

## Data Sheet

### KSB Leakage Sensor

Intelligent monitoring system for mechanical seal leakage

#### General Description

The KSB leakage sensor is an intelligent monitoring system for measuring and displaying mechanical seal leakage on site. It comprises a leakage measuring instrument and a display unit.

If supplied together with a pump set with baseplate, the leakage measuring instrument is pre-mounted on the baseplate; the display unit is supplied but not fitted. If supplied together with a pump set without baseplate, the leakage measuring instrument and the display unit are supplied but not fitted.

The KSB leakage sensor is connected via an M12 connector and immediately ready for operation. The device monitors the leakage rate of the mechanical seal. If the adjustable warning threshold or alarm threshold are exceeded, the device responds with acoustic signals or light signals. In addition, the current leakage rate can be output via an analog output.

#### Display unit

Display unit with signal lamps based on universally understood colour coding and symbols and acoustic alarm signal.

#### Displayed information

"In operation", warning, alarm and sensor contact as a light signal; alarm status as an acoustic signal.

- Connection of the display unit via M12 × 1 5-pin connector for power supply and utilisation of interfaces
- Operating statuses "in operation", warning and alarm provided as OPTO signal.
- Optional output of leakage rate as analog signal.

Setting 8 fixed warning levels and alarm levels with DIP switches:

Level	Warning threshold	Alarm threshold
	g/h	g/h
1	0,1	2
2	0,2	3
3	0,3	3
4 <sup>1)</sup>	0,3	5
5	0,3	8
6	0,5	8
7	1	12
8	2	30

#### Sensor

An inductive sensor is supplied fitted in the leakage sensor housing. It is connected to the display unit with a connector.

Fluid temperatures at the sensor housing inlet depending on the fluid handled: -20...90 °C.  
(Depending on the pump type and ambient conditions pump-end fluid temperatures of -30...400 °C are possible.)

#### Materials

- Leakage measuring instrument: Noribeam® 316L
- Inductive sensor (not in contact with the fluid handled): brass with white-bronze coating
- Active surface: PBT

#### Available measuring ranges of the analog output

Depending on the warning / alarm level: 0.2 × warning threshold, 2 × alarm threshold (e.g. measuring range for level 4: 0.06...10 g/h for 4...20 mA)

#### Ambient conditions

Enclosure: IP65

#### Ambient temperature

- -30°C ... 80°C (transport, storage)
- -10°C ... 60°C (operation)

#### Electrical data

- Power supply: 24 V DC (±10 %)

#### Interfaces that can be used as an alternative

- Leakage rate 4 ... 20 mA
- OPTO (open collector) signal for operation
- OPTO (open collector) signal for warning
- OPTO (open collector) signal for alarm

#### Electromagnetic compatibility

- EN 61326-1 (interference immunity for industrial environments, interference emission for residential environments)

#### Use in potentially explosive atmospheres

The KSB Leakage Sensor is available in a special design for use in potentially explosive atmospheres (II 2G T5-T1).

However, a switching amplifier is required for use in potentially explosive atmospheres, and the display unit with switching amplifier must be located outside of the potentially explosive atmosphere. The sensor cable for connecting the leakage sensor and the switching amplifier is 25 metres long and included in the scope of supply. This special design of the KSB Leakage Sensor is offered exclusively for use with KSB pumps bearing the explosion protection marking.

<sup>1</sup> Factory setting