Relative Pressure Transmitter HART   MIPS

● Characteristics

- Input:	pressure 0...10 mbar up to 0...100 mbar
- Output:	4...20 mA current loop HART (2-wire)
- Voltage supply:	out of current loop (12...40 VDC)
- Accuracy:	see technical data
- Process connection:	1x hose connection
- Medium:	clean dry air, dry gases
- Electrical connection:	several plugs / cable
- Temperature range:	-20...+80 °C (operation)
- Configuration:	software
- Material casing:	PBT GF 30
- Protection class:	at least IP65

● Technical Data

Input

Differential pressure:	0...10 mbar up to 0...1 bar
Pressure ranges:	see table page 2 (with overpressure safety, burst pressure)
Medium:	clean dry air, dry gases and the like (non-corroding, non-ionizing)

Output

Current signal:	4...20 mA with superimposed communication signal (HART), 2-wire current loop
Current range:	3,6...21 mA
Signal interference:	21 mA (sensor break, sensor open circuit, sensor short circuit, underflow)
HART ability:	to be used for factory configuration and service

Performance Parameters

Pressure sensor:	Accuracy:	±0,1%...±0,25% FSO (linearity and hysteresis)
	Zero-point offset:	±0...1,25% FS
	Repeatability:	±0,2%...±0,5% FSO
	Temperature effect:	within rated temperature range
		Offset: ±0,5...2,5% FS
		Span: ±0,4...1% FSO
	Long-time stability:	0,25...0,5% FS (offset and span, 1 year)
	Response time:	100 µs
Measuring amplifier:	Resolution:	16 Bit
	Accuracy:	0,3% of range
	Filter setting:	0...99 s
	Transient response:	linear with pressure
	Switch-on delay:	<5 s
	Measurement rate:	10 Measurements/s
	Linearization:	10 calibration points
	Configuration:	Via software with HART communication (factory configuration and service)
	Response time:	100 ms

● Applications

The relative pressure sensor MIPS is suitable for heating, climate and ventilating applications as well as for general pressure measurement. Numerous electrical connections are available and the casing size is very compact. Factory setting and configuration are done via HART tool.

Photo: Erich Westendarp @ pixelio.de

Photo: Poschle@pixelio.de

Photo: Simon Coste @ fotolia.de

● *Technical Data (Continued)*

Supply

Voltage:	HART current loop: 12...40 VDC VDC
Load:	$R = (U_B-12\ V) / 22\ mA$
Reverse voltage protection:	available (no function, no damage)

Environmental Conditions

Temperature:	Operating range:	0...+50 °C (compensated range)
		-20...+80 °C (nominal range)
	Storage:	-20...+85 °C
Condensation:	uncritical	
CE-conformity:	Pressure equipment directive: 2014/68/EU	EMC directive: 2014/30/EU

Mechanics

Dimensions:	see page 3	
Pressure connection:	1x hose connection 4 mm	
Electrical connection:	Plugs and cables:	see page 3
Material:	Process connection:	PBT GF30
	Casing body, cover:	PBT GF30
Casing color:	black	
Casing flammability:	UL94 HB	
Weight:	approx. 50 g	
Fitting position:	Any	
Device protection:	Protection class:	at least IP65 (electronics)
	PCB:	potted

Configurable Parameters

Measuring amplifier:	Nominal measuring range start (LRL) / Nominal measuring range end (URL) / Measuring range start (LRV) / Measuring range end (URV) / Filter function / Adjustment output current / Simulation output current / HART address / Linear output signal / 2-point calibration / 10-point calibration (linearization)

Pressure Table (in mbar)

Pressure range	10	40	100
Overpressure safety	105	330	825
Burst pressure	205	410	1030

● Electrical Connection

M12x1	Super Seal	Deutsch	Deutsch	Bayonet	Valve	MIL	Cable
4-, 5-, 8-pole	3-pole	3-pole	4-pole	4-pole	4-pole	6-pole	4-pole

● HART Communication and Configuration

The HART-Tool is a graphical user interface with a menu-driven program for configuration. It can be used for start-up, configuration, signal analysis, data backup and device documentation. Operating systems: Windows 2000, Windows XP, Windows 7, 8.1 and 10.
Connection via HART interface (modem) with USB interface of a PC or hand-held HART communicator

Possible settings are:
- Adjustment of output current
- Limits of nominal measuring range (URL, LRL)
- Limits of measuring range (LRV, URV)
- 10-point calibration (linearization)

- Simulation of output current
- Linear output signal
- 2-point calibration

- Filter function
- HART address

Please note: When using communication via a HART modem, a comunication resistance of 250 Ω has to be taken into account.

● Dimensions (in mm)

View top	View side	View front
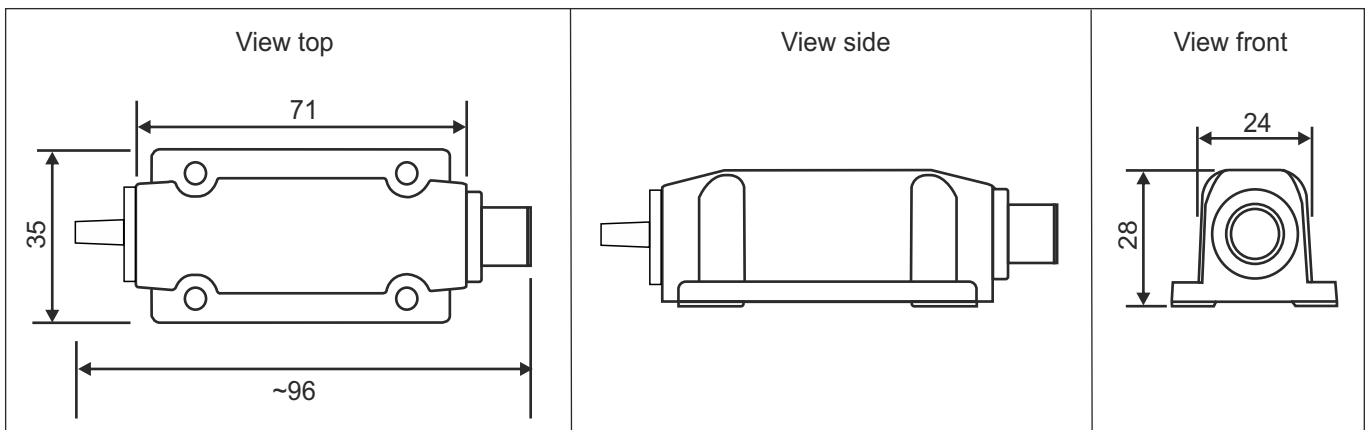
● Pressure Connection
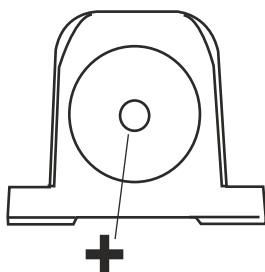
● *Order Code*

			M	O	-	X	-	X	X	X	X	X	X	X

Input:	0...10 mbar	10
	0...40 mbar	40
	0...100 mbar	A1

| **Output:** | 4...20 mA HART | 2 |

| **Casing:** | U-CASE5 | 5 |

| **Supply:** | 12...40 VDC | 2 |

Electrical connection:	M12, 4-pole	1
	M12, 5-pole	2
	M12, 8-pole	3
	Deutsch DT04, 3-pole	4
	Deutsch DT04, 4-pole	5
	Super Seal 1.5, 3-pole	6
	Bayonet (DIN), 4-pole	7
	Valve plug, 4-pole	8
	Cable, 2 m	9
	MIL, 6-pole	A

| **Configuration:** | Factory setting[1] | 0 |

| **Special model:** | No | 0 |
| | Yes (to specify) | 1 |

1) Measurement range: Settings are made as per order code