



Datasheet

Flat Membrane Pressure

Transmitter

AI-PT35



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Flat Membrane Pressure Transmitter AI-PT35

The flat membrane pressure transmitter uses a corrugated membrane to directly sense the pressure. The sensor's flat diaphragm prevents fouling, unsanitary and clogging of viscous liquids. It has the characteristics of small size, light weight and good long-term stability, and is widely used in food, medicine, health and brewing industries.

Applications

- Food
- Medicine
- Oil industry
- Paper industry
- Chemical industry

Features

- Compact structure and easy installation.
- Advanced diaphragm/oil-filled isolation technology.
- High stability and high reliability.
- Anti-vibration, anti-radio frequency interference.
- 316L stainless steel isolation diaphragm structure.
- Micro amplifier, voltage, current, RS485 signal output.
- Strong anti-interference, good long-term stability.
- Wide range and multiple mode pressure



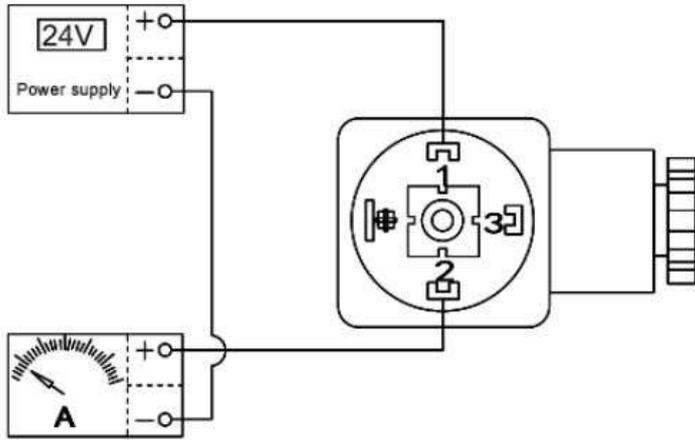
AI-PT35

Principle

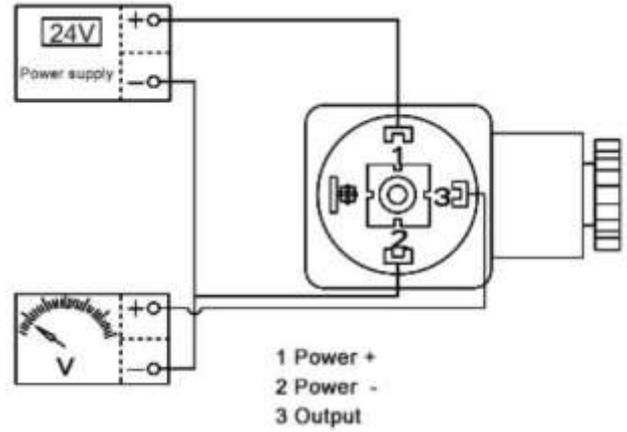
The flat diaphragm pressure transmitter incorporates a flat diaphragm as its sensing element. When the flat diaphragm is subjected to external pressure, it undergoes minute deformation. This deformation results in a change in the resistance value on the flat diaphragm. By measuring this change in resistance, the magnitude of the applied pressure can be deduced and converted into a standardized electrical signal (such as 4-20mA or 0-10V) for subsequent processing, display, recording, or control.

Parameters	
Supply	(4~20)mA output (10~32V); (0~10)V output (12~32V); RS485 output (8~32)V.
Output	(4~20)mA ;(1~5)V;(0~10)V;(0~5)V; RS485
Accuracy	0.5%
Range	Threaded connection flat film :-0.1~ 0... 10MPa (range cannot be lower than 10kPa). Clamp connection flat film measuring range:-0.1~. 0..... 3.5MPa (range cannot be lower than 10kPa).
Pressure type	Gauge pressure ,sealing pressure
Compensation temperature	-10℃~70℃
Operating temperature	-20℃~85℃
Medium temperature	-20℃~85℃
Storage temperature	-40℃~85℃
Zero temperature drift	±0.3%FS/10℃
Full range output temperature drift	±0.3%FS/10℃
Overload pressure	150%FS
Stability	±0.2%FS/year
Response time	Current and voltage output:≤10ms (up to 90%FS) Rs485 output:≤100ms (up to 90%FS)
Insulation	20MΩ, 250VDC
Insulation strength	50Hz, 500VAC
Ingress Protection	IP65
Load resistance	(U-9V)/0.02A,U:Supply voltage

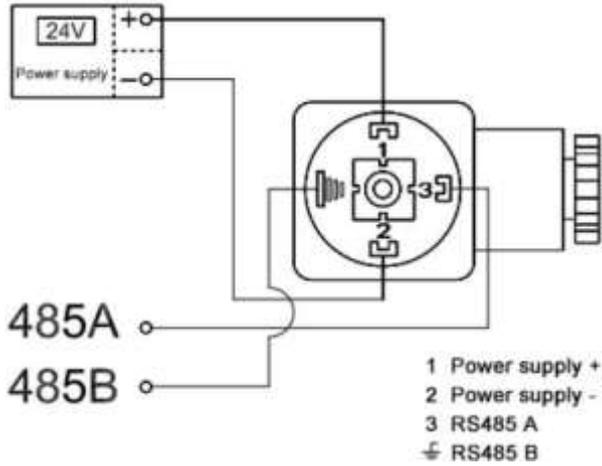
Wiring



2-wire current



voltage output



RS485 output

Current output:

Red: Power +
Green: Current output +

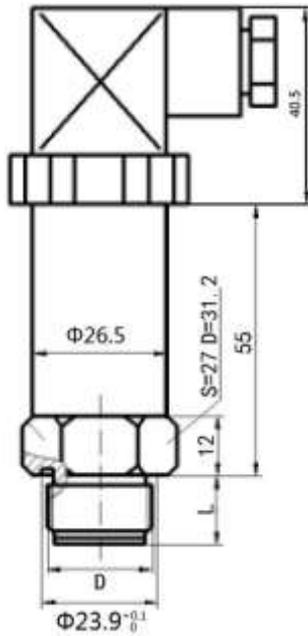
Voltage output:

Red: Power +
Green: Power -
Yellow: Voltage +

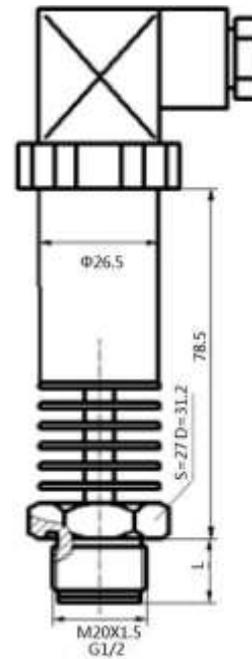
RS485 output:

Red: Power +
White: Power +
Green: RS485 +
Yellow: RS485 -

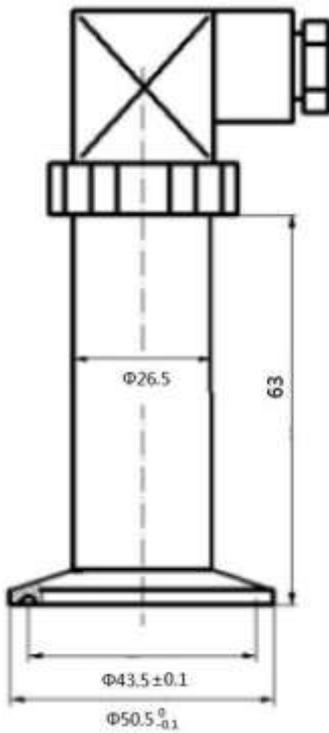
Dimensions



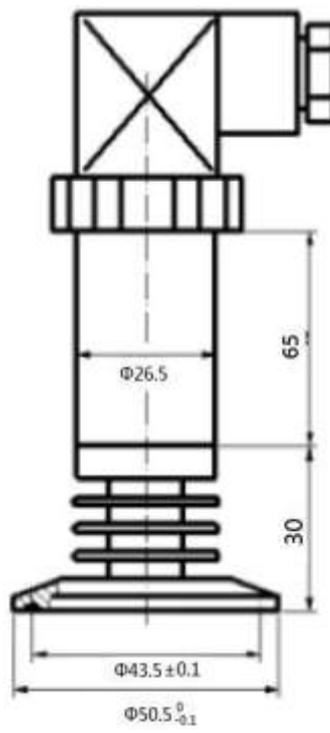
Hessman Threaded Flat Membrane



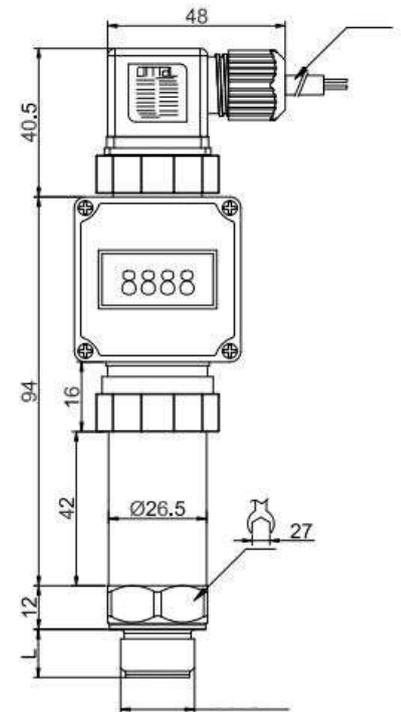
High temperature type Hessman thread



Hessman clamp flat film



High temperature type Hessman clamp flat film



Hessman flat film belt display

Installation

- (1) The pressure transmitter is installed as far as possible where the temperature fluctuation is small to avoid vibration and shock.
- (2) The pressure transmitter is installed directly on the measuring point, and the threads are connected at the same time: M20mm 1.5, G1amp 2. Special threads or clamps need to contact the salesman.
- (3) The signal should not pass through the wire tube or open wire slot together with other power lines, and should not pass through the high-power equipment at the same time.
- (4) If the transmitter needs to use the pressure tube, it is necessary to pay attention to the strong corrosive or superheated medium does not touch the transmitter, so as to prevent the slag from precipitating in the pressure tube, and it is necessary to ensure that the pressure tube is as short as possible. At the same time, when measuring steam or other high temperature media, do not let the working temperature of the transmitter exceed the limit. When used for steam measurement, the suction tube should be filled with water to prevent the transmitter from coming into direct contact with the steam

Ordering Code

AI-PT35-G-1A-K-A1-L2-B-WA-02-PA	Description
AI-PT35	
Pressure Type	Gauge Pressure Absolute Pressure
	-100 - 0 kPa
	-100 - 100 kPa
	-100 - 1,000 kPa
	0 - 10 kPa
	0 - 20 kPa
	0 - 30 kPa
	0 - 50 kPa
Measurement Range	0 - 100 kPa
	0 - 0.6 MPa
	0 - 1 MPa
	0 - 1.6 MPa
	0 - 2.5 MPa
	0 - 4 MPa
	0 - 10 MPa
	Other
Accuracy	0.5 Class
	0.25 Class
	0.2 Class
Output and Power Supply	Two-wire 4-20 mA
	1-5 V, 24 VDC
	0-10 V, 24 VDC
	0-5 V, 24 VDC
	RS485, 24 VDC
Thread Type	M20×1.5
	G1/2
	2" clamp
	Other
Diaphragm and Thread Type Material	316L SS, 316L SS
	Other
Electrical interface, housing material and ingress protection	Hirschmann connector, 304 SS, IP65
	Hirschmann connector, 316L SS, IP65
	Aviation plug, 304 SS, IP65
	Aviation plug, 316L SS, IP65
	Direct lead wire, 304 SS, IP65
	Direct lead wire, 316L SS, IP65
	Other
	2 m
	5 m



	10		10 m
	XX		Other
Accessories		PA	Carbon Steel Thread Base
		PB	304SS Thread Base

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