

Model 225T Heavy Duty Pressure Transmitters

Description

The smart pressure transmitter model 225T is a high-performance, highly reliable gauge/absolute pressure transmitter based on a BCM silicone piezoresistive pressure sensor. The transmitter uses HART protocol so that it can easily communicate with other devices.

The 225T is designed to be used in hazardous locations where explosion proof (Ex d II CT6) is needed, and is able to measure aggressive pressure media by choosing as a pressure diaphragm made from Hastelloy-C.

Two types of wetted parts structure are available for the 225T. One is inner-cavity type which is for gases or dilute fluids measurement, while the other is for measurement of viscous fluids or media containing solids.



Features

- pressure ranges: 0~15mbar, ..., 0~420bar, G
- output signal: 4~20mA with HART protocol
- accuracy: 0.25%fs, 0.5%fs (standard)
- media temperature range: -40°C ~ +125°C
- material of pressure diaphragm: 316L SS
option: Hastelloy-C
- explosive-proof: Exd II CT6
- protection class: IP65

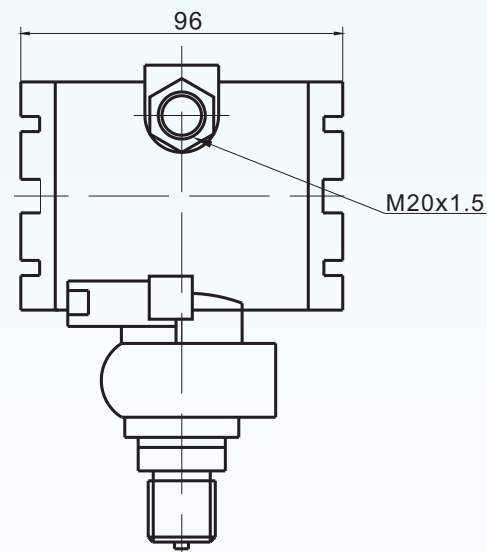
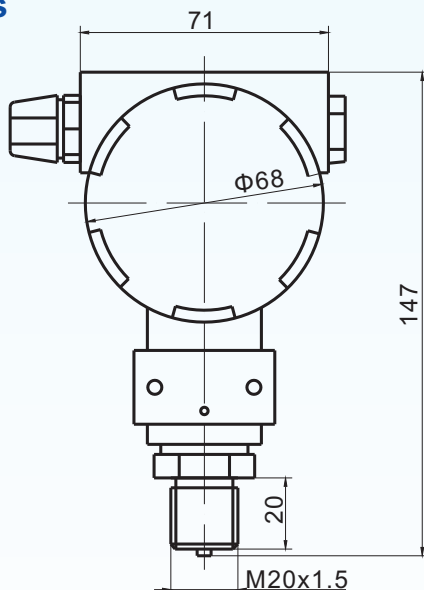


225T (type I): inner cavity



225T (type II): flush diaphragm

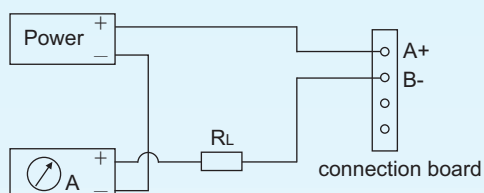
Dimensions



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Electrical connection



Technical Data

Parameter	Units	Specifications
pressure media	type I	gases or dilute liquids (compatible with the wetted parts' materials)
	type II	viscous fluids or fluids with grains (compatible with the wetted parts' materials)
measuring range & type	mbar (G ^{*,**} , A)	0~15, 0~30, 0~50, 0~80, 0~150, 0~250, 0~400, 0~700
	bar (G ^{**} , A)	0~1, 0~2, 0~3.5, 0~7, 0~10, 0~15, 0~25, 0~40, 0~70, 0~100
	barG	0~160, 0~250, 0~350, 0~420
overload pressure	%fs	200 (≥ 150 mbar), 300 (≤ 80 mbar)
output signal	mA	4~20 (standard), 4~20 with HART protocol
supply voltage (Vs)	Vdc	12, ..., 30
accuracy	%fs	± 0.25 , ± 0.5 (standard)
long-term stability of zero	%fs/year	$\leq \pm 0.1$ in case of 2bar \leq ranges ≤ 250 bar; $\leq \pm 0.2$ in case of the other ranges
life time	cycle	10 ⁸
response time	ms	<2
load resistance (R _L)	Ω	$\leq (V_s - 10) / 0.02 - R_0$, R ₀ refer to cable resistance, R _L can be 0 Ω .
media temperature range	$^{\circ}\text{C}$	-40~+125
ambient temperature range	$^{\circ}\text{C}$	-40~+85
storage temperature range	$^{\circ}\text{C}$	-40~+85
compensated temperature range	$^{\circ}\text{C}$	-10~+70
temperature coefficient of zero	%fso/ $^{\circ}\text{C}$	$\leq \pm 0.02$
temperature coefficient of span	%fso/ $^{\circ}\text{C}$	$\leq \pm 0.02$
process connection	Type I	M20x1.5 (standard), others are available on request
	Type II	G1/2
electrical connection	Inner thread	M20x1.5 (standard), 1/2 NPT
material of pressure diaphragm		316L SS (standard), Hastelloy-C
material of wetted parts		316 SS
housing material		cast aluminum alloy
environment protection		IP65
explosive-proof	proof rating	Exd II CT6
field display		4 1/2 digits LCD display
net weight	kg	~1.2

*: the range of "0~15 mbar, ..., 0~80 mbar" is only suitable for measurement of dry gas media.

** : On request, 225T is available for negative pressure measurement in gauge pressure. The negative pressure range is half of the positive pressure range, but not beyond -1 bar. For example, if the pressure range of the concerned 225T is 0~700 mbarG and this 225T is to be used for negative pressure measurement, then the customer needs to specify the pressure range as (-350/+700)mbarG.

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Ordering Information

position (pos.) 1: model							
225T							
pos. 2: pressure ranges and references							
0/15mbar G, A		0/250mbar G, A		0/3.5bar G, A		0/40bar G, A	
0/30mbar G, A		0/400mbar G, A		0/7bar G, A		0/70bar G, A	
0/50mbar G, A		0/700mbar G, A		0/10bar G, A		0/100bar G, A	
0/80mbar G, A		0/1bar G, A		0/15bar G, A		0/160bar G	
0/150mbar G, A		0/2bar G, A		0/25bar G, A		0/250bar G	
G: gauge pressure A: absolute pressure							
pos. 3: output signal							
4/20mA (standard)				4/20mA with HART			
pos. 4: accuracy							
0.25%fs				0.5%fs (standard)			
pos. 5: pressure diaphragm							
316L SS (standard), Hastelloy-C							
pos. 6: mechanical interface							
Type I (M20x1.5) (standard), Type II (G1/2)							
pos. 7: cable connection							
M20x1.5 (standard)				½ NPT			
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 transmitter:

225T-0/15barG-4/20mA-0.5%fs-316LSS-Type I (M20x1.5)-M20x1.5

- customized transmitter:

225T-(-1/1)barG-4/20mA-0.5%fs-316LSS-Type I (M20x1.5)-M20x1.5-(*)

(*): Customized pressure range = -1~+1 barG.

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

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