High Pressure Transmitter

S M H

Main features

- Measuring ranges > 0...1000 bar to 0...4000 bar
- Standard signals for the industry, hydraulics and others
- Highly flexible options by its modular design
- Plug systems MVS/A acc. to DIN EN 175301-803 A, MVS/C acc. to DIN EN 175301-803 E, M12
- Highly reliable

Applications

- Hydraulics
- Mechanical engineering
- Test stand design
- Water-power engineering
- Diesel engine technology

Description

This pressure transmitter is designed and manufactured for safely measuring **high pressures.** It is robust and precise. Special non-corroding steel permits its application also in systems with aggressive, liquid or gaseous media. Its modular design allows reasonable manufacture also in small batches and offers a multitude of signal, thread and connecting options that can all be supplied within very short time.

At its pressure connection, the sensor is sealed by means of a double-seal cone (as a rule, from 1000 bar). The threaded connection is to be fastened applying the specified torque.

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Specifications

PRESSURE RANGE					
Measuring range*	p [bar]	**1600**	**2000**	**2500**	**4000**
Overload pressure	p [bar]	2400	2400	3600	4800
Burst pressure	p [bar]	3000	3000	4500	6000

ELECTRICAL PARAMETER						
		signal		U_S [V_{DC}]	R_L [kΩ]	RA [Ω]
Output signal * and	R_A in Ohm	4...20 mA	(2-wire, 3-wire)	9...32		acc. to R_A = < (U_S - 10V) / 0,02 A
maximum acceptable burden R_A		0...10 V_{DC}	(3-wire)	12...32	> 5,0	
		1...5 V_{DC}		8...32	> 1,0	
		0,5...4,5 V_{DC}	ratiometric	5 ±10%	> 4,7	
Response time* (10...90%)	t [ms]	< 1				
Withstand voltage	U [V_{DC}]	350	(option 710)			

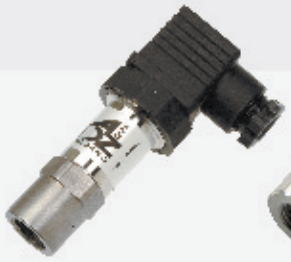
ACCURACY		**for pressure range ≤ 2000 bar**		**for pressure range > 2000 bis 4000 bar**
Accuracy @ RT	% of the range	≤ 0,50**	option ≤ 0,25	≤ 1,00**
	BFSL	≤ 0,25		≤ 0,50
Non-linearity	% of the range	≤ 0,15		≤ 0,30
Repeatability	% of the range	≤ 0,10		≤ 0,20
Stability/year	% of the range	≤ 0,10		≤ 0,20
	** incl. nonlinearity, hysteresis, repeatability, zero-offset- and final-offset (acc. to IEC 61298-2)			

ACCEPTABLE TEMPERATURE RANGES			
Measuring medium	T [°C]	-40...125	
Ambience	T [°C]	-40...105	(option-55)
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	105°C 2,00%	

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]	120-150	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 compensation. From a pressure range of 60bar, a ventilated mating plug and/or cable is not necessarily required.		

*** others upon request**

Configurations -examples-



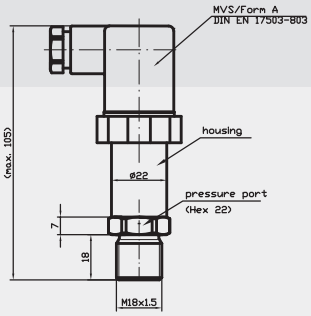
M16x1,5
MVS/A

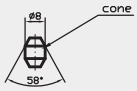
adapter M16x1,5
MVS/C

M18x1,5
MVS/A

M18x1,5
Packard

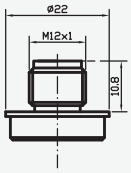
SMH with MVS/A



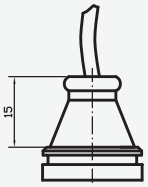


Connectors*

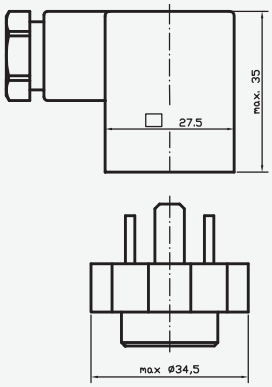
male socket
M12x1
(S763)



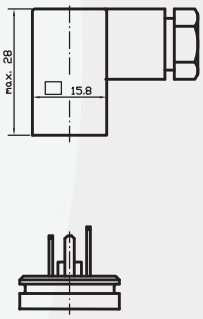
cable output
plastic



MVS/A
DIN EN 175301-803

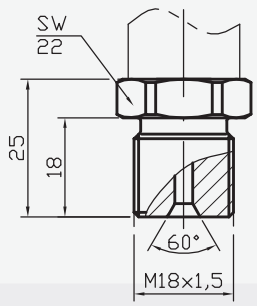


MVS/C
DIN EN 175301-803

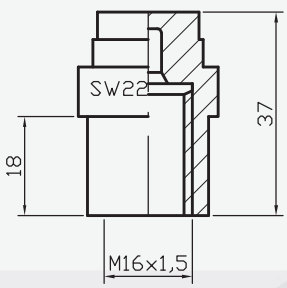


Pressure Connections*

M 18x1,5



M 16x1,5 fem.



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

S M H

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

MVS/A
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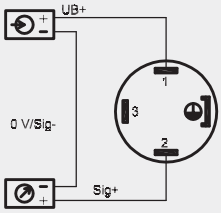
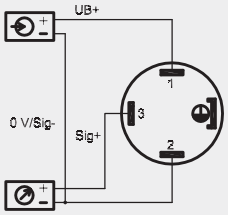
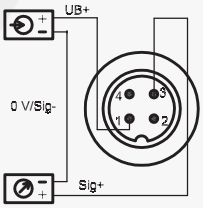
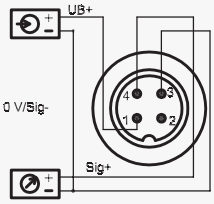
175301-803



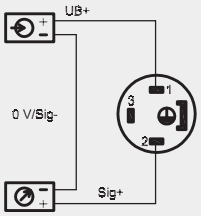


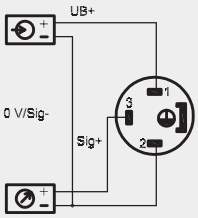
male
socket
M12x1
(S763)



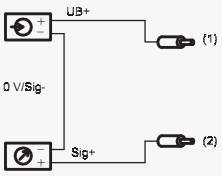


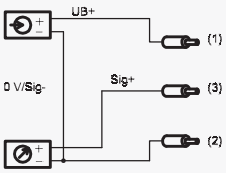
MVS/C
DIN EN
175301-803





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		

ADZ NAGANO GmbH
Gesellschaft für Sensortechnik
Bergener Ring 43 • D-01458 Ottendorf-Okrilla
Germany
Phone: +49 (0) 35 205 / 59 69-30 • Fax: -59
Email: info@adz.de www.adz.de

Your contacts sales department:
Lutz Reinhardt
Marion Hotz