Pressure Transmitter PT5N

Technical Bulletin

PT5N Pressure Transmitters convert a pressure into a linear electrical 4...20 mA output signal suitable for controlling simple compressor and fan switching to the more sophisticated application of superheat modulation of Electronic Control Valves. With competitive performance to price characteristics and an easy to install pre-fabricated M12 cable assembly, PT5N transmitters are the designers choice for all heat pump, refrigeration and air conditioning applications.

PT5N-xxM

PT5N-xxT

Features

- Hybrid film technology where the pressure measuring cell is fully welded with the pressure transducer without seals.
- With output signal 4…20 mA and 2-wire connection for the precise operation of superheat, compressor or fan control systems
- Fully hermetic
- Calibrated for specific temperature and pressure ranges
- Easy install M12 electrical connection with pre-assembled cable assemblies available in various lengths
- PT5N-xxM with 7/16”-20UNF pressure connection and Schrader valve opener
- PT5N-xxT with 6x40 mm stainless steel tube and integrated brazing neck for easy mounting in applications requiring a fully hermetic system solution
- PT5N-150D with pressure connection 1/4“-18 NPT male suitable for subcritical and transcritical CO_2 systems
- Vibration, shock and pulsation resistant
- Protection class IP67 with mounted Plug and Cable Assembly

Selection table Pressure Transmitter

Type	Part No.		Pressure range for signal output (bar)*	Output signal	Medium temperature range	Max. working pressure PS (bar)*	Pressure Connection
	Single pack	Multipack 25 pcs					
PT5N-07M	805350	805350M	-0.8…7	4…20 mA	-40...+135°C	27	7/16” – 20 UNF (with Schrader valve opener)
PT5N-18M	805351	805351M	0...18			48	
PT5N-30M	805352	805352M	0...30			60	
PT5N-50M	805353	805353M	0...50			75	
PT5N-07T	805380	805380M	-0.8...7			27	6 mm tube x 40 mm long
PT5N-18T	805381	805381M	0...18			48	
PT5N-30T	805382	805382M	0…30			60	
PT5N-50T	805383	805383M	0…50			75	
PT5N-150D	805379	805379M	0…150			150	1/4”-18 NPT (male)

Note: *) Sealed gauge pressure

Selection table Cable Assemblies: assembly fits all models

Type	Part No.		Cable Length**	Temperature Range
	Single pack	Multipack 20 pcs		
PT4-M15	804803	804803M	1.5 m	-50…+80°C static application -25…+80°C mobile application
PT4-M30	804804	804804M	3.0 m	
PT4-M60	804805	804805M	6.0 m	

Note: **) Longer length of the electrical connection cable beyond 6.0 m must be verified by user in term of output signal as well as EMC within installed system.

Pressure Transmitter PT5N

Technical Data

Supply voltage (polarity protected)	Nominal: 24VDC Range: 7…33VDC
Operating current	Maximum ≤ 23 mA 4…20 mA output
Load resistance	$R_L \leq \frac{Ub - 7.0V}{0.02A}$
Response time	≤ 2 ms
Weight (without plug and cable ass.)	PT5N-xxM: ~ 87 g PT5N -150D: 73 g PT5N-xxT: ~ 103 g
Mounting position	Non position sensitive; details see operating instructions
Temperatures …Transport and storage …Operating ambient housing …Medium	 -50…+100°C -30…+85°C -40…+135°C

Electrical connection PT4-Mxx Cable Assembly	M12 connection according to EN61076-2-101 Part 2 Prefabricated, various cable lengths
Medium compatibility	A1 group refrigerants
Marking	CE acc. EMC Directive (EN 61326-2-3, EN 50121-3-2) c UL us LISTED (E499688)
Protection class (EN 60529)	IP67 with mounted plug and cable assembly
Vibration at 15…2000Hz	20 g according to IEC 60068-2-6
Materials Housing pressure connection PT5N-xxT	 Stainless steel 1.4404 / AISI316L Stainless steel 1.4301 / AISI 304

Accuracy performance

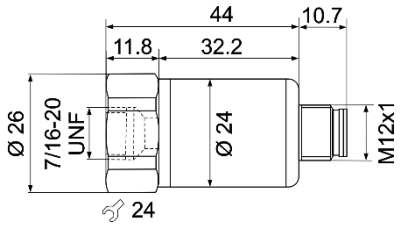
Type	Total error[1]	Temperature range
PT5N-07 / -18	≤ ±1% FS	-40…+20°C
PT5N-30 / -50	≤ ±1% FS	+10…+50°C
	≤ ±2% FS	-10…+80°C
PT5N-150D	≤ ±1% FS	+10...+50°C
	≤ ±2% FS	-10...+90°C

Note:
[1]) Total error includes non-linearity, hysteresis, repeatability as well as offset and span drift due to the temperature changes.

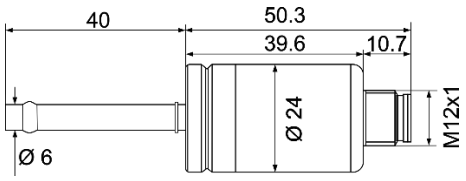
%FS is related to **P**ercentage of **F**ull sensor **S**cale.

Dimensions (mm)

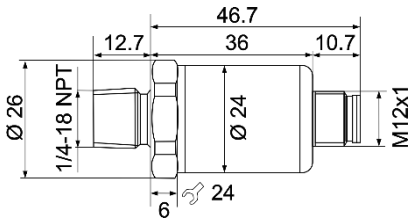
PT5N-xxM



PT5N-xxT



PT5N-150D



PT4-Mxx M12 Plug