HB Products – dedicated to optimal solutions for level measurement and control of oil and refrigerants.

HB Products is a development-oriented company, which specializes in the development and production of sensors for industrial refrigeration systems. Apart from expertise within oil and refrigerant control, we have great know-how in the design and optimization of industrial refrigeration systems. This knowledge enables us to develop and produce the best sensors!

Since its start more than 20 years ago, HB Products has attained a strong global position. This is the result of our ability to think in terms of new technological solutions, create trustworthy products, and provide a high level of service.

For further info and guidance please visit our homepage
www.hbproducts.dk

Quick guide
HBLT-Flex – Level sensor

Functionality:
The HBLT-Flex sensor is made to measure HFC and CO_2 refrigerant level in refrigeration systems. If the HBLT-Flex is to be used in a different way, prior approval must be obtained from HB Products.

Download complete manual:
For further information please download the instruction manual from our homepage: www.hbproducts.dk.

Caution:
Only qualified personnel should work with the product. The technician must be aware of the consequences of an improperly installed sensor, and must be committed to adhering to the applicable local legislation.

Caution – grease on tip:
Please note that the sensor electronic tip is protected with silver grease to ensure proper contact. Please use gloves to protect your skin. The type of grease is CW7100 from Chemtronics.

Mechanical installation

100 % / 20 mA

50 mm
0 % / 4 mA
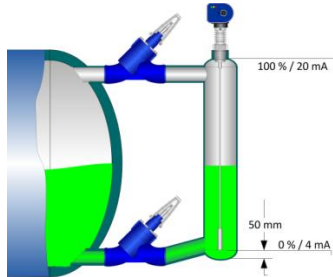
Mechanical specifications:
Ambient temperature: -30...+50°C
Liquid temperature: -60...+60°C
Max. pressure: 100 bar
Material, mechanical: AISI304/PTFE
Thread connection: see packaging.

Installation guide:
It must be mounted vertically.
HBLT-Flex can be mounted on an overflow pipe or a
pipe segment where flow and turbulence are
minimized.
It is supplied with a 5 pin connector cable with an
M12 plug.

Caution! In case of welding work on the unit, please
make sure that proper earthing is carried out to avoid
damaging the electronics.

Electrical installation

1O
4O 5O 2O
3O
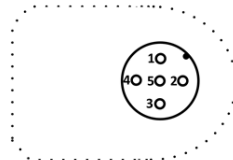
Supply 24V AC/DC
1 = Brown +
2 = White -
3 = Blue, DO, Alarm, PNP, 1A
4 = Black, AO, Control output, 4-20mA
5 = Gray, DI, Run in signal (5 to 24 VDC)

Electrical specifications:
Supply: 24 V AC/DC
Power consumption: Maximum 30mA
Plug: DIN 0627 – M12/5 pins
Enclosure: IP65
Material, electronics: Nylon 6 (PA).

Note! All terminals are protected against improper termination with a supply voltage
up to 40 V. If the supply voltage is greater than 40 V the electronics will be damaged.

Configuration of sensor
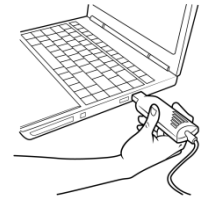
In order to set the control parameters the HB configuration tool is
needed

Download of software:
The tool can be downloaded from our homepage.

NOTE! To be able to change the control parameters, it is necessary to
have a special USB/M12 configuration cable as well as the
configuration tool installed on a PC.

LED activation:
1) Green LED indicates 24 V DC
supply; it blinks during operation. If
"run-in" is not used, this function
must be deactivated in the tool.
2) Yellow LED indicates control. The
blink sequence indicates if the valve
is closing or opening.
3) Red LED indicates high or low level alarm, depending on
configurations.
Caution! Factory settings do not guarantee safe operation, since the
configuration parameters depend on the system design.
Note! Fault detection on the electronic function can be carried out
without releasing pressure from the system or disassembling the
mechanical part of the sensor.