

Labkotec SET sensors

Level detectors
for monitoring
and control
of liquids



- Sensors for various applications
- Warns of excessive levels of oil, sludge & liquids
- No moving parts
- Easy installation
- Remote monitoring
- ATEX approved

Measure your success

 **Labkotec**
INDUTRADE GROUP

Labkotec SET level detectors for monitoring and control of liquids

Labkotec SET level detectors are suitable for a wide variety of applications. When connected to SET-100, SET-1000 and SET-2000 control units, they can be used for the level monitoring and control of water, oil products, acids, alkalis, detergents, solvents and other liquids. All measurements can be connected to LabkoNet remote monitoring systems, www.labkonet.com



SET level detector models

SET/TSH2 sensor for non-viscous liquids

SET/TSH2 is a universal sensor for non-viscous liquids. The most common applications are e.g. water/oil interface detection and high/low level alarm in fuel and chemical tanks. Easy installation by suspension cable or mounting thread.

When ordering, please specify SET/TSH2-V for conductive and SET/TSH2-O for non-conductive medium.



SET/TSHS2 sensor for viscous liquids

SET/TSHS2 is a special sensor for viscous liquids. The most common applications are e.g. high level or water interface alarm in grease or heavy oil storage tanks. Equipped with a fork type counter electrode instead of a tube. Other specifications as SET/TSH2.



SET/TSSH2 sensor for non-viscous liquids

SET/TSSH2 is a special sensor with adjustable mounting thread for non-viscous liquids having high temperatures - up to 120 °C. It is very versatile, some of the most typical applications being high/low level alarm or high level alarm in a hot water vessel. Standard lengths 500 mm and 800 mm.



SET/OS2 sensor for oil alarm

SET/OS2 is a low-cost capacitive sensor for e.g. oil/water interface detection. The transmitter is cast in the sensor.



Floating SET/OSK2

SET/OSK2 is a special version of SET/OS2 equipped with polypropylene floats to detect an oil layer in an inspection shaft, pump shaft or on a water basin.



SET/SA2 sensor for difficult circumstances

SET/SA2 is a special sensor for process mediums causing material build-up on the sensing element. Due to its rod-type construction with FEP-coating, SET/SA2 can be utilized in various applications in difficult circumstances, especially in the process and chemical industries. Standard length 300 mm.



SET/OELO2 sensor for leakage alarm



SET/OELO2 is a special sensor for leakage alarm in oil burner rooms, in basins under oil tanks, cellars or other dry rooms, where leakage of oil, water or chemicals has to be detected.

The transmitter is cast in the sensor, protection class IP68. The sensing element consists of two parallel metallic plates and the transmitter detects the presence of liquid between them.

SET/S2 sludge alarm sensor

SET/S2 sludge alarm sensor is installed in the lower section of the separator. The sensor alarms when the sludge layer reaches the sensor. The probe is normally immersed in water.



SET/V high level sensor

SET/V high level sensor is installed above the outlet's upper level. The sensor alarms when in contact with liquid, oil or water. The sensor is normally in air.



Technical Data



Fault diagnostics and easy choice of operation.



Fault diagnostics and easy choice of operation.
Resettable audible alarm.
Push buttons on front panel.



Fault diagnostics and easy choice of operation.
Resettable audible alarms.
Push buttons on front panel.

Control units

| | SET-100 | SET-1000 | SET-2000 |
|---------------------|---|--|--|
| Dimensions | 55 x 70 x 112 mm (L x H x D) | 175 x 125 x 75 mm (L x H x D) | |
| Enclosure | Plastic housing IP 20, mounting on a 35 mm DIN rail | IP 65, material polycarbonate, wall-mounted | |
| Ambient temperature | -20 °C...+50 °C | -25 °C...+50 °C | -25 °C...+50 °C |
| Supply voltage | 230 V AC ± 10 %, 50/60 Hz | 230 V AC ± 10 %, 50/60 Hz, 110 V AC ± 10 %, 50/60 Hz, 12 VDC | |
| Power consumption | 2 VA | | 4 VA |
| Sensors | SET/...2 sensors | One Labkotec SET sensor | Max. two SET sensor |
| Relay outputs | One potential-free relay output, 250 V, 5 A, 100 VA | Two potential-free relay outputs, 250 V, 5 A, 100 VA | Two potential-free relay outputs, 250 V, 5 A, 100 VA |
| Electrical safety | EN 61010-1, CAT II, Class II | | EN 61010-1, CAT II, Class II/III |
| Certificates: | | | |
| ATEX | VTT 02 ATEX 018X | VTT 04 ATEX 031X | VTT 04 ATEX 031X |
| IECEX | N/A | IECEX VTT 10.0003X | IECEX VTT 10.0003X |
| Ex-classification | Ex II (1) G [Ex ia] IIC | Ex II (1) G [Ex ia] IIC | Ex II (1) G [Ex ia] IIC |

Accessories



Junction box



Installation accessories



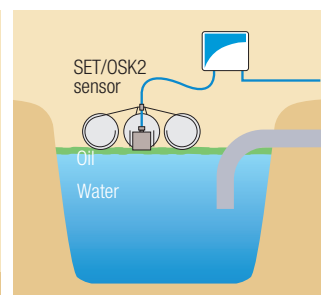
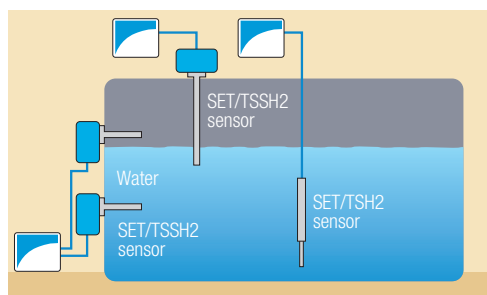
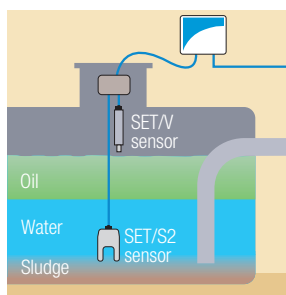
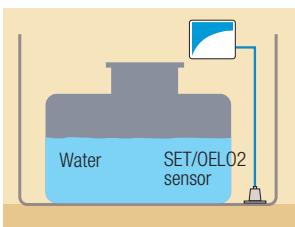
Cable joint



Sensors

| | SET/TSH2 SET/TSHS2 | SET/TSSH2 | SET/OS2 SET/OSK2 | SET/SA2 | SET/OELO2 | SET/S2 | SET/V |
|------------------------|--------------------------------------|---------------------------------|---------------------------|---------------------------------|---------------------------|---------------------------|---------------------------|
| Interface to | SET-100, SET-1000, SET-2000 | | | | | SET-1000, SET-2000 | SET-1000, SET-2000 |
| Principle of operation | Capacitive | Capacitive | Capacitive | Capacitive | Capacitive | Ultrasonic | Vibration |
| IP classification | IP 68 | | | | | | |
| Enclosure | AISI 316, PTFE | AISI 316, PTFE | AISI 316, PVC | AISI 316, FEP | AISI 316, Nylon 12 | PA, PVC, aluminium, NBR | PA, PVC, aluminium, NBR |
| Ambient temperature | -25 °C...+60 °C | -25 °C...+120 °C | -25 °C...+60 °C | -25 °C...+60 °C | -25 °C...+60 °C | -30 °C...+60 °C | -30 °C...+60 °C |
| Supply voltage | Approx. 12 VDC from SET control unit | | | | | | |
| Cable | 3 x 0,75 mm ² | 2 x (2+1) x 0,5 mm ² | 3 x 0,5 mm ² | 2 x (2+1) x 0,5 mm ² | 3 x 0,5 mm ² | | 2 x 0,75 mm ² |
| Certificates: | | | | | | | |
| ATEX | VTT 03 ATEX 024X | VTT 02 ATEX 022X | VTT 03 ATEX 009X | VTT 02 ATEX 022X | VTT 03 ATEX 015X | VTT 09 ATEX 051X | VTT 09 ATEX 025X |
| IECEX | N/A | N/A | N/A | N/A | N/A | IECEX VTT 10.0002X | IECEX VTT 10.0006X |
| Ex-classification | Ex II 1 G Ex ia IIB T5 Ga | Ex II 1 G Ex ia IIC T5 Ga | Ex II 1 G Ex ia IIA T5 Ga | Ex II 2 G Ex ia IIC T5 Ga | Ex II 2 G Ex ia IIB T5 Ga | Ex II 1 G Ex ia IIB T5 Ga | Ex II 1 G Ex ia IIB T5 Ga |

Applications





Measure your success with Labkotec

Labkotec Oy is a leading Finnish manufacturer and supplier of electronic level gauges, flow detection devices and alarms, automation and detector technology, and web-based data transmission solutions.

We have more than 40 years of experience of the industry, and have pioneered several new solutions. Our diverse and comprehensive expertise enables us to supply solutions tailored to each customer's needs.

Our ISO 9001:2008 and ISO 14001:2004 compliant quality and environmental systems are certified by Lloyd's Register Quality Assurance. As regards to safety, we comply with the ATEX and ISPS standards.

Labkotec Oy is a member of the international Indutrade Group.

Our electronic level gauges and leak detection and flow measurement technologies cover a comprehensive range of applications. Our communication units and data transmission systems relay readings in real time, independently of permanent electrical or cable networks.

Our automation and detector technology is widely used in access control systems in industrial installations, in storage silos and ports, as well as at snow dumping and landfill sites. Our TransControl system is based on RFID identification technology and fulfils the requirements of the International Ship and Port Security Facility (ISPS) code.

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www.labkotec.com
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