

DPT系列

压差传感器

技术说明书



产品概述

DPT系列微差压变送器用于测量差压或表压，提供低至 $\pm 50\text{Pa}$ ，高至 $0-10\text{kPa}$ 的量程，适用于：

- HVAC 暖通空调
- 智能楼宇能源管理
- 环境保护
- VAV 及风阀控制
- 过滤系统及风扇监控
- 洁净间压力及管道风速监控

产品特点

- 全不锈钢电容型敏感元件
- 良好的温度稳定性和长期稳定性
- 电源误接线保护
- 翻盖设计方便现场接线和维护

技术参数

性能参数

精度(RSS)(恒温下)	$\pm 1.0\%FS$
工作温度	$0...50\text{ }^{\circ}\text{C}$
工作湿度	$0...95\%RH$ (不凝露)
储存温度	$-10...+70\text{ }^{\circ}\text{C}$
温度影响(零点/满程偏移)	$\pm 0.06\%FS/^{\circ}\text{C}$
长期稳定性	$\pm 1.0\%FS/\text{Year}$
安装位置影响	$\pm 0.6\%FS$ (最大值)
响应时间	$<20\text{ms}$ (63%FS)
测量介质	空气或无腐蚀性不导电气体
压力接口	$3/16"$ (4.8mm)外径接口
电气接口	可插拔式接线端子
外壳材质	聚碳酸酯(UL94V-0 认证)
外壳防护等级	IP65
重量	约 220 克
认证	CE

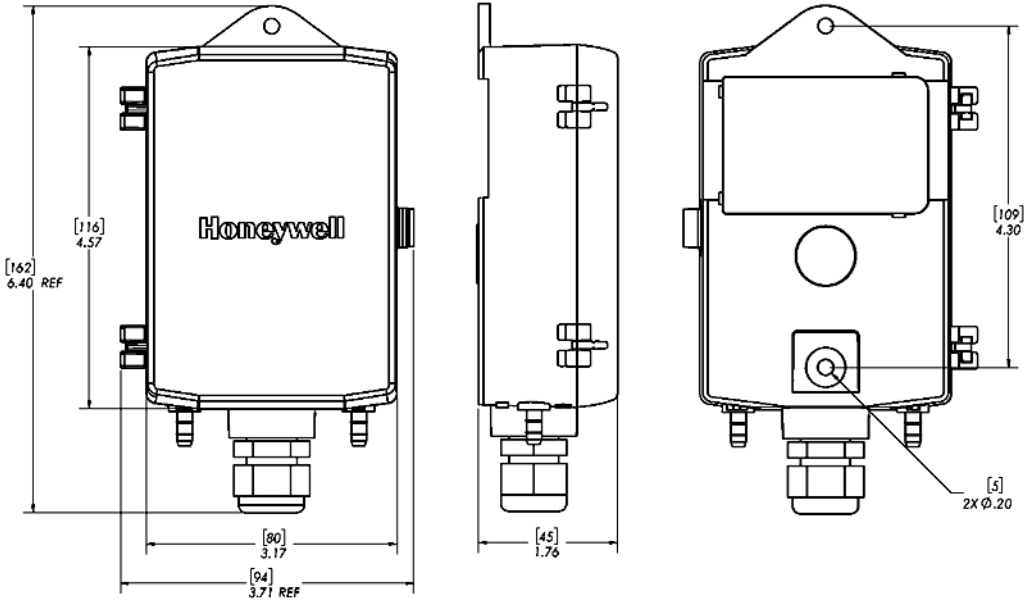
电气参数

供电电压(电压型)	$12...30\text{ Vac/Vdc}$
供电电压(电流型)	$9...30\text{ Vdc}$
输出阻抗(电压型)	100 欧姆
负载范围(电流型)	$0...800\text{ 欧姆}$

安装和使用注意事项

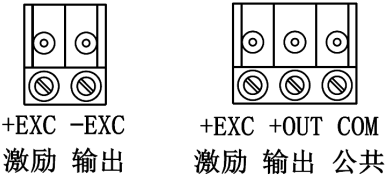
- 推荐垂直安装于无震动表面，避免底面向上倒装
- 安装后可以微调零点电位器以消除误差
- 信号线布线应远离高压及动力线路以避免干扰
- 禁用高压气体清洁气管和压力接口以免过压损坏
- 没有高精度压力基准源时请勿进行满量程调整

外形尺寸 [mm] inch



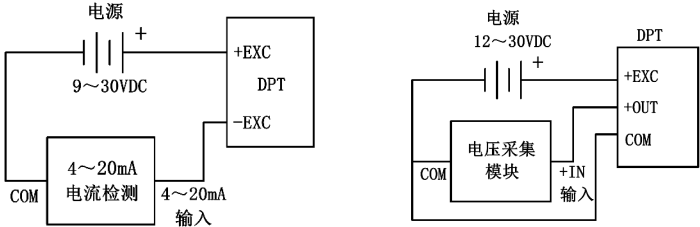
安装接线

接线端子示意图



两线电流输出型 三线电压输出型

信号接线示意图



两线电流输出型 三线电压输出型

订货型号

产品型号	描述	产品型号	描述
DPT0050U2-A	压差变送器, -50...0...+50 Pa, 4~20mA	DPT0250U1-A	压差变送器, 0...+250 Pa, 4~20mA
DPT0050U2-B	压差变送器, -50...0...+50 Pa, 0~10V	DPT0250U1-B	压差变送器, 0...+250 Pa, 0~10V
DPT0100U2-A	压差变送器, -100...0...+100 Pa, 4~20mA	DPT0500U1-A	压差变送器, 0...+500Pa, 4~20mA
DPT0100U2-B	压差变送器, -100...0...+100 Pa, 0~10V	DPT0500U1-B	压差变送器, 0...+500 Pa, 0~10V
DPT0500U2-A	压差变送器, -500...0...+500 Pa, 4~20mA	DPT1000U1-A	压差变送器, 0...+1000 Pa, 4~20mA
DPT0500U2-B	压差变送器, -500...0...+500 Pa, 0~10V	DPT1000U1-B	压差变送器, 0...+1000 Pa, 0~10V
DPT1000U2-A	压差变送器, -1000...0...+1000 Pa, 4~20mA	DPT2500U1-A	压差变送器, 0...+2500 Pa, 4~20mA
DPT1000U2-B	压差变送器, -1000...0...+1000 Pa, 0~10V	DPT2500U1-B	压差变送器, 0...+2500 Pa, 0~10V
DPT0100U1-A	压差变送器, 0...+100 Pa, 4~20mA	DPT5000U1-A	压差变送器, 0...+5000 Pa, 4~20mA
DPT0100U1-B	压差变送器, 0...+100 Pa, 0~10V	DPT5000U1-B	压差变送器, 0...+5000 Pa, 0~10V
		DPT0010T1-A	压差变送器, 0...+10000 Pa, 4~20mA
		DPT0010T1-B	压差变送器, 0...+10000 Pa, 0~10V



DPT Series

Differential Pressure Transmitter

SPECIFICATION



Technical Specification

Performance

Accuracy (RSS at Const. temp)	±1.0%FS
Working temp. range	0...50 °C
Working temp. range	0...95%RH(non-condense)
Storage temp. range	-10...+70 °C
Thermal Effects (Zero/Span)	±0.06%FS/°C
Long Term Stability	±1.0%FS/Year
Position Effects	±0.6%FS(max.)
Response Time	<20ms (63%FS)
Pressure Media	Air, Non-conductive or Non-corrosive Gas
Pressure Inlet	external Ø3/16(4.8mm)
Electrical Connection	pluggable terminal strip
Chassis Material	Poly Carbonate (UL 94 V-0)
IP Grade	IP65
Weight	about 220g
Certification	CE

Application

The DPT series differential pressure transmitter uses a dead-ended stainless steel welded capacitive sensing element that requires minimal amplification and delivers excellent accuracy and long-term stability in critical installations. It offers pressure range as low as +/-50Pa and up to 0~10kPa. Typical applications include:

- HVAC
- Building Automation
- Environment Protection
- VAV and valve control
- Filtering system and fans control
- Clean room pressure and duct wind velocity monitor

Features

- All Stainless-Steel Capacitance Sensor
- Excellent Thermal Stability and Long-Term Stability
- Reverse Excitation Protection
- Foldable Cover Design: Easy wiring and maintenance

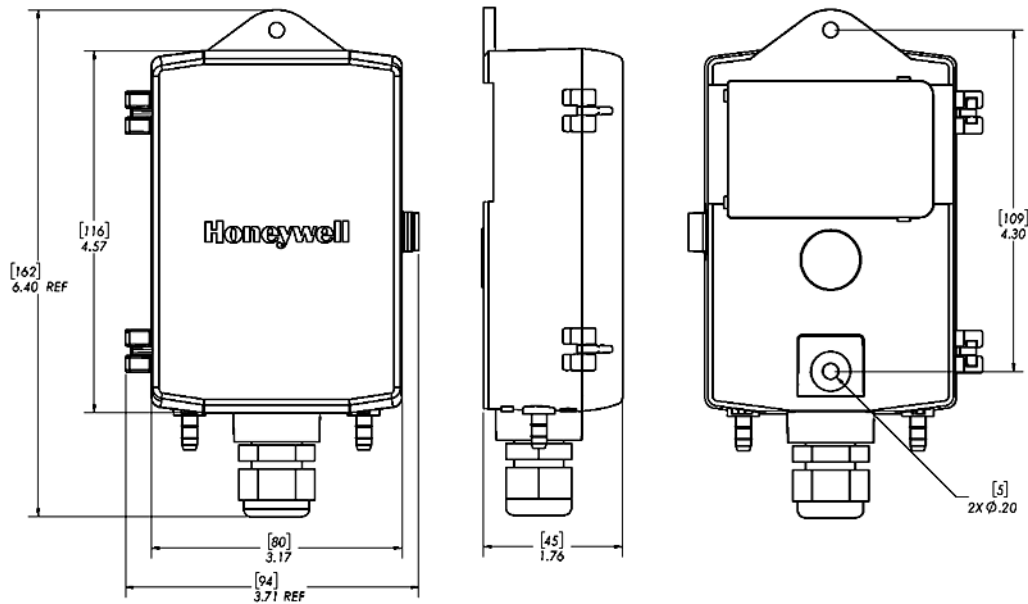
Electrical

Excitation (Voltage)	12...30 VAC/VDC
Excitation (Current)	9...30 VDC
Impedance (Voltage model)	100 Ohm
Load Resistance (Current model)	0...800 Ohm

Installation Notes

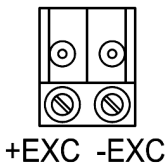
- Vertical mounting on vibration isolated surface is preferred, DO NOT mount the product with its cover facing downward
- To eliminate zero error fine adjust the zero potentiometer after installation is allowed
- Signal wire routing should be isolated with high voltage or power line
- DO NOT use high pressure air to test/clean the pressure tubing & pressure ports
- DO NOT calibrate the product when a high accuracy pressure standard is not available

Size [mm] Inch

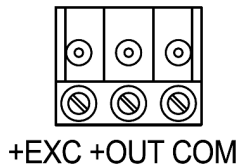


Installation

Terminal

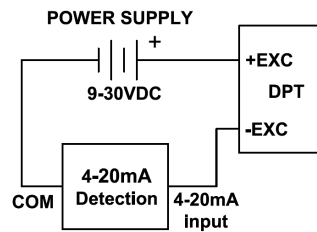


2-Wire Current output

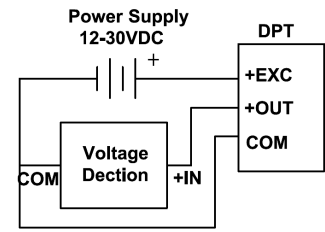


3-Wire Voltage output

Wiring Diagram



2-Wire Current output



3-Wire Voltage output

Ordering

SKU	Description	SKU	Description
DPT0050U2-A	DP Transmitter, -50...0...+50 Pa, 4~20mA	DPT0250U1-A	DP Transmitter, 0...+250 Pa, 4~20mA
DPT0050U2-B	DP Transmitter, -50...0...+50 Pa, 0~10V	DPT0250U1-B	DP Transmitter, 0...+250 Pa, 0~10V
DPT0100U2-A	DP Transmitter, -100...0...+100 Pa, 4~20mA	DPT0500U1-A	DP Transmitter, 0...+500Pa, 4~20mA
DPT0100U2-B	DP Transmitter, -100...0...+100 Pa, 0~10V	DPT0500U1-B	DP Transmitter, 0...+500 Pa, 0~10V
DPT0500U2-A	DP Transmitter, -500...0...+500 Pa, 4~20mA	DPT1000U1-A	DP Transmitter, 0...+1000 Pa, 4~20mA
DPT0500U2-B	DP Transmitter, -500...0...+500 Pa, 0~10V	DPT1000U1-B	DP Transmitter, 0...+1000 Pa, 0~10V
DPT1000U2-A	DP Transmitter, -1000...0...+1000 Pa, 4~20mA	DPT2500U1-A	DP Transmitter, 0...+2500 Pa, 4~20mA
DPT1000U2-B	DP Transmitter, -1000...0...+1000 Pa, 0~10V	DPT2500U1-B	DP Transmitter, 0...+2500 Pa, 0~10V
DPT0100U1-A	DP Transmitter, 0...+100 Pa, 4~20mA	DPT5000U1-A	DP Transmitter, 0...+5000 Pa, 4~20mA
DPT0100U1-B	DP Transmitter, 0...+100 Pa, 0~10V	DPT5000U1-B	DP Transmitter, 0...+5000 Pa, 0~10V
		DPT0010T1-A	DP Transmitter, 0...+10000 Pa, 4~20mA
		DPT0010T1-B	DP Transmitter, 0...+10000 Pa, 0~10V

Honeywell