

Low Pressure Transmitter for Industrial Applications

S I L

Main features

- Measuring ranges 0...10 mbar to 0...40 bar
- Standard signals 4...20 mA, 0...10 V, 1...5 V
- Highly flexible options by its modular design
- Highly reliable

Applications

- General industrial use
- Hydraulics
- Pneumatics
- Mechanical engineering
- Plant engineering and automation technology

Description

The Si-based pressure sensors which in their external design are comparable to the SML model can make use of the advantages of silicon technology. These benefits include lower overall production costs. Thanks to its design, all customary and client-specific pressure connection configurations are possible. Also, the complete range of electrical adapters, which are already known from the SML series, can be integrated.

Its modular design permits reasonable manufacture also in medium-size batches that can be supplied within short periods of time.



SIL

Low Pressure Transmitter
for Industrial Applications

Specifications

Pressure range

Measuring range*	p [mbar]	10	16	20	25	40	60	100
Overload pressure	p [mbar]	300	300	300	300	300	300	300
Burst pressure	p [mbar]	500	500	500	500	500	500	500
Measuring range*	p [mbar]	160	200	250	400	600	1000	
Overload pressure	p [mbar]	300	300	2000	2000	2000	2000	
Burst pressure	p [mbar]	500	500	3000	3000	3000	3000	
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, + -		
Burst pressure	p [bar]	60	60	150	150	or absolute pressure are available)		

Electrical parameter

Electrical parameter	signal	U _s [V _{DC}]	R _i [kΩ]	RA [Ω]
Output signal * and maximum acceptable burden R _x	R _x in Ohm	4...20 mA (2-wire, 3-wire)	9...32	acc. to R _x = < (U _s - 10V) / 0,02 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

Accuracy

Accuracy @RT % of the range ≤ 1,0** 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

Repeatability % of the range ≤ 0,10

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

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 3,00%

% of the range 85°C 3,00%

Mechanical parameter

Parts in contact with the measuring medium* silicon

Housing* stainless steel

Shock resistance g 1000 acc. to IEC 68-2-32

Vibration resistance g 20 acc. to IEC 68-2-6 and 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 allow for pressure

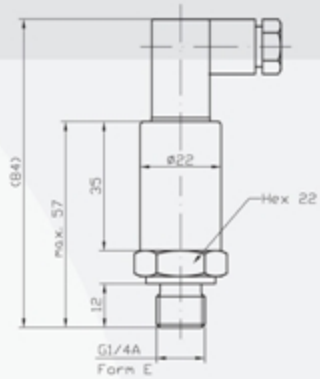
* other upon request compensation. From a pressure range of 60bar, a ventilated mating plug and/or cable is not necessarily required.

Low Pressure Transmitter
for Industrial Applications

SIL

Configurations -examples-

SIL with MVS/C connector



(deviations for absolute pressure are possible)

Connectors*

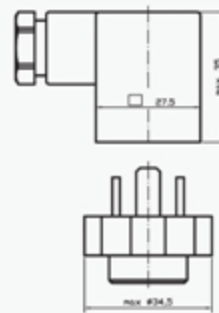
male socket
M12x1 (S 763)



cable output



MVS/A
DIN EN 175301-803

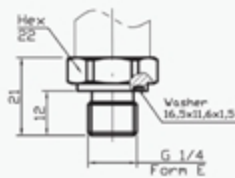


MVS/C
DIN EN 175301-803

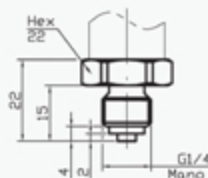


Pressure Connections*

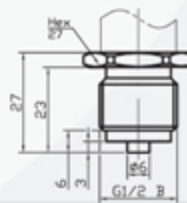
G 1/4 A; DIN 3852; Form E



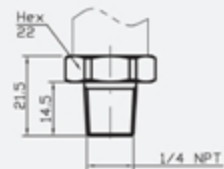
G 1/4 B



G 1/2 B



1/4 NPT



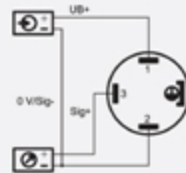
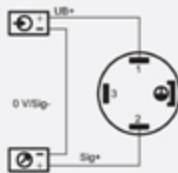
* custom-made adjustments acc. to pressure connections and connecting options are possible

S I L

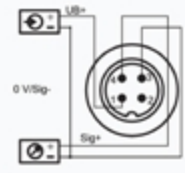
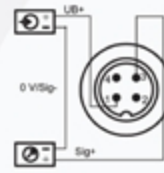
Low Pressure Transmitter
for Industrial Applications

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

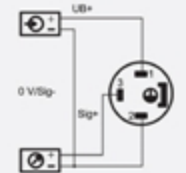
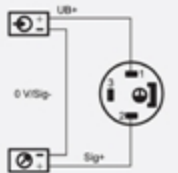
MVS/A
DIN EN
175301-803



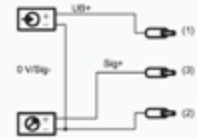
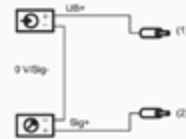
male
socket
M12x1
(S 763)



MVS/C
DIN EN
175301-803



cable
output



Legend

power supply
 consumer

red
 black
 white