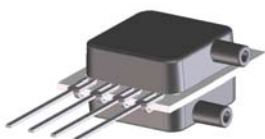


sensors

all



- 0 to 1" H₂O to 0 to 30" H₂O Pressure Ranges
- Matched pressure port volumes
- Temperature Compensated
- Calibrated Zero and Span

- Medical Instrumentation
- Environmental Controls
- HVAC

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Pressure Sensor Characteristics Maximum Ratings

Supply Supply Voltage VS	+4.5 to +5.5 Vdc
Common-mode pressure	10 psig
Lead Temperature (soldering 2-4 sec.)	250°C

Environmental Specifications

Temperature Ranges	
Compensated	5 to 50° 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
1 INCH-Dx-4V-MINI	±1 In H2O	4 V	100 In H2O	200 In H2O
1 INCH-G-4V-MINI	0 - 1 In H2O	4 V	100 In H2O	200 In H2O
5 INCH-Dx-4V-MINI	± 5 In H2O	4 V	200 In H2O	300 In H2O
5 INCH-G-4V-MINI	0 - 5 In H2O	4 V	200 In H2O	300 In H2O
10 INCH-Dx-4V-MINI	±10 In H2O	4 V	200 In H2O	300 In H2O
10 INCH-G-4V-MINI	0 - 10 In H2O	4 V	200 In H2O	300 In H2O
20 INCH-Dx-4V-MINI	±20 In H2O	4 V	300 In H2O	500 In H2O
20 INCH-G-4V-MINI	0 - 20 In H2O	4 V	300 In H2O	500 In H2O
30 INCH-Dx-4V-MINI	±30 In H2O	4 V	500 In H2O	800 In H2O
30 INCH-G-4V-MINI	0 - 30 In H2O	4 V	500 In H2O	800 In H2O

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

Equivalent Circuit

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

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

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

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure		1.0		"H ₂ O
Output Span, note 5	3.90	4.0	4.10	volt
Offset Voltage @ zero pressure	0.15	0.25	0.35	volt
Offset Temperature Shift (5°C-50°C), note 2			±60	mvolt
Offset Warm-up Shift, note 3		±10		mvolt
Offset Position Sensitivity (±1g)		±15		mvolt
Offset Long Term Drift (one year)		±10		mvolt
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Span Shift (5°C-50°C), note 2			±2	%span

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

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure		±5.0		"H ₂ O
Output Span, note 5	±1.90	±2.0	±2.10	volt
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	volt
Offset Temperature Shift (5°C-50°C), note 2			±40	mvolt
Offset Warm-up Shift, note 3		±5		mvolt
Offset Position Sensitivity (±1g)		±5		mvolt
Offset Long Term Drift (one year)		±5		mvolt
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Span Shift (5°C-50°C), note 2			±1	%span



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

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

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

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

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

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

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

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure		±20.0		“H2O
Output Span, note 5	±1.90	±2.0	±2.10	volt
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	volt
Offset Temperature Shift (5°C-50°C), note 2			±20	mvolt
Offset Warm-up Shift, note 3		±5		mvolt
Offset Position Sensitivity (±1g)		±5		mvolt
Offset Long Term Drift (one year)		±5		mvolt
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Span Shift (5°C-50°C), note 2			±1	%span

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

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure		20.0		“H2O
Output Span, note 5	3.90	4.0	4.1	volt
Offset Voltage @ zero pressure	0.15	0.25	0.35	volt
Offset Temperature Shift (5°C-50°C), note 2			±20	mvolt
Offset Warm-up Shift, note 3		±5		mvolt
Offset Position Sensitivity (±1g)		±5		mvolt
Offset Long Term Drift (one year)		±5		mvolt
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Span Shift (5°C-50°C), note 2			±1	%span

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

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, differential pressure		±30.0		“H2O
Output Span, note 5	±1.90	±2.0	±2.10	volt
Offset Voltage @ zero differential pressure	2.15	2.25	2.35	volt
Offset Temperature Shift (5°C-50°C), note 2			±20	mvolt
Offset Warm-up Shift, note 3		±5		mvolt
Offset Position Sensitivity (±1g)		±5		mvolt
Offset Long Term Drift (one year)		±5		mvolt
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Span Shift (5°C-50°C), note 2			±1	%span



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

Parameter, NOTE 1	Minimum	Nominal	Maximum	Units
Operating Range, gage pressure		30.0		"H2O
Output Span, NOTE 5	3.9	4.0	4.1	volt
Offset Voltage @ zero pressure	0.15	0.25	0.35	volt
Offset Temperature Shift (5°C-50°C), NOTE 2			±20	mvolt
Offset Warm-up Shift, NOTE 3		±5		mvolt
Offset Position Sensitivity (±1g)		±5		mvolt
Offset Long Term Drift (one year)		±5		mvolt
Linearity, hysteresis error, NOTE 4		0.05	0.25	%fs
Span Shift (5°C-50°C), NOTE 2			±1	%span

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

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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