

# Air Flow Switches



DBSL

## DESCRIPTION

Duct air flow switches.

## APPLICATION

Control and monitor air and non aggressive gases flow in ducts, chambers, etc., of heating, cooling, and air conditioning equipment.

## FEATURES

- NEMA 1 & 4 housing
- Cut-in and cut-out
- Stainless steel paddle
- Brass level

## SPECIFICATIONS

<b>Type of operation</b>	On/Off, single-stage, micro switch
<b>Output</b>	1 SPDT, or 2 SPDT, 24/250 VAC, 15 (8) A
<b>Flow rate switching</b>	
- Cut-out	Min. 197 ft/min (1.0 m/sec)* Max. 1,575 ft/min (8.0 m/sec)
- Cut-in	Min. 492 ft/min (2.5 m/sec) Max. 1,811 ft/min (9.2 m/sec)
<b>Flow rate setting adjustment</b>	Internal screw
<b>Sensing element</b>	Paddle
<b>Paddle size</b>	3.2 x 6.9 in. (80 x 175 mm)
<b>Paddle w/level - Length</b>	7.9 in. (200 mm)
<b>Flow applications</b>	Air and non aggressive gases
<b>Paddle material</b>	Stainless steel
<b>Paddle level material</b>	Brass
<b>Permissible ambient temperature</b>	
- Housing	-40°F to 185°F (-40°C to 85°C)
- Paddle	14°F to 185°F (-10°C to 85°C)
<b>Permissible ambient humidity</b>	10..90% RH, non-condensing
<b>Wire</b>	
- Connection	Terminal with wire retaining screws
- Size	Maximum 14 AWG (2.5 mm <sup>2</sup> )
<b>Cable entry</b>	M20 fitting, replaceable by 1/2" conduit connector
<b>Housing</b>	
- Material	Base: Steel, galvanized Cover: ABS, fire retardant
- Color	Dark gray/blue
- Protection	NEMA 1 (IP 40), or NEMA 4 (IP 65)
- Dimensions	4.3 x 2.8 x 2.8 in. (108 x 70 x 72 mm)
<b>Installation</b>	Duct mounted
<b>Ship weight</b>	1.6 lb (0.7 kg)



certified ISO 9001

## Part Numbers

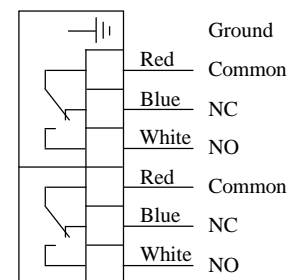
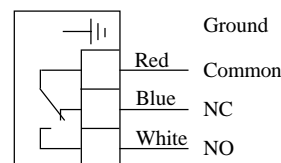
- 1 SPDT, NEMA 1
- 1 SPDT, NEMA 4
- 2 SPDT, NEMA 1
- 2 SPDT, NEMA 4

- DBSL-1EPL-1US
- DBSL-1EPL-4US
- DBSL-1EPLB-1US
- DBSL-1EPLB-4US
- DBSL-1EPL

## DBSL-1EPLB

## WIRING DIAGRAM

- Increased flow and attained cut-in setting:  
Red & White connected
- Decreased flow and attained cut-out setting:  
Red & Blue connected



\* Factory calibrated to minimum cut-out switching / high sensitivity  
To adjust for less sensitivity / higher flow rate, turn adjustment screw located below switch clockwise.

**INSTALLATION**

The flow switch should be mounted into a duct or chamber where the air paddle can freely point horizontally downwards. To avoid air swirl and paddle instability, straight zones should be provided for a length of 5 times the diameter of duct upstream and downstream from the installation location.

**NOTE**

The units are factory calibrated to the minimum switch-off value. To increase the set value, adjust the range screw clockwise. Due to the risk of fracture at air speeds of higher than 984 ft/min (5.0 m/sec), the paddle must be cut off on the marked side. When the paddle is cut off, the minimum cut-out value increases from 197 ft/min (1.0 m/sec) to 492 ft/min (2.5 m/sec).

**DBSL DIMENSIONS (mm)**

