# FREELY SCALABLE PRESSURE MEASURING TRANSDUCER FOR ABSOLUTE PRESSURE OR OVER / UNDER PRESSURE AND PRESSURE DIFFERENCE



*absolute pressure connection*

HIGHLIGHTS:

- Change between 4 ... 20 mA / 0 ... 10 V
- With display
- Switching output
- Configuration protected by code lock

## GMUD-MP-S

Freely scalable pressure measuring transducer for pressure difference or absolute pressure (pressure range >25 mbar)

## GMUD-MP-F

Freely scalable pressure measuring transducer for pressure difference (fine pressure range ≤25 mbar)

### General:

Microprocessor controlled, digital pressure transducer with display and operation via 3 buttons. With freely scalable analog output that can be switched between 4 ... 20 mA and 0 ... 10 V. Code lock for input, after code input parameters can be changed (code permanently stored).

### Application:

For air and non-aggressive gases
**Area of application:** controlling, measuring and monitoring, climate and ventilation, environmental and medical technology

### Messbereiche:

**Differenz-Feinstdruckbereich:**

| | |
|---|---|
| **GMUD MP-F-MR0:** *Art. no. 602483* | **Measuring range:** 0.000 ... 1.000 mbar **Overload:** 250 mbar, **Burst pressure:** 500 mbar |
| **GMUD MP-F-MR1:** *Art. no. 602485* | **Measuring range:** 0.00 ... 10.00 mbar **Overload:** 150 mbar, **Burst pressure:** 200 mbar |
| **GMUD MP-F-MR2:** *Art. no. 602487* | **Measuring range:** 0.00 ... 20.00 mbar **Overload:** 150 mbar, **Burst pressure:** 200 mbar |
| **GMUD-MP-F-MR3:** *Art. no. 605958* | **Measuring range:** -1.999 ... +2.500 mbar **Overload:** 250 mbar, **Burst pressure:** 500 mbar |
| **GMUD-MP-F-MR31:** *Art. no. 602970* | **Measuring range:** -10.00 ... +10.00 mbar **Overload:** 150 mbar, **Burst pressure:** 200 mbar |
| **GMUD-MP-F-MR4:** *Art. no. 604355* | **Measuring range:** -19.99 ... +20.00 mbar **Overload:** 150 mbar, **Burst pressure:** 200 mbar |

**Differenzdruckbereich:**

| | |
|---|---|
| **GMUD MP-S-MR0:** *Art. no. 602482* | **Measuring range:** 0.0 ... 100.0 mbar **Overload:** 1000 mbar, **Burst pressure:** 1500 mbar |
| **GMUD MP-S-MR1:** *Art. no. 602491* | **Measuring range:** 0.0 ... 500.0 mbar **Overload:** 1000 mbar, **Burst pressure:** 1500 mbar |
| **GMUD MP-S-MR2:** *Art. no. 602493* | **Measuring range:** 0 ... 1000 mbar **Overload:** 2000 mbar, **Burst pressure:** 3000 mbar |
| **GMUD MP-S-MR3:** *Art. no. 602495* | **Measuring range:** 0 ... 2000 mbar **Overload:** 4000 mbar, **Burst pressure:** 6000 mbar |
| **GMUD MP-S-MR4:** *Art. no. 602497* | **Measuring range:** 0 ... 5000 mbar **Overload:** 7000 mbar, **Burst pressure:** 7000 mbar |
| **GMUD MP-S-MR50:** *Art. no. 608650* | **Measuring range:** -50.0 ... +50.0 mbar **Overload:** 150 mbar, **Burst pressure:** 200 mbar |
| **GMUD-MP-S-MR5:** *Art. no. 607278* | **Measuring range:** -100.0 ... +100.0 mbar **Overload:** 1000 mbar, **Burst pressure:** 1500 mbar |
| **GMUD-MP-S-MR6:** *Art. no. 607925* | **Measuring range:** -500 ... +500 mbar **Overload:** 1000 mbar, **Burst pressure:** 1500 mbar |
| **GMUD-MP-S-MR7:** *Art. no. 607252* | **Measuring range:** -1000 ... +1000 mbar **Overload:** 2000 mbar, **Burst pressure:** 3000 mbar |

**Absolutdruckbereich:**

| | |
|---|---|
| **GMUD MP-S-MA0:** *Art. no. 602499* | **Measuring range:** 0 ... 1100 mbar abs. **Overload:** 4000 mbar, **Burst pressure:** 6000 mbar |
| **GMUD MP-S-MA1:** *Art. no. 602501* | **Measuring range:** 0 ... 2000 mbar abs. **Overload:** 4000 mbar, **Burst pressure:** 6000 mbar |
| **GMUD MP-S-MA2:** *Art. no. 602490* | **Measuring range:** 600 ... 1100 mbar abs. **Overload:** 2000 mbar, **Burst pressure:** 3000 mbar |

### Types of pressure:

**Absolute pressure** is the pressure related to vacuum (zero pressure). When no pressure is applied (pressure port open), the ambient pressure is displayed.
**Examples:** meteorological measurements (eg 1013 hPa abs), vacuum processes
**Differential pressure** is the pressure difference between 2 press. Mostly both pressures are connected to a respective side of the measuring membrane, the sensor must have two pressure connections.
**Examples:** ventilation technology / filters, dynamic pressure measurements
The **relative pressure** is the pressure difference between a pressure / vacuum and the ambient pressure. For relative pressure measurement with a differential pressure sensor (2 pressure ports) one of the terminals is left open.
**Examples:** pneumatic, tire pressure, hydraulic

### Specifications:

| | |
|---|---|
| **Sensor element:** | piezoresistive pressure sensor with integrated temperature |
| **Typ. accuracy:** | depends on type (see manual)<br>±0.15 % (linearity)<br>±0.6 % FS (hysteresis and temperature 0 ... 70 °C) |
| **Output signal:** | 4 ... 20 mA / 0 ... 10 V (selectable in menu) |
| **Auxiliary energy:** | only needed if 0 ... 10 V output signal is selected (18 ... 30 V DC) |
| **Permissible burden:** | (4 ... 20 mA): $R_A[\Omega] \leq (Uv\,[V] - 12\,[V]) / 0.02\,A$ |
| **Permissible load:** | (0 ... 10 V): ≥3000 Ω |
| **Operating temperature:** | -20 ... +70 °C |
| **Storage temperature:** | -40 ... +70 °C |
| **Display / Operation:** | 4-digit 7-segment display and 3 buttons |
| **Display range:** | -1999 ... 9999 digit |
| **Pressure connection:** | universal pressure connecting pieces for 6 x 1 mm or 8 x 1 mm plastic tubes (4 or 6 mm inner pipe diameter) |
| **Mounting position:** | any position (small influence of mounting position for low ranges) |
| **Housing:** | ABS (IP65): with fixing holes for wall mounting (accessible after cover has been removed) |
| **Dimensions:** | Housing 80 x 82 x 55 mm (without elbow-plug and pressure connecting pieces) |
| **Electric connection:** | Elbow-type plug acc. to EN 175301-803/A (IP65) max. wire cross section: 1.5 mm², wire / cable Ø: 4.5 ... 7 mm |
| **Scope of supply:** | Device, calibration protocol, manual |

### Option:

**LACK**
card coated on both sides for outdoor application

**OUT**
Switching output (max 28 V, 40 mA), switches if meas. Value falls below or exceeds limit value connection via 2nd elbow-type plug

**WE**
Default settings according to customer's specifications, includes: output signal, measuring range, default state in case of error (without upcharge if together with MBF / MBS)

**MBF**
Option any fine pressure range ≤25 mbar, please state desired measuring range

**MBS**
Option any pressure range >25 mbar ... 5000 mbar, please state desired measuring range

### Accessories and spare parts:

Tube and accessories: see product catalog (handheld instruments).