Pressure Measuring Transducer

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

Type: GMUD

CE

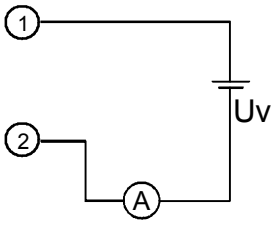
Specification:

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 or four 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	
Permissible impedance (for 4-20mA)**:**	R_A(Ohm) < ((Vs - 12V) / 0.02A)	
	Example: for Uv = 18V:	$R_A < (18V - 12V) / 0.02A \Rightarrow R_A < 300\ Ohm$
Permissible load (for 0-...V)**:**	R_L(Ohm) > 3000 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 (1) metal connection terminals (nickel plated) for plastic tube 6 x 1 mm (4mm inner-Ø)	
Mounting position:	any position (small ranges up to 10 mbar depending on position)	
Housing:	ABS (IP65), 82 x 80 x 55 mm (without elbow-type plug and pressure connection)	
Mounting:	By means of screw thread or mounting holes in housing (accessible after cover has been removed).	
Mounting distance:	50 x 70mm, max. shaft diameter of mounting screws is 4mm.	
Electric connection:	elbow-type plug conforming to DIN 43650 (IP65), max. wire cross section: 1.5 mm², wire/cable diameter from 4.5 to 7 mm	
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 for outdoor application	

GREISINGER electronic GmbH
D - 93128 Regenstauf, Hans-Sachs-Straße 26
Tel.: +49 9402 / 9383-0, Fax: +49 9402 / 9383-33, eMail: info@greisinger.de

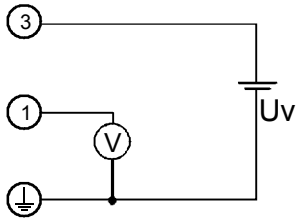
Assignment of elbow-type plug:

2-wire connection (4-20mA)



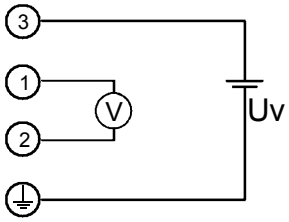
1 = supply voltage +Vs
2 = GND / signal

3-wire connection (voltage)



1 = signal +
3 = supply voltage +Vs
⏚ (4) = supply voltage -Vs
signal -

4-wire connection (voltage)



1 = signal +
2 = signal -
3 = supply voltage +Vs
⏚ (4) = supply voltage -Vs

General installation instructions:

To mount the connection cable (2-, 3-, or 4-wire depending on type of device) the angle plug screw has to be loosened and the coupling insert has to be removed by means of a screw driver at the position indicated (arrow).
Pull out connection cable through PG glanding and connect to the loose coupling insert as described in the wiring diagram. Replace loose coupling insert onto the pins at the transmitter housing and turn cover cap with PG glanding in the direction desired till it snaps on (4 different starting positions at 90° intervals). Re-tighten the screw at the angle plug

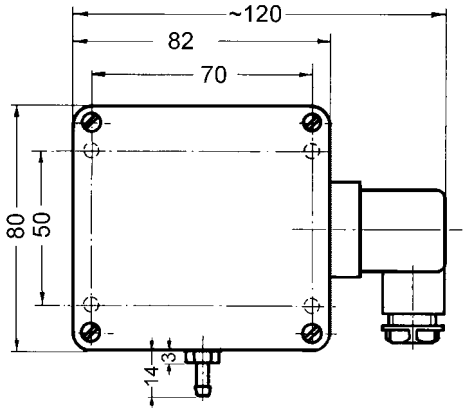
Pressure Connection:

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:

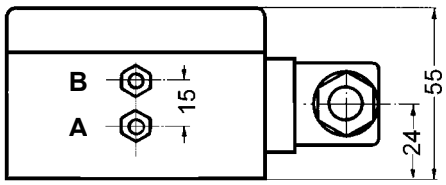
The output signal corresponds to the pressure difference between the connected pressure and the ambient pressure.

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.

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.