


## ● Characteristics

1 - MODULAR - ECONOMIC - SERIES -

	- Input:	pressure 0...10 mbar up to 0...1 bar
	- Output:	4...20 mA current loop HART (2-wire)
	- Voltage supply:	out of current loop (12...40 VDC)
	- Accuracy:	see technical details
	- Process connection:	2x hose connection
	- Medium:	clean dry air, dry gases
	- Electrical connection:	several plugs / cable
	- Temperature range:	-20...+85 °C (operation)
	- Adjustment:	software
	- Material enclosure:	PBT GF 30
- Protection:	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-corrosive, non-ionic working)

### Output

Current signal: 4...20 mA with superimposed communication signal (HART), 2-wire current loop  
 Current range: 3,8...20,8 mA  
 Signal on error: 3,8 mA (sensor break, sensor open circuit)  
 HART ability: to be used for factory configuration and service

### Performance

Pressure sensor:	Accuracy:	±0,1%...±0,25% FSO (linearity and hysteresis)	
	Zero offset:	±0...1,25% FS	
	Repeatability:	±0,2%...±0,5% FSO	
	Temperature effects:	within rated temperature range	
		Offset: ±0,5...2,5% FS	
		Span: ±0,4...1% FSO	
		Long term stability: 0,25...0,5% FS (offset and span, 1 year)	
		Response time: 100 µs	
	Measuring amplifier:	Resolution:	16 Bit / 0,3 µA
		Long term stability:	0,05% / year
Filter setting:		yes	
Transmission behaviour:		linear with pressure	
Turn-on delay time:		<5 s	
Response time:		100 ms	

## ● Applications

The differential pressure sensor is suitable for heating, climate and ventilating applications as well as for general pressure measurement. Numerous electrical connections and the size of the enclosure are useful details of the device. Factory 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:  $R = (U_B - 12 \text{ V}) / 22 \text{ mA}$   
Reverse battery protection: available (no function, no damage)

### Ambient conditions

Temperature: Operating range: 0...+50 °C (compensated range)  
-20...+85 °C (nominal range)  
Storing: -20...+85 °C  
Condensation: uncritical  
CE-conformity: Pressure equipment directive: 97/23/EG EMC directive: 2004/108/EG

### Mechanics

Dimensions: see page 3  
Pressure connection: 2x hose connection 4 mm  
Electrical connection: Plugs and cables: see page 3  
Material: Process connection: PBT GF30  
Body, cover: PBT GF30  
Weight: approx. 50 g  
System pressure: see pressure table below  
Protection of device: Ingress protection: at least IP 65 (electronics)  
PCB: potted









### Programmable features

Measuring amplifier: measuring range start / measuring range end /

### Pressure table (in mbar)

Pressure range	10	20	50	100	200	500	1000	
Overpressure safety	100	100	250	250	1000	1000	3000	
Burst pressure	150	150	500	500	1400	1400	5000	
System pressure	15	30	75	150	300	500	1500	

● **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 ability is used for factory configuration and service.**

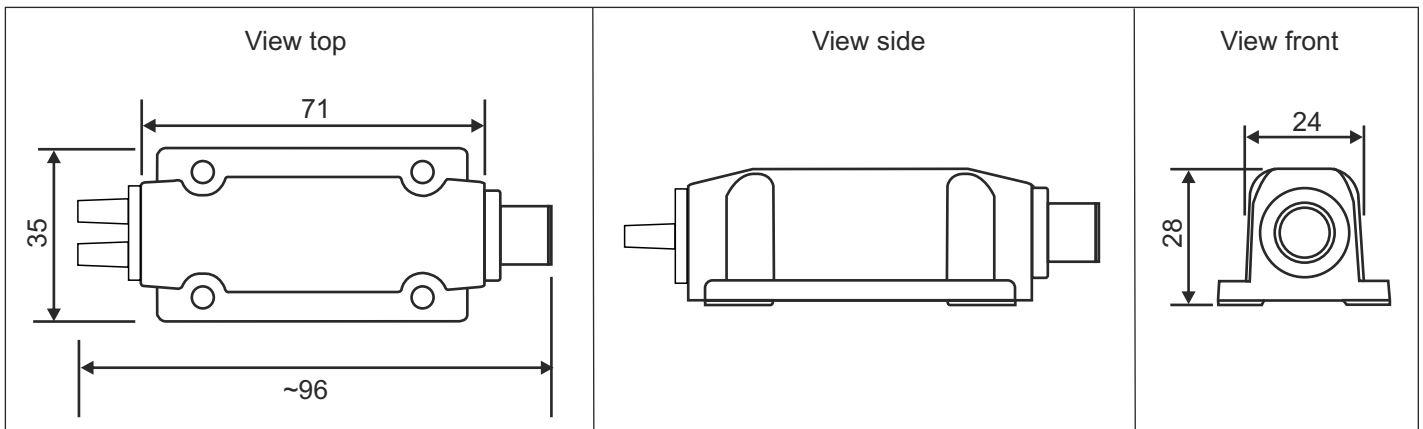
The HART-Tool is a graphical user interface for the ME series with menu-driven program for configuration. It can be used for putting into operation, configuration, analysis of signals, data backup and documentation of the device. Connection via HART interface DEV-HM for operating systems: Windows 2000, Windows XP, W7.

Possible settings are:

Adjustment and simulation of output current, filter function, limits of measuring range, linear output signal, HART address, HART TAG number, 2-point calibration, 6-point calibration (linearization)

**Please note:** When using communication via a HART modem, a communication resistance of 250  $\Omega$  has to be taken into account.

● **Dimensions (in mm)**



● **Order code**

**M D - X - X X X X X X**

<b>Input:</b>	0...10 mbar	10								
	0...20 mbar	20								
	0...50 mbar	50								
	0...100 mbar	A1								
	0...200 mbar	A6								
	0...500 mbar	A7								
	0...1 bar	B1								
	<b>Output:</b>	4...20 mA HART		2						
<b>Enclosure:</b>	U-CASE5			5						
<b>Supply:</b>	12...40 VDC				2					
<b>Electrical connection:</b>	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			
<b>Configuration:</b>	Factory setting <sup>1)</sup>								0	
<b>Special model:</b>	No									0

1) Measuring range: Settings are made according order