Configuration of sensor

To set the control parameters, the HB tool is needed.

To change the control parameters, it is necessary to have a special USB/M12 cable as well as a PC, where the HB tool is installed.

Download of software:
The tool can be downloaded on our web page www.hbproducts.dk

LED activation:
a) 3 x green LEDs indicate oil level
b) Green Power LED indicates 24 V DC supply; flashes during operation.
If "run-in" is not used, this function must be deactivated in the tool.
c) Yellow LED indicates supply is open to magnetic valve
d) Red LED indicates ALARM

Caution! Factory settings do not guarantee safe operation, since the configuration parameters depend on the type of compressor/separator.
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.

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Quick guide

HBOC and HBOC mk2– oil control sensor
for stand-alone oil management

Functionality:

The HBOC sensor is made to control oil level refrigeration systems compressors. The sensor exist in two versions the normal HBOC and the HBOC mk.2 the only difference is where you get the electrical output. If the HBOC 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 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.

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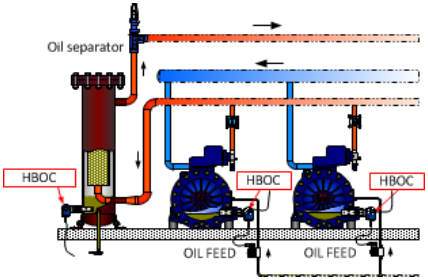
Mechanical installation

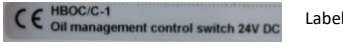


Mechanical specifications:
Ambient temperature: -30…+50°C
Liquid temperature: 0…+80°C
Max. pressure: 150 bar
Material, mechanical: AISI304/PTFE
Thread connection: see packaging.

Installation guide:
The sensor must be installed in a horizontal position.
During installation, check the sensor's length as well as its placement with the refrigeration compressor manufacturer or the oil separator producer. Oil pockets may not form around the sensor, and there must be a gap of at least 2mm between the sensor and the other mechanical parts.

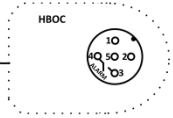
Caution! In case of welding work on the unit, please make sure that proper earthing is carried out to avoid damaging the electronics.

Electrical installation
HBOC and HBOC/C



Label

Solenoid Valve
24 V DC Max
24W



1 = Brown +
2 = White -
Gray wire NOT in use

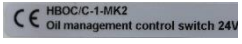
Supply 24V DC,
1 = Brown +
2 = White -
3 = Blue – Alarm - Potential free solid state, 1 A
4 = Black – Alam - Potential free solid state, 1 A
5 = Gray - DI, Run in Signal (5 to 24V DC)

Electrical specifications:
Supply: 24 VDC
Current draw: Max 30 mA
Plug: DIN 0627 – M12/5 pins
Enclosure: IP65
Material, electronics: Nylon 6 (PA).

Run in signal:
The sensor has a control function and regulates the flow of oil independent of other parts of the system. The function starts to work when the supply is connected. The control function can be activated/deactivated via an external “run in” signal.

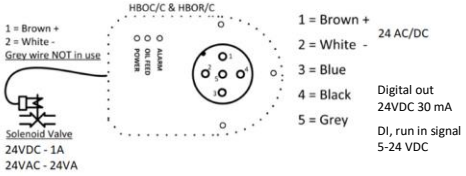
Note! All terminals are protected against improper termination with a supply voltage up to 40 V. If the supply voltage is greater than 40 V the electronics will be damaged.

Electrical installation
HBOC mk2 and HBOC/C mk2



Label

Connection diagram



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

Run in signal:
The sensor has a control function and regulates the flow of oil independent of other parts of the system. The function starts to work when the supply is connected. The control function can be activated/deactivated via an external “run in” signal.

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.