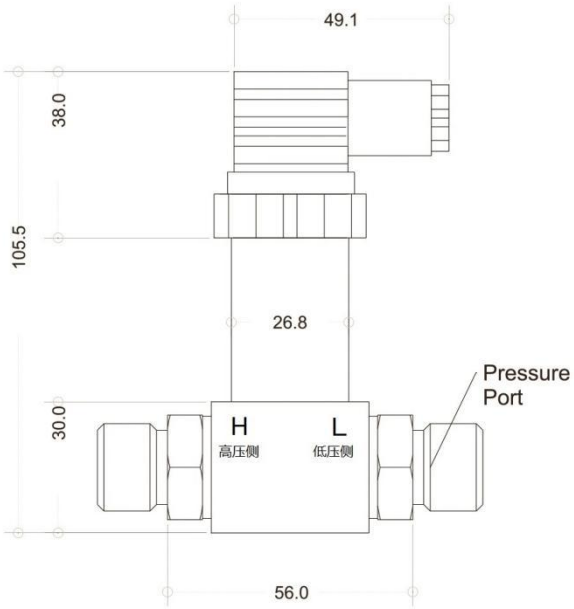
Manual of Differential Pressure Sensor HPT-7

I. Description

The differential pressure transmitter adopts high-precision and high-sensitivity diffusion silicon differential pressure core body. Through the stable and reliable amplifier circuit with strong anti-interference ability, the differential pressure signal of the measured medium is converted into standard analog signal or digital signal. The exquisite packaging technology and perfect detection technology ensure the excellent performance of the product. It is widely used in petroleum, chemical, metallurgy, environmental protection and measurement Automation control engineering and production process testing and other industrial automation fields。

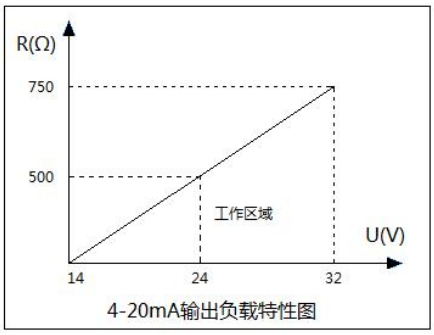
II. Parameters

- Test medium: liquid or gas compatible with material
- Measuring range：0~7MPa（differential pressure)
- Accuracy：0.1%FS、 0.25%FS、 0.5%FS
- Stability：±0.25%FS/year、 ±0.5%FS/year
- Output：4~20mA、0~10V、RS485
- Work voltage：12~36V DC（Standard：24V±5%，ripple＜1%）
- Power supply effect: less than 0.01% / V of output range
- Work temperature：-20~80℃
- Temperature compensation：-20~80℃
- Temperature effect：±1.55%FS/year、 ±3.0%FS/year



- Overload：300%
- Threads of pressure port：M20*1.5、 G1/2、 1/2NPT etc.
- Load resistance：4～20mA $R = \frac{U - 14}{0.02} - R_D$

(U is the power supply voltage and RD is the internal resistance of the cable)



4-20mA输出负载特性图

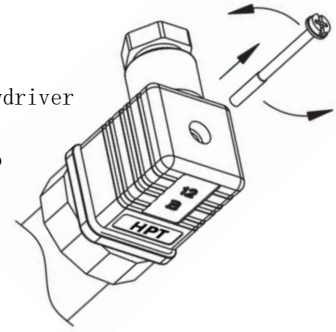
⚠ Warning: do not disassemble the transmitter without permission! Do not press the measuring element diaphragm with your fingers! Do not insert any sharp object into the pressure hole!

III. Definition of wires

Wire / Output	Reismman ①pin	Reismman ②pin	Reismman ③pin	Reismman Gpin
	Red wire	Black wire	Yellow wire	Blue wire
4-20mA（two wires）	24V+	Signal output	\	\
0-10V（3 wires）	24V+	24V-	Signal outptu	\
RS485	24V+	24V-	A	B

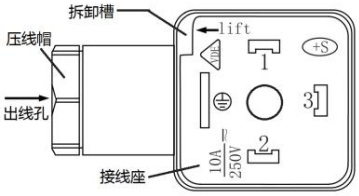
IV. Wire connection

1. 1. Screw out the screw and pull out the Reismman connector
2. 2. Pry out the junction box from the removal slot with a slotted screwdriver
3. 3. Insert the cable from the outlet and define the wiring according to
4. the terminal corresponding to the output signal
5. Assemble and restore the Reismman connector and tighten the wire cap



V. Notice

- Do not measure media that is not compatible with the transmitter material;
- Ensure that the power supply voltage meets the product requirements,
- and connect according to the instructions;
- The transmitter should be installed in a ventilated and dry place
- to avoid direct illumination and rain;
- Pay attention to use snakeskin pipe or iron pipe to protect the outgoing cable,
- or raise the cable rack;



- It is suggested that the product should be powered on for at least 10 minutes, and the product
- performance can reach the optimal level;
- When disassembling the transmitter, make sure that the pressure source is turned off to prevent the medium from ejecting;

This product is not explosion-proof. It will cause serious accident when used in explosion-proof area ;

VI. Troubleshooting

Fault	Analyses	Resolution
Zero output exceeded Accuracy error range	• The diaphragm is damaged • The back pressure pipe of sensor is not connected with the atmosphere	• Need to return to factory for repair • Small pressure products should use air cable and the air duct should be connected with the atmosphere
Collection device has no display or display value Not in accordance with actual pressure	• Wiring error • The transmitter has no signal output •Error in calibration of output signal and pressure range	• Check the circuit according to the wiring method corresponding to the output signal of the transmitter • Measuring transmitter output signal • Recalibrate the acquisition device according to the range and output of the transmitter
Output signal and The actual pressure does not match	• Medium or ambient temperature out of limit • Supply voltage out of limit • Excessive external load	• Install a cooling device at the pressure port or move the transmitter to a low temperature environment for retesting • Adjust the power supply voltage • Adjust external load
At constant pressure Output irregular jump	• Transmitter not grounded • The field radio frequency interference is strong • Shielded cable not used	• Use shielded cable and shield grounded • Reliable connection between transmitter and earth

VII. After sales service

- One-year warranty period;
- If the product fails during the warranty period, it is a quality problem detected by our company, our company shall bear all the maintenance costs; Failure to follow the manual or disassemble the product without authorization, resulting in component damage or pressure diaphragm damage, does not belong to the scope of product warranty.