect

Approvals

MKT	DATE	MFG	DATE	ENG	DATE	QA	DATE
<input type="checkbox"/> As Is <input type="checkbox"/> With Change		<input type="checkbox"/> As Is <input type="checkbox"/> With Change		<input type="checkbox"/> As Is <input type="checkbox"/> With Change		<input type="checkbox"/> As Is <input type="checkbox"/> With Change	

All Sensors

DS-0101 Rev B

Pressure Sensor Characteristics Maximum Ratings		Environmental Specifications	
Supply Voltage, Vs	+4.5 to +5.5 Vdc	Temperature Ranges	
Common-mode pressure	10 psig	Compensated	5 to 50° C
Lead Temperature (soldering 2-4 sec.)	250°C	Operating	-25 to 85° C
		Storage	-40 to 125° C
		Humidity Limits	0 to 95% RH (non condensing)

Standard Pressure Ranges

Part Number	Operating Pressure	Nominal Span	Proof Pressure	Burst Pressure
0.5 INCH-Dx-4V-MINI	± 0.5 inH2O	4 V	100 inH2O	200 inH2O
1 INCH-Dx-4V-MINI	±1 inH2O	4 V	100 inH2O	200 inH2O
1 INCH-G-4V-MINI	0 - 1 inH2O	4 V	100 inH2O	200 inH2O
5 INCH-Dx-4V-MINI	± 5 inH2O	4 V	200 inH2O	300 inH2O
5 INCH-G-4V-MINI	0 - 5 inH2O	4 V	200 inH2O	300 inH2O
10 INCH-Dx-4V-MINI	±10 inH2O	4 V	200 inH2O	300 inH2O
10 INCH-G-4V-MINI	0 - 10 inH2O	4 V	200 inH2O	300 inH2O
20 INCH-Dx-4V-MINI	±20 inH2O	4 V	300 inH2O	500 inH2O
20 INCH-G-4V-MINI	0 - 20 inH2O	4 V	300 inH2O	500 inH2O
30 INCH-Dx-4V-MINI	±30 inH2O	4 V	500 inH2O	800 inH2O
30 INCH-G-4V-MINI	0 - 30 inH2O	4 V	500 inH2O	800 inH2O

For differential pressure D1 is the package with two pressure ports the same side, D2 has two ports the opposite sides.

Performance Characteristics for 0.5 INCH-Dx-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	±0.5	-	inH2O
Output Span, note 5	±1.90	±2.0	±2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	±120	mV
Offset Warm-up Shift, note 3	-	±10	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±10	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	±2	%FSS

Performance Characteristics for 1 INCH-Dx-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	± 1.0	-	inH2O
Output Span, note 5	± 1.90	± 2.0	± 2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	± 60	mV
Offset Warm-up Shift, note 3	-	± 10	-	mV
Offset Position Sensitivity ($\pm 1g$)	-	± 5	-	mV
Offset Long Term Drift (one year)	-	± 10	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	± 2	%FSS

Performance Characteristics for 1 INCH-G-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure	-	1.0	-	inH2O
Output Span, note 5	3.90	4.0	4.10	V
Offset Voltage @ zero pressure	0.15	0.25	0.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	± 60	mV
Offset Warm-up Shift, note 3	-	± 10	-	mV
Offset Position Sensitivity ($\pm 1g$)	-	± 5	-	mV
Offset Long Term Drift (one year)	-	± 10	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	± 2	%FSS

Performance Characteristics for 5 INCH-Dx-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	± 5.0	-	inH2O
Output Span, note 5	± 1.90	± 2.0	± 2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	± 40	mV
Offset Warm-up Shift, note 3	-	± 5	-	mV
Offset Position Sensitivity ($\pm 1g$)	-	± 5	-	mV
Offset Long Term Drift (one year)	-	± 5	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	± 1	%FSS

Performance Characteristics for: 5 INCH-G-4V-MINI

Parameter, NOTE 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure	-	5.0	-	inH2O
Output Span, NOTE 5	3.90	4.0	4.10	V
Offset Voltage @ zero pressure	0.15	0.25	0.35	V
Offset Temperature Shift (5°C-50°C), NOTE 2	-	-	±40	mV
Offset Warm-up Shift, NOTE 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, NOTE 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), NOTE 2	-	-	±1	%FSS

Performance Characteristics for: 10 INCH-Dx-4V-MINI

Parameter, NOTE 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	±10.0	-	inH2O
Output Span, NOTE 5	±1.90	±2.0	±2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), NOTE 2	-	-	±20	mV
Offset Warm-up Shift, NOTE 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, NOTE 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), NOTE 2	-	-	±1	%FSS

Performance Characteristics for: 10 INCH-G-4V-MINI

Parameter, NOTE 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure	-	10.0	-	inH2O
Output Span, NOTE 5	3.90	4.0	4.10	V
Offset Voltage @ zero pressure	0.15	0.25	0.35	V
Offset Temperature Shift (5°C-50°C), NOTE 2	-	-	±20	mV
Offset Warm-up Shift, NOTE 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, NOTE 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), NOTE 2	-	-	±1	%FSS

Performance Characteristics for 20 INCH-Dx-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	±20.0	-	inH2O
Output Span, note 5	±1.90	±2.0	±2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	±20	mV
Offset Warm-up Shift, note 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	±1	%FSS

Performance Characteristics for 20 INCH-G-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure	-	20.0	-	inH2O
Output Span, note 5	3.90	4.0	4.1	V
Offset Voltage @ zero pressure	0.15	0.25	0.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	±20	mV
Offset Warm-up Shift, note 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	±1	%FSS

Performance Characteristics for 30 INCH-Dx-4V-MINI

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure	-	±30.0	-	inH2O
Output Span, note 5	±1.90	±2.0	±2.10	V
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	V
Offset Temperature Shift (5°C-50°C), note 2	-	-	±20	mV
Offset Warm-up Shift, note 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, note 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), note 2	-	-	±1	%FSS

Performance Characteristics for 30 INCH-G-4V-MINI

Parameter, NOTE 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure	-	30.0	-	inH ₂ O
Output Span, NOTE 5	3.9	4.0	4.1	V
Offset Voltage @ zero pressure	0.15	0.25	0.35	V
Offset Temperature Shift (5°C-50°C), NOTE 2	-	-	±20	mV
Offset Warm-up Shift, NOTE 3	-	±5	-	mV
Offset Position Sensitivity (±1g)	-	±5	-	mV
Offset Long Term Drift (one year)	-	±5	-	mV
Linearity, hysteresis error, NOTE 4	-	0.05	0.25	%FSS
Span Shift (5°C-50°C), NOTE 2	-	-	±1	%FSS

Pressure Response: for any pressure applied the response time to get to 90% of pressure applied is typically less than 500 microseconds.

Specification Notes

NOTE 1: ALL PARAMETERS ARE MEASURED AT 5.0 VOLT EXCITATION, FOR THE NOMINAL FULL SCALE PRESSURE AND ROOM TEMPERATURE UNLESS OTHERWISE SPECIFIED.

PRESSURE MEASUREMENTS ARE WITH POSITIVE PRESSURE APPLIED TO THE B-PORT.

NOTE 2: SHIFT IS RELATIVE TO 25°C.

NOTE 3: SHIFT IS WITHIN THE FIRST HOUR OF EXCITATION APPLIED TO THE DEVICE.

NOTE 4: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.

NOTE 5: THE VOLTAGE ADDED TO THE OFFSET VOLTAGE AT FULL SCALE PRESSURE. NOMINALLY THE OUTPUT VOLTAGE RANGE IS 0.25 TO 4.25 VOLTS FOR MINUS TO PLUS FULL SCALE PRESSURE.

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ООО "ЛайфЭлектроникс"

"LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибуторских договоров

Мы предлагаем:

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помочь разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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