

# MSHD

## Miniature Pressure Transmitter for industrial applications

**SENSEABLE™**

- *Measuring ranges 0...1 to 0...20 bar (Ø 14 mm housing)*
- *Measuring ranges 0...25 to 0...400 bar (Ø 12 mm housing)*
- *Media temperature range -40...+125°C*
- *Miniature design (L 50 mm, Ø 12-14 mm, ~ 20 g)*
- *Protection IP67*



### Description

The miniature design of this high quality pressure transmitter enables the application in confined spaces. With its stainless steel membrane and semiconductor thin-film technology it has excellent characteristics regarding excess pressure, hysteresis and repeat accuracy.

Its robust design ensures a high level of reliability and safety even in harsh environments. The stainless steel membrane is firmly bonded to the process connection and therefore fully vacuum-tight and extremely burst resistant.

### Applications

All parts of the transmitter which are in contact with the media, are made of stainless steel. This makes the transmitter usable with all standard

media in most industrial applications, as long as the media are compatible with stainless steel.

- **GENERAL INDUSTRIAL APPLICATIONS**
- **HYDRAULICS**
- **PNEUMATICS**
- **MECHANICAL ENGINEERING**
- **BUILDING AUTOMATION**
- **PLANT ENGINEERING**
- **AUTOMATION TECHNOLOGIES**
- **MEDICINE TECHNOLOGIES**
- **GAS TECHNOLOGIES**
- **RESEARCH & DEVELOPMENT**

## Technical specifications

### Pressure ranges \*

housing Ø 14 mm	p [bar]	1	1,6	2	2,5	4	6	10	16	20
Overload pressure	p [bar]	6	6	6	6	10	20	20	40	40
Burst pressure	p [bar]	9	9	9	9	15	30	30	60	60

housing Ø 12 mm	p [bar]	25	40	60	100	160	200	250	400
Overload pressure	p [bar]	100	100	200	200	400	400	750	750
Burst pressure	p [bar]	150	150	300	300	600	600	1000	1000

Electrical parameter		signal	$U_s$ [Vdc]	$R_L$ [kΩ]
Output signal *	$R_A$ in Ohm	0...5 Vdc 0,5...4,5 Vdc ratiometric	8...32	> 2,5 5 ± 10% > 4,7
Response time * (10-90%)	t [ms]	< 1		
Withstand voltage	U [Vdc]	350		

### Accuracy

Accuracy @ room temperature	% of range	≤ 0,5 **, optional ≤ 0,25
	BFSL	≤ 0,125
Non-linearity	% of range	≤ 0,15
Repeatability	% of range	≤ 0,10
Stability / year	% of range	≤ 0,10

### Acceptable temperature ranges

Measuring medium	T [°C]	-40...+125
Ambience	T [°C]	-40...+80
Storage	T [°C]	-40...+125
Compensated range *	T [°C]	-20...+85
Temperature coefficient within the compensated range		
Mean TC offset	% of range	≤ 0,15 / 10 K
Mean TC range	% of range	≤ 0,15 / 10 K
Total error	% of range	-40°C 2,00%
	% of range	+105°C 2,00%

### Mechanical parameter

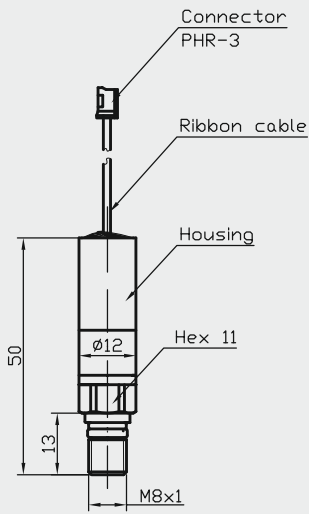
Parts contacting the medium		stainless steel
Housing *		stainless steel
Shock resistance	g	1000 acc. to IEC 68-2-32
Vibration resistance	g	5 acc. to IEC 68-2-6 and IEC 68-2-36
Mass	m [g]	~ 20 g (depending on design)
CE - conformity		EC Directive 89 / 336 / EWG
IP Protection	The IP level of protection as specified in the data sheet generally applies, with their mating plug connected. Relative pressure transmitters usually require a ventilated mating plug and/or cable to allow pressure compensation. At pressure ranges exceeding 60 bar, a ventilated mating plug and/or cable ist not necessarily needed.	

\* others on request

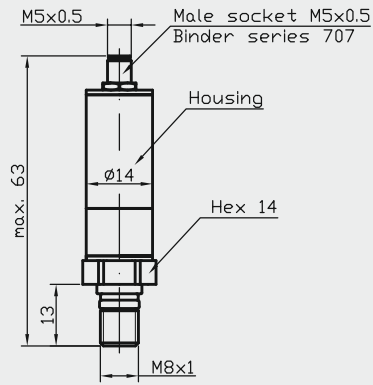
\*\* incl. non-linearity, hysteresis, repeatability, zero-offset and final-offset (acc. to IEC 61298-2)

## Configuration examples

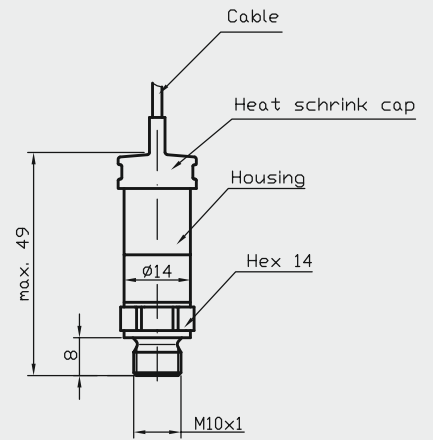
Flat ribbon cable with connector



M 5 x 0,5 male socket

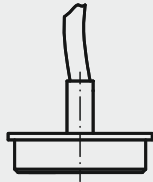


Cable output

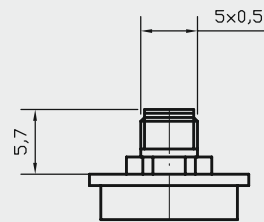


## Electrical connections \*

Cable output steel

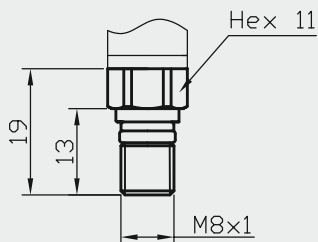


M 5 x 0,5 male socket

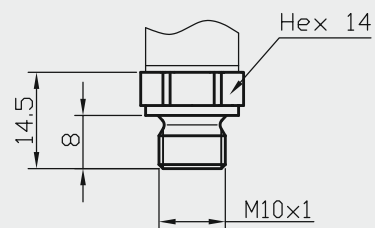


## Process connections \*

M 8 x 1

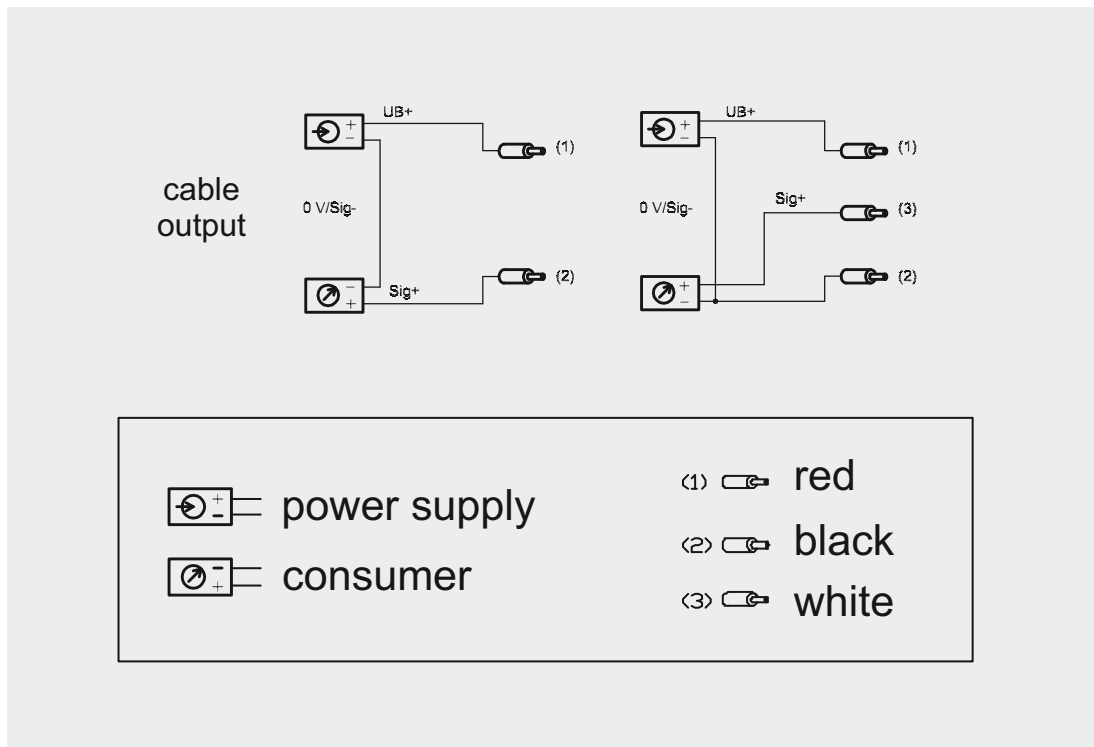


M 10 x 1



\* Customized solutions and adjustments are possible

## Electrical wiring \*



\* Customized solutions and adjustments are possible