Assembly instruction pressure gauge series DMG3

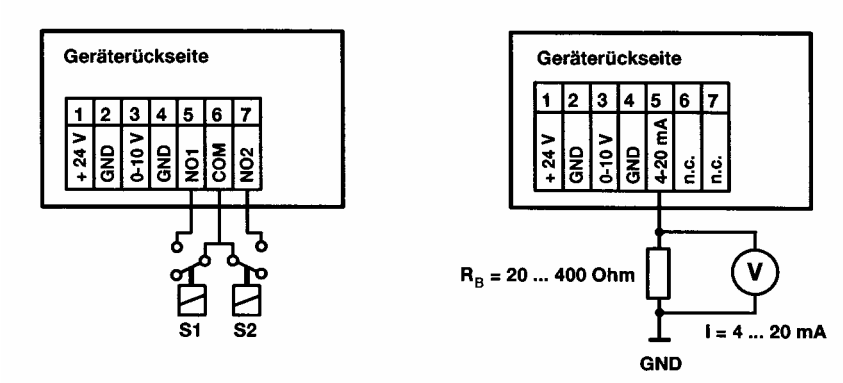
1. Insert the pressure gauge DMG3 from outside into the prepared part of the switch board. The necessary switchboard cutting is (92mm + 0,8 mm) x (45mm + 0,6 mm).

2. Hang up the fixing clamps (part of specification) into the holes on the housing side and fix it with both enclosed screws on the switchboard.

3. Connect the earthing socket.

4. Take off the 7-pole plug-in-connection on the back of the pressure gauge DMG3 and connect the cables for current supply, analogue output and switch output (if available) to the screw clamps of the plug-in-connection corresponding to figure 1. After that relink the plug-in-connection.

fig.1



connections 1 and 2 are used for
230 V AC at 230 V-type

n.c. = not connected

5. Put on the power supply. After warm-up-time of approximately 30 minutes set zero point with the screw on the front plate.

6. Pin the tubes on the connections „P+“ und „ P-“ at the back.

analog output:

By using the 0-10V-analog output it is necessary to lay out the ground wire functionally. So you prevent to falsify measuring signals due to the voltage drop over earth wire. Figure 2 shows the right and figure 3 the wrong earth laying.

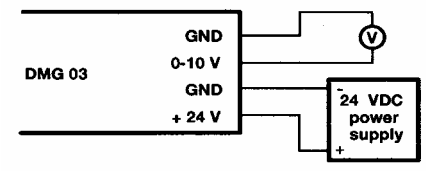


fig. 2 - right -

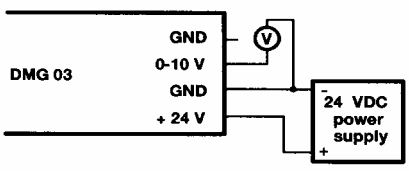


fig. 3 - wrong –

option switching outputs:

You can adjust the switch levels for the two switching outputs on the front with the potentiometers „S1“ and „S2“. Turn to right means rising the switch-value and turn left means decrease it. To avoid the relais „fluttering“, the switch-hysteresis is set to app. 2% of the measuring range. The two LED´s above the potentiometers on the front-plate showes the level of the switch output which belongs to it.

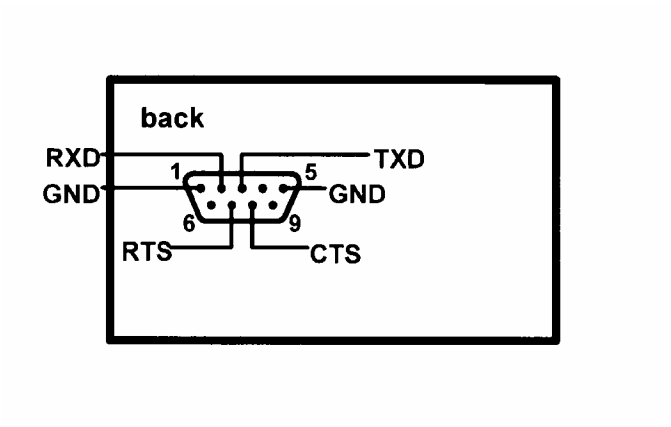
option RS 232 interface:

After switch on DMG 03-4 the screen shows the message ok + cr + lf. By input of the command P? + cr you can read the pressure value. Right after input the above given command the DMG 3 transmits the pressure value as character string consists of 4 Byte data + cr + lf (databyte 1, databyte 2, databyte 3, databyte 4, 0DH, 0AH). The date of the AD-converter is given out in hexadecimal spelling kind. The figures 0 - 2047 (0H - 07FFH) means positive pressure. The figures 4095 - 2048 (0FFFH - 0800H) means negative pressure. Negative figures are given out in two-complement spelling kinds. RTS, CTS are not supported by the software up to now.

The pressure value for 1 LSB is calculated to the range divided by 2000. The part of range from 2000 up to 2047 (7D0 – 7FF) is intended for recognizing overload.

example: result at a range from 200 mbar: 1 LSB = 200 mbar / 2000 = 0,1 mbar

RS 232 interface connections:
fig. 4



attention !

If the overload-display flashes up reduce the pressure or disconnect the tube-connection! Slight overload (see datasheet) also don´t damage the piezoresistive sensor over a longer time. Note that in this case the value on the display is wrong!

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