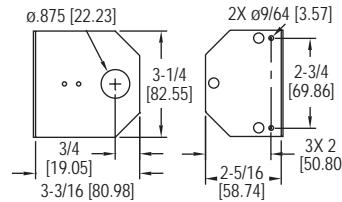
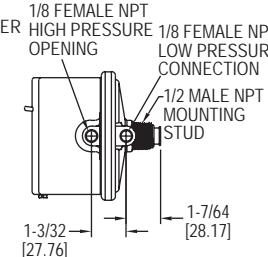
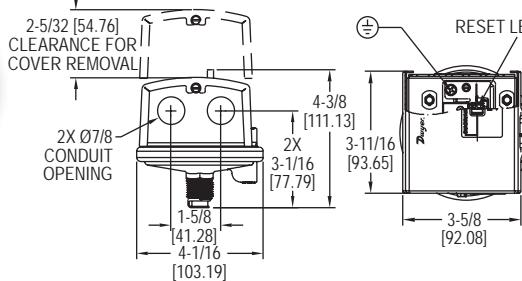


# DPDT LOW DIFFERENTIAL PRESSURE SWITCHES

Manual Reset, No Power Required



A-389 mounting bracket



Note: Shown with included mounting bracket.  
Bracket can rotate and be tightened at any angle.

One of our most popular differential pressure switches is now available with a DPDT switch and manual reset. The **Series 1831 DPDT Low Differential Pressure Switches** combine small size with 4% set point repeatability. Absolutely no power is required to operate the DPDT switch. Set point adjustment on the switch is easily accessible for modifying the set point.

The Series 1831 DPDT Low Differential Pressure Switches with Manual Reset eliminate common problems associated with typical high duct static cutout installations. Since the 1831 requires absolutely no power to drive its outputs, a separate power loop and its associated additional wiring and conduit is alleviated, reducing material and labor installation costs. Both control contacts of the Series 1831 activate at the same time. The potential of the lead switch shutting down the fan preventing the lag switch from sending an alarming signal to the DDC is no longer a probable system liability. Potential costly maintenance calls are diminished. Unlike typical switches that possess only a single conduit entry for both control loops, the Series 1831 provides two conduit connections simplifying wiring while eliminating additional conduit tees.

## FEATURES/BENEFITS

- No power to operate DPDT switch means no additional wiring or conduit reduces material and installation labor costs
- Easy access for modifying set point simplifies adjustment
- Both control contacts activate at the same time eliminating system issues where lead switch activities prevent the lagging switch from sending a signal

## APPLICATIONS

- High duct static cutout applications
- HVAC

## MODEL CHART

Model	Description	Range (in w.c.)
1831-1-RA-S	Manual reset DPDT, activate on increase	2.5 to 9
1831-2-RA-S	Manual reset DPDT, activate on increase	7.5 to 23

## SPECIFICATIONS

**Service:** Air and non-combustible, compatible gases.

**Wetted Materials:** Consult factory.

**Temperature Limits:** -30 to 180°F (-34 to 82.2°C).

**Pressure Limits:** 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.

**Switch Type:** 2 SPDT.

**Actuation Time Difference:** 1 millisecond maximum actuation delay between contacts.

**Repeatability:** ±4% max.

**Electrical Rating:** 4 A @ 125/250 VAC.

**Electrical Connections:** Screw type terminal block.

**Process Connections:** 1/8" female NPT.

**Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.

**Set Point Adjustment:** Screw type inside mounting spud.

**Weight:** 1 lb 2 oz (522 g).

## ACCESSORIES

Model	Description
A-489	4" straight static pressure tip with flange
A-491	6" straight static pressure tip with flange
A-493	8" straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16" ID rubber or plastic tubing; 4" insertion depth; includes mounting screws
A-302F-B	303 SS static pressure tip with mounting flange; for 3/16" rubber or plastic tubing; 6" insertion depth; includes mounting screws
A-302F-C	303 SS static pressure tip with mounting flange; for 3/16" rubber or plastic tubing; 8" insertion depth; includes mounting screws

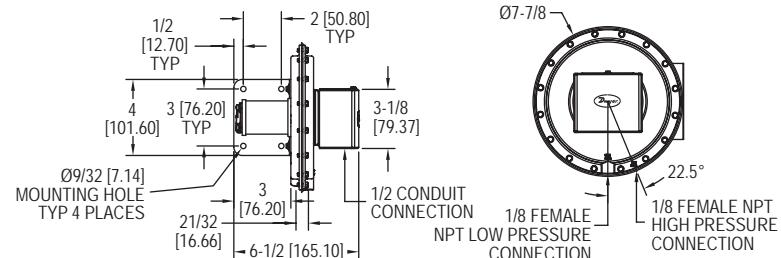
Process Tubing Options: See page 453 (Gage Tubing Accessories)

## SERIES 1640



# FLOATING CONTACT NULL SWITCH FOR HIGH AND LOW ACTUATION

Visual Set Point Adjustment, Adjustable Null Zone



The unique electric switch design in the **Series 1640 Floating Contact Null Switch for High and Low Actuation** is another Dwyer Instrument, Inc. innovation. The Dwyer® Model 1640 Differential Pressure Switch resembles the high precision large diaphragm Series 1630 switches. However, the Model 1640 is equipped with a single pole, double throw floating contact switch (not snap acting) so it functions as a null switch.

As the diaphragm moves in response to pressure changes, it moves the floating contact to cause switching action at two preset points with no switching action between these points. The "high" circuit will be closed when rising pressure differential reaches the preset level. The "low" circuit will be closed when falling pressure differential reaches the preset level.

## FEATURES/BENEFITS

- Floating "null" switch supports applications requiring two set point actions such as open and close damper control
- Visible set point indicator simplifies operation and trouble shooting
- Large diaphragm provides low range accuracy providing precise control

## APPLICATIONS

- Damper positioning
- Duct air control

## SPECIFICATIONS

**Service:** Air and non-combustible, compatible gases.

**Wetted Materials:** Consult factory.

**Temperature Limits:** -30 to 110°F (-34.4 to 43.3°C).

**Pressure Limits:** 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.

**Switch Type:** SPDT floating contact (not snap action).

**Electrical Rating:** Non-inductive — 2.5 A @ 110 VAC; 1.5 A @ 220 VAC; 1 A @ 24 VDC; 0.5 A @ 110 VAC; Inductive —

1 A @ 110 VAC; 0.5 A @ 220 VAC; 0.5 A @ 24 VDC (de-rate 70-80% for very slow pressure changes).

**Electrical Connections:** 3 screw type.

**Process Connections:** 1/8" female NPT.

**Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.

**Set Point Adjustment:** Screw type.

**Weight:** 4 lb 13 oz (2.18 kg).

**Agency Approvals:** CE.

## MODEL CHART

Model	Ranges in w.c.	Adjustable Null Span	
		Min. Set Point	Max. Set Point
1640-0	.01 to 0.2	.01	.03
1640-1	0.2 to 1.0	.02	.06
1640-2	1.0 to 4.0	.03	.12

Process Tubing Options: See page 453 (Gage Tubing Accessories)