

# Low Temperature Oil Level Switch 90 - 240 V AC

## Category: HBSO-SSR-2-LT



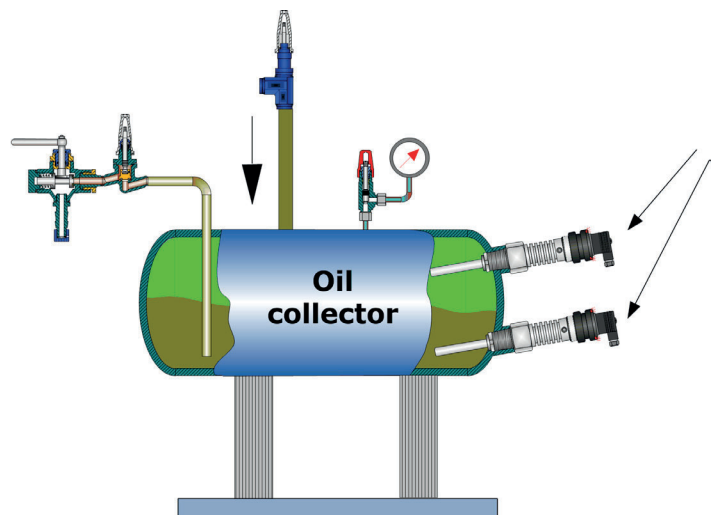
### Functional description

HBSO-U-LT is a low temperature level switch used for detecting common lubricating oils in refrigeration systems. The switch is special developed for low temperature applications. The HBSO version of the low temperature oil switch can be used for all types PAO, POE, mineral oil and PAG oil. Typically it is installed in / on the compressor and the oil separator, but it is also suited for installation in other locations in the oil system. The sensor's measurement principle makes it unique for these purposes, since the properties of the measurement

principle allows it, among other things, to detect oil without detecting refrigerant.

It is calibrated so that it is unaffected by oil spray and only allows a small amount of foam.

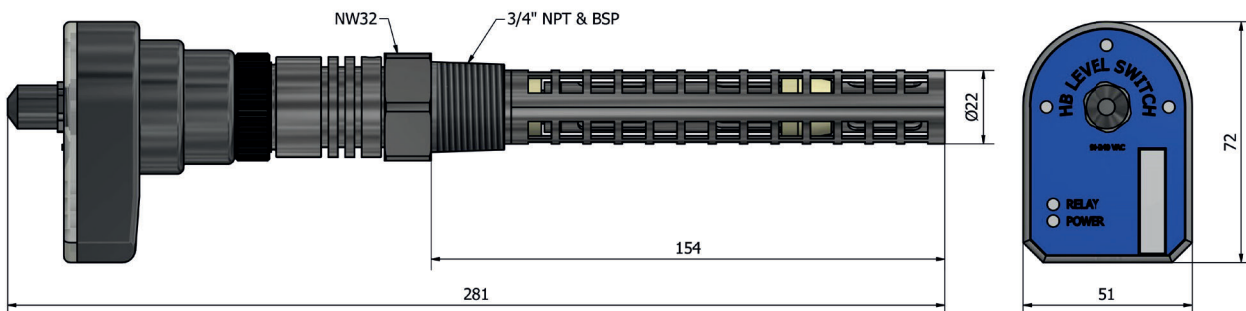
The electronic sensor head is the same as the one used for the regular HBSO1 and HBSO2 sensors. The mechanical part has got a special open design made for draining the stiff and sticky oil at low temperatures on the low pressure side of a cooling plant.



## Technical data - sensor

Supply		Mechanical Specifications	
Supply:	90...240 VAC	Thread connection	¾" NPT & ¾" BSPP
Current consumption	< 10 mA	Materials - mechanical parts:	AISI304/PTFE
Max current output	Max 50 mA	Materials - electronic parts:	Nylon 6 (PA)
Plug connection	M12 – DIN 0627	Dimensions	278 x 51 x 72 mm
		Weight	605 g
Output		Installation conditions:	
Solid state relay output:	90...240 VAC – 40 W	Ambient temperature	-30°...+50°C
Output function	NC or NO	Oil temperature	-30°...+80°C
LED indication		Max. operational pressure:	150 bar
Level indication:	3 x LED (green)	Protection degree	IP65
Relay-on activation:	1 x LED (yellow)	Vibrations	IEC 68-2-6 (4g)
Power supply:	1 x LED (green)	Oil type	
Approvals		HBSO-SSR-2-LT	All common PAO, POE, mineral & PAG oil types
EMC Emission:	EN61000-3-2		
EMC Immunity:	EN61000-4-2		

## Mechanical dimensions



## Electrical installation

Supply: 90...240 V AC -50/60 Hz

- 1 = Brown: 90...240V AC supply
- 2 = White: 90...240V AC supply
- 3 = Blue - Potential free solid state, Max 240V AC / 40 W
- 4 = Black - Potential free solid state, Max 240V AC / 40 W

## Ordering codes

Output	Thread type	Oil type	Oil temperature	Ordering code
NO	3/4" NPT	All types*	-30...80 °C	HBSO-U-SSR2/NO-2-LT
NC	3/4" NPT	All types*	-30...80 °C	HBSO-U-SSR2/NC-2-LT
NO	3/4" BSPP	All types*	-30...80 °C	HBSO-U-SSR2/NO-6-LT
NC	3/4" BSPP	All types*	-30...80 °C	HBSO-U-SSR2/NC-6-LT

\*All common PAO, POE, mineral & PAG oil types.

## Spare parts



Position	Specification	Type	Ordering code
1.	Electronic parts	NO	HBSO-U-SSR2/NO-EL-LT
		NC	HBSO-U-SSR2/NC-EL-LT
2.	Mechanical parts	3/4" NPT	HBSO-U-LT-MEK-2
		3/4" BSPP	HBSO-U-LT-MEK-6