



**NO:** 07-20  
**DATE:** 09.04.2020  
**TO:** All customers  
**FROM:** Emerson Commercial & Residential Solutions - Europe  
Emerson Climate Technologies GmbH  
**SUBJECT:** PT4 & PT5 Pressure Transmitters Phase-out

Emerson Commercial & Residential Solutions announces the termination of PT4 & PT5 pressure transmitter ranges commercial life. The new PT5N range covers completely the functionality of those products as indicated in the below charts and drawings. **All indicated products use the same type of M12 connector.**

In general, new PT5N range of pressure transmitters offers same or better features than the previous ones, with some remarks as it's explained below.

#### Comparison PT4 vs PT5N:

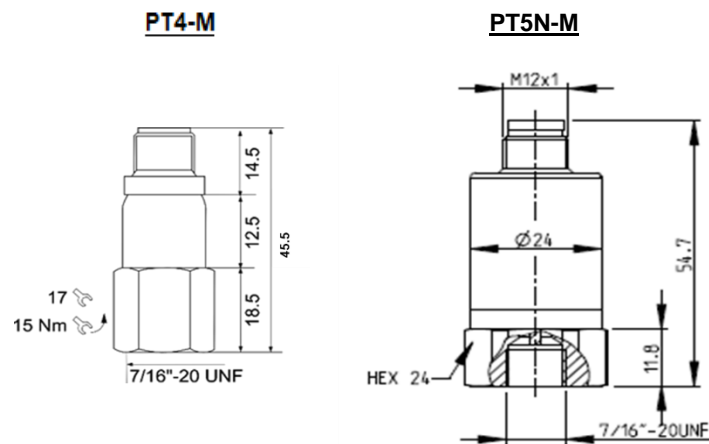
Description	PT4-...M	PT5N-...M/D
Technology	Piezo	Hybrid-film
Pressure connection type	7/16-20UNF	
Signal	4-20mA	
Supply voltage, VDC	8 to 32	7 to 33
Maximum output signal beyond max. range	24mA	23mA
Compatible plug and cable assembly	PT4-M15/30/60	
Marking	CE - UL	
Pressure sensing range (bar)	PT4-07 M (-0.8...7)	PT5N-07 M (-0.8...7)
	PT4-18 M (0...18)	PT5N-18 M (0...18)
	PT4-30 M (0...30)	PT5N-30 M (0...30)
	PT4-50 M (0...50)	PT5N-50 M (0...50)
Response time, millisecond	<1	<2
Medium temperature, °C	-50 to +135	-40 to +135
Operating ambient temperature °C	-40 to +80	-30* to +85
Transport and storage °C	-40 to +85	-50 to +100
Protection class	IP67	IP67
Total error (typical) FS *	±1%	
Housing & connection	SS316L	
Quantity in Multipack	20 pieces	25 pieces

\* If lower operating ambient temperatures please contact your local Emerson sales office.

Accuracy, total error (FS)\*

Temp. range, °C	PT4 RANGE				PT5N RANGE				
	PT4-07M	PT4-18M	PT4-30M	PT4-50M	PT5N-07M/T	PT5N-18M/T	PT5N-30M/T	PT5N-50M/T	PT5N-150D
-40...+80	≤ +/- 1% F.S.		≤ +/- 2% F.S.						
-40...+20					≤ +/- 1% F.S.				
-30...+80				≤ +/- 2% F.S.					
-20...+80		≤ +/- 1% F.S.							
-20...+60			≤ +/- 1% F.S.						
-10...+80							≤ +/- 2% F.S.		
-10...+90									≤ +/- 2% F.S.
-10...+100									
0...+40			≤ +/- 2% F.S.						
+10...+50							≤ +/- 1% F.S.		≤ +/- 1% F.S.

\*Total error includes non-linearity, Hysteresis, repeatability. Offset and span drift due to temperature change. %FS is related to Percentage of Full Scale.



The main differences between PT5N and PT4 are related to:

- PT5N is hybrid-film whilst PT4 utilizes piezo technology,
- PT4 offers wider measurement range in model 07 below 1% F.S. error.
- PT5N is 9.2 mm longer than PT4
- PT5N offers solution for > 50 bar range.
- PT5N needs a 24 mm hexagonal wrench, whilst PT4 requires 17 mm
- Medium temperature of PT5N is limited to -40°C whilst PT4 was down to -50 °C, but it can be limited down to -40°C in certain cases.

**Comparison PT5-M/D/T vs PT5N-M/D/T:**

Description	PT5-...M/D	PT5N-...M/D	PT5-...T	PT5N-...T
Technology	Thin-film	Hybrid-film	Thin-film	Hybrid-film
Pressure connection type	7/16-20UNF		6x40mm tube	
Signal	4-20mA		4-20mA	
Supply voltage, VDC	8 to 32 (150D: 7...26.4)	7 to 33	8 to 32	7 to 33
Maximum output signal beyond max. range	24mA	23mA	24mA	23mA
Compatible plug and cable assembly	PT4-M15/30/60		PT4-M15/30/60	
Marking	CE - UL		CE - UL	
Pressure sensing range (bar)	PT5-07 M (-0.8...7)	PT5N-07 M (-0.8...7)	PT5-07 T (-0.8...7)	PT5N-07 T (-0.8...7)
	PT5-18 M (0...18)	PT5N-18 M (0...18)	PT5-18 T (0...18)	PT5N-18 T (0...18)
	PT5-30 M (0...30)	PT5N-30 M (0...30)	PT5-30 T (0...30)	PT5N-30 T (0...30)
	PT5-50 M (0...50)	PT5N-50 M (0...50)	PT5-50 T (0...50)	PT5N-50 T (0...50)
	PT5-150 D (0...150)	PT5N-150 D (0...150)		
Response time, millisecond	<5	<2	<5	<2
Medium temperature, °C	-40 to +100	-40 to +135	-40 to +135	-40 to +135
Operating ambient temperature °C	-40 to +80	-30* to +85	-40 to +80	-30* to +85
Transport and storage °C	-25 to +80	-50 to +100	-25 to +80	-50 to +100
Protection Class	IP67	IP67	IP67	IP67
	(PT5-07M, IP65)		(PT5-07M, IP65)	
Total error (typical) FS*	≤±1%			
Housing & connection	SS316L			SS316L/SS304
Quantity in Multipack	20 pieces	25 pieces	10 pieces	25 pieces

\* If lower operating ambient temperatures please contact your local Emerson sales office.

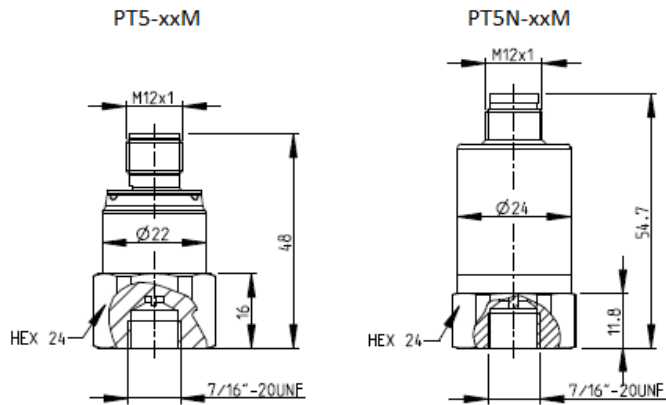
**Accuracy, total error (FS)\***

Temp. range, °C	PT5 RANGE					PT5N RANGE				
	PT5-07M/T	PT5-18M/T	PT5-30M/T	PT5-50M/T	PT5-150D	PT5N-07M/T	PT5N-18M/T	PT5N-30M/T	PT5N-50M/T	PT5N-150D
-40...+80										
-40...+20	≤ +/- 1% F.S.					≤ +/- 1% F.S.				
-30...+80										
-20...+80										
-20...+60										
-10...+80			≤ +/- 2% F.S.					≤ +/- 2% F.S.		
-10...+90										≤ +/- 2% F.S.
-10...+100				≤ +/- 2% F.S.						
0...+40										
+10...+50			≤ +/- 1% F.S.		≤ +/- 1% F.S.			≤ +/- 1% F.S.		≤ +/- 1% F.S.

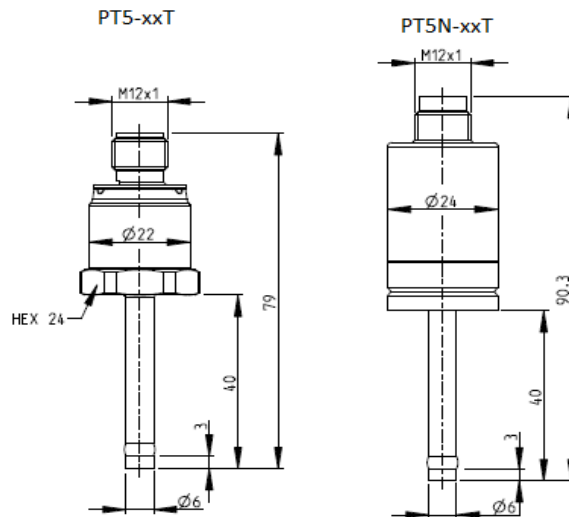
\*Total error includes non-linearity, Hysteresis, repeatability. Offset and span drift due to temperature change. %FS is related to Percentage of Full Scale.

Dimensional data:

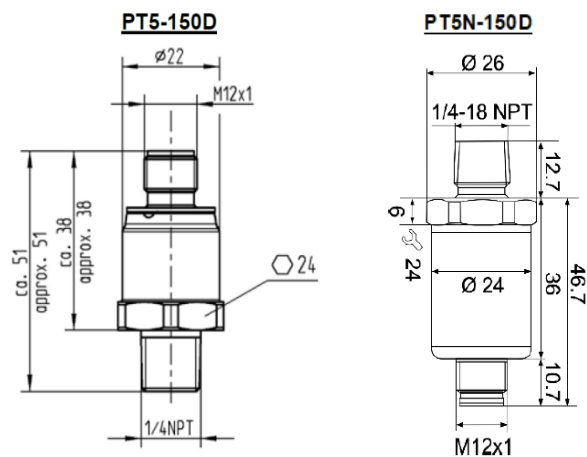
PT5-M and PT5N-M



PT5-T and PT5N-T



PT5-D and PT5N-D



The main differences between PT5 and PT5N are related to:

- PT5N is hybrid-film, PT5 utilizes thin-film technology.
- PT5N offers higher medium maximum measurement temperature than PT5 (135°C vs 100 °C)
- PT5N is a bit longer than PT5 in all the versions

**Conclusions.**

Based on the previous analysis and comparisons, the new PT5N range fully covers the phasing out one, apart from the accuracy on the PT4-07/30M, which is wider.

Nevertheless, in the ordinary refrigeration applications usually there's no need to measure from -40°C to +80°C in the same application.

The minimal form differences, together with the almost exact fitting and features, allow the new PT5N range to be a 100% direct replacement of the phased-out series.

Please refer to the PT5N Technical Bulletin for further details regarding the product.

Last orders for PT4/PT5: 31 of March 2020.

For specific cases, which may have existing platforms affected by the dimensional/functional differences of the PT5N new range compared to the previous, please contact MKG dept. in Aachen.

PCN correlation for ordering (in orange the phased-out products / in green new release):

*Subjected to Phase-out*

*New*

PT4		PT5	
Type	PCN	Type	PCN
PT4-07M	802332	PT5-07M	802350
PT4-07M	802332M	PT5-07M	802350M
PT4-18M	802333	PT5-18M	802351
PT4-18M	802333M	PT5-18M	802351M
PT4-30M	802334	PT5-30M	802352
PT4-30M	802334M	PT5-30M	802352M
PT4-50M	802335	PT5-50M	802353
PT4-50M	802335M	PT5-50M	802353M
-	-	PT5-150D	802379

PT5N	PT5N
Type	PCN
PT5N-07M	805350
PT5N-07M	805350M
PT5N-18M	805351
PT5N-18M	805351M
PT5N-30M	805352
PT5N-30M	805352M
PT5N-50M	805353
PT5N-50M	805353M
PT5N-150D	805379



-	-	PT5-07T	802380
-	-	PT5-07T	802380M
-	-	PT5-18T	802381
-	-	PT5-18T	802381M
-	-	PT5-30T	802382
-	-	PT5-30T	802382M
-	-	PT5-50T	802383
-	-	PT5-50T	802383M

PT5N-07T	805380
PT5N-07T	805380M
PT5N-18T	805381
PT5N-18T	805381M
PT5N-30T	805382
PT5N-30T	805382M
PT5N-50T	805383
PT5N-50T	805383M



For any further information please contact your local Emerson Commercial & Residential Solutions representatives.