

Low Pressure Transmitter in Short and Compact Design

S I S

Main features

- Measuring ranges 0...10 mbar to 0...40 bar
- Standard signals for the industry, hydraulics and pneumatics
- Plug systems MVS/A acc. to DIN EN 175301-803 A, MVS/C acc. to DIN EN 175301-803 C
- small design ~ max. 50 mm in length
- large variety of electrical connections

Applications

- General industrial applications
- Hydraulics
- Pneumatics
- Mechanical engineering
- Automotive industry
- Plant engineering and automation technology

Description

The SIS low-pressure transducer distinguishes itself by its very short and compact design. This allows for a higher degree of integrating it, so that the SIS can also be installed in very limited spaces. At the same time, the SIS is stable, reliable and features a high degree of variability in both electrical and mechanical connection. Its proven modular concept also permits to use the types of signaling most common in industry, and to manufacture it reasonably, also in low quantities.



Specifications

PRESSURE RANGE

Measuring range*	p [mbar]	10	16	20	25	40	60	100
Overload pressure	p [mbar]	50	80	100	125	200	300	500
Burst pressure	p [mbar]	150	240	300	375	600	900	1500
Measuring range*	p [mbar]	160	200	250	400	600	1000	
Overload pressure	p [mbar]	800	1000	1250	1200	1800	3000	
Burst pressure	p [mbar]	2000	2000	2000	2000	3000	5000	
Measuring range*	p [bar]	1,6	2,0	2,5	4,0	6,0	10,0	
Overload pressure	p [bar]	6	6	6	10	20	20	
Burst pressure	p [bar]	9	9	9	15	30	30	
Measuring range*	p [bar]	16	20	25	40			
Overload pressure	p [bar]	40	40	100	100	(vacuum, relative pressure, +- or absolute pressure are available)		
Burst pressure	p [bar]	60	60	150	150			

ELECTRICAL PARAMETER

		2-wire	3-wire	3-wire	3-wire
Output signal*		4...20 mA	0...10 V	0...5 V	0,5...4,5 V ratiometric
Supply voltage	U_s [V _{DC}]	10...32**	12...32	8...32	5 ± 10 %
Load resistor	R_L in Ohm	$R_L = (U_s - 10V) / 0,02A$	≥4.7kΩ	≥4.7kΩ	≥4.7kΩ
Response time	t [ms]	≤ 2	≤ 1	≤ 1	≤ 1
Maximum supply current	I [mA]	23	10	10	7,5
Isolation voltage*	U [V _{DC}]	50		** > AppNote (see www.adz.de)	

ACCURACY

Accuracy @ RT	% of the range ≤ 1,00***	Option ≤ 0,5	*** incl. nonlinearity, hysteresis, repeatability, zero-offset and final-offset (acc. to IEC 61298-2)	
	BFSL ≤ 0,25			
Non-linearity	% of the range ≤ 0,15			
Stability/year	% of the range ≤ 0,10			

ACCEPTABLE TEMPERATURE RANGES

Measuring medium	T [°C]	-40...85	
Ambience	T [°C]	-40...85	
Storage	T [°C]	-40...85	
Compensated range****	T [°C]	-10...70	**** The mean TC are relevant for the compensated range only, outside the compensated range the total error statements apply.
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	3,00%	
	% of the range 85°C	3,00%	

MECHANICAL PARAMETER

Wetted components	silicon, NBR O-ring, aluminium, plastic (e.g. PA66)		
Housing*	stainless steel		
Weight	m [g]	80-120	depending on design
Shock resistance/drop	g	1000	acc. to DIN EN 60068-2-32 – free fall
Vibration resistance	g	20	acc. to DIN EN 60068-2-6 – vibration sinusoidal
Shock resistance/constant	g	25	acc. to DIN EN 60068-2-27 – shock
Approvals	CE Declarations of conformity 2014/30/EU, 2014/68/EU		
IP system of protection (IEC 60529) up to IP69K	The IP system of protection as specified in the data sheets generally applies, with appropriate mating plug connected.		

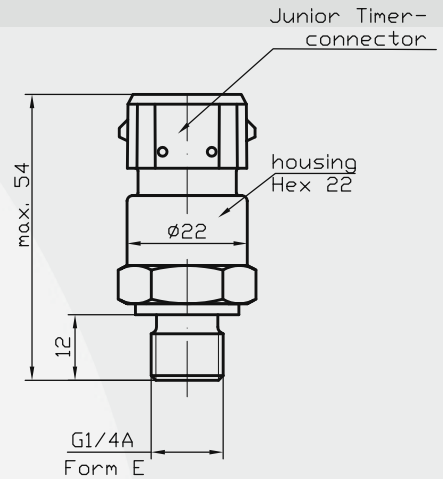
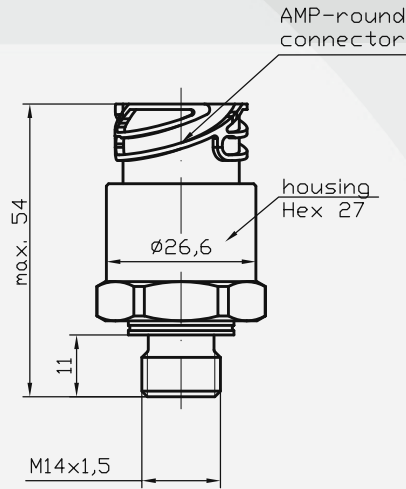
Configurations -examples-

SIS with



Round connector DIN 72585

Junior-Timer connector



Electrical connections* -examples-

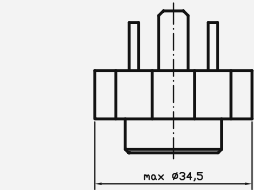
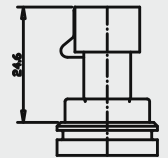
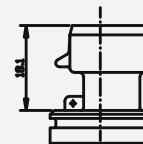
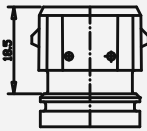
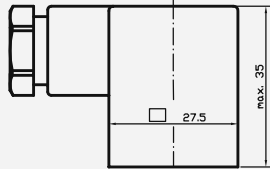
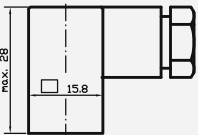
MVS/C
DIN EN 175301-803

MVS/A
DIN EN 175301-803

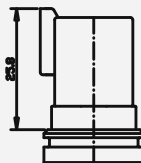
Junior-Timer
connector

Packard-
connector

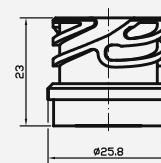
Superseal
connector



Round connector
DIN 72585



Deutsch-
connector 4-contacts



Pressure Connections* -examples-

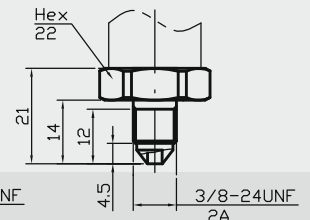
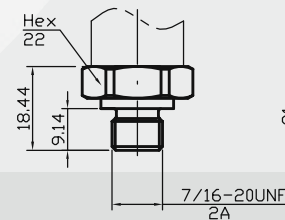
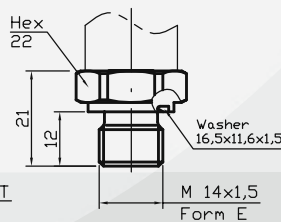
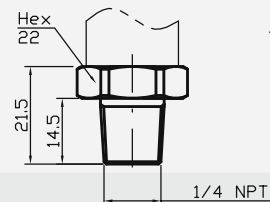
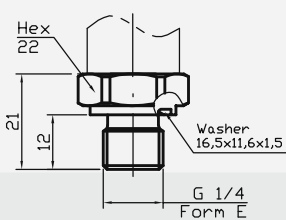
G 1/4 A;
DIN 3852; Form E

1/4 NPT

M 14x1,5;
DIN 3852; Form E

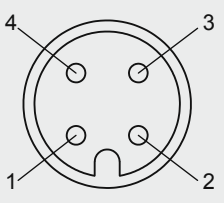
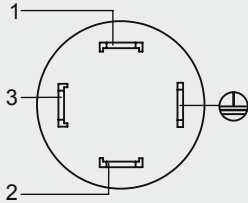
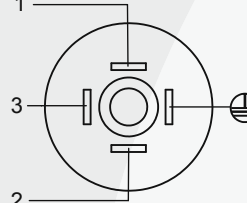
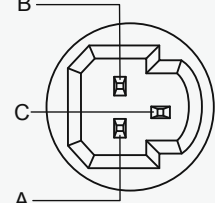
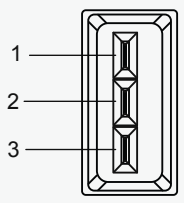
7/16-20UNF-2A
SAE 514

3/8-24UNF-2A



* customer specific configurations available

Electrical Configuration*

Plug M12x1	Cable port	DIN EN 175301-803-A	DIN EN 175301-803-C	Packard Metripack	JuniorTimer
					
2-wire 1: UB+ 2: nc 3: out 4: nc	2-wire rt: UB+ sw: out ws: nc	2-wire 1: UB+ 2: out 3: nc ⊕: nc	2-wire 1: UB+ 2: out 3: nc ⊕: nc	2-wire A: UB+ B: UB+ C: out	2-wire 1: UB- 2: out 3: UB+
3-wire 1: UB+ 2: nc 3: UB- 4: out	3-wire rt: UB+ sw: UB- ws: out	3-wire 1: UB+ 2: UB- 3: out ⊕: nc	3-wire 1: UB+ 2: UB- 3: out ⊕: nc	3-wire*	3-wire*

nc = not connected

The electrical connection must be made in accordance with the respective connection diagram unless otherwise agreed upon.

* custom-made adjustments are possible

Product line

DS5	Electronic Pressure Switch	SME	Pressure Transmitter in Miniature Design
DPSX9I	Intrinsically Safe Electronic Pressure Switch for Current	SMF	Pressure Transmitter with Flush Diaphragm
DPSX9U	Intrinsically Safe Electronic Pressure Switch for Voltage	SMH	High Pressure Transmitter
PS1/17	Level Sensor	SML	Pressure Transmitter for Industrial Application
PSX2	Intrinsically Safe Level Sensor	SMO	Pressure Transmitter in Mobile Hydraulics
SHP	High Precision Pressure Transmitter	SMS	OEM Pressure Transmitter for Hydraulics and Pneumatics
SIS	Low Pressure Transmitter in Short and Compact Design	SMX	Intrinsically Safe Pressure Transmitter for Industrial Application
SIL	Low Pressure Transmitter for Industrial Application	SMX2	Intrinsically Safe Pressure Transmitter for Industrial Application
SKE	High Temperature Pressure Transmitter with Detached Electronics	TPSE	Multi-Function Transmitter for Pressure and Temperature – external sensor
SKL	High Temperature Pressure Transmitter with Cooling Fins	TPSI	Multi-Function Transmitter for Pressure and Temperature – internal sensor
SMC	Pressure Transmitter with CANopen Interface and J1939		

