

Model 157M

Silicon Capacitive Differential Pressure Transducers



Description

The model 157M is a capacitive differential pressure transducer, based on the BCM silicon capacitive sensor die. The sensor die is packaged in a 316 SS (stainless steel) housing which is filled with oil. Through the filling oil, measured pressure can be transferred from two 316L SS diaphragms to the sensing element of the transducer.

The 157M is designed for a wide variety of pressure ranges from 0~60 mbar to 0~5000 mbar with accuracy up to 0.25%fs (full scale). Owing to the large diameter diaphragms, the transducer is able to measure viscous fluids or fluids with particles, and it is also compatible with corrosive media. Moreover, Hastelloy-C or Monel diaphragms are available on request for stronger corrosive media applications.



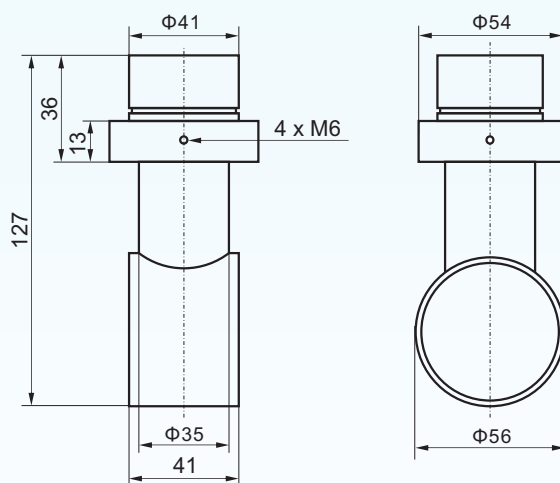
Features

- static pressure up to 100bar
- accuracy up to 0.25%fs
- easy assembly and wide suitability
- rigid and robust housing
- reliability and stability

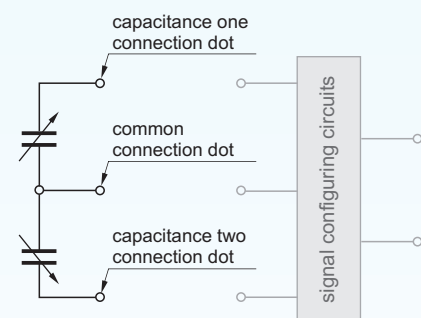
Applications

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

Dimensions



Electrical Interface



BCM SENSOR TECHNOLOGIES BVBA

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Technical Data

Parameter	Units	Specifications	
pressure medium		gases or dilute-liquids, including the oil chemical media, which are compatible to the diaphragm and flange materials.	
measuring ranges	mbar	0~60	0~320, 0~1300, 0~5000
differential overload pressure	bar	32	100
static pressure	bar	32	100
basic capacitance	pF	50 ±10	
capacitance output signal	pF	≥ 10 ±2	
capacitance zero offset	pF	≤ 5	
configured output signal*	mA	4~20 (2-wire)	
accuracy	%fs	≤ ±0.25 (standard), ≤ ±0.5	
hysteresis	%fs	±0.05	
static pressure effect	%fs	±0.5	
power supply (for current loop)	Vdc	24 (typical), 12, ..., 32	
long-term stability	%fs/year	±0.2	
fatigue time	cycles	10 ⁸	
load resistance (for current loop)	Ω	250~1000	
insulation resistance	MΩ	200 @ 100 Vdc	
storage temperature range	°C	-40 ~ +90	
operating temperature range	°C	-40 ~ +85	
temperature coefficient of zero offset	%fso/°C	±0.025	±0.01
temperature coefficient of span	%fso/°C	±0.025	±0.01
electrical interface		3-pin connector (capacitance output signal); 2-wire (4~20 mA output signal)	
diaphragm material		316L SS (standard), option: hastelloy-C, monel	
wetted parts material		316 SS	
housing material		316 SS	
unit weight	gram	~1300	

*:157M modules can be configured to 4~20 mA output signal with electronic circuitry.
The listed specifications are subject to change without prior notice.

Ordering Information:

model-range-output-accuracy-static pressure-flanges-customized requests (if any)

ordering code example: 157M-60mbar-4/20mA-0.25%fs-32bar-need flanges



ISO9001 Certified Company

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