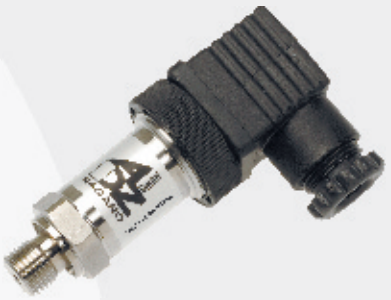
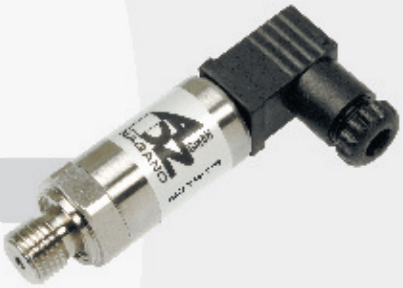
Intrinsically Safe Pressure Transmitter for Industrial Use

S M X

Main features

- Measuring ranges 0...1 bar to 0...2000 bar
- **Explosion-proof certificate II 2G EEx ia IIC T4 acc. to Atex**
- Output signal 4...20 mA for the industry, hydraulics and pneumatics and more
- Media temperature range -40°C to 100°C (Class T4)
- Shock and vibration resistance > 1000 g shock, > 20 g vibration
- No internal transmitting media (fully welded, "dry" measuring cell)
- Degree of protection from IP65 (special version up to IP69K)
- Compact and robust stainless steel design
- Highly flexible options by its modular design
- Short delivery times
- Highly reliable





Applications

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

Description

Thanks to its stainless steel diaphragm and semiconductor thin-film technology, the ex-proof pressure transmitter has excellent properties and can be applied in hydraulics, pneumatics, environmental engineering and more with all standard media compatible with stainless steel. Special protective circuitry prevents voltage reversal, overvoltage protection and limits power loss in the event of failure. Its application in a wide range of industries is guaranteed by its high precision and robust and compact design.

By being able to combine diverse mechanical and electronic connections, a variety of pressure measuring transmitters can be offered.

Safety Note:

When fitting, commissioning and operating this pressure transmitter, please observe relevant national safety regulations by all means.

DPF sensors
www.dpfsensors.com

S M X

Intrinsically Safe Pressure
Transmitter for Industrial Use

Specifications

PRESSURE RANGE									
Measuring range*	p [bar]	**1,0**	**1,6**	**2,0**	**2,5**	**4,0**	**6,0**	**10,0**	**16,0**
Overload pressure	p [bar]	6	6	6	10	10	20	20	40
Burst pressure	p [bar]	9	9	9	15	15	30	30	60
Measuring range*	p [bar]	**20**	**25**	**40**	**60**	**100**	**160**	**200**	**250**
Overload pressure	p [bar]	40	100	100	200	200	400	400	750
Burst pressure	p [bar]	60	150	150	300	300	600	600	1000
Measuring range*	p [bar]	**400**	**600**	**1000**	**1600**	**2000**			
Overload pressure	p [bar]	750	840	1200	2400	2400	(vaccum, relative pressure, +-,		
Burst pressure	p [bar]	100	1050	1500	3000	3000	absolute pressure are available)		

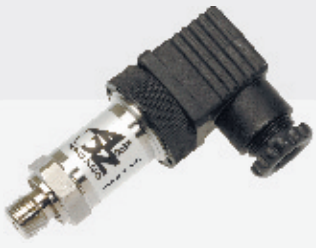
ELECTRICAL PARAMETER		Signal		U_S [V_{DC}]	RA [Ω]
Output signal * and	R_A in Ohm	4...20 mA	(2-wire)	9...27	acc. to R_A = < (U_S - 10V) / 0,02 A
maximum acceptable burden	R_A				
Response time* (10...90%)	t [ms]	< 1			
Withstand voltage	U [V_{DC}]	720	(=500 V_{AC})		
ACCURACY					
Accuracy @ RT	% of the range	≤ 0,50**	option ≤ 0,25	** incl. nonlinearity, hysteresis, repeatability, zero-offset-	
	BFSL	≤ 0,25		and final-offset (acc. to IEC 61298-2)	
Non-linearity	% of the range	≤ 0,15			
Repeatability	% of the range	≤ 0,15			
Stability/year	% of the range	≤ 0,15			
ACCEPTABLE TEMPERATURE RANGES					
Measuring medium	T [°C]	-20...85			
Ambience	T [°C]	-20...85			
Storage	T [°C]	-40...125			
Compensated range*	T [°C]	-20...85			
Temperature coefficient within the compensated range					
Mean TC offset	% of the range	≤ 0,15 / 10K			
Mean TC range	% of the range	≤ 0,15 / 10K			
Total error	% of the range	-40°C	2,00%		
	% of the range	85°C	2,00%		
DIRECTIVE ATEX					
Type of ignition protection		II 2G EEx ia IIC T4 (IBEx 04 Atex 1182)			
Underlying standards		EN 50014, EN 50020			
Maximum connected power		30 V, 50 mA, 1 W			
Temperature class		T4	(ambient temperature -40...+85° C)		

MECHANICAL PARAMETER			
Parts in contact with the measuring medium*		stainless steel	
Housing*		stainless steel	
Shock resistance	g	1000	acc. to IEC 68-2-32
Vibration resistance	g	20	acc. to IEC 68-2-6 und IEC 68-2-36
Mass	m [g]	80-120	depending on design
CE-conformity		EC directive	89/336/EWG

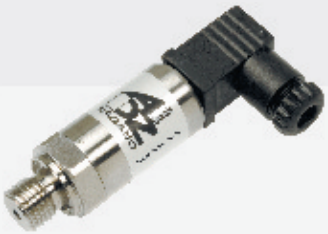
IP system of protection	The IP system of protection as specified in the data sheets generally applies, with their mating plug connected.
	Relative pressure transmitters usually require a ventilated mating plug and/or cable to aloow for pressure compen-
*** others upon request**	sation. From a pressure range of 60bar, a ventilated mating plug and/or cable is not necessarily required.

Configurations -examples-

SMX (MVS/A connector)

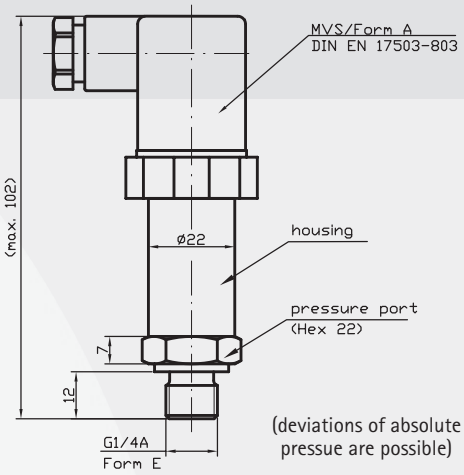


MVS/A



MVS/C

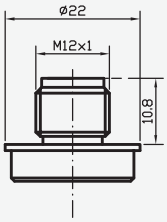
M12x1
(S763)



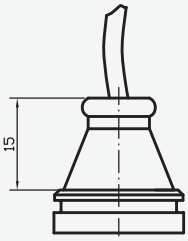
(deviations of absolute pressue are possible)

Connectors*

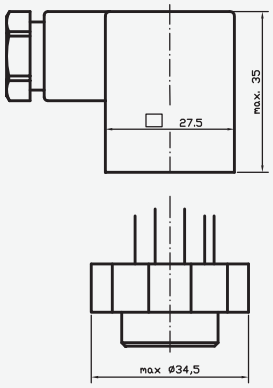
male socket
M12x1
(S 763)



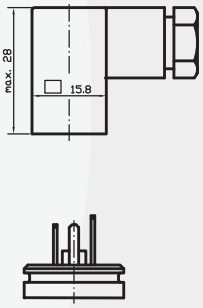
cable output
plastic



MSV/A
DIN EN 175301-803

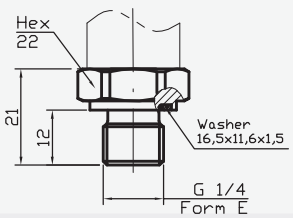


MSV/C
DIN EN 175301-803

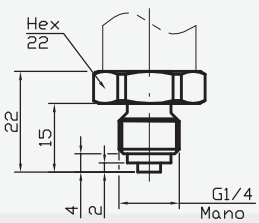


Pressure Connections*

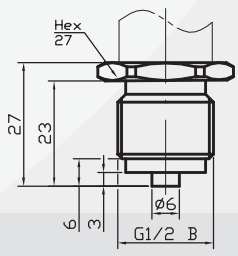
G ¼ A;
DIN 3852; Form E



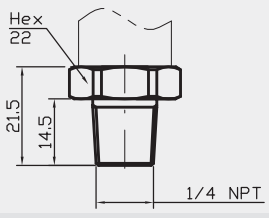
G ¼ B



G ½ B



¼ NPT



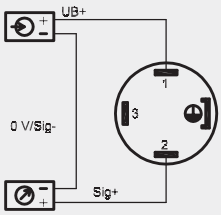
*** custom-made adjustments acc. to pressure connections and connecting options are possible**

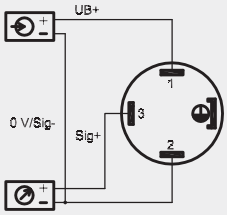
S M X

Intrinsically Safe Pressure Transmitter for Industrial Use

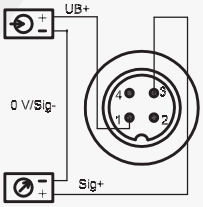
Electrical Connections* (left: 2-wire, right: 3-wire)

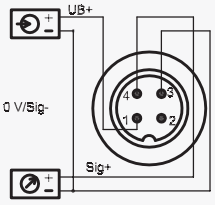
MVS/A
DIN EN
175301-803



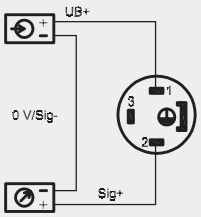


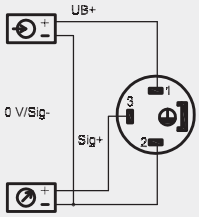
male
socket
M12x1
(S763)



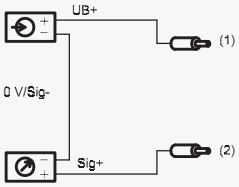


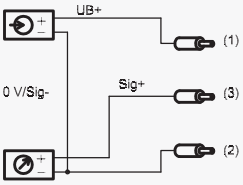
MVS/C
DIN EN
175301-803





cable
output





Legend

power supply
consumer

(1) red
(2) black
(3) white

*** custom-made adjustments acc. to pressure connections and connecting options are possible**

Product line

DS4	Electronic Pressure Switch	SMC	Pressure Transmitter with CANopen Interface
DPSX9I	Intrinsically Safe Electronic Pressure Switch for Current	SME	Pressure Transmitter in Miniature Design
DPSX9U	Intrinsically Safe Electronic Pressure Switch for Voltage	SMF	Pressure Transmitter with Flush Diaphragm
PS1	Level Sensor	SMH	High Pressure Transmitter
PSX2	Intrinsically Safe Level Sensor	SML	Pressure Transmitter for Industrial Application
SHP	High Precision Pressure Transmitter	SMO	Pressure Transmitter in Mobile Hydraulics
SIS	Low Pressure Transmitter in Short and Compact Design	SMS	OEM Pressure Transmitter for Hydraulics and Pneumatics
SIL	Low Pressure Transmitter for Industrial Application	SMX	Intrinsically Safe Pressure Transmitter for Industrial Application
SKE	High Temperature Pressure Transmitter with Detached Electronics	TPS	Multi-Function Transmitter for Pressure and Temperature
SKL	High Temperature Pressure Transmitter with Cooling Fins		

GUEMISA (Electrónica Guerra y Miró Guemisa S.L.)
Sta. Virgilia, 29 - local - 28033 Madrid (Spain)
Tlfno.: (034) 91 764 21 00 Fax.: (034) 91 764 21 32
Email.: ventas@guemisa.com Web.: www.guemisa.com