

Trouble shouting

If anything is missing or not working anymore or you need extra options or spares please let us know.
We do need our production (job reference) number so we can check what you need.
The job. ref. / order nr. is always on the tagplate.

If you need more info or help please let us know.
We are happy to assist you.

Space for your remarks:

Process positions : Side / Side
 Side / Top
 Top / Bottom
 Side / Bottom
 Top mounted

Tag Nr. :
Quantity :
Measuring length : C. to C.mm

PROCESS CONDITIONS

Medium :
Density (kg/m³) : min max
Pressure : min max
Temperature : min max
Viscosity : < 80 cst orcst

DESIGN

Flanged Couplings
 Thread Butt-weld

Material : SS 316L or
Connection size :
Pressure rating : Sealing surface
Drain (bottom/side) : G...../..... NPT / flange
Vent : Closed, G.../... NPT / flange
Gasket material : Std. / SS spiral wound / graphite /

CERTIFICATES

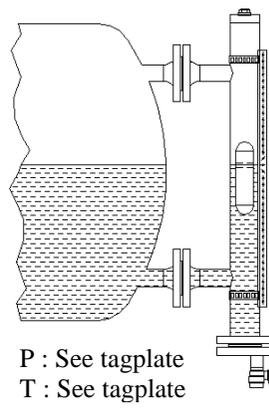
Ship approvals : GL / LRS / BV
Material cert. : EN 10204 3.1
Welding proc. : WPS / PQR
X-ray : No / 10 / 100%
Explosion : ATEX / IECEx
Pressure test : HADRO /

OPTIONS

Float malfunction : Yes / No * optical indication
Switches : STD / Exi / Exd *
Scale / ruler : Cm / 0-100% / acc. tank content*
Level transmitter : 4-20 mA / Exi / Exd*
Frost protection : Yes / No* electric, steam, oil
Insulation : Cold / Heat resistant *

POINTER[®] magnetic level gauge

Type: D- ; L- ; R-



P : See tagplate

T : See tagplate

1 General

- Only authorised personal may operate the level gauge.
- Magnetic level gauges are measuring instruments, please handle with care.
- Please check if your magnetic level gauge is the one you ordered. Check C to C, process flange, density float etc. Float, switches, level transmitter can be packed separately, but together in one box.
- The level gauge can be used for liquids and for condensate gasses if they don't harm the material (SS316 and/or Titanium).
- Since there is no self heating of the equipment, the temperature class is determined by the max. process temperature and the max. surface temperature T is equal to the process temperature.

2 Mounting float

- Check if the float is not damaged and remove the metal parts (if any)
- Mount the float with top side up into the measuring chamber through the bottom stop. Change if necessary the gasket.
If the float has to be installed by the top flange, the float has a lifting hook. Slowly bring down the float by the lifting hook to prevent damaging the float.
- Bring the float into the measuring chamber to its max. position and back to its starting position for the right moving of the flaps cq. switches.**

3 Mounting level gauge

- Fasten the magnetic level gauge. Turn, if necessary, the flaps into the position you want.
- Mount the level switches on the desired level, do the same with the level transmitter, if these were ordered.
- If the surface temp. is high the level gauge should be insulated to prevent the danger of ignition and burn.
For the function of the level gauge insulation is not a problem, do not insulate switches or the reedchain transmitter.

4 Pressure test

If the magnetic level gauge must be pressurized as a part of an installation, please do **not** do this with the float.
(float does not have any safety factor)

5 Start-up

- Purge the gauge if an explosive mixture can be expected.
- Open top valve (gas side), vent if necessary.
- Check if the connections of the level gauge are closed (flange connections and plugs).
- Open bottom process valve (liquid side) slowly.
- Level gauge is in operation.
- Do not use the drain as bleedvalve

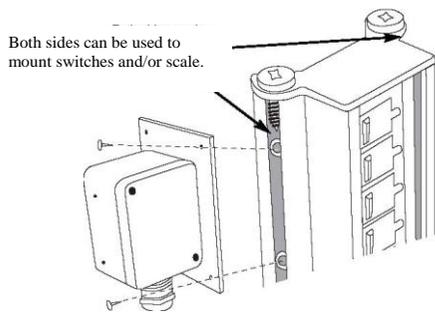
6 Shut down (out of operation)

- Purge the gauge if an explosive mixture can be expected.
- Close bottom valve (liquid side).
- Close top valve (gas side).
- Open vent slowly (please take care of the possibility of an explosive air-gas mixture).
- Open drain (please take care for jet of liquid, hot or explosive liquids).
- Level gauge is out of operation.

7 Maintenance

Maintenance is only necessary if the liquid is sticky, clean the measuring chamber periodically. (special types are available). Lifetime of flaps is limited if temperature > 105°C for Polycarbonate or > 160°C for Aluminium or SS 316 rails. Always use original products by replacements.

Only clean the level gauge and transmitter/switches etc. with a wet cloth to avoid static electricity and or shocks.



IMPORTANT!

Power must be switched OFF before wiring the unit.

The density of the liquid can change by fluctuating pressure / temperature, so the float can indicate an other level when installing the level gauge.

If necessary make sure that a galvanic barrier is used for intrinsically safe units.

The process temperature of the switches may depend on the insulation options of the level gauge.

Operating instructions:

1. Mount the switch on the correct position.
2. Move the float from bottom to top and back.
3. Check the function of the switch.
4. If necessary, change the cables of the switch if an other function is required.
5. Connect the switch to the supply.

Surge Protection for reed switches

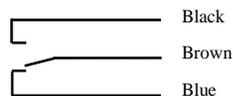
Capacitive loads (in extremely long cable runs) and lamp loads are prone to high inrush currents which can greatly reduce the life of the switch contacts on closure. The addition of a surge suppression circuit in series with the switch and as close as possible to the switch will alleviate this problem.

For normal signal circuits the capacitance in the cable can be ignored as several hundreds of meters of cable will need to be connected to the switch before damage may be caused.

Reedswitches

Type HLS-15

24 VAC/DC 2,5 A 60W 60VA
230 VAC/DC 250 mA 60W 60VA

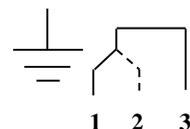


T process -25°C to +95°C



Type LMS-Ha2

24 VAC/DC 0,8A 60W 40VA
230 VAC/DC 0,8A 60W 40VA

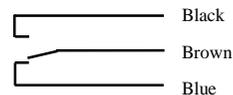


T process -40° to +180°C



Type HLS-25i

Ui= 30V; Li= 250 mA ; Pi= 1,3 W



II 1 GD Exia IIC T6 Ga
II 1 GD Exia IIIC T85°C IP66/67
Da
Ta -20°C to +80 °C
T process -40°C to +100°C



Type HLS-25d

24 VDC 2,5 A 60W
110 VAC 540 mA 60W
230 VAC 250 mA 60W



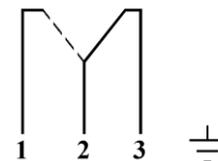
II 2 GD Exd IIC T6 Gb
II 2 GD Ex tb IIIC T85°C Db
Ta -20°C to +70 °C
T process -40°C to +100°C



Micro switches

Type LMS-Ha1

10 -230 VAC/DC 2A 40W 100VA

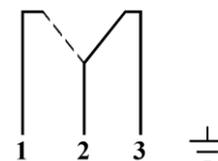


T process -50°C to +380°



Type LMS-Ha1E

Ui= 30V; Li= 500 mA ; Pi= 20 W

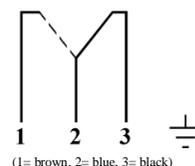


T process -50°C to + 380°C



Type LMS-HaD

10 -230 VAC/DC 2A 40W 100VA



II 2 G Ex d IIC T3..T4 Gb
II 2 D Ex tb IIIC T135°C..T200°C Db
Ta -20°C to +60 °C
T process -40°C to +190°C



Reedchain transmitter

Type P-05, P-10, P-25 (GP, Exi or Exd)

If necessary mount in transmitter on the level gauge. The 4 mA setting is marked on the chain and should correspond with the lowest point of the bottom process connection.

Supply 12 – 30 VDC

Only the terminals + and – should be used for wiring up the device. The other terminals (3,4,5 and 6) are for factory use only.

Ta -40°C to +60°C
T process -50°C to +350°C

For Exd:

II 2G Ex db IIC T5...T1 Gb
II 2D Ex tb IIIC T100°...T350°C Db

For Exi:

II 1 G Ex ia IIC T4...T6 Ga
II 1 D Ex ia IIIC Da

Ui=30V; Li=120mA ; Pi=0.84W; Ci=1nF; Li=10µH

