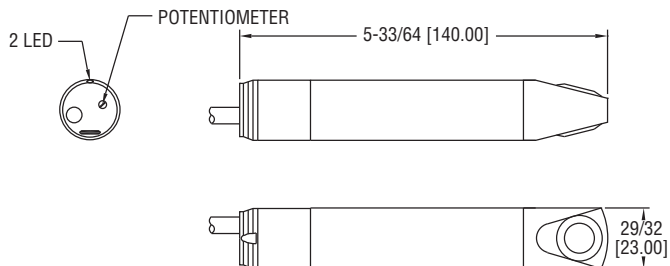




Series AVFS Air Flow Switch

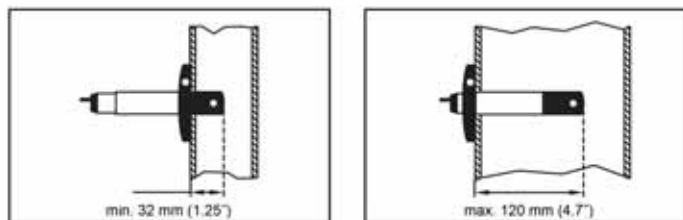
Specifications - Installation and Operating Instructions



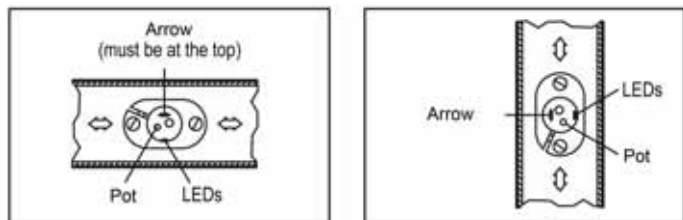
The new Series AVFS Adjustable Air Flow Switch complements the Dwyer Instruments line of thermo-anemometer transmitters and handheld instruments. The AVFS is specifically designed to monitor air flow in ducts and provides a 3A contact output to indicate a change or loss of flow. Simply turn on the fan or air handling unit and adjust the set-point via the potentiometer to show normal status. Then alter a damper or decrease fan speed to activate the AVFS. The AVFS will signal a loss of flow and the N.O. SPST output will indicate the detected decrease. For ease of installation and system trouble-shooting, the Series AVFS possesses a red/green LED indication to provide local status if the air flow is above (green) or below (red) the set-point. The AVFS provides a +/-5% set-point repeatability across a full scale range of 1-10 m/s (197-1969 fpm) and includes a mounting bracket for quick duct mounting. The AVFS Series Adjustable Air Flow Switches come in a compact, rugged PBT enclosure that is rated NEMA 4X (IP65), making them ideal for any ventilation system installation or similar BAS application.

**Mounting**

Mount the airflow monitor by means of the mounting clamp provided. Diameter of the mounting hole for the unit: .9 in (24 mm) mm. If mounting is to be airtight, use the gasket provided. The sensing head must be completely immersed into the airflow and should be in the range of the highest flow velocity, if possible. Installation depth: min. 1.25 in (32 mm), max. 4.7 in (120 mm).



Align the unit in the airflow; the arrow on the cap must point in the direction of flow.



**SPECIFICATIONS**

**Air Velocity Range:** 197-1969 FPM (1-10 m/s).

**Temperature Limits:** 5 to 122°F (-10 to 50°C).

**Humidity Limits:** 0-90% RH.

**Wetted Materials:** PBT Body, Titanium Sensor.

**Maximum Pressure:** 14.7 psig (1 bar).

**Housing:** PBT.

**Repeatability:** 5%.

**Contact Rating:** 3 A (30 VDC/250 VAC).

**Response Time:** 3-60 seconds. Varies with flow and set point.

**Power Requirement:**

AVFS-01: 80...250 AC/DC (47...63 Hz AC).

AVFS-02: 24 VDC ±25%.

**Power Consumption:** 3 VA.

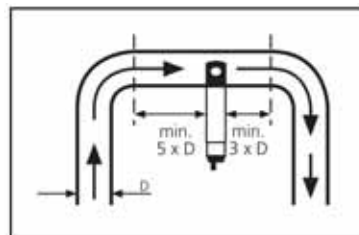
**Electrical Connection:** 6.5 ft (2 m) cable.

**Enclosure Rating:** NEMA 4X (IP65).

**Display:** 1 Red LED/1 Green LED.

**Weight:** 7.2 oz (203 g).

**Agency Approvals:** CE.



To avoid malfunction a minimum distance between the air flow monitor and bends, valves or similar must be observed.

**Electrical Connection**



The unit must only be connected by an electrician.

The national and international regulations for the installation of electrical equipment must be observed.

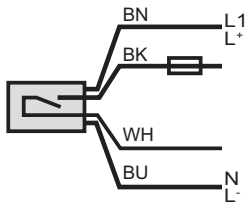
Voltage supply for units up to 60 V to EN50178, SELV, PELV. Insert a miniature fuse according to the technical data sheet, if specified.

- Disconnect power.
- Connect the unit according to the indications per wiring diagrams.

## Wiring

### AVFS-01

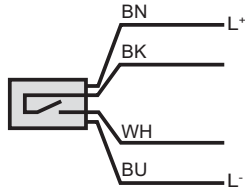
Wire colors  
 BN brown  
 BU blue  
 BK black  
 WH white



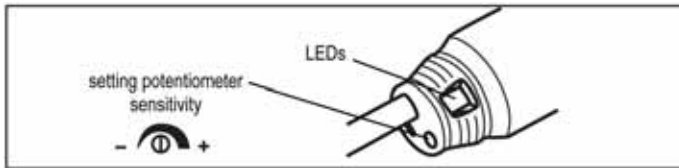
**Note:** Miniature fuse to IEC60127-2 sheet 1,  $\leq 5$  A (fast acting)

### AVFS-02

Wire colors  
 BN brown  
 BU blue  
 BK black  
 WH white



## Adjustment



1	<ul style="list-style-type: none"> <li>Apply the operating voltage.</li> <li>Switch on the flow (preset value) and keep it constant. → Both LEDs (red and green) light; after approx. 60 s one LED goes off.</li> </ul>	
2	If the red LED lights: <ul style="list-style-type: none"> <li>turn the pot slowly clockwise until the red LED goes off and the green LED comes on.</li> </ul>	If the green LED lights: <ul style="list-style-type: none"> <li>turn the pot slowly counterclockwise until the green LED goes off and the red LED comes on.</li> <li>Turn the pot again slowly clockwise until the green LED comes on.</li> </ul>
3	If fluctuations as a result of the operating conditions are to be compensated for: <ul style="list-style-type: none"> <li>turn the pot further clockwise after the green LED has lit.</li> </ul>	

After application of the supply voltage both LEDs light for about 60 s, the output relay is energized (power-on delay time). The unit then is ready for operation.

## MAINTENANCE

Upon final installation of the Series AVFS Air Flow Switch, no routine maintenance is required. The Series AVFS is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.