OPTISWITCH 5300 –
The switch for hot and cold

OPTISWITCH 5300 –
Vibration level switch for extreme process conditions

KROHNE tuning fork technology level switches have long been valued for their superior robustness and reliability.

The OPTISWITCH 5300 is our latest development and was designed to reliably detect liquids in harsh environments such as refineries or offshore platforms. With its extensive set of approvals, this switch is ready to deliver top performance wherever you need an extra tough device for hot and cold or high pressure applications.
Technology for extreme conditions

The sturdy tuning fork of the OPTISWITCH 5300 resists corrosion (e.g. sour gas) as well as high and low temperatures. The switch reliably detects liquids with very low densities \( \geq 0.42 \text{ kg/l} \geq 26.22 \text{ lb/ft}^3 \) (e.g. ammonia) in processes from –196 to +450 °C/–321 to +842 °F, and its pressure range meets boiler standards (saturated steam applications).

Safety at the highest level

The specific environment of e.g. petrochemical plants, refineries and offshore platforms calls for a high level of safety to prevent injury, pollution as well as damage to equipment. KROHNE puts safety first: The OPTISWITCH 5300 is available with hazardous area, ship, steam boiler and NACE approvals. It also features a permanent fault monitoring function as well as a second process seal made of ceramic for additional safety. The switch provides high and low level alarm and can be used as overfill protection (acc. WHG) or pump dry-run detection.

Designed for use in safety loops SIL2/3 – as a single device for a single safety function (1oo1), the OPTISWITCH 5300 meets SIL2 and in a homogenous redundant setup, it conforms to SIL3 (1oo2) architecture requirements.

A matter of choice

The OPTISWITCH 5300 comes in standard and selectable insertion lengths, with a large choice of sensor materials and process connections. Its 40 mm/1.58”-long tuning fork fits into almost any bypass chamber and can be installed in addition to a level gauge.

Highlights:
- Adjustment-free setup
- Unaffected by turbulences or varying dielectrics and densities
- Extra safe with second process seal (ceramic)
- Self-monitoring sensor and electronics element
- Functional test possible during operation
- SIL2/3 compliant

Contact

Head office:
KROHNE Messtechnik GmbH
Ludwig-Krohne-Str. 5
47058 Duisburg
Germany
Tel.: +49 203 301 0
Fax: +49 203 301 103 89
info@krohne.com

Vibration level switch with selectable insertion length for heavy-duty liquid applications
- Sensor lengths up to 3 m/9.8 ft
- Temperature range from –196 to +450 °C/–321 to +842 °F
- Pressure range from –1 to 160 barg/–14.5 to 2320.6 psig
- Density \( \geq 0.47 \text{ kg/l} \geq 29.34 \text{ lb/ft}^3 \) as standard; \( \geq 0.42 \text{ kg/l} \geq 26.22 \text{ lb/ft}^3 \) (optional)
- Process connections from DN40, 1½” ANSI, G1 and 1”NPT
- Wetted parts made of Inconel Alloy 718 with 316L or Hastelloy® C-22
- 2-wire 8/16 mA, relay (DPDT) and transistor PNP/NPN electronics
- Ex, WHG, SIL, NACE and various ship approvals
- EN 12952-11 (water tube boilers) and EN 12953-9 (Shell boilers)

Typical applications
- Steam boilers
- Liquefied natural gas (LNG) tankers
- Liquid nitrogen and ethylene tanks
- Distillation columns

Industries
- Power
- Petrochemical
- Oil and Gas

www.krohne.com