

INTRINSICALLY SAFE LEVEL TRANSMITTER FOR CORROSIVE MEDIA ATM/NC/Ex



36

CE  II 1G EEx ia IIB T4...T6

Features

- Chemical resistant level transmitter made of PVDF. This transmitter has an excellent resistance to most aggressive chemicals.
- Piezoresistive measuring element
- Gauge or absolute
- All pressure ranges between 0...50 mbar and -1...1000 bar available
- Calibration available for all common pressure units mH₂O, mWS, mWC etc.
- High reliability
- Short delivery time
- Available with PUR or Teflon cable
- Reverse polarity and short circuit protected

Typical applications

Depth and level measurement in hazardous areas

- Aggressive fluids
- Chemicals
- Waste water

Specifications

Pressure range	[bar]	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
Overpressure		3 bar	3 x FS (min. 3 bar)	3 x FS
Burst pressure	[bar]	> 200	> 200	> 200
Accuracy ¹⁾	[± % FS]	≤ 2.0	≤ 1.0	≤ 0.5
Accuracy ²⁾		≤ 0.5	≤ 0.5	≤ 0.5
Thermal shift ²⁾	[± % FS/°C]			
Zero	0...70°C	≤ 0.06 ³⁾	≤ 0.03	≤ 0.015
	-25...85°C	≤ 0.08 ⁴⁾	≤ 0.04	≤ 0.02
Span	0...70°C	≤ 0.015	≤ 0.015	≤ 0.015
	-25...85°C	≤ 0.02	≤ 0.02	≤ 0.02
Long term stability (1 year)		< 4 mbar	< 4 mbar	< 0.2% FS

Electrical connection

Type	4...20 mA Two wire current transmitter	Load resistance	
Supply voltage	10...30 V DC	Load resistance influence	
Supply voltage influence	< 0.1% FS	< 0.1% FS	
Circuit diagram			

Ex-Approval

Type of protection Standards	intrinsic safety II 1G EEx ia IIB T4...T6 EN 50 014: 1992 EN 50 020: 1994 EN 50 284: 1997	SEE Certificate SEE 99 ATEX 2640 general requirements intrinsic safety "i" special requirements zone 0 zener barrier
Max. values for supply/output circuit	30V / 100mA / 1W	
Temperature class ²⁾	T6	T4
Ambient temperature Ta	[°C] -25...55	-25...85
Process temperature	[°C] -25...55	-25...85
Without any information about temperature class the transmitter will be labelled T4. Ex-Approval for dust on request.		

Materials

Housing	PVDF
Diaphragm	Titanium, stainless steel 1.4435 (316L) with teflon protection
Seals (standard)	Viton (other materials see ordering information)

Electromagnetic compatibility

Standard	Level	Typical interferences
Emission:		
EN 61000-6-3 EN 55022	Generic emission standard Emission, class B	
Immunity:		
EN 61000-6-2	Generic immunity	
EN 61000-4-2	Electrostatic discharge	4kV contact, 8kV air
EN 61000-4-3	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz
EN 61000-4-3	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off
EN 61000-4-4	Fast transients (burst)	2 kV
EN 61000-4-6	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz
		Cellular phones, radio sets Digital portable phones Motors, valves Cellular phones, radio sets

¹⁾ Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

²⁾ Only if diaphragm is made in titanium

³⁾ 50 – 99 mbar: ≤ 0.12

⁴⁾ 50 – 99 mbar: ≤ 0.16

Ordering Information

		36	X	.XXXX	.XXXX	.XX	.XXX
Type	ATM/NC/Ex	36					
Pressure type	Gauge	1					
	Absolute	2					
Pressure range³⁾	All pressure ranges between 0...50 mbar and -1...1000 bar available		XX				
Version	Open, TD in titanium (Fig. 1)				90		
	Open, TD with teflon foil (Fig. 1)				91		
Electrical connection	PUR cable, blue ^{1) 2)}				17		
	Teflon cable, blue ¹⁾				22		
Output signal	4...20 mA					05	
Accuracy	≤ ± 0.5 % FS / ≤ ± 1.0 % FS / ≤ ± 2.0 % FS (dependent on pressure range and version)						9
Temperature class²⁾	T6 (Ta: -25...55°C comp.)						0
	T4 (Ta: -25...85°C comp.)						1
Options	Special oil filling: ASEOL Food						G
	Halocarbon						H
	Seals: EPDM						S
	Kalrez						T
	Protective cap (brass or POM) (Fig. 2)						W
Special options						Z	

¹⁾ Please specify the required cable length and media

²⁾ For media temperature > 50°C a teflon cable must be used

³⁾ mH2O, mWS, mWC etc. available

Dimensions

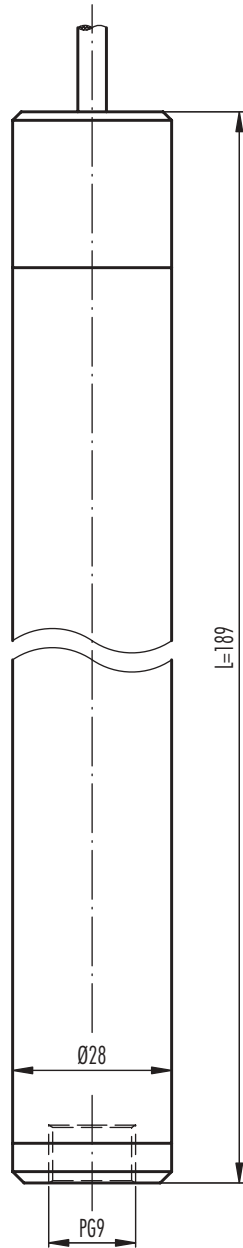


Fig. 1

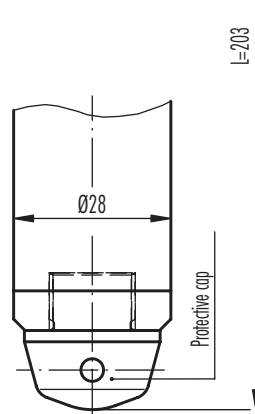


Fig. 2

Colour	2-Wire
white	+Vin
yellow	Pout
grey	EP

Specifications may change without notice.

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Switzerland	Germany	France	represented by
STS Sensor Technik Sirnach AG Rütihofstrasse 8 CH - 8370 Sirnach Tel.: +41 (0)71 969 49 29 Fax: +41 (0)71 969 49 20 e-mail: sales@sts-ag.ch Internet: www.sts-ag.com	STS Sensoren Transmitter Systeme GmbH Mercedesstrasse 1 D - 71063 Sindelfingen Tel.: +49 (0)7031 811 920 Fax: +49 (0)7031 811 958 e-mail: sts.gmbh@t-online.de Internet: www.sts-ag.com	STS Italia s.r.l. Via Gesù 5 I - 20090 Opera (MI) Tel.: +39 02 57607073/074 Fax: +39 02 57607110 e-mail: info@sts-italia.it Internet: www.sts-ag.com	STS France 66, Avenue de la Gare FR - 74100 Annemasse Tel.: +33 (0)4 50 37 69 25 Fax: +33 (0)4 50 39 42 25 e-mail: info@stsfrence.fr Internet: www.sts-ag.com