Pressure Transmitters Type SPT Series

Product Description

The New Stauff SPT pressure transmitter was designed for many industrial and OEM pressure measurement applications. The SPT pressure transmitters convert applied pressure from 15PSI up to 10,000PSI into the corresponding output signals. The SPT Series provides resistance to vibration, shock, wide temperature variations, and many other extreme environmental conditions that are typical of industrial and OEM applications.

Features

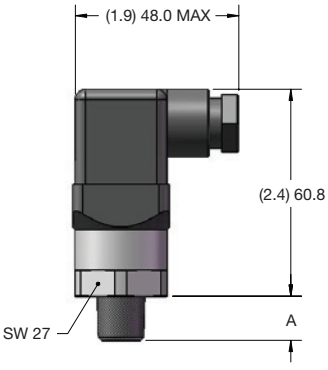
- Stainless steel housing construction
- L-plug DIN 175301-803A electrical connection
- Pressure ranges up to 7,500PSI
- 1/4NPT or -4 SAE process connection
- Output signal 4-20mA
- Non-linearity ≤ ± 0.5% BFSL
- Environmental protection of IP65
- Protection against incorrect polarity, short circuits, and over-voltage
- Temperature compensated
- Long term stability

Options

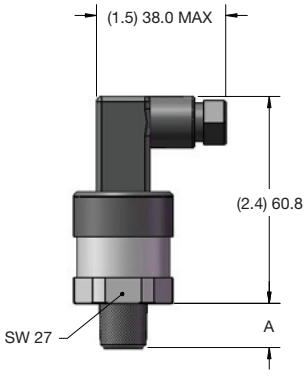
- Mini L-plug DIN 175301-803C, M12x1, and flying lead electrical connections
- Pressure ranges up to 10,000PSI
- -4 SAE, 1/2NPT, G1/4, G1/2, and 1/4NPT female process connections
- Output signals 0-5 V, 0-10 V, 1-5V, and 0.5-4.5 V
- Non-linearity ≤ ± 0.25% BFSL
- Environmental protection of IP67
- Extended temperature option -30°C to +100°C (-22°F to +212°F)

Dimensional Data

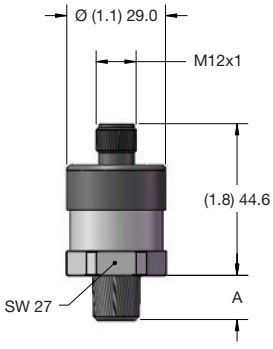
DIN 175301-803A



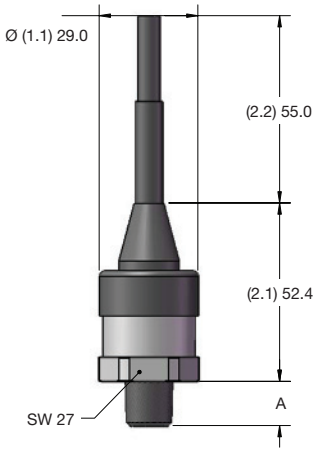
DIN 175301-803C



M12x1, 4-PIN



FLYING LEADS



Type	A	Threads
N04	13 mm (0.51")	1/4" NPT
N08	19 mm (0.75")	1/2" NPT
U04	9.1 mm (0.36")	7/16-20 UNF 2A
B04	14 mm (0.55")	G 1/4 B
F04	20 mm (0.80")	1/4" NPT Female

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Pressure Range Ordering Code

Order Code	Pressure Range		Maximum Pressure[2]		Burst Pressure[3]	
P00015	0-15 PSI	(0-1 BAR)	30 PSI	(2 BAR)	75 PSI	(5.2 BAR)
P00025	0-25 PSI	(0-1.7 BAR)	60 PSI	(4.1 BAR)	150 PSI	(10.3 BAR)
P00030	0-30 PSI	(0-2 BAR)	60 PSI	(4.1 BAR)	150 PSI	(10.3 BAR)
P00050	0-50 PSI	(0-3.4 BAR)	100 PSI	(6.9 BAR)	250 PSI	(17.2 BAR)
P00100	0-100 PSI	(0-6.9 BAR)	200 PSI	(13 BAR)	500 PSI	(34 BAR)
P00160	0-160 PSI	(0-11 BAR)	290 PSI	(20 BAR)	500 PSI	(34 BAR)
P00200	0-200 PSI	(0-13 BAR)	400 PSI	(27 BAR)	1500 PSI	(102 BAR)
P00300[1]	**0-300 PSI**	**(0-20 BAR)**	**600 PSI**	**(34 BAR)**	**1500 PSI**	**(102 BAR)**
P00500[1]	**0-500 PSI**	**(0-34 BAR)**	**1000 PSI**	**(68 BAR)**	**2500 PSI**	**(172 BAR)**
P01000[1]	**0-1000 PSI**	**(0-68 BAR)**	**1740 PSI**	**(118 BAR)**	**7975 PSI**	**(550 BAR)**
P01500[1]	**0-1500 PSI**	**(0-102 BAR)**	**2900 PSI**	**(197 BAR)**	**11600 PSI**	**(800 BAR)**
P02000	0-2000 PSI	(0-136 BAR)	4000 PSI	(275 BAR)	14500 PSI	(1000 BAR)
P03000[1]	**0-3000 PSI**	**(0-204 BAR)**	**6000 PSI**	**(413 BAR)**	**17400 PSI**	**(1200 BAR)**
P05000[1]	**0-5000 PSI**	**(0-340 BAR)**	**10000 PSI**	**(689 BAR)**	**24650 PSI**	**(1700 BAR)**
P07500[1]	**0-7500 PSI**	**(0-510 BAR)**	**17400 PSI**	**(1184 BAR)**	**34800 PSI**	**(2367 BAR)**
P10000	0-10000 PSI	(0-689 BAR)	17400 PSI	(1184 BAR)	34800 PSI	(2367 BAR)

Note:

1 - Bold print denotes standard option stocked
2 - Maximum pressure, causing no perminate changes in specifications but may lead to zero point and span shifts
3 - Burst pressure, leading to perminate changes in specifications or destruction of the transmitter

Ordering Code

SPT - P03000 - N04 - 010V - DIN - A - 2

Stauff Pressure Transmitter

Order Pressure Range
See table above

Process Connection

N04	1/4 NPT [1]
N08	1/2 NPT
B04	G 1/4
U04	7/16-20 UNF, SAE -4
F04	1/4 NPT Female

Output

420	4-20mA, 2 Wire [1]
010V	0-10 V, 3 Wire
05V	0-5 V, 3 Wire
15V	1-5 V, 3 Wire
0545V	0.5-4.5 V, 3 Wire

Electrical Connection

DIN	DIN 175301-803A [1]
MD	DIN 175301-803C
M12	M12x1, 4-PIN
FL	Flying Leads

Options

OMIT	≤ ± 0.5 % BFSL [1]
A	≤ ± 0.25 % BFSL
B	-30°C to +100°C Extended Temp Option

Design Number

Note:

1 - Standard Stocked Option

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Specifications

Materials					
Wetted Parts		316 L Stainless Steel			
Internal Transmission Fluid		Silicone oil (only pressure ranges up to 0-100 psig and 0-300 psi absolute)			
Case		316 L Stainless Steel			
Fatigue Life		10 million load cycles maximum			
Power Supply UB		**Signal Output**	**Power Supply UB**	**Maximum Load RA**	
Signal Output and Maximum		4-20mA, 2-wire	8-30 DCV	RA≤ (UB-10V) / 0.02A	
Ohmic Load RA		1-5V, 3 wire	8-30 DCV	RA> 5 kOhm	
		0-10V, 3-wire	14-30 DCV	RA> 10 kOhm	
		0.5-4.5V, ratiometric	5±0.5 DCV	RA> 4.5 kOhm	
		Others on request			
Response Time	ms	<4			
Isolation Voltage	DCV	500			
Current Consumption	mA	Signal current (max 25) for current output, and (max 8) for voltage output			
Non-linearity	% of span	≤ ± 0.5 (BFSL), or optional ≤ ± 0.25 (BFSL)			
Accuracy	% of span	≤ ± 1.0 (with non-linearity 0.5%)*			
		≤ ± 0.5 (with non-linearity 0.25%)*			
		≤ ± 0.6 (with non-linearity 0.25% and signal output 0-5 V)*			
		*(Includes non-linearity, hysteresis, zero point, and full scale error			
Zero Offset	% of span	≤0.15 typ., ≤0.4 max. (non-linearity 0.25%)			
		≤0.5 typ., ≤0.8 max. (non-linearity 0.5%)			
Hysteresis	% of span	≤0.16			
Non-repeatability	% of span	≤0.1			
Long Term Drift	% of span	≤0.1			
Signal Noise	% of span	≤0.3			
Permissible Temperature of:		**Standard**		**Extended Temperature Option**	
Media		32….+176°F	0….+80°C	-22….+212°F	-30….+100°C
Ambient		32….+176°F	0….+80°C	-22….+212°F	-30….+100°C
Storage		-4….+176°F	-20….+80°C	-22….+212°F	-30….+100°C
Operating Temperature Range		32….+176°F	0….+80°C		
Temperature Error within					
Compensated Temperature Range	% of span	≤1.0 typ., ≤2.5 max.			
CE Conformity					
Pressure Equipment Directive		97/23/EC			
EMC Directive		89/336/EWG emission (class B) and immunity according to EN 61 326			
Shock Resistance	g	500 according to IEC 60068-2-27 (mechanical shock)			
Vibration Resistance	g	10 according to IEC 60068-2-6 (vibration under resonance)			
Wiring Protection					
Overvoltage Protection	VDC	32; 36 with 4-20mA			
Short Circuit Protection		Sig+ to UB-			
Reverse Polarity Protection		UB+ to UB-			
Test Reference Conditions					
Relative Humidity	%	45-75			
Temperature	%	59….+77°F	15….+25°C		
Atmospheric Pressure	Kpa	86-106 (25.4-31.3 inhg)			
RoHS-conformity		Yes			
Weight	oz	Approximately 2.8 (80 g)			

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Electrical Connections