

# Solid State Pressure Switch and Sensor with Digital Display

## PDS-1110 Series



The PDS-1110 compact all-in-one output device and digital gauge reduces the number of components in your system. With two switch outputs and one analog output, it's possible to monitor the high and low limits for pressure control and system conditions.

The analog output allows software control over the entire vacuum and pressure range with the ability to track system vacuum/pressure changes in real time. The switches are highly flexible due to selectable output functions such as switching point hysteresis and window comparator.

This is a compound switch device that operates from full vacuum to full pressure, see specifications on page 310 for the operating ranges.

### Switch Options:

- 3 Mounting brackets – rear mount, bottom mount, panel mount
- Electrical quick disconnects
- 2 Output types – PDS-1110 (PNP) or PDS-1110-N (NPN)

### Ideal Applications:

- Material handling
- Process control
- Leak testing
- Monitoring

### Features/Benefits

- Fully Programmable – simple push button calibration – no tools required
- Operating range includes both vacuum and pressure
- Full 3 digit display – red LED
- Analog output 1-5 VDC and two switch outputs
- Globally accepted display scales: "Hg, mmHg, PSI, bar, mbar, gf/cm sq, kgf/cm sq, kPa
- Dust and drip proof enclosure to IP65 IEC standards
- Solid state dependability
- 2 ports – back and bottom for easy plumbing and design flexibility
- RoHS compliant

### How to Specify:

- **Sensor only:** part number, i.e., PDS-1110 (PNP), PDS-1110-N (NPN)
- **Bracket only:** part number, i.e., -RMB (rear mount bracket) -BMB (bottom mount bracket), -PMB (panel mount bracket)
- **Sensor & Bracket:** part number i.e., PDS-1110-RMB
- **Sensor with Quick Disconnect:** part number i.e., PDS-1110-QD

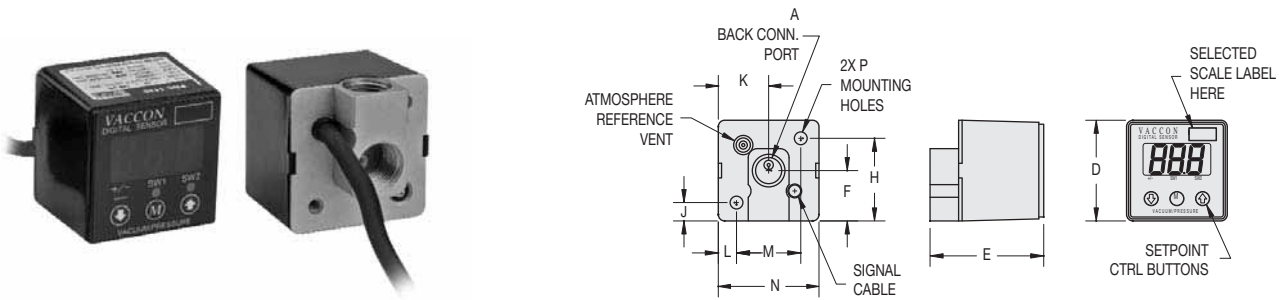


### On-line Configurator and CAD Drawings @ [www.vaccon.com](http://www.vaccon.com)

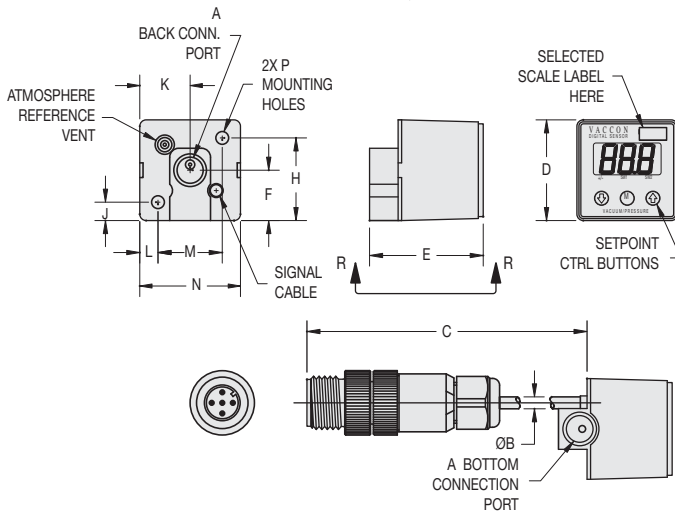
New powerful design tool saves you time by configuring the pump you need on-line. When complete, simply download the CAD drawing in any one of 13 different CAD formats and insert it right into your design.

*Get the product you need,  
in the format you like!*

## Standard PDS-1110 Digital Switch/Sensor



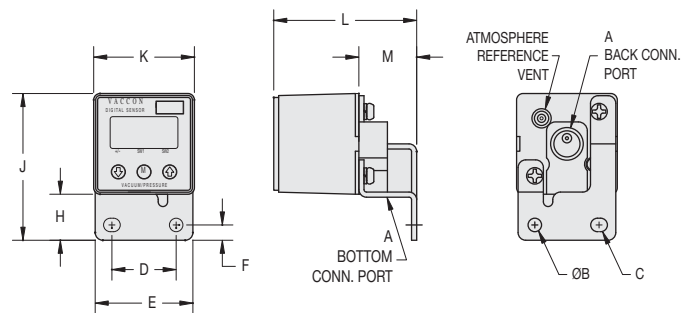
**PDS-1110-QD**



**Quick Disconnect**

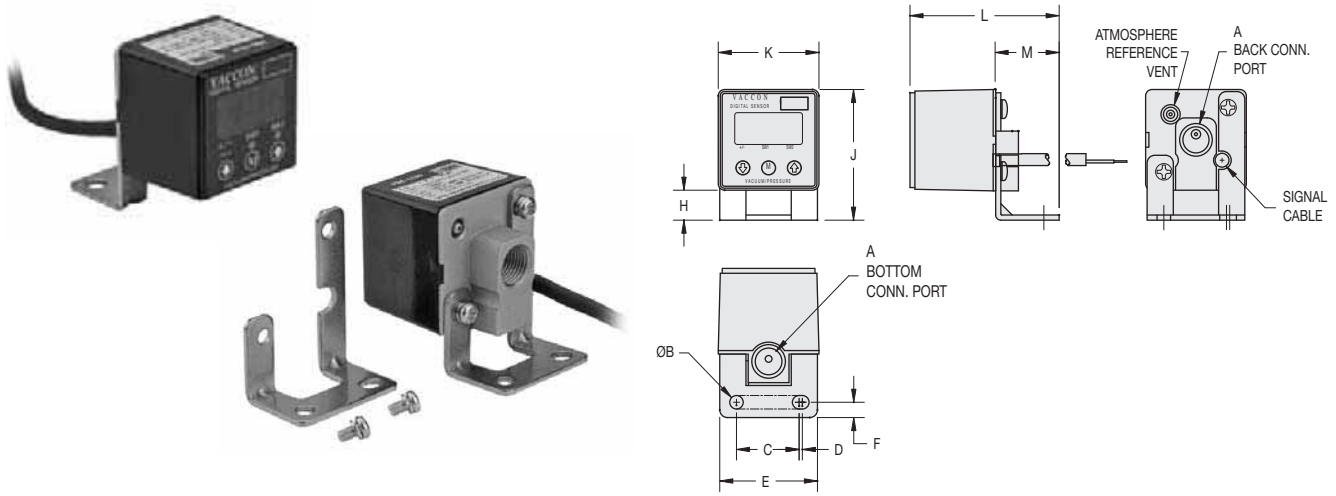
Model #	Dimensions														Weight
		A	B	C	D	E	F	H	J	K	L	M	N	P	
PDS-1110 (N)	in.	1/8 NPT F	0.15	77.62	1.23	1.39	0.62	1.02	0.23	0.62	0.22	0.79	1.23	M3 x 0.5	3.2 oz
	mm	(2X)	3.8	1971.5	31.2	35.3	15.7	25.9	5.8	15.7	5.6	20.1	0.00	M3 x 0.5	91 g
PDS-1110 (N)-QD	in.	1/8 NPT F	0.15	75.60	1.23	1.39	0.62	1.02	0.23	0.62	0.22	0.79	1.23	M3 x 0.5	4.3 oz
	mm	(2X)	3.8	1920.5	31.2	35.3	15.7	25.9	5.8	15.7	5.6	20.1	0.00	M3 x 0.5	122 g

## Optional Mounting Brackets: Rear Mount Bracket – RMB



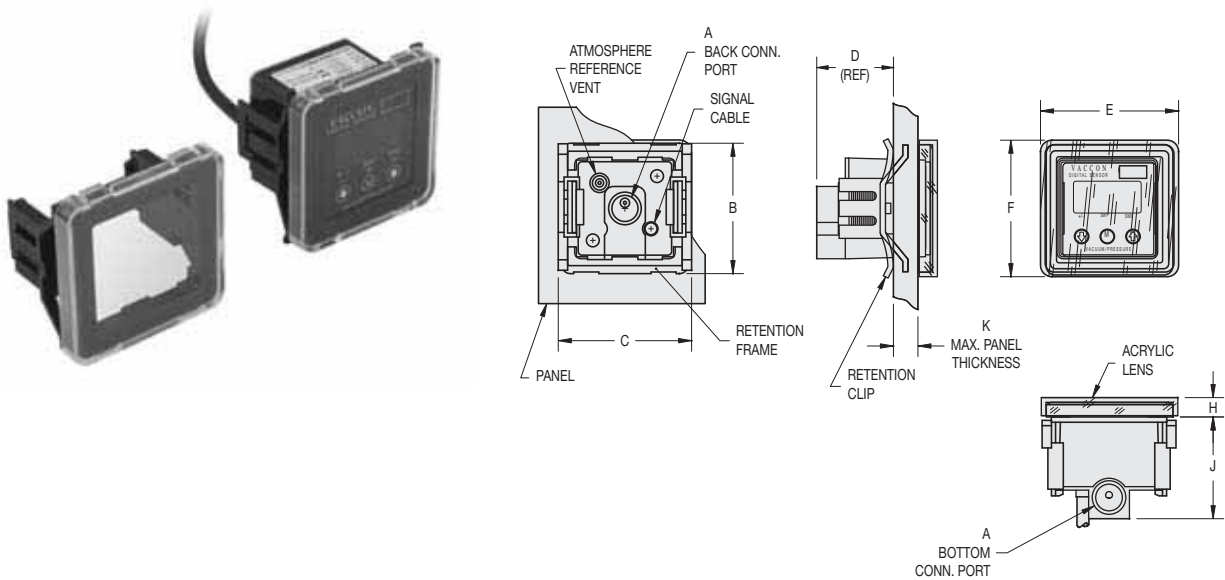
Model #	Dimensions												Weight
		A	B	C	D	E	F	H	J	K	L	M	
PDS-1110 (N)-RMB	in.	1/8 NPT F	0.17	0.17 x 0.20	0.79	1.20	0.19	0.56	1.80	1.23	1.75	0.71	3.6 oz
	mm	(2X)	4.3	4.3 x 5.1	20.1	30.5	4.8	14.2	45.7	31.2	44.5	18.0	102 g

## Optional Mounting Brackets: Bottom Mount Bracket – BMB



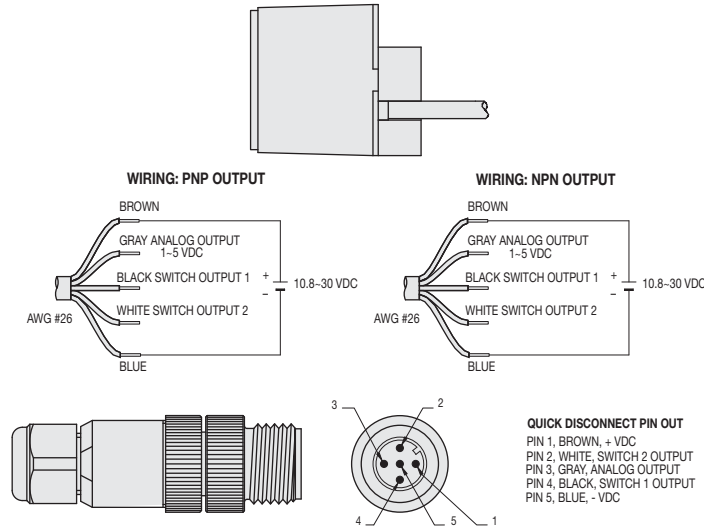
Model #	Dimensions												Weight
		A	B	C	D	E	F	H	J	K	L	M	
PDS-1110 (N) - BMB	in.	1/8 NPT F	0.17	0.17 x 0.20	0.29	1.20	0.19	0.37	1.60	1.23	1.82	0.78	3.6 oz
	mm	(2X)	4.3	4.3 x 5.1	7.4	30.5	4.8	9.4	40.6	31.2	46.2	19.8	102 g

## Optional Mounting Brackets: Panel Mount Bracket – PMB



Model #	Dimensions											Weight
		A	B	C	D	E	F	H	J	K		
PDS-1110 (N) - PMB	in.	1/8 NPT F	1.60	1.63	1.09	1.69	1.67	0.24	1.25	0.15	3.6 oz	
	mm	(2X)	40.6	41.4	27.7	42.9	42.4	6.1	31.8	3.8	102 g	

## Wiring Schematic for PDS-1110



### PDS-1110 Specifications:

	PDS-1110	PDS-1110-N
Rated Pressure Range:	-14.5 to 145 PSI [-101.5 mbar to 10 bar]	
Proof Pressure:	217 PSI [15 bar]	
Burst Pressure:	290 PSI [20 bar]	
Media:	Non-Corrosive, Dry Gases	
Supply Voltage:	10.8 to 30 VDC	
Current Consumption:	70 mA Max.	
Switch Type:	Transistor Open Collector	
Sensing/Switching Material:	Single Crystal Silicon	
Output:	(2) PNP Switched, (1) 1-5 VDC Analog	(2) NPN Switched, (1) 1-5 VDC Analog
Electrical Connection:	5 Wire - 26 AWG - 7' (2M), Optional 5 pin, M12 Quick Disconnect	
Hysteresis:	Adjustable – 0 to 300 Digit	
Repeatability:	+/- 0.2% Full Scale, 1 Digit	
Response Time:	5 ms Max.	
Circuit Protection:	Exists	
Max. Switch Voltage Load:	30 VDC	
Max. Switched Current Load:	100mA	
Thermal Error:	+/- 3% Full Scale/121°F [50°C]	
Thermal Compensation:	None	
Display:	Full 3 Digit LED (sampling rate: 4/sec)	
Switch Indication:	SW1-Green LED ON (Switched Output ON) SW2-Red LED ON (Switched Output ON)	
IP Protection:	IP65	
Operating Temperature:	15°F to 125°F [-10°C to 52°C]	
Operating Humidity:	35 to 85% RH (No Condensation)	
Construction:	ABS/Aluminum Die-Cast/Buna	
Fitting/Connection:	2-1/8" NPT Female, Back and Bottom	
Net Weight:	3.7 oz [105g]	
Safety and Environmental Compliance:	CE, RoHS	