

DPT-2015 Series

# Differential Pressure Transmitter for VAV Box Applications



**DPT-2015**

## Description

The DPT-2015 Differential Pressure Transmitter senses differential pressure in pressure independent Variable Air Volume (VAV) applications. It sends an analog signal that is proportional to velocity pressure to a VAV controller. The DPT-2015 is available mounted to an M9104 or M9106 Electric Non-spring Return Actuator, or to the Johnson Controls VAV controller for reliable damper positioning in closed-loop applications.

The DPT-2015 may also be mounted alone as an independent pressure transmitter or used for damper positioning in other VAV systems.

(See the *M9104-AGx-2N Electric Non-spring Return Product Bulletin, LIT-2681117* or the *M9106-AGx-2N0x Series Electric Non-spring Return Actuators Product Bulletin, LIT-2681126* and the *Variable Air Volume Controller Technical Bulletin, LIT-6363040* for more information on these products.)

## Features

- integral pressure transmitter with dead-ended input ports eliminates inline filter and maintenance and prevents sensor contamination
- 0 to 1.5 in. W.C. sensor range satisfies the requirements for virtually all terminal box applications
- 0.5 to 4.5 VDC output is compatible with a wide variety of HVAC controllers
- no warmup period allows for immediate commissioning after powering up
- capacitive sensor technology provides long-term stability and accuracy
- 4 VDC output span replaces DPT-2000-2 when used as recommended

## Accessories

Code Number	Description
<b>CBL-2000-1</b>	20 in. (0.5 m) wiring harness, accepted by Underwriters Laboratories, Inc.® (UL) for plenum use, is included with the M9104-AGS-2N or M9106-AGS-2N02 and may be ordered separately; connects the DPT-2015 and actuator to the VAV controller.
<b>CBL-2000-2</b>	20 in. (0.5 m) plenum rated wiring harness connects the DPT-2015 and M9104-AGS-2N or M9106-AGS-2N02 to the VAV controller.
<b>CBL-2000-3</b>	72 in. (1.8 m) plenum rated wiring harness connects the DPT-2015 and M9104-AGS-2N or M9106-AGS-2N02 to the VAV controller.
<b>DPT-2015-MNT</b>	Mounting kit for DPT-2015 used to replace the DPT-2000 or retrofit to the EDA-2040 without mounting bosses (date code prior to 9540)

## Specifications

DPT-2015 Differential Pressure Transmitter for VAV Box Applications	
<b>Power Requirements</b>	15 VDC (14.5 to 17 VDC) unregulated; 15 mA maximum
<b>Pressure Range</b>	0 to 1.5 in. W.C. (0 to 374 Pa) maximum
<b>Overpressure Limit</b>	15 in. W.C. (3.74 kPa)
<b>Output Voltage</b>	0.5 to 4.5 VDC into load impedance of 25,000 ohms minimum
<b>Accuracy</b>	<b>Linearity</b> ±1.0% full span maximum
	<b>Repeatability/Hysteresis</b> ±0.05% full span maximum
<b>Position Effects</b>	<b>Zero Shift</b> ±0.1 VDC maximum
	<b>Span Shift</b> ±0.05 VDC maximum
<b>Stability (One Year)</b>	<b>Zero Shift</b> ±0.5% full span
	<b>Span Shift</b> ±2% full span
<b>Temperature Effects</b>	<b>Zero Shift</b> ±0.06% of full span per F° maximum over 60 to 120°F (15.6 to 49.0°C) range
	<b>Span Shift</b> ±1.5% of full span maximum over 60 to 120°F (15.6 to 49.0°C) range
<b>Power Supply Effects (a)</b>	<b>Zero Shift</b> ±0.01 VDC maximum
	<b>Span Shift</b> +0.02, -0.04 VDC maximum

## Applications

The DPT-2015 is used to measure differential pressure to determine the air velocity for calculating airflow. It measures differential pressure and generates a proportional voltage signal. The voltage signal from the DPT-2015 is read by the VAV controller and converted to airflow in cubic feet per minute (cfm). The DPT-2015 is available factory mounted to an M9104 or M9106 actuator, or factory mounted to a Johnson Controls VAV controller as an AS-VAVDPT. Calibration is not required other than zero calibration, which is performed within the controller.

For more information, refer to the *DPT-2015 Series Differential Pressure Transmitter for VAV Box Applications Product Bulletin, LIT-216200X*, or the *DPT-2015 Series Differential Pressure Transmitter for VAV Box Applications Installation Instructions, Part No. 24-7547-18*.

## Repair Parts

Replace the unit.

## To Order

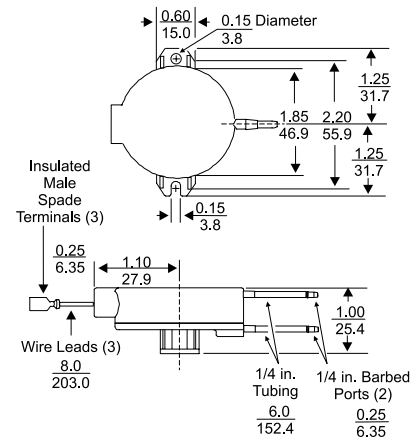
Specify the code number from the following selection chart.

## Selection Chart

Code Number	Description
<b>DPT-2015-0</b>	0 to 1.5 in. W.C. (0 to 374 Pa) differential pressure transmitter
<b>DPT-2015-1</b>	DPT-2015-0 with DPT-2015-MNT Mounting Kit

## Repair Parts

Replace the unit.



**Dimensions, in. (mm)**

## ***DPT-2015 Series Differential Pressure Transmitter for VAV Box Applications (Continued)***

### **Specifications (Continued)**

<b>DPT-2015 Differential Pressure Transmitter for VAV Box Applications</b>	
<b>Terminals</b>	1/4 in. male spade terminals with 8 in. (203 mm) wire length
<b>Pressure Connections</b>	6 in. (152 mm) length of silicone tubing with barbed fittings for 1/4 in. (6.35 mm) O.D. tubing
<b>Ambient Operating Conditions</b>	32 to 140°F (0 to 60°C); 90% RH maximum, non-condensing
<b>Ambient Storage Conditions</b>	-22 to 185°F (-30 to 85°C); 90% RH maximum, non-condensing
<b>Dimensions (H x W x D)</b>	1.00 x 2.71 x 2.5 in. (254 x 68.8 x 63.5 mm)
<b>Agency Compliance</b>	UL 916 Listed , File 107041, CCN PAZX CSA C22.2, No. 205 Certified, File LR68965, Class 4812 05

(a) For power supply changes of 14.5 to 17.1 VDC, referenced to 15.0 VDC.