

Pressure transmitter TST-SMX 2



Intrinsically safe pressure transmitter with ATEX certification
 Protection class zone 1: II 2G Ex ia IIC T4 and zone 0: II 1G Ex ia IIB T4



Applications

- Chemical industry
- Oil and gas industry
- Food industry
- Plant engineering and automation technology

Description

- Measuring ranges 10 ... 600 mbar up to 0 ... 1000 bar
- Ex approval for zone 0: II 1G Ex ia IIB T4 or II 1G Ex ia IIC T4
- Ex approval for zone 1: II 2G Ex ia IIC T4
- Output signal 4 ... 20 mA
- Compact and robust stainless steel housing
- High reliability

Standard pressure ranges													
Measuring range*	P(mbar)	10	16	20	25	40	60	100	160	200	250	400	600
Overload pressure	P(mbar)	50	80	100	125	200	300	500	800	1000	1250	1200	1800
Bursting Pressure	P(mbar)	150	2400	300	375	600	900	1500	2400	3000	3750	2000	3000
Measuring range**	P(bar)	1,0	1,6	2,0	2,5	4,0	6,0	10,0	16	20	25		
Overload pressure	P(bar)	6	6	6	10	10	20	20	40	40	100		
Bursting Pressure	P(bar)	9	9	9	15	15	30	30	60	60	150		
Measuring range**	P(bar)	40	60	100	160	200	250	400	600	1000			
Overload pressure	P(bar)	100	200	200	400	400	750	750	840	1200			
Bursting Pressure	P(bar)	150	300	300	600	600	1000	1000	1050	1500			

*silicium type, **stainless steel diaphragm type

Technical data		Type: TST-SMX 2	
Electrical parameters			
Output signal*	4 ... 20 mA (2-wire)		
Operating voltage U_B	20 ... 27 V DC		
Permitted max. load R_A	$R_A \leq (U_B - 16 V)/20 \text{ mA}$, at least 100 Ohm		
Response time* (10 ... 90%)	< 1 ms		
Electric strength	350 V DC		
Accuracy specifications	pressure range 1 to 1000 bar	pressure range 10 to 600 mbar	
BFSL	$\leq \pm 0,25 \%$ of range	$\leq \pm 0,50 \%$ of range	
(Best Fit Straight Line)	$\leq \pm 0,20 \%$ of range	$\leq \pm 0,40 \%$ of range	
Total error at RT	$\leq \pm 0,50 \%$ of range	$\leq \pm 1,00 \%$ of range	
	including nonlinearity, hysteresis, zero point and full scale error (according to IEC 61298-2).		
	Optional $\leq \pm 0,25 \%$ of range or $\leq \pm 0,50 \%$ of range available		
(Best Fit Straight Line)	$\leq \pm 0,20 \%$ of range	$\leq \pm 0,40 \%$ of range	

* Other response times on request.

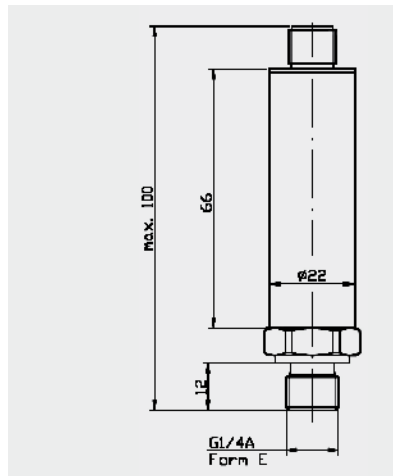
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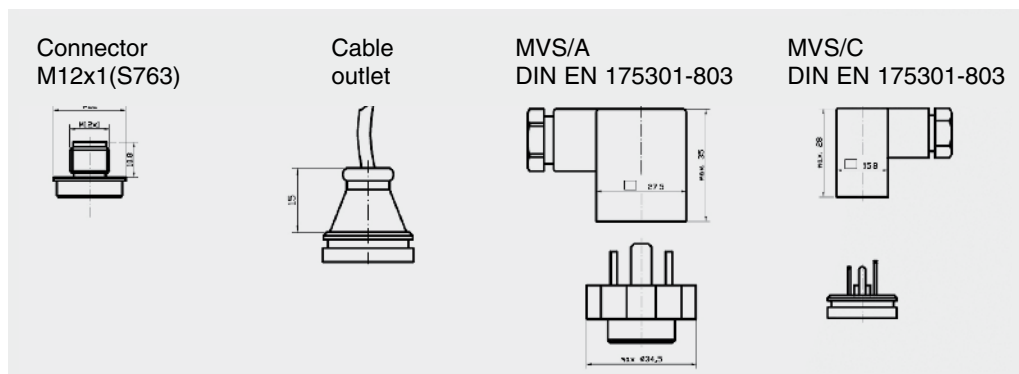
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Technical data	Type: TST-SMX 2	
Temperature ranges	Zone 0	Zone 1
Media temperature	-20 ... +60° C	-40 ... +100° C
Ambient temperature	-20 ... +60° C	-40 ... +85° C
Storage temperature	-40 ... +120° C	-40 ... +125° C
Compensated temperature range	-20 ... +60° C	-20 ... +85° C
Temperature coefficient zero point	≤± 0,15 / 10K % (% of range)	≤± 0,15 / 10K % (% of range)
Temperature coefficient range	≤± 0,15 / 10K % (% of range)	≤± 0,15 / 10K % (% of range)
Total error	bei -20° C - 1,00 % (% of range) bei +60° C - 1,00 % (% of range)	bei -40° C - 1,00 % (% of range) bei -85° C - 1,00 % (% of range)
ATEX certification	Zone 0	Zone 1
Ignition protection category	II 1G Ex ia IIB T4	II 2G Ex ia IIC T4
Ignition protection category	II 1G Ex ia IIC T4 (only with connector M12x1)	
Applicable norms and directives	EN 60079-0, EN 60079-11, EN 60079-26, EN 60079-14 (both zones)	
Maximum connection values	27 V, 125 mA, 85 W	27 V, 125 mA, 85 W
Temperature class	T4 (ambiance -20 ... +60° C)	T4 (ambiance -40 ... +85° C)
Mechanical parameters		
Material of parts with contact to measuring medium	silicium for pressure range from 10 to 600 mbar stainless steel (CrNiCuNb 17-4 PH / 1.4542) for pressure range from 1 to 1000 bar	
Housing	X5CrNi18-10	
Process connection	G 1/4 E, G 1/4 B, G 1/4 B, 1/4 NPT, others on request	
Electrical connection	connector M12x1, MVS / A, MVS / C, others on request	
Weight	~ 150 g according to layout	
Shock resistance	1000 g according to IEC 68-2-32	
Vibration resistance	20 g according to IEC 68-2-6 and IEC 68-2-36	
CE conformity	EMC directive 2004 / 108 / EC	
IP protection class	corresponding to the used and connected mating connector	

Dimensional drawing



Connector variants

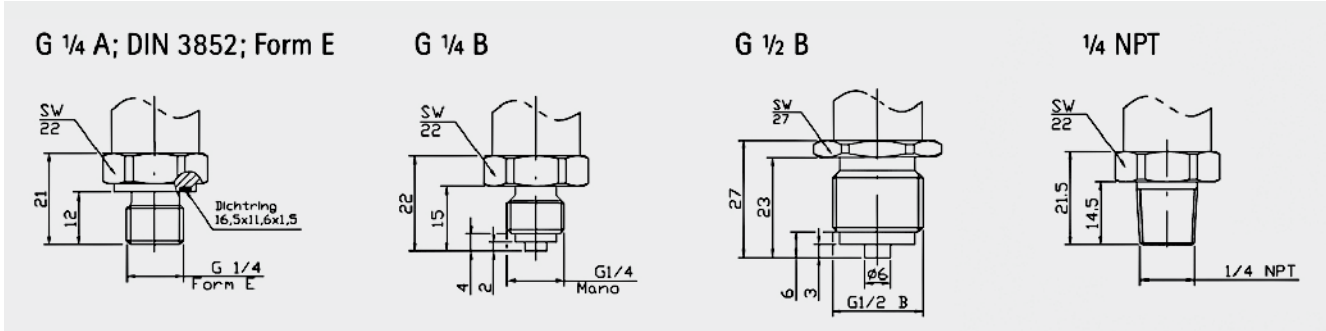


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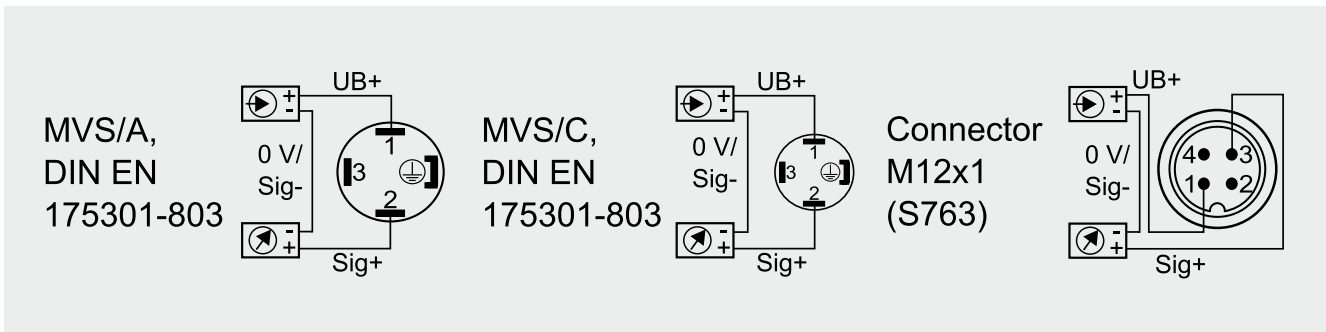


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Process connectors



PIN assignment



Assembled cable and connection accessories



Type	Length	Specification	Part No.:	straight	angled
M12x1 (S763) 4-pin	-	connector M12x1 for self-connection		1070039	1070038
	-	connector M12x1 self-connection, shielded		1070030	1070031
	2 m	cable: PUR		1070044	-
	5 m	cable: PUR, halogen-free		1070023	1070025
	5 m	cable: PUR, shielded, halogen-free		1070032	1070033
MVS / C, 3-pin +PE	3 m	cable: PUR, connector MVS / C		-	1070021

Special types upon request.