Model 108C
Pressure Transmitters of Mono-Block Structure

Description

The 108C is a pressure transmitter based on thick film technology. Compared to the model 105C, this model is developed from model 330B stainless steel pressure sensor which features mono-block structure, so the 108C has no any O-ring inside its housing and has excellent resistance to overload pressure.

Due to an inner-cavity process connection, the 108C is suitable to measure pressure of gases or dilute fluids with pressure reference of absolute or gauge in automotive industry and household appliances.

The 108C has numerous options available for its electrical interface. And the customized electrical interface or/and mechanical interface is available on request.

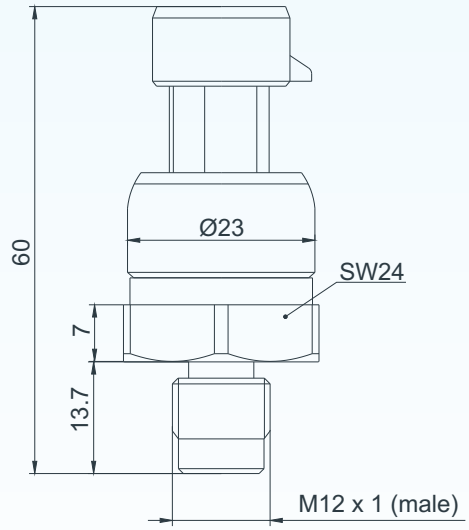
Features

- mono-block structure of wetted parts made from 304 stainless steel
- pressure ranges: 200bar, ..., 300bar
- proof pressure: up to 300%fs
- burst pressure: up to 500%fs

Applications

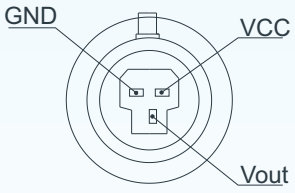
- automotive industry
- HVAC industry
- air compressors
- household appliances

Dimensions:



Note: All the dimensions are in mm.

Electrical connection:



3-pin Packard connector (12065287)

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Technical Data

Parameters		Units	Specifications	Notes
pressure medium			gases or dilute fluids	1
pressure references & ranges	gauge	bar	0~200, ~250, ~300	2
proof pressure		%fs	300, 250 for range of 300bar	3
burst pressure		%fs	500, 400 for range of 300bar	
output signal	current loop	mA	4~20 (standard)	
	voltage output	V	0~5, 10%~90%Vs ratiometric (e.g., 0.5~4.5V when Vs = 5Vdc)	
	digital output		I^2C, SPI, CAN open	
accuracy		%fs	±0.5 (standard), ±1	4
long-term stability		%fs/year	≤ ±0.2	
power supply (Vs)	current loop	Vdc	12 < Vs ≤ 36	
	voltage output	Vdc	12 < Vs ≤ 36 (for 0/5V), ≥3 (for ratiometric output)	
	digital output	Vdc	3, ..., 5	
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 ~ +135 (option: -50 ~ +150 °C, available on request)	
storage temperature range		°C	-40 ~ +135	
temperature coefficient of zero		%fso/°C	≤ ±0.02	
temperature coefficient of span		%fso/°C	≤ ±0.03	
vibration resistance (20, ..., 2000 Hz)		g	10	
life time		cycles	10^8	
response time		ms	≤ 1	5
pressure diaphragm			304 stainless steel	
wetted parts material			304 stainless steel	
mechanical interface			M12x1 male (standard), other threads available on request.	
electrical interface			3-pin (3P) Packard connector 12065287 (not for digital output)	
			shielded cable, cable length = 1m	6
environment protection			IP65	
net weight		gram	~50	

Notes: 1. The pressure medium should be compatible with wetted parts material and pressure diaphragm.

2. For customized pressure ranges, consult BCM.

3. “fs” means full scale, and refers to maximum working pressure or rated pressure.

4. Including non-linearity, hysteresis and repeatability.

5. Response time for a 0 bar to fs step change, 10% to 90% rise time of leading edge.

6. Options of cable jacket material are:

(1) PVC cable (temperature range to guarantee cable flexibility: -20°C ~ +70°C); (2) silicone cable (-50°C ~ +180°C);
(3) FEP cable (-100°C ~ +205°C); (4) PTFE cable (-190°C ~ +260°C).

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

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Ordering Information

par. 1	par. 2	par. 3	par. 4	par. 5	par. 6	par. 7
parameter (par.) 1: model						
108C						
	par. 2: pressure range and reference					
	200barG 250barG 300barG	G: gauge pressure				
		par. 3: output signal				
		4/20mA (standard) 10%/90%Vs = 10%~90%Vs ratiometric (e.g., 0.5~4.5V when Vs = 5Vdc) I^2C	0/5V SPI	CANopen		
			par. 4: accuracy			
			0.5%fs (standard)	1%fs		
				par. 5: mechanical interface		
				M12x1(male)	customized threads	
					par. 6: electrical interface	
					3P Packard connector (standard for analog output) PVC* cable (standard for digital output, -20~+70°C) *: Other options are: - silicone cable (-50~+180°C); - FEP cable (-100~+205°C); - PTFE cable (-190°~+260°C). customized interface available on request	
						par. 7: customized specifications
						"(*)" is necessary only if any customized parameter is required, otherwise it is neglectable.

Examples of Ordering Code

- standard product:

  108C-0/250barG-4/20mA-0.5%fs-M12x1(male)-3P(Packard connector)

- customized product:

  108C-0/220barG-4/20mA-0.5%fs-M12x1(male)-3P(Packard connector)-**(*)**

  (*): Customized pressure range = 0~220 barG

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