

Model 218D

Differential Pressure Transducers



Description

The model 218D is a low profile differential pressure transducer, based on the BCM 101B(a19D) piezoresistive differential pressure sensor. The sensor is packaged in a 316 SS (stainless steel) housing and fixed by laser welding. The 218D has diverse choices of thread types for its mechanical interface.

The 218D is designed to measure differential pressure of gases or diluting liquids. Its pressure ranges cover from 0~0.1 bar to 0~35bar with accuracy up to 0.5%fs (full scale). 316L SS diaphragms and 316 SS wetted parts of the 218D is compatible with corrosive media. Moreover, for stronger corrosive media applications, Tantalum diaphragms and Hastelloy-C wetted parts are also available on request.



Features

- diff. measuring ranges: 0~0.1bar, ..., ~35bar
- accuracy: up to 0.5%fs
- temperature compensation by laser trimming
- threaded mechanical interface
- constant current or constant voltage excitation
- laser welded construction, rigid and robust
- cost-effective

Applications

- process control systems
- hydraulic systems
- liquid level control
- biomedical instruments
- flow measurement
- OEM equipment

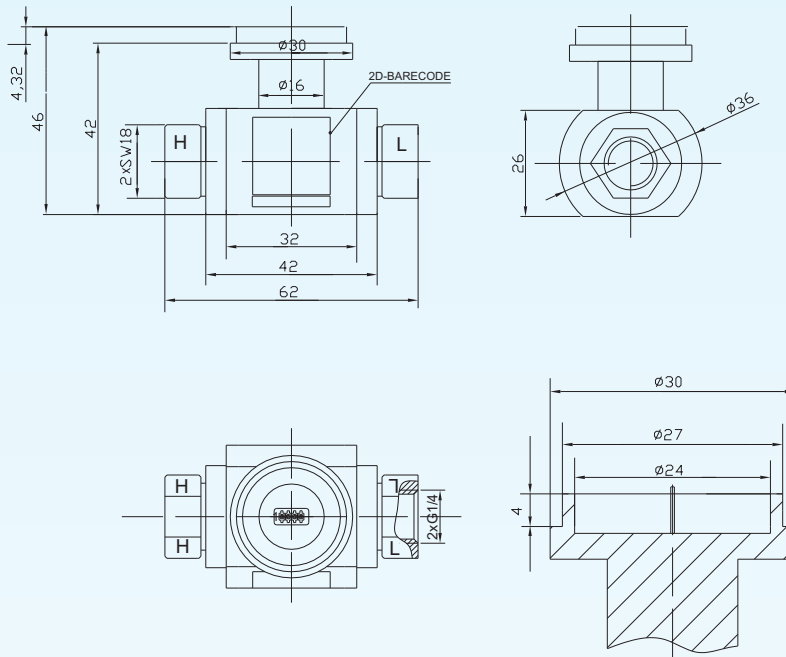
BCM SENSOR TECHNOLOGIES BVBA

Model 218D

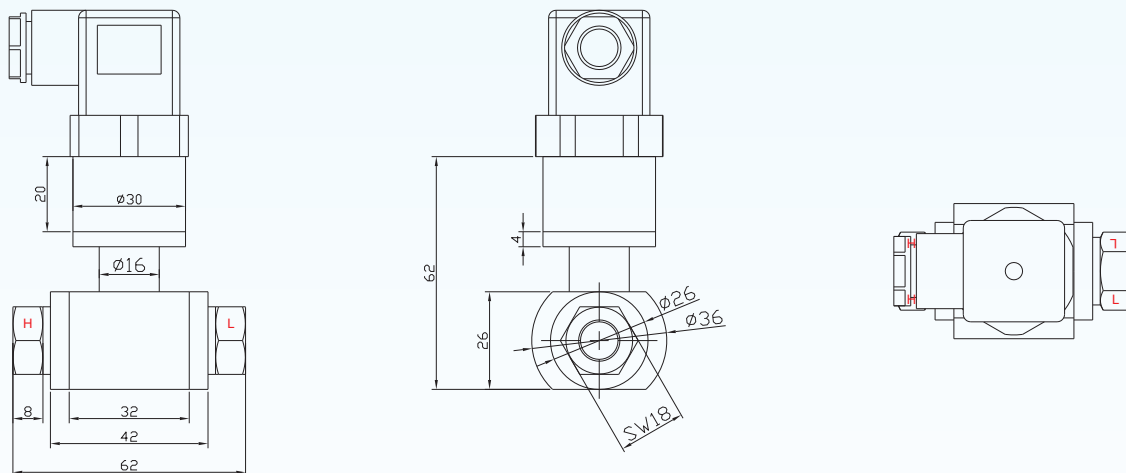
Differential Pressure Transducers

Dimensions

Dimensions 1: transducer with 4-color flying wires



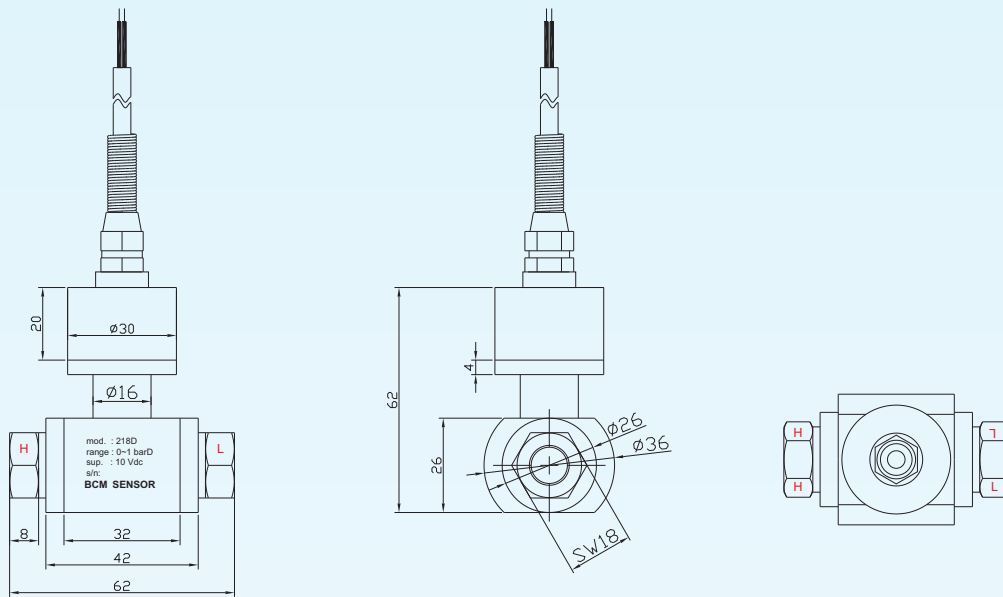
Dimensions 2: transducer with DIN43650



BCM SENSOR TECHNOLOGIES BVBA

Model 218D Differential Pressure Transducers

Dimensions 3: transducer with a cable



Technical Data

Parameters	Units	Specifications
pressure medium		gases or dilute-liquids, compatible to the 316L stainless steel
differential pressure ranges	barD	0~0.1, 0~0.2, ~0.35, ~0.7, ~1, ~2, ~3.5, ~7, ~10, ~20, ~35
pressure type		differential (D)
overload pressure	%fs	1000 (max. 100bar)
static pressure	%fs	1000 (max. 100bar)
output sensitivity	mV	≥ 20 @5Vdc
excitation	Vdc	2.5, ..., 10
	mA	0.5, ..., 2.0
zero offset	%fso	±1
accuracy	%fs	±0.5 (standard), ±1
long-term stability of zero offset	%fs/year	±0.25
input/output resistance	kΩ	4.6 (typical), max. 6
insulation resistance	MΩ	> 500 @500Vdc
temperature coefficient of zero offset*	%fso/°C	±0.05
temperature coefficient of span*	%fso/°C	±0.05
compensated temperature range	°C	0~50 (other range available on request)
operating temperature range	°C	-40 ~ +125
storage temperature range	°C	-40 ~ +135
process connection		G1/4 female (standard), G1/4 male, other threads available on request
electrical interface		4-color flying wires, PVC, 120mm length (standard)
		DIN43650
		Φ5mm, 4-core shielded PVC cable, cable length = 1m
diaphragm material		316L SS
wetted parts material		316 SS
net weight	g	~238

*: Measured over the compensated temperature range (0~80 °C).

General conditions for measurements: excitation = 5Vdc, temperature = 25°C, humidity = 40%RH.

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

Model 218D

Differential Pressure Transducers



Ordering Information

position (pos.) 1: model							
218D							
pos. 2: pressure ranges and references							
0.1bar	D	0.7bar	D	3.5bar	D	20bar	D
0.2bar	D	1bar	D	7bar	D	35bar	D
0.35bar	D	2bar	D	10bar	D		
pos. 3: output signal							
20mV							
pos. 4: accuracy							
0.5%fs (standard)				1%fs			
pos. 5: static pressure							
1000%fs (for ranges ≤ 10bar)				100bar (for ranges > 10bar)			
pos. 6: mechanical interface							
G1/4(female) (standard)				G1/4(male)			
Other threads available on request							
pos. 7: electrical interface							
4F = 4-color flying wires, PVC, 120mm (standard) DIN43650							
Φ5/n*/PVC/1m = Φ5mm, 4-core shielded PVC cable, cable length = 1m, cable length can be customized.							
pos. 8: customized specifications							
“(*)” 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

Examples of Ordering Code

- standard transducer:

218D-7barD-20mV-0.5%fs-1000%fs-G1/4(female)-4F

- customized transducer:

218D-5barD-20mV-0.5%fs-30bar-G1/4(male)-DIN43650-(*)

(*): Customized pressure range = 0~5barD;
Customized static pressure = 30bar.

BCM SENSOR TECHNOLOGIES BVBA

