

# Model 132S(a)/132S(b)/132S(c) Pressure Transmitter with Flush Diaphragm



## Description

The 132S-series is a silicone piezoresistive pressure transmitter developed for general purpose applications. With various options of process connection and electrical interface, the 132S can be fitted into almost all common systems.

The 132S-series features a flush diaphragm process connection. The transmitter is specially designed to measure pressures of viscous fluids or media containing solids. Three types of flush diaphragm are available, type a, b, and c. The 132S(a) has its diaphragm completely flat, while the 132S(b) has a ring on the diaphragm, so-called semi-flush diaphragm. The 132S(c) is designed with Tri-Clamp interface for mechanical connection, especially for application in either pharmaceutical or food industries.

Due to its compact and rugged design, the models are suitable for applications of processing and control operations such as hydraulics, pneumatics, test equipment, liquid level measurement, compressor and pump control, etc.

By selecting proper electrical interface, the 132S-series is able to reach the environmental protection rating up to IP67.



## Features

- measuring ranges: 1bar, ..., 160bar
- pressure references:  
gauge, absolute, and sealed gauge
- flush diaphragm
- selectable output:  
4~20mA (standard), 0.5~4.5Vdc ratiometric and others.
- wide choice of process connection and electrical interface
- protection rating up to IP67

## Applications

- compressor and pump systems
- liquid level measurement
- hygienic applications
- test equipment
- food industry
- pharmaceutical industry

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# Model 132S(a)/132S(b)/132S(c) Pressure Transmitter with Flush Diaphragm



## Technical Data

Parameters		Units	Specifications	Notes
pressure medium			viscous fluid or fluid with particles	1
pressure references & ranges	gauge	bar	0~1, ~1.6, ~2.5, ~4, ~6, ~10, ~16, ~25	2
	absolute	bar	0~1, ~1.6, ~2.5, ~4, ~6, ~10, ~16	
	sealed gauge	bar	0~10, ~16, ~25, ~40, ~60, ~100, ~160	
proof pressure		%fs	150	3
burst pressure		%fs	200	
output signal		mA	4~20 (standard)	
		V	0.5~4.5 (ratiometric), 0.5~5, 0.5~10	
accuracy		%fs	≤ ±0.5 (standard)	4
long-term stability		%fso/year	≤ ±0.2	
power supply (Vs)		Vdc	12 < Vs ≤ 36; 5 (for output = 0.5~4.5Vdc)	
load resistance for voltage output		kΩ	> 5	
load resistance for current loop		Ω	≤ (Vs - 12V) / 0.02A	
insulation resistance		MΩ	500 @100Vdc	
compensated temperature range		°C	-20 ~ +85	
operating temperature range		°C	-40 ~ +125, -40 ~ +200 (for 132S(c))	
storage temperature range		°C	-40 ~ +125	
temperature coefficient of zero		%fso/°C	≤ ±0.03	
temperature coefficient of span		%fso/°C	≤ ±0.03	
vibration resistance (20, ..., 2000 Hz)		g	10	
life time		cycles	10 <sup>8</sup>	
response time		ms	≤ 1	5
seal			O-ring (fluorine rubber)	
pressure diaphragm			316L SS	
wetted parts material			316 SS	
electronics housing material			304 SS	
filling oil			silicone oil (standard), fluorine oil	6
environment protection			IP65 (standard), IP67 (only for cable connection)	
net weight		gram	~180	

- Notes: 1. The pressure medium should be compatible with wetted parts material and pressure diaphragm.  
 2. For customized pressure ranges, consult BCM.  
 3. "fs" refers to full scale pressure or rated pressure.  
 4. Including non-linearity, hysteresis and repeatability.  
 5. Response time for a 0bar to fs step change, 10% to 90% rise time.  
 6. Fluorine oil can be used for in food and oxygen industry

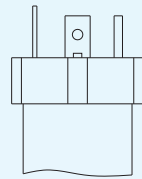
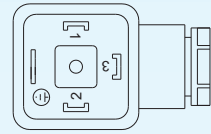
The listed specifications and dimensions are subject to change without prior notice.

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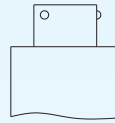
# Model 132S(a)/132S(b)/132S(c) Pressure Transmitter with Flush Diaphragm

## Dimensions

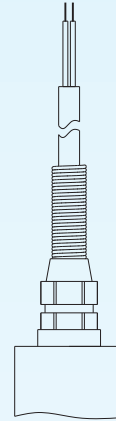
### electrical interface



DIN43650  
(standard)



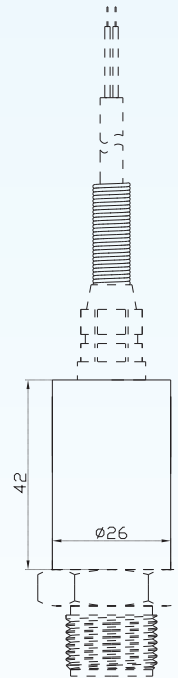
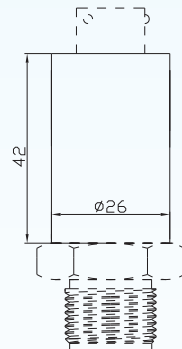
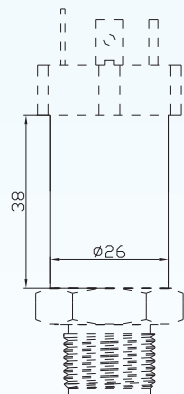
circular connector  
with 4 pins



PVC cable  
Φ5mm

- 2 wires for current loop
- 3 wires for voltage output
- cable length (L) should be specified in ordering information

### electronics housing (casing)



Notes: All dimensions are in mm.

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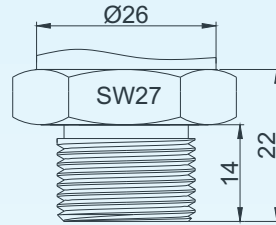
# Model 132S(a)/132S(b)/132S(c) Pressure Transmitter with Flush Diaphragm

## mechanical interface

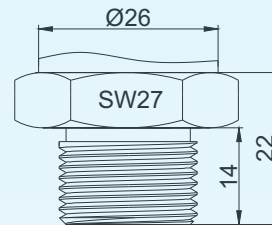
### 132S(a):



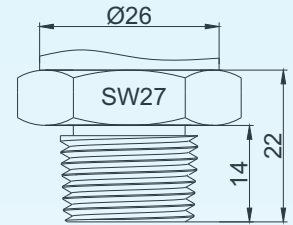
flush diaphragm



M20x1.5(M)



G1/2(M)

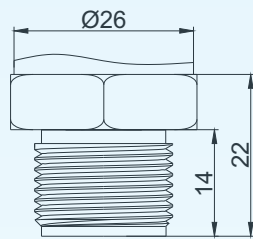


1/2 NPT(M)

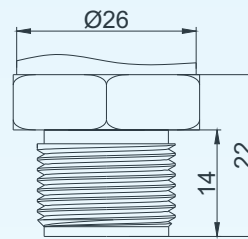
### 132S(b) (standard):



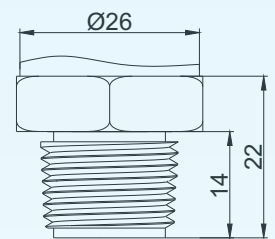
semi-flush diaphragm



M20x1.5(M)



G1/2(M)

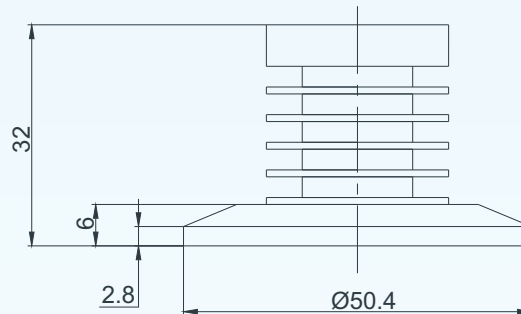


1/2 NPT(M)

### 132S(c):



Tri-Clamp connection



2" Tri-Clamp

Notes: - All dimensions are in mm.

- The mechanical interfaces and the electrical interfaces listed can be combined freely.
- If other types of interfaces are on request, consult BCM.

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# Model 132S(a)/132S(b)/132S(c) Pressure Transmitter with Flush Diaphragm



## Ordering Information

<b>position (pos.) 1: model</b>									
132S(a)	132S(b) (standard)			132S(c)					
<b>pos. 2: pressure ranges and references</b>									
1bar	G, A	10bar	G, A, S	100bar	S	G: gauge pressure			
1.6bar	G, A	16bar	G, A, S	160bar	S	A: absolute pressure			
2.5bar	G, A	25bar	G, S	S: sealed gauge					
4bar	G, A	40bar	S						
6bar	G, A	60bar	S						
<b>pos. 3: output signal</b>									
4/20 mA (standard)		0.5/4.5 V (ratiometric)		0.5/5 V		0.5/10 V			
<b>pos. 4: accuracy</b>									
0.5%fs									
<b>pos. 5: filling oil</b>									
siOil = silicone oil      fOil = fluorine oil									
<b>pos. 6: pressure diaphragm</b>									
316L stainless steel									
<b>pos. 7: mechanical interface</b>									
Refer to the drawings of mechanical interface for available options.									
<b>pos. 8: electrical interface</b>									
DIN43650 (standard)									
circular connection									
PVC/Φ5/1m = PVC cable, Φ5mm, L = 1m (this length should be specified)									
<b>pos. 9: environment protection</b>									
IP65					IP67				
<b>pos. 10: customized specifications</b>									
“(*)” is necessary only if any customized parameter is required, otherwise it is neglectable.									
pos.1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6	pos. 7	pos. 8	pos. 9	pos. 10

## Examples of Ordering Code

- standard transmitter:

132S(b)-16barG-4/20mA-0.5%fs-siOil-316L-G1/2(M)-DIN43650-IP65

- customized transmitter:

132S(c)-50barG-4/20mA-0.5%fs-siOil-316L-2"TriClamp-DIN43650-IP65-(\*)

(\*): Customized pressure range = 0~50 barG.



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