

Pressure transmitter PT5N

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-30M

PT5N-30T

Features

- Piezo-resistive sensor with output signal 4...20 mA and 2-wire connection for the precise operation of superheat, compressor or fan control systems
- Specially calibrated pressure ranges with $\pm 1\%$ accuracy performance to fulfill demands of today's refrigeration and HVAC applications
- Fully hermetic
- PT5N-xxM with 7/16"-20UNF pressure connection and Schrader valve opener
- PT5N-xxT with 40 mm stainless steel tube and integrated brazing neck for easy mounting in applications requiring a fully hermetic system solution
- PT5N-150D for subcritical and transcritical CO₂ systems
- Vibration, shock and pulsation resistant
- Protection class IP65 / IP67 (type-specific)
- UL (File No. E499688)

Selection table

Type	Part No.		Pressure Range For Signal Output (bar)*	Output Signal (mA)	Medium Temp. Range at Pressure Connection (°C)	Max. Allowable Pressure PS (bar)	Test Pressure PT (bar)	Burst Pressure (bar)*	Pressure Connection
	Single Pack	MultiPack**							
PT5N-07M	805350	805350M	-0.8 .. 7	4 .. 20	-40 .. +135	27	30	150	7/16" - 20 UNF (with Schrader Valve Opener)
PT5N-18M	805351	805351M	0 .. 18			48	63	250	
PT5N-30M	805352	805352M	0 .. 30			60	100	400	
PT5N-50M	805353	805353M	0 .. 50			75	150	400	
PT5N-07T	805380	805380M	-0.8 .. 7			6 mm ODM	27	30	150
PT5N-18T	805381	805381M	0 .. 18				48	63	250
PT5N-30T	805382	805382M	0 .. 30				60	100	400
PT5N-50T	805383	805383M	0 .. 50				75	150	400
PT5N-150D	805379	-	0 .. 150				150	320	1000

Note: *) Sealed Gauge Pressure
**) 25 pcs

Selection table plug/cable assemblies: assembly fits all models

Type	Part No.		Cable Length	Weight (g/Piece)	Temperature Range
	Single Pack	Multi Pack*			
PT4-M15	804 803	804 803M	1.5 m	50	-50 ... +80°C Static Application -25 ... +80°C Mobile Application
PT4-M30	804 804	804 804M	3.0 m	80	
PT4-M60	804 805	804 805M	6.0 m	140	

Note 1: *) 20 pieces

Note 2: PT4-M... are not in compliance with EN60335-1/2-40, clause 30 in term of glue wire test however, they comply to EN60079-15, clause 22.3 heat endurance test.

Technical data pressure transmitter

Supply Voltage (Polarity Protected)	Nominal: 24 VDC Range: 7.. 33 VDC	Sensor Lifetime	30 Million Load Cycles with 1.3 Times of Nominal Pressure
Medium Compatibility	A1: R134a, R410A, R407C, R404A, R507, R448A, R449A, R513A, R450A, R452A, R23, R124, R744 A2L: R32	Electrical Connection PT4-Mxx Cable Assembly	M12 Connection according to IEC 61076-2-101:2012 Prefabricated, various cable lengths
Operating Current	Maximum \leq 23 mA 4...20 mA Output	Approvals/Marking	 acc. EMC Directive (EN 61326-2-3)  cULus(LISTED) (UL File Nr. 499688) pending
Load Resistance	$R_L \leq \frac{U_b - 7.0 V}{0.02 A}$	Protection Class (EN 60529)	IP67 with mounted plug and cable assembly
Response Time	\leq 2 ms	Vibration at 15...2000Hz	20 g according to IEC60068-2-6
Temperatures Transport and Storage Operating Ambient Housing Medium:	-50 .. +100 °C -30 .. +85 °C -40 .. +135 °C (UL listed -40...+100 °C)	Materials Housing	Stainless steel 1.4404 / AISI316L
		Pressure Connection PT5N-xxT	Stainless steel 1.4301 / AISI 304

Accuracy performance

Type	Total Error *	Temperature Range
PT5N-07 / 18	\pm 1% FS	-40 ... +20 °C
PT5N-30 / -50/	\pm 1% FS \pm 2% FS	+10 ... +50 °C -10 ... +80 °C
PT5N-150D	\pm 1% FS \pm 2% FS	+10 ... +50 °C -10 ... +90 °C

*) Total Error Includes Non-Linearity, Hysteresis, Repeatability As Well As Offset And Span Drift Due To The Temperature Changes.
Note: % FS is Related to Percentage of Full sensor Scale.