



Level meter

BA

- Level metering and monitoring of liquids
- Robust design
- Clear 90°-scale
- Transmitter with HART or PROFIBUS-PA as option

Function

The displacer rod, which is attached to a measuring spring using a chain, immerses into the liquid and is subject to a buoyant force proportional to the mass of the displaced liquid.

Every change in the weight of the rod corresponds to a change in the length of the spring and is therefore a measure of the liquid level. The longitudinal expansion of the spring, i.e. the travel of the rod, will be transmitted from the measuring space to the indicator unit by means of a magnetic coupling. The basic version of the indicator unit consists of a scale with a pointer for displaying the liquid level. As an option, the indicator unit may be equipped with electrical transmitters for remote display or with limit switches.

If the device cannot be installed from above, because, for example, a stirrer is mounted in the container, a special displacement vessel is available for lateral installation.

Since the buoyancy of the displacer rod depends on the density of the measured medium, it must have been designed for the specific liquid to be measured.

Application

The BA-type level indicator is suitable for level measurement of liquid products in open containers and in containers under pressure. The device is based on Archimedes' principle.

Applications: level metering, monitoring, adjusting and control.

The meter's design makes it ideal for processes under difficult and rough operating conditions.

The devices are available with additional electrical equipment for process monitoring and control.

- A large spectrum of wetted materials
- Magneto-resistive signal transmission
- Swilling well for rough conditions (optional)
- High-temperature application (option)
- High-pressure application (option)
- Excellent heat tracing technology (option)



Technical data

Sensor

Materials:	Stainless steel, Hastelloy other materials on request
Process connection:	DN50 flange acc. EN 1092, ASME B16.5, DIN2512, special connections on request
Nominal pressure:	PN 40, ASME CI150 / 300 (standard) higher pressure rates up to 400 bar optional
Process temperature:	-40°C up to +250°C
Ambient temperature:	-40°C up to +80°C
Ingress protection:	IP 65 (EN60529)
<u>Certification</u>	
Explosion protection:	TÜV 02 ATEX 1926 X
Density range:	400...2.000 g/l



Display	Aluminum (stove-enameled) Stainless steel (as option)
Outputs	inductive switch inductive switch (safety design) microswitch others on request
Ambient temperature:	-40°C up to +80°C (without switch) -40°C up to +65°C (with switch)
Transmitter	ES with HART-protocol ES with HART-protocol and 2 NAMUR-switches ES with HART-protocol and 1 NAMUR-switch / 1 pulse output ES with Profibus-PA
Power supply:	14 - 30 VDC
Output:	passive, galvanically isolated
Currency:	4-20 mA
Binary 1 and 2:	$U_i=30\text{ V}$, $I_i=20\text{ mA}$, $P_i=100\text{ mW}$
Ambient temperature:	-40°C up to +70°C
Ingress protection:	IP 20 (EN60529)
<u>Accuracy</u>	
Liquid:	$\pm 5\text{ mm}$ of actual value $\pm 0,2\%$ with transmitter (ES)
<u>Certification</u>	
Explosion protection:	DMT 00 ATEX E 075
Type of protection:	II 2G EEx ia IIC T6
CE-Marking:	Explosion Protection Directive 94/9/EC
Electromagnetic compatibility:	EMC-Directive 89/336/EEC EN 61000-6-3:2001 (emissions residential environments) EN 61000-6-2:1999 (immunity for industrial environments) EN 55011:1998+A1: 1999 Group 1, Class B (radio interference) EN 61000-4-2 to DIN EN 61000-4-6 EN 61000-4-8 EN 61000-4-11 EN 61000-4-29 EN 61326

