



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Flat Membrane Pressure

Transmitter

SUP-P350

Supmea[®]

Committed to process automation solutions

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Datasheet**Flat Membrane Pressure Transmitter
SUP-P350**

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

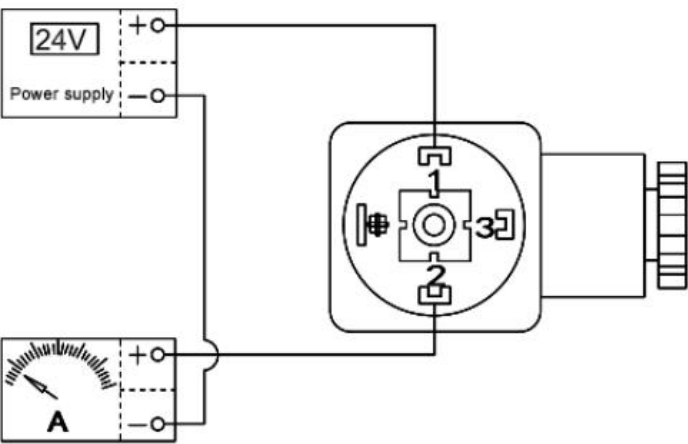
SUP-P350

Principle

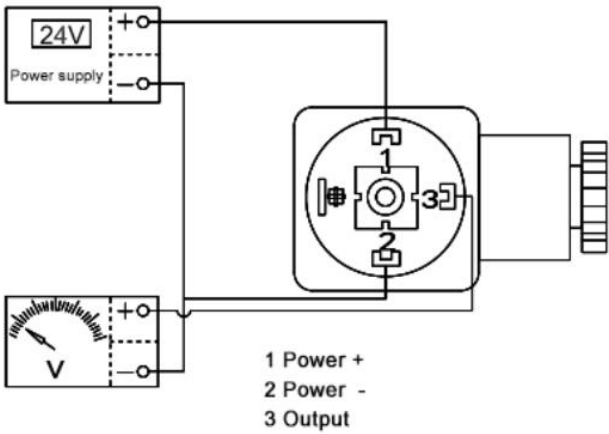
The flat diaphragm pressure transmitter incorporates a flat diaphragm as its sensing element. When the flat diaphragm is subjected to external pressure, it undergoes minute deformation. This deformation results in a change in the resistance value on the flat diaphragm. By measuring this change in resistance, 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 (12~32)V; 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

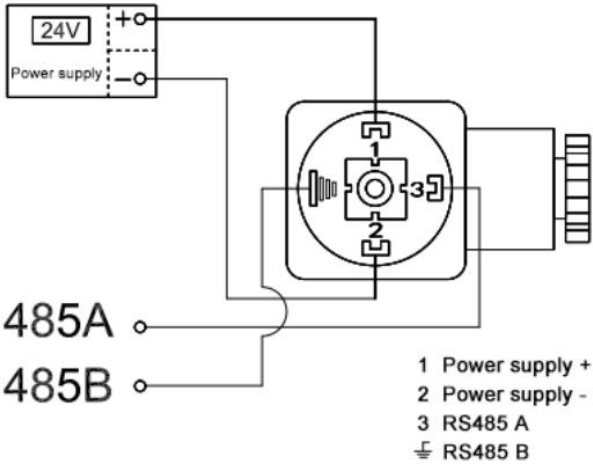
Wiring



2-wire current



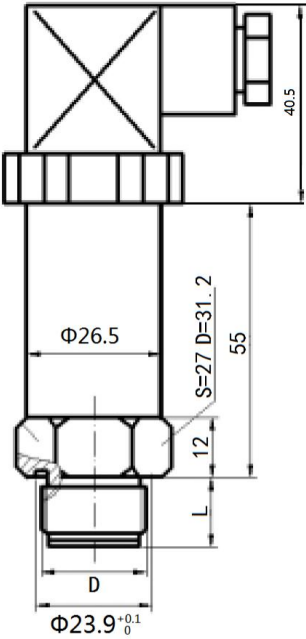
voltage output



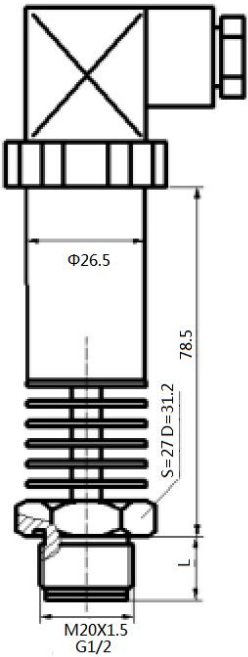
RS485 output

Current output:	Voltage output:	RS485 output:
Red: Power + Green: Current output +	Red: Power + Green: Power - Yellow: Voltage +	Red: Power + White: Power + Green: RS485 + Yellow: RS485 -

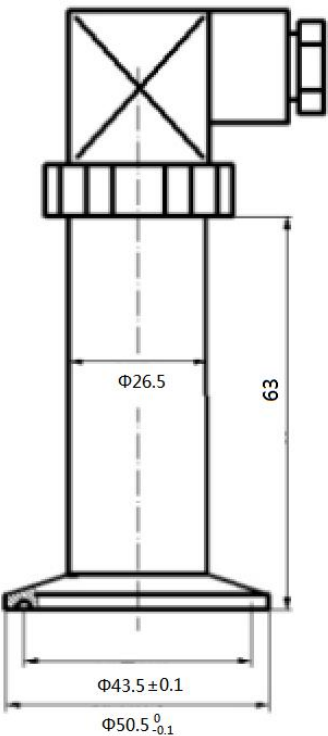
Dimension



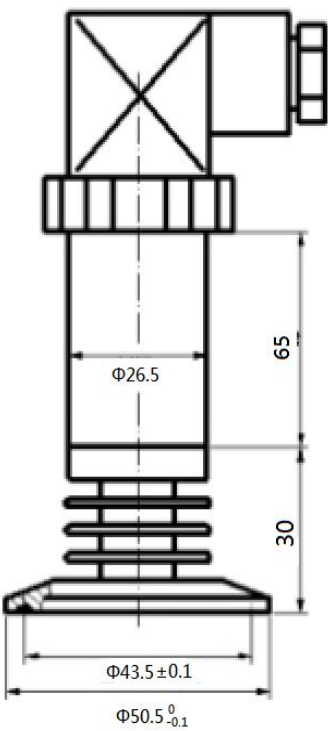
Hessman Threaded Flat Membrane



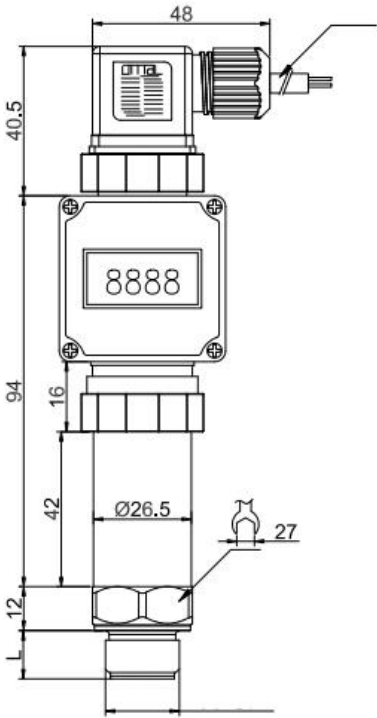
High temperature type Hessman thread



Hessman clamp flat film



High temperature type Hessman clamp flat film



Herssman flat film belt display

Installation

■ 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

SUP-P350-G-1A-K-A1-L2-B-WA-02-PA										Description
SUP-P350	-	-	-	-	-	-	-	-	-	
Pressure Type	G A									Gauge Pressure Absolute Pressure
Measurement Range		1A								-100 - 0 kPa
		1B								-100 - 100 kPa
		1C								-100 - 1,000 kPa
		1L								0 - 10 kPa
		1M								0 - 20 kPa
		1N								0 - 30 kPa
		1Q								0 - 50 kPa
		1S								0 - 100 kPa
		2A								0 - 0.6 MPa
		2B								0 - 1 MPa
		2C								0 - 1.6 MPa
		2D								0 - 2.5 MPa
		2E								0 - 4 MPa
		2H								0 - 10 MPa
		XX								Other
Accuracy			K							0.5 Class
			G							0.25 Class
			F							0.2 Class
Output and Power Supply				A1						Two-wire 4-20 mA
				A2						1-5 V, 24 VDC
				A3						0-10 V, 24 VDC
				A4						0-5 V, 24 VDC
				A5						RS485, 24 VDC
Thread Type					L2					M20×1.5
					G2					G1/2
					AK					2" clamp
					XX					Other
Diaphragm and Thread Type Material						B				316L SS, 316L SS
						X				Other
Electrical interface, housing material and ingress protection							WA			Hirschmann connector, 304 SS, IP65
							WB			Hirschmann connector, 316L SS, IP65
							WG			Aviation plug, 304 SS, IP65
							WH			Aviation plug, 316L SS, IP65
							WN			Direct lead wire, 304 SS, IP65
							WP			Direct lead wire, 316L SS, IP65
Cable length							XX			Other
								02		2 m
								05		5 m

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