

## DIFFERENTIAL PRESSURE FLOW SENSOR DPFS SERIES

### DESCRIPTION

The Kele DPFS Series differential pressure flow sensor is the most economical way to sense airflow velocity in VAV ducts, and other small size branch ducts in HVAC systems.

The DPFS Series is available in 4 different lengths for flow sensing in duct sizes from 4" to 18" (10 to 46 cm) and can reliably sense velocities above 1000 FPM (feet/minute) or 305 MPM (meters/minute).



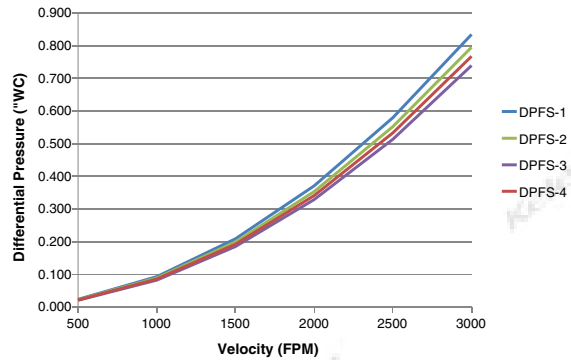
### INSTALLATION

Select the appropriate DPFS model to fit the duct size; the flow sensor length needs to be at least half the duct width in order to get a good reading of the velocity pressure. The DPFS-1 is for 4" to 6" ducts; the DPFS-2 is for 6" to 8" ducts; the DPFS-3 is for 8" to 10" ducts and the DPFS-4 is for 10" to 18" ducts.

The DPFS requires 10 straight duct diameters upstream and 10 downstream for accurate readings. The sensor must be mounted with the flow direction arrow accurately pointing in the direction of the airflow. To ensure reliable performance, the sensor pickup openings must be kept free of dirt and dust accumulation.

Mounting the DPFS Series sensor requires a 7/8" (2.2 cm) hole in the duct, through which the probe inserts. Using 1/4" OD poly tubing, connect the DPFS "H" port to a differential pressure gauge or transmitter "High" input port, and the "L" port to the gauge or transmitter's "Low" input port.

### FLOW PERFORMANCE



|        |                                      |
|--------|--------------------------------------|
| DPFS-1 | Velocity = 3285( $\sqrt{\Delta P}$ ) |
| DPFS-2 | Velocity = 3365( $\sqrt{\Delta P}$ ) |
| DPFS-3 | Velocity = 3490( $\sqrt{\Delta P}$ ) |
| DPFS-4 | Velocity = 3425( $\sqrt{\Delta P}$ ) |

Notes: 1. Test data based on round duct sizes 6" (DPFS-1), 8" (DPFS-2), 10" (DPFS-3) and 12" (DPFS-4)  
2. Flow coefficients were derived by averaging data for each sensor size.

### SPECIFICATIONS

|                                  |  |
|----------------------------------|--|
| <b>Connections</b>               | 3/16" (0.48 cm) OD connections for 1/4" (0.64 cm) OD poly tubing                                   |
| <b>Operating Temperature</b>     | 40° to 120°F (4° to 49°C)  |
| <b>Mounting Flange</b>           | 4" x 2" flange with integral foam gasket and two 3/16" holes spaced 3.3" (8.4 cm) center-to-center |
| <b>Materials of Construction</b> | ABS  |
| <b>Dimensions</b>                |  |
| DPFS-1                           | 4.0"W x 2.1"H x 3.6"L (10.2 x 5.3 x 9.1 cm)  |
| DPFS-2                           | 4.0"W x 2.1"H x 6.0"L (10.2 x 5.3 x 15.2 cm)   |

|                  |   |
|------------------|---|
| <b>DPFS-3</b>    | 4.0"W x 2.1"H x 8.3"L (10.2 x 5.3 x 21.1 cm)  |
| <b>DPFS-4</b>    | 4.0"W x 2.1"H x 10.6"L (10.2 x 5.3 x 26.9 cm) |
| <b>Weight</b>    |   |
| DPFS-1           | 0.04 lb (0.02 kg)                             |
| DPFS-2           | 0.06 lb (0.03 kg)                             |
| DPFS-3           | 0.07 lb (0.032 kg)                            |
| DPFS-4           | 0.08 lb (0.036 kg)                            |
| <b>Approvals</b> | RoHS  |
| <b>Warranty</b>  | 2 years                                       |

### ORDERING INFORMATION

| MODEL  | DESCRIPTION   |
|--------|---|
| DPFS-1 | Differential pressure flow sensor, 3.0" insertion, for 4" to 6" ducts, 1/4" poly tube connection, 1 sensing point   |
| DPFS-2 | Differential pressure flow sensor, 5.2" insertion, for 6" to 8" ducts, 1/4" poly tube connection, 2 sensing point   |
| DPFS-3 | Differential pressure flow sensor, 7.5" insertion, for 8" to 10" ducts, 1/4" poly tube connection, 3 sensing point  |
| DPFS-4 | Differential pressure flow sensor, 9.7" insertion, for 10" to 18" ducts, 1/4" poly tube connection, 4 sensing point |

Cost-saving 10-packs are available; order model with "....10PAK" suffix.

| RELATED PRODUCTS    |  |
|---------------------|--|
| CX, RX, XLdp Series | Ashcroft differential pressure transmitters      |
| M264 Series         | Setra differential pressure transmitter          |
| T-101               | 1/4" OD black poly tubing, 1 coil, 250 ft (76 m) |