TxLDP16
Differential pressure transmitter

Product operation instruction

PRODUCT DESCRIPTION

This product is suitable for HVAC, energy management systems, VAV and fan control, environmental pollution control static pipelines and clean room pressure, smoke hood control, oven pressurization and furnace ventilation control and other fields.

TxLDP16 pressure sensor detects differential pressure or gauge pressure, and converts this pressure difference into a proportional electrical signal output.**TxLDP16**provides 0～5Vdc or 0～10Vdc, 4～20mA analog output or RS-485 digitaloutputforbuildingenergymanagement systems. This sensor can measure the precise pressure and flow required for building pressurization and air flow control.

The TxLDP16 series pressure sensor can provide a rangeas low as 0～±50Pa and as high as 0～±10,000Pa. The static accuracy is ±1.0%FS at normal temperature, the temperature compensation range is -10～+60℃, and thethermaldriftoutsidethetemperature compensation range is less than 0.05%FS/℃.

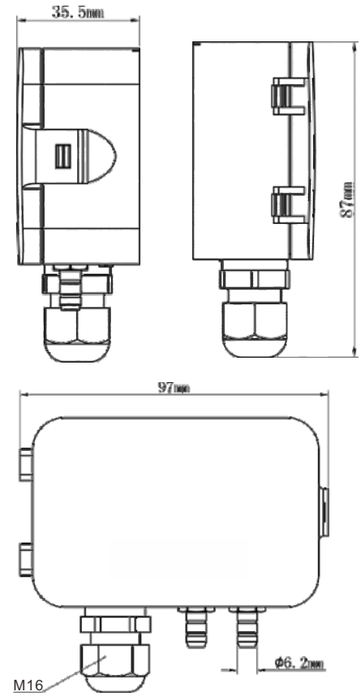
TxLDP16 adopts imported pressure core, which has the characteristics of sensitive pressure response, stable long-term output, and superior temperature performance.

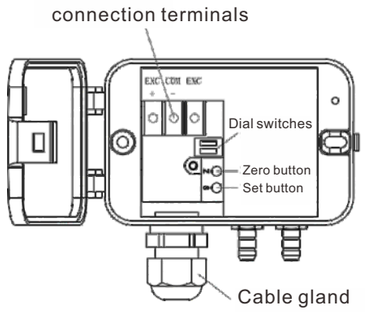
SPECIFICATION

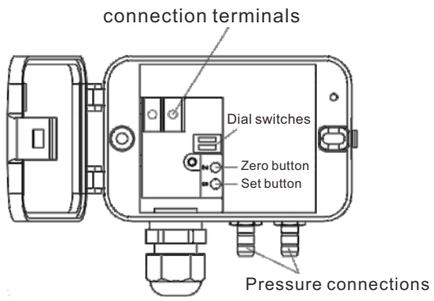
Accuracy	±1.0%FS
Compensated temperatures	-10～+60℃
Media	Air or neutral gas
Zero/Full range deviation %FS/℃	±0.01
Over pressure capacity	5Kpa(±100Pa),10Kpa(±1000Pa) 80Kpa(±10Kpa)
Output signal	0～5/10VDC\3-wire 4～20mA\2-wire RS485 communication
Supply voltage	0～5/10VDC\16～30VDC 4～20mA\10～30VDC(non-polarity) RS485 communication\ 12～30VDC
External load	0～5/10VDC\≥5KΩ 4～20mA\≤250Ω
Ambient temperature	-20～70℃

Shell material	Industrial plastics, flame retardant grade UL94-V0
Pressure connection	Ribbed Ø 6.2 mm
Cable gland	For cables Ø 8 mm maximum
Weight	140g

MECHANICAL PARAMETER







FUNCTIONS

1. Analogue output

TxLDP16 have two output mode: voltage output (0～5/10VDC) and current output(4～20mA). Voltage output has three-wire whichneeds to be wired according to the label; the current output has two-wire, and there is no polarity, and the wiring can be exchanged at will. Output RS-485 communication signal, Modbus standard communication protocol or BACnet MS/TP communication protocol can be selected. The Modbus standard communication protocol uses the two function codes 0x03 (read holding register) and 0x06 (write a single register) in the protocol. For details of the protocol, see **TxLDP16**-Mod Communication Protocol"; for details of the BACnet MS/TP protocol, see "TxLDP16-BACnet Communication protocol".The pin is the RS-485 A-B line matching resistance jumper. When the communication is 300 meters, the distance sensor jumper is connected to reduce the communication signal reflection interference.

2. Zero Button

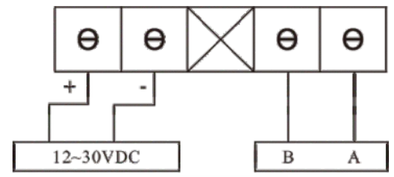
Push the zero button to calibrate when the differential pressure between positive port and negative port reach to zero(The LED would light when the button be pushed).

3.Output Response Time Setting

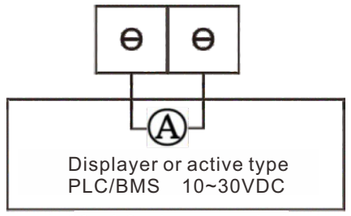
Dial switch response time in following arrangement:

Dial switch	0.5s	1s	2s	4s
1				
2				

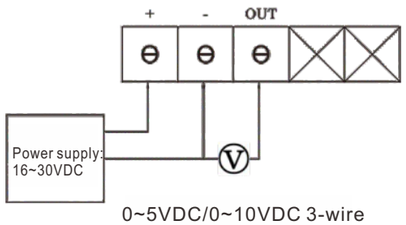
WIRING METHOD



4-wire RS-485type



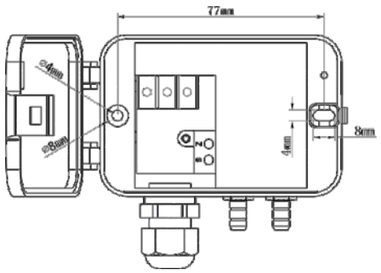
4~20mA 2-wire non-polarized

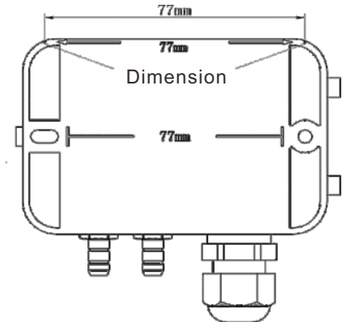


0~5VDC/0~10VDC 3-wire

INSTALLATION

Locate position for installation then drill holes(30mm depth with 6mm diameter). Place expand plug inside the holes before install the transmitter. There are two holes for screwing after Uncovering the transmitter(expand plugs and screws for installation would be provided by the manufacturer).





Q&A

1.No change or inaccurate change in pressure output value after pressurization.

①Check whether the loading pressure exceeds the burst pressure and directly damages the pressure core;

②Check whether the medium used is corrosive or different from the applicable medium of the purchased product (the applicable medium of the existing micro pressure differential transmitter is non-corrosive gas);

③Check whether the intake hose is blocked (by particles or water column) or leaked;

④Check whether the ambient temperature exceeds the compensation temperature range (-10~60℃);

⑤Confirm whether operated zero reset under pressurized conditions, and if so, reset it again under the condition of no input pressure;

⑥Confirm whether there is any misoperation of the setting button (the setting button has an anti-misoperation mechanism, which means the set point pressure value must be increased from small to large to be successfully set. The setting should be calibrated and set under a high-precision pressure source. It is not recommended for customers to calibrate by themselves. If there is a deviation caused by the calibration operation, the differential pressure transmitter needs to be returned to the factory for recalibration).

2.The pressure display value is normal, but there is no analog output or the analog output is inaccurate.

①Check whether the output line is connected normally;

②For three-wire output, it is necessary to check whether the common ground between the transmitter and the control instrument is normal (which means the ground wire must be connected);

③Check whether the load resistor is selected properly.

3.There is a slight drift in the zero pressure value.

①After the drift is stable, carry out the reset operation.

If the above method cannot eliminate the fault, please contact the manufacturer!

CAUTION: Please read the manual carefully and follow the wring diagram to operate, if any damage caused by wrong wiring, it is not covered by the warranty.