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**Sanitary Pressure Transmitter**  
**Model : P425 (Circular Connector)**  
**P426 (DIN Connector)**  
**P427 (Flying Leads)**  
**P428 (General Head)**

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**Advantages**

- Pressure transmitter for corrosive environments
- High corrosion resistant stainless steel diaphragm (316LSS)
- Measuring ranges from 3000mmH<sub>2</sub>O to 50 kgf / cm<sup>2</sup>
- Shock and vibration resistant
- 3A certificated suitable SIP and CIP

**Applications**

- Process control and monitoring in corrosive environments
- Bio-chemical and pharmaceutical industry
- Dairy and food industry

**Descriptions**

P420 series pressure transmitter has been designed as an advanced device for measuring pressure of corrosive and viscous liquids in industrial applications. They incorporate a fully temperature compensated piezoresistive silicon sensor with great accuracy, excellent long term stability, very low temperature drift, and a strong, durable flush mounted diaphragm. The diaphragm is specifically designed to meet 3A standard.

The transmitters are available as absolute and relative types with either 2-wire current or 3-wire voltage output. The pressure to be measured acts through a thin corrosion resistant stainless steel 316L diaphragm. The pressure transmitter medium is silicon oil. The measuring element contains diffused piezoresistive resistors which are connected into a Wheatstone bridge. The output signal of this bridge is temperature compensated and converted into a standardized current or voltage output signal.



P425



P426



P427



P428

## Specification

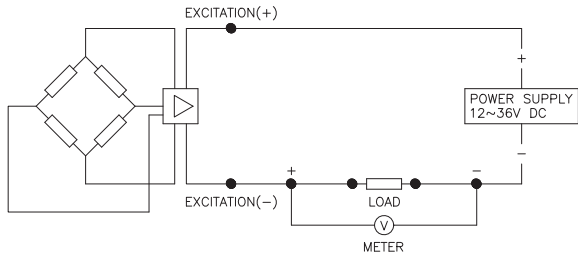
Input				
Technology	Piezoresistive silicon pressure sensor			
Pressure ranges	0~0.3 to 50 kgf / cm <sup>2</sup> relative pressure			
	0~1 to 50 kgf / cm <sup>2</sup> absolute pressure			
Pressure reference	Gauge, absolute, vacuum and compound			
Overload	3x full scale without damage			
Output				
	Current output		Voltage output	
Electrical connection type	2-wire technique		3 or 4-wire technique	
Full scale output signal	20mA	± 0.25%	5V	± 0.25%
Zero measured output	4mA	± 0.03%	1V	± 0.03%
	Other signals available on request			
Electrical Specification				
Excitation voltage	24V DC (12~36V DC)			
Load resistance max @ 24V	500Ω at 24V			
Influence of excitation	0.01% FSO/V			
Power ripple	≤ 500mV P-P			
Reverse polarity	Protected			
Shock resistance	No change in performance after 10Gs for 11ms			
Vibration	0.1G (1m / s / s) maximum			
Response time(10~90%)	≤ 2 milliseconds			
Adjustment	± 10% FSO / zero and span			
Performance Specification				
Accuracy	≤± 0.3% FSO			
Non-linearity	± 0.100% FSO typical			
Repeatability	± 0.015% FSO typical			
Pressure hysteresis	± 0.010% FSO typical			
Long term stability	± 0.3% FSO over 6 month			
Cutoff frequency(-3 d B)	≤ 2KHz			
Reference temperature	35°C			
Operating temperature range	-40~125 °C			
Compensated temperature range	0~82 °C			
Thermal sensitivity shift	≤± 0.5% FSO in reference to 35°C typical			
Thermal zero shift	≤± 0.2% FSO in reference to 35°C typical			
Thermal hysteresis	≤± 0.1% FSO in reference to 35°C typical			
Physical Specification				
Process connection	1, 1.5, 2 Tri-clamp connection			
	Other connections available on request			
Process media	Gases and liquids compatible with stainless steel 316			
Materials wetted by process	Diaphragm : Stainless steel 316L			
	Housing : Stainless steel 316			
	Gasket O-ring : Viton (HNBR, CSM, etc.) or No O-ring			
Enclosure rating	IP65			
Weight	Approx. (350g)			

Note : ① Cable version : 1.5m standard length, 4-wire, shielded with integral vent tube

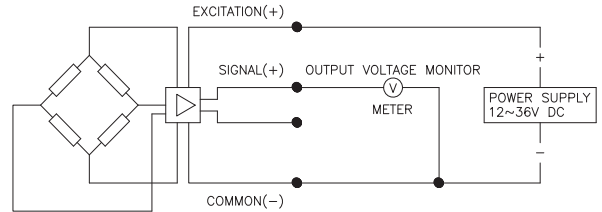
② Vented gauge units must breathe dry, non - corrosive gases.

③ Connector version is vented through the removed pin, cable versions are vented through a vent tube inside the cable sleeve

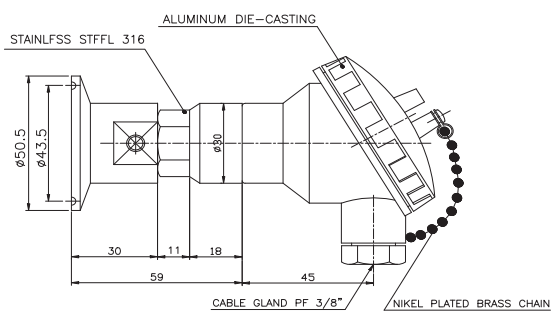
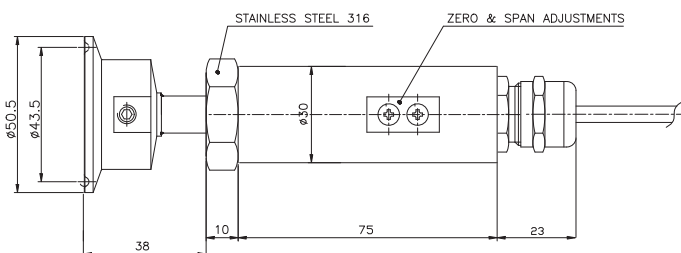
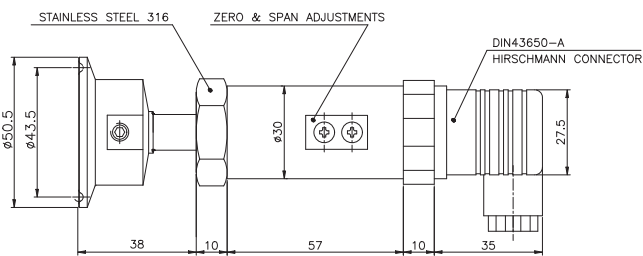
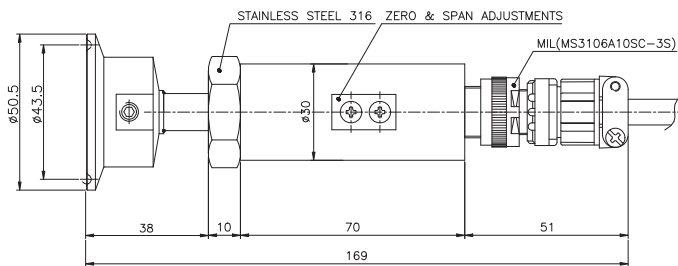
## System connection for 2-wire transmitter



## System connection for 3-wire transmitter



## Dimension (mm)



## Electrical connection

E : Excitation  
S : Signal  
C : Common

### Circular connector

System Color	2-Wire	3-Wire	4-Wire
Red	E +	E +	E +
Black	E -	C -	E -
Green		S +	S +
White			S -
GND	Shielded	Shielded	Shielded

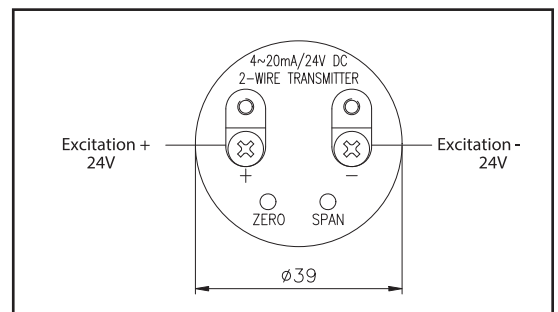
### DIN connector

System Color	2-Wire	3-Wire	4-Wire
1	E +	E +	E +
2	E -	C -	E -
3		S +	S +
GND	Shielded	Shielded	S -

### Flying Lead

System Color	2-Wire	3-Wire	4-Wire
Red	E +	E +	E +
Black	E -	C -	E -
Green		S +	S +
White			S -
GND	Shielded	Shielded	Shielded

### General head



## Ordering Information

### Sanitary Pressure Transmitter

#### 1. Base model

P425											Circular Connector
P426											DIN Connector
P427											Flying lead (1.5m cable)
P428											General Head

#### 2. Pressure reference

R											Relative pressure
A											Absolute pressure

#### 3. Process connection type "1"

M											Male thread
F											Female thread
N											Not required

#### 4. Process connection type "2"

T											PT thread as standard
N											NPT thread
S											PF thread
C											Clamp mounted
F											Flange mounted
X											Other process connections available on request

#### 5. Process connection size

1											1"
2											1.5"
3											2"
X											Other units available on request

#### 6. Accuracy

H											± 0.3% F.S.O
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#### 7. Measuring range

01											0~0.3 kgf / cm <sup>2</sup> , bar	0~0.03 Mpa
02											0~0.5 kgf / cm <sup>2</sup> , bar	0~0.05 Mpa
03											0~1 kgf / cm <sup>2</sup> , bar	0~0.1 Mpa
04											0~2 kgf / cm <sup>2</sup> , bar	0~0.2 Mpa
05											0~5 kgf / cm <sup>2</sup> , bar	0~0.5 Mpa
06											0~10 kgf / cm <sup>2</sup> , bar	0~1 Mpa
07											0~20 kgf / cm <sup>2</sup> , bar	0~2 Mpa
08											0~35 kgf / cm <sup>2</sup> , bar	0~3.5 Mpa
09											0~50 kgf / cm <sup>2</sup> , bar	0~5 Mpa
xx											Other calibration ranges available on request	

#### 8. Unit

K											Calibration in kgf / cm <sup>2</sup>
A											Calibration in Mpa
B											Calibration in bar
X											Other units available on request

#### 9. Output signal / Electrical connection type

A1											4~20mA, DC, 2-wire output
A2											4~20mA, DC, 4-wire output
B1											1~5V, DC, 3-wire output
B2											0~5V, DC, 3-wire output (Only available P426 and P427)
B3											0~10V, DC, 3-wire output (Only available P426 and P427)

#### 10. Option

N											None options
X											Other accessories available on request

P428	R	M	F	1	H	01	K	A1	N	Sample ordering code	
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Specifications subject to change without notice