

MEMPRO

Hydrostatic level transmitter



INSTRUCTION MANUAL

BAMO MESURES

22, Rue de la Voie des Bans - Z.I. de la Gare - 95100 ARGENTEUIL

Tél : (+33) 01 30 25 83 20 - Web : www.bamo.fr

Fax : (+33) 01 34 10 16 05 - E-mail : info@bamo.fr

Hydrostatic level transmitter
MEMPRO

04-03-2015

592 M1 01 B

MES

592-01/1

SAFETY PRECAUTIONS

- Installation, initial start-up and maintenance may only be performed by trained personnel.
- The device may only be connected to supply power, which is rated as specified in the technical data.
- The device must be disconnected from all sources of power during installation and maintenance work.
- The device may only be operated under the conditions specified in the operating instructions.

DESCRIPTION

The MEMPRO® hydrostatic level transmitter functions in accordance with the head-pressure principle, i.e. the level signal is proportional to the hydrostatic pressure in a measuring tube plunged into the liquid.

AERATOR CONTROLLER

For clogging media, or media with large temperature fluctuations or media which liberate gases (e.g. muriatic acid) it is necessary to flush out all the measuring gas column to reset the operating conditions. The aerator hose connection (under the silver sticker) allows you to connect our "MEMPRO® BL Automatic Aerator Controls" or your own supplied compressed air.

IMPORTANT:

- Please only use "instrument air" (dry and filtered air)
- Purge air pressure should not exceed a level of 2 bar.

In the case of liquids, which may plug the tube with sediment, pumping should be activated as required. Measured value drift is reduced by means of frequent pumping if the liquid is subject to temperature fluctuations. Pumping for duration of approximately 30 seconds once or twice a day is adequate for most applications.



TECHNICAL FEATURES

Power supply:	12...28 V DC
Measuring cell:	Ceramic, capacitive, temperature compensated
Sealing:	EPDM
Measuring scales:	Selectable ranges from 20 to 100%
Resolution:	< 2 mm
Accuracy/Linearity:	< +/- 0.5% full scale
Temperature limits:	PP and stainless 0...60°C; PVC 0...40°C
Materials:	Stem and process connection in PVC, PP or S.S. 316 Pressure sensor in ceramic Housing in PBT, fibre glass reinforced, IP65, according to EN 60 529



MECHANICAL INSTALLATION

The MEMPRO® sensor can be attached to containers and tanks in two different ways:

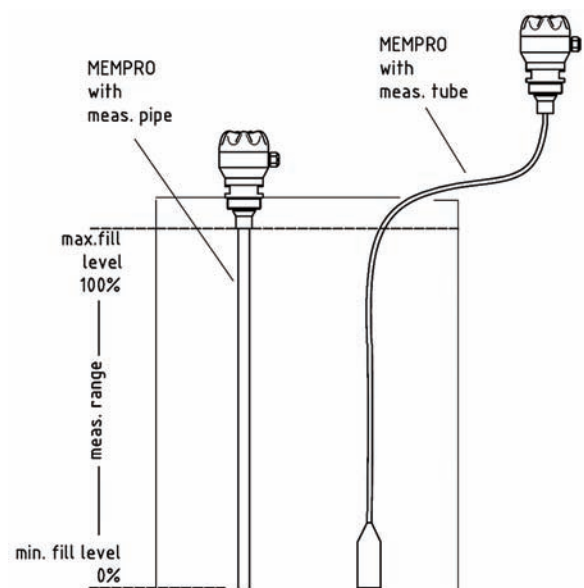
- With the measuring tube immersed into the tank from above.
- With the measuring hose immersed into the tank from above, and with the transducer mounted in close proximity to the tank.

Please observe the following points:

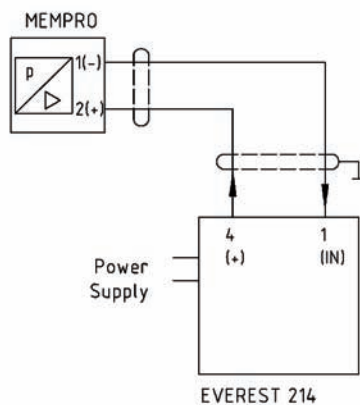
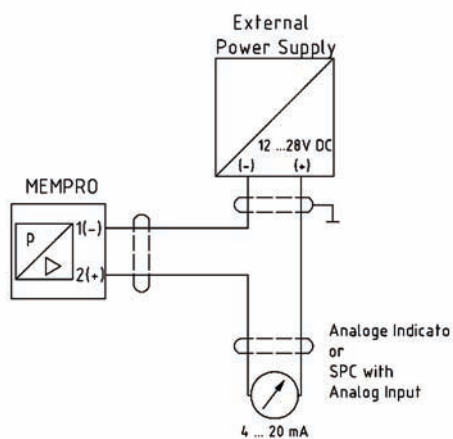
- The bottom end of the measuring tube or measuring hose corresponds to the 0% fill-level measuring point.
- The measuring tube may not make contact with the floor of the tank, nor may it be immersed into bottom sludge.

MAINTENANCE

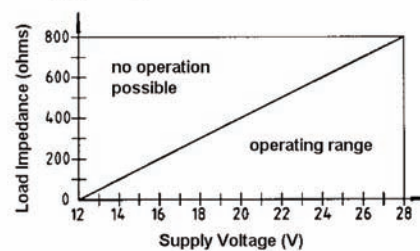
If used for its intended purpose, the MEMPRO® hydrostatic level transmitter is maintenance-free. If used with highly adhesive liquids (e.g. lime slurry), the measuring pipe or tube must be inspected at regular intervals and cleaned if necessary.



WIRING



Load as Related to Supply Voltage



Note: load is the sum of all resistors within the measuring circuit

INITIAL START-UP

All MEMPRO® hydrostatic level transmitters are configured at the factory to values acc. customer application or respectively to the measuring cell nominal value.

(DIP switch S1=ON)

- Zero point (0% fill level = 4 mA)
- Maximal value (100% fill level = 20 mA)

The zero point and the maximal value must always be examined during initial start-up and readjusted to the desired measuring range if necessary.

It is advantageous to adjust the MEMPRO with the original liquid.

ADJUSTMENT SEQUENCE

1. Electrical connection of MEMPRO acc. connection diagram
2. Preset of the measuring range

100 % of fill level range (height of Water Column)		
Measuring cell Type 1 (1000 mm WC)	Measuring cell Type 2 (2500 mm WC)	DIP switch setting
0.20 – 0.30	0.4 – 0.7 m	DIP 6 = ON
0.20 – 0.45	0.5 – 1.1 m	DIP 5 = ON
0.25 – 0.55	0.7 – 1.4 m	DIP 4 = ON
0.35 – 0.80	0.8 – 2.0 m	DIP 3 = ON
0.55 – 1.0	1.4 – 2.5 m	DIP 2 = ON
0.65 – 1.0	1.6 – 2.5 m	DIP 1 = ON

100 % of fill level range (height of Water Column)		
Measuring cell Type 4 (4000 mm WC)	Measuring cell Type 10 (10 000 mm WC)	DIP switch setting
0.7 – 1.2	2.0 – 3.0	DIP 6 = ON
0.8 – 1.8	2.0 – 4.5	DIP 5 = ON
1.2 – 2.2	2.5 – 5.5	DIP 4 = ON
1.5 – 3.2	3.5 – 8.0	DIP 3 = ON
2.0 – 4.0	5.5 – 10	DIP 2 = ON
2.4 – 4.0	6.5 – 10	DIP 1 = ON

Note: Always switch only one of the DIP switches to ON-position.

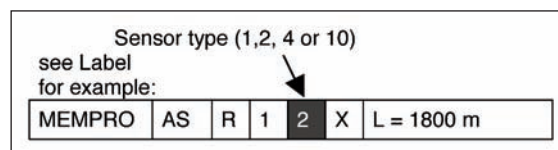
3. Zero Point

- Empty the container or remove the MEMPRO
- Adjust measuring current to 4 mA with the "4 mA" trimming potentiometer

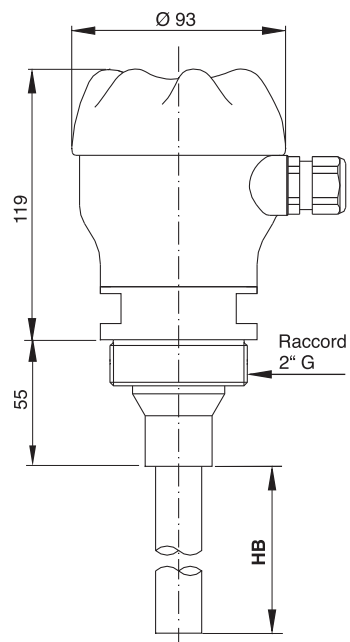
4. 100%-Point

- Fill container with the original liquid to desired maximal level
- Adjust measuring current to 20 mA with the "20 mA" trimming potentiometer

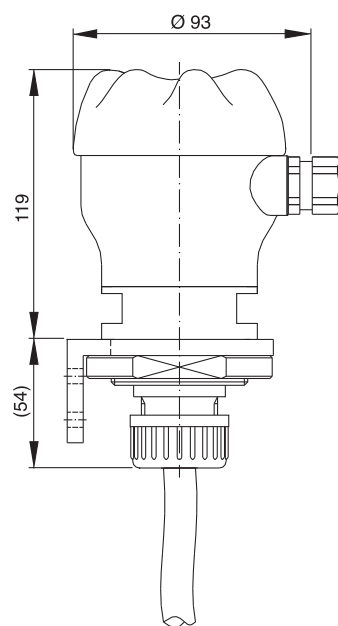
Note: If the container is refilled with liquids which have another density, the MEMPRO must be readjusted!



DIMENSIONS

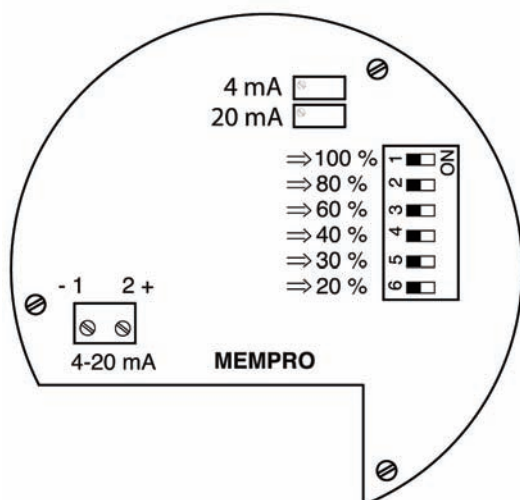


MEMPRO
with measuring pipe,



MEMPRO
with flexible measuring

TERMINAL HOUSING



FILL LEVEL MEASURING SIGNAL V.S. DENSITY

