

Model 132S Silicon Piezoresistive Pressure Transmitters With Flush Diaphragm



Features

- silicon piezoresistive technology
- flush diaphragm
- measuring ranges from 0~0.35 bar to 0~160 bar
- gauge and absolute reference available
- selectable output of 4~20 mA (standard), 0.5~4.5V, or 0.5~5V (or 10V)
- 0.5 %fs accuracy
- stainless steel (SS) case and SS 316L wetted parts
- available in many type of pressure connection threads and electrical interfaces



Applications

- hygienic applications
- hydraulics and pneumatics
- refrigeration and air conditioning systems
- compressor controls
- process engineering

Description

132S-series general purpose pressure transmitters are made of silicon piezoresistive technology. When a working pressure acts on the metal diaphragm, the pressure is transmitted to a Wheatstone bridge circuit of the pressure sensor die (SE103) through filling fluid. The output signal of the bridge circuit, which is proportional to the working pressure, is processed further to fit application purpose by a signal conditioning circuit.

The pressure range of the 132S transmitters starts from 0~0.35 bar and ends to 0~160 bar. A number of standard output signals, such as 4~20 mA current loop or voltage output of 0.5~4.5V or 0.5~5V (or 10V), are available when order. The measuring accuracy of 132S transmitters is 0.5%fs (fs=full scale). Thanks to BCM's advanced temperature compensation technology and aging process, model 131S transmitters provide rather good long-term stability (<0.2%fs/year) and excellent thermal characteristics (<0.03%fs/°C).

By means of a flush diaphragm, model 132S transmitter is designed to measure either gauge or absolute pressures of medium in paste form or with grains. The all-stainless steel construction allows 132S transmitters to have a compatibility of pressure media with SS 316L. Typical applications of 132S transmitters include hygienic applications, hydraulics and pneumatics, domestic appliances, refrigeration and air conditioning.

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Technical data

parameters	units	specifications
pressure medium		gases or dilute fluids compatible with the material of wetted parts
pressure range	barG	0~0.35, ~0.4, ~0.6, ~1, ~2.5, ~4, ~6, ~10, ~16, ~25
	barA	0~1, ~1.6, ~2.5, ~4, ~6, ~10, ~16
	barSG	0~10, ~16, ~25, ~40, ~60, ~100, ~160
overload pressure	%fs	150
burst pressure	%fs	200
output signal		4~20 mA (standard), 0.5~4.5 V (ratiometric), 0.5~5 (or 10) V
accuracy	%fs	0.5 (standard)
long-term stability	%fs/year	< 0.2
power supply (V _{sup})	Vdc	15, ..., 36; 5 (for 0.5~4.5 V output)
response time (10...90%)	ms	< 1
load resistance for current loop	Ω	≤ (V _{sup} -12)V/0.02mA
load resistance for voltage output	kΩ	> 5
storage temperature range	°C	-40 ~ +125
operating temperature range	°C	-40 ~ +125
compensated temperature range	°C	-10 ~ +60
temp. coefficient of span	%fs/°C	0.03
temp. coefficient of zero	%fs/°C	0.03
vibration resistance (20, ..., 2000 Hz)	g	10
seal (O-ring)		fluorine rubber
filling fluid		silicone oil (standard), fluorine oil* (for food & oxygen industries)
material of pressure diaphragm		316L SS
material of wetted parts		316 SS
electronics housing material		304 SS
mechanical interface		refer to the drawings of mechanical interface
electrical interface		refer to the drawings of electrical interface
environment protection	IP rating	IP 65, IP 66
unit weight	g	~ 200

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

*: Fluorine oil = Goruber fluoro Instrument fill fluids 2919

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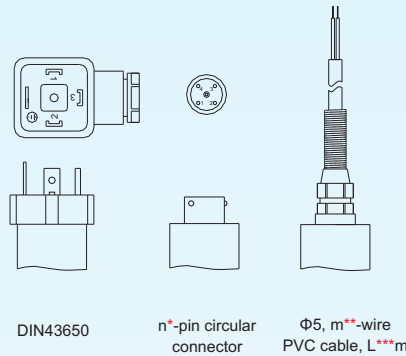
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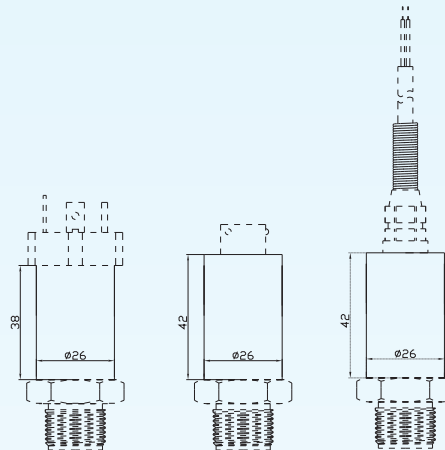
Dimensions

electrical interface#

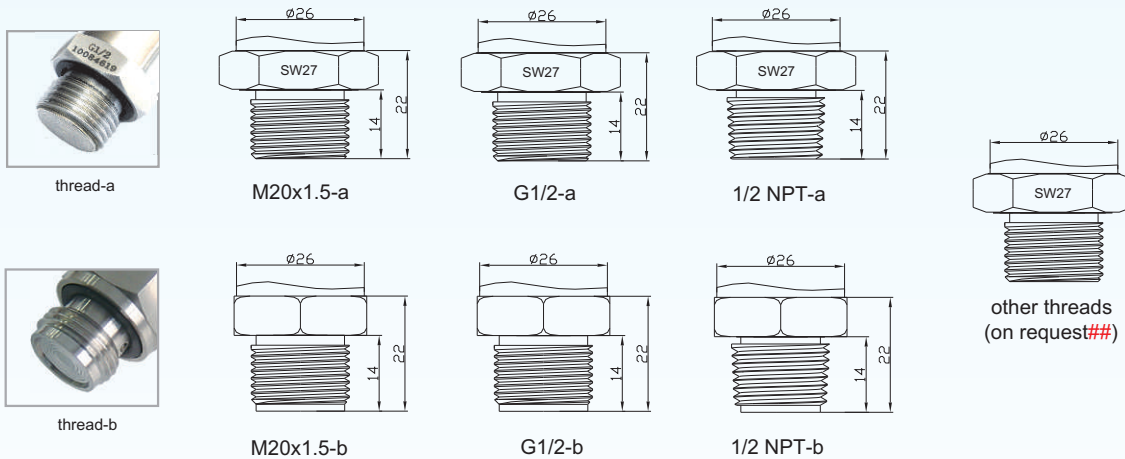


*: n = 4
 **: m = 2 (for current loop), 3 (for voltage output)
 ***: L = cable length

electronics housing (case)



mechanical interface#



#: The mechanical interfaces and the electrical interfaces listed below can be combined freely.

##: Other types of interfaces are available on request and to be confirmed in case of order.

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Ordering Information

position (pos.) 1: model										
132S										
pos. 2: ranges and types										
0.35 bar, G		1 bar, G, A		10 bar, G, A, S		100 bar, S		G: gauge pressure		
0.6 bar, G		1.6 bar, G, A		16 bar, G, A, S		160 bar, S		A: absolute pressure		
		2.5 bar, G, A		25 bar, G, S				S: sealed gauge		
		4 bar, G, A		40 bar, S						
		6 bar, G, A		60 bar, S						
pos. 3: output signal										
4~20 mA 0.5~4.5 V(ratiometric) 0.5~5 V 0.5~10 V										
pos. 4: accuracy										
0.5 %fs										
pos. 5: supply power										
24 V (15,...., 36 Vdc)					5 V (for o/p = 0.5~4.5 V)					
pos. 6: filling fluid										
siOil: silicone oil fOil: fluorine oil										
pos. 7: material (diaphragm)										
316L stainless steel										
pos. 8: mechanical interface										
Refer to drawings of mechanical interface for available options.										
pos. 9: electrical interface										
For available connections, refer to drawings of electrical interface. For cable, code = diameter(Φ)/number of conductors/cable jacket /cable length 5.7/4/PVC/5 = Φ5.7 mm,4-conductors shielded, PVC, length=5 m*										
pos. 10: environment protection										
IP 65 IP 66										
pos. 11: customized spec's										
When any customized spec's are required, the customer needs to add "C" as the last parameter in the ordering code, and specifies the wished spec's on his order clearly. The customized spec's needs to be confirmed in advance by BCM's sales representative. Code "C" can be omitted if no customized spec's are required.										
pos.1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6	pos. 7	pos. 8	pos. 9	pos. 10	pos. 11

example: 132S-16barG-4/20mA-0.5%fs-siOil-316L-G1/4-DIN43650-IP65-C



ISO9001 Certified Company

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