

# Model 102C Pressure Transmitters for HVAC and Refrigerator Applications



## Description

Model 102C Pressure Transmitter is specially developed for HVAC and refrigerator systems which requires the transmitters with high burst pressures.

The 102C pressure transmitter is integrated with 301B ceramic pressure sensor which is made by thick-film technology of BCM SENOR.

Though the housing of the 102C pressure transmitter is made from 304S stainless steel, this transmitter has a copper-tube for its process connection which is specially designed for air conditioning and refrigerator systems. Featuring in an inner-cavity structure, the 102C is suitable to measure the pressure of medium in either gases or dilute fluids. This model is available in either gauge or absolute pressure reference.

In addition, the electrical interface of the 102C pressure transmitter can be equipped with a 3-pin Packard connector (standard) or one meter shielded PVC cable.

## Features

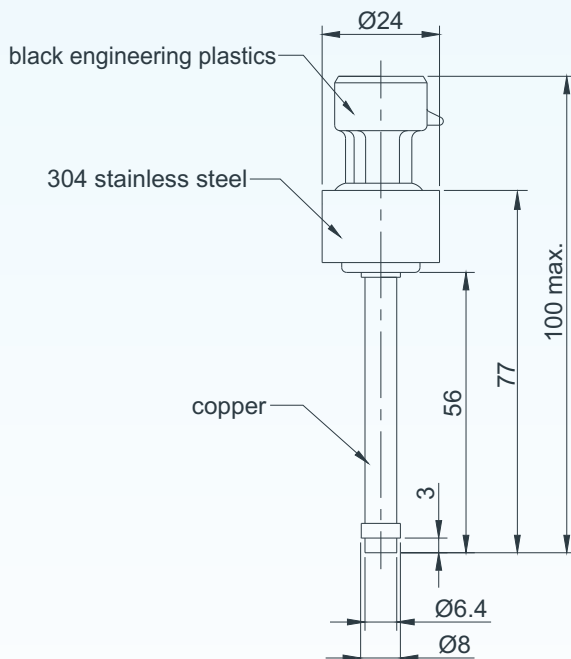
- middle pressure ranges: 2.5bar, ..., 50bar
- high proof pressure and high burst pressure
- process connection: copper tube

## Applications

- refrigerator systems
- HVAC systems



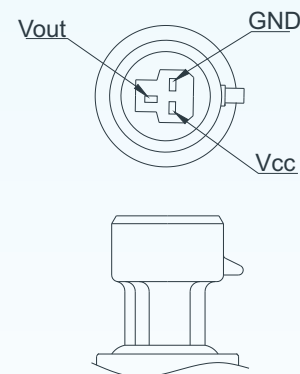
## Dimensions:



Note: All dimensions are in mm.

## Electrical Connection:

standard: 3-pin Packard connector (12065287)



option: 1 meter shielded PVC cable

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# Model 102C

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### Technical Data

Parameters		Units	Specifications	Notes
pressure medium			gases or dilute fluids compatible with wetted-part material	1
pressure ranges		bar	0~2.5, ~4, ~6, ~10, ~16, ~25, ~40, ~60, ~100	2
pressure references			gauge, sealed gauge	
proof pressure		%fs	300	3
burst pressure		%fs	800	
output signal	current loop	mA	4~20 (standard)	
	voltage output	V	0~5, 0.5~3.5, 10%~90%Vs ratiometric	
	digital output		I2C	
accuracy		%fs	$\leq \pm 1$ , $\leq \pm 2$ (standard)	4
long-term stability		%fs/year	$\leq \pm 0.2$	
power supply (Vs)	current loop	Vdc	$12 < V_s \leq 36$	
	voltage output	Vdc	$5 \pm 0.25$ , $\geq 3$ for ratiometric output	
	digital output	Vdc	3, ..., 5.5	
load resistance for voltage output		k $\Omega$	$> 5$	
load resistance for current loop		$\Omega$	$\leq (V_s - 12V) / 0.02A$	
insulation resistance		M $\Omega$	$\geq 100 @500Vdc$	
compensated temperature range		$^{\circ}C$	-30 ~ +80	
operating temperature range		$^{\circ}C$	-40 ~ +135	
storage temperature range		$^{\circ}C$	-40 ~ +135	
temperature coefficient of zero		%fso/ $^{\circ}C$	$\leq \pm 0.03$	
temperature coefficient of span		%fso/ $^{\circ}C$	$\leq \pm 0.03$	
vibration resistance (20, ..., 2000 Hz)		g	10	
life time		cycles	$10^8$	
response time		ms	$\leq 1$	5
seal			O-ring (fluorine rubber)	
pressure diaphragm			ceramic (96% Al <sub>2</sub> O <sub>3</sub> )	
mechanical interface			copper tube	
electrical interface		standard	3-pin (3P) Packard connector 12065287	
			shielded PVC cable, 1m	
environment protection			IP65	
net weight		gram	~40	

- Notes:
1. The pressure medium should be compatible with wetted parts including pressure diaphragm, O-ring, mechanical interface, and housing.
  2. For customized pressure ranges, consult BCM.
  3. "fs" means full scale, and refers to maximum working pressure or rated pressure.
  4. Combined non-linearity, hysteresis and repeatability.
  5. Response time for a 0 bar to fs step change, 10% to 90% rise time of leading edge.

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

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### Ordering Information

<b>parameter (par.) 1: model</b>						
102C						
<b>par. 2: pressure range and reference</b>						
0/2.5bar G, S		0/25bar G, S		G: gauge pressure		
0/4bar G, S		0/40bar G, S		S: sealed gauge		
0/6bar G, S		0/60bar G, S				
0/10bar G, S		0/100bar G, S				
0/16bar G, S						
<b>par. 3: output signal</b>						
4/20mA(standard)		0/5V		0.5/3.5V		10%/90%Vs I2C
<b>par. 4: accuracy</b>						
1%fs			2%fs (standard)			
<b>par. 5: mechanical interface</b>						
CopperTube customized threads available on request						
<b>par. 6: electrical interface</b>						
3P Packard connector (standard) PVC cable (1m) customized interface available on request						
<b>par. 7: customized specifications</b>						
“(*)” is necessary only if any customized parameter is required, otherwise it is neglectable.						
<b>par. 1</b>	<b>par. 2</b>	<b>par. 3</b>	<b>par. 4</b>	<b>par. 5</b>	<b>par. 6</b>	<b>par. 7</b>

### Examples of Ordering Code

- standard product:  
102C-0/16barG-4/20mA-2%fs-CopperTube-3P Packard connector
- customized product:  
102C-2/50barS-10%/90%Vs-2%fs-CopperTube-3P Packard connector-(\*)  
(\*): Customized pressure range = 2~50 barS.