

Pressure Measuring Transducer

for Over/Under Pressure and Pressure Difference resp. Absolute Pressure

Type: GMDP



Specification:

Measuring range:	please refer to type plate	
Sensor element:	piezoresistiver pressure sensor with integrated temperature compensation 0 to 70°C	
Pressure media:	the sensor is suitable for air, non-corrosive, non-oxidising and non-reducing gases and liquids.	
Sensor accuracy: (typ. value)	Normal accuracy:	±0.2 % FS (hysteresis and linearity) ±0.4 % FS (temperature effect 0 to 50°C)
	for measuring ranges ≤ 16mbar:	±0.6 % FS (temperature effect 0 to 50°C)
	OPTION: double accuracy:	±0.1 % FS (hysteresis and linearity) ±0.2 % FS (temperature effect 0 to 50°C)
Output signal:	please refer to type plate	
Connection:	4 - 20 mA (two wire); 0 - 10 V (three wire)	
Auxiliary energy: (supply voltage)	Vs = 12 - 30 V DC (4-20mA) Vs = 18 - 30 V DC (0-10V) or refer to type plate	
Reverse voltage protection:	50V permanent	
Perm. impedance (for 4-20mA):	$R_A(\text{Ohm}) < (V_s - 12V) / 0.02A$ <i>Example: for $U_v = 18V$: $R_A < (18V - 12V) / 0.02A \Rightarrow R_A < 300 \text{ Ohm}$</i>	
Permissible load (for 0-...V):	$R_L(\text{Ohm}) > 3000 \text{ Ohm}$	
Accuracy electronic: (typ.)	0.1%	
Nominal temperature:	25°C	
Operating temperature:	0 to 70°C	
Relative humidity:	0 to 95 %RH (non-condensing)	
Storage temperature:	-45 to 70°C	
Pressure connection:	2 plastic connection terminals for plastic tube 6 x 1 mm (4mm inner-Ø)	
Mounting position:	any position (small ranges up to 10 mbar depending on position)	
Design-type:	PC board (approx. 70 x 56.5 mm) cpl. with sensor,	
Mounting:	4 mounting holes, Ø 3.5 mm.	
Mounting distance:	43.5 x 58mm	
Electric connection:	3-pin screw-type/plug-in terminal max. wire cross section: 1.5 mm ²	
EMC:	The device corresponds to the essential protection ratings established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (89/336/EWG). In accordance with EN50081-1 and EN50082-1, Additional error: <1%	
Optional:	encapsulated PC board	

Disposal instructions

The device must not be disposed in the regular domestic waste.

Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmentally sound.



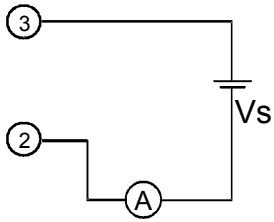
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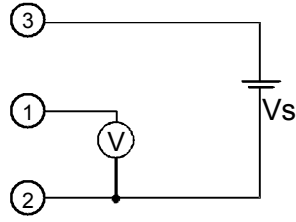
Assignment of screw-type/plug-in terminal:

2-wire connection (4-20mA)

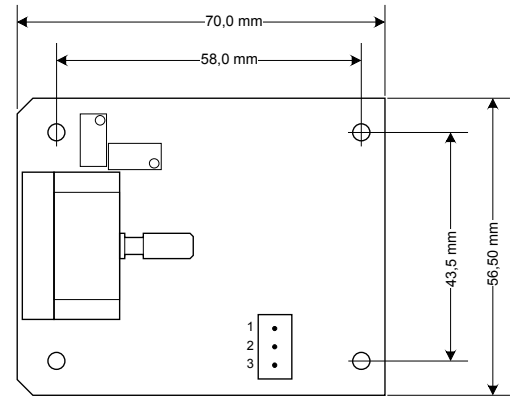


2 = GND / signal
3 = supply voltage +Vs

3-wire connection (voltage)



1 = signal +
2 = supply voltage -Vs
3 = supply voltage +Vs



Pressure Connection:

Measuring transducer for absolute pressure:

Absolute pressure for over pressure measurements over absolute zero (Reference Vacuum).

The output signal corresponds to the absolute pressure.

pressure connection: port "A" (port "B" is not used)

Measuring transducer for relative pressure:

- For measurements of over- or under pressure:

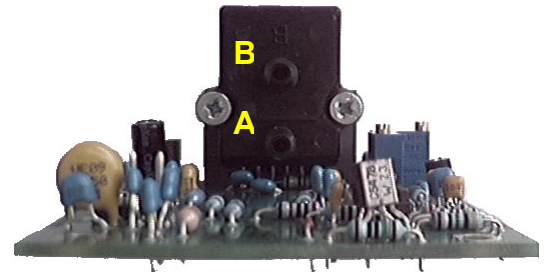
The output signal corresponds to the pressure difference between the connected pressure and the ambient pressure.

pressure connection for over pressure measurement: port "B"
under pressure measurement: port "A"

- Difference pressure measuring:

The output signal corresponds to the pressure difference between the both pressure ports.

pressure connection higher pressure: port "B"
lower pressure: port "A"



Safety instructions:

This device has been designed and tested in accordance with the safety regulations for electronic devices.

However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under "Specification". If the device is transported from a cold to a warm environment condensation may cause in a failure of the function. In such a case make sure the device temperature has adjusted to the ambient temperature before trying a new start-up.
2. General instructions and safety regulations for electric, light and heavy current plants, including domestic safety regulations (e.g. VDE), have to be observed.
3. If device is to be connected to other devices (e.g. via PC) the circuitry has to be designed most carefully. Internal connection in third party devices (e.g. connection GND and earth) may result in not-permissible voltages impairing or destroying the device or another device connected.
4. If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid re-starting.
Operator safety may be a risk if:
 - there is visible damage to the device
 - the device is not working as specified
 - the device has been stored under unsuitable conditions for a longer time.
 In case of doubt, please return device to manufacturer for repair or maintenance.

5. **Warning:**

Do not use these product as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury or material damage.

Failure to comply with these instructions could result in death or serious injury and material damage.