Oil on water detectors
ODL 1600-1610

Presentation:

Oil on water detector by measuring the differences in the reflection properties between water and oil.

Detection from 0.3m to 10m (depending on model).

No contact with water surface.

Real-time operation, no analysis time.

Oil film detection less than micron.

Detection of number of drops for a given time defined by the user.

4…20 mA output, Modbus… for alarm or PLC.

ODL 1600
Head + transmitter

Wall fixing support
for transmitter

Options:

- transmitter support in SS
- head support in SS
- transmitter **and** head support in SS
- second detection head on a single transmitter
- ATEX version on request
- installation assistance

ODL 1610
until 10m detection

Applications:

- airports
- industries
- drinking water plants
- electric power stations
- inlet / outlet of WWTP
- stream monitoring
- oil platforms

…

Example of installation

Wall fixing support
for detection head

Advantages:

- no hard maintenance because no mechanical parts
- no contact with water so no consumables
- easy installation
- instantaneous efficiency; no analysis time and no self-cleaning
- detection until 5 m (ODL-1600) and until 10 m (ODL-1610)
- detection by sheet or drops
- timeable alarm
- two detection heads on a single transmitter
- a lot of references worldwide:
  - PARIS airports
  - Electric power stations
  - Industries
  - CERN (Geneva)
  - …

Rue Hector Malot 57600 FORBACH
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Technical specifications

Product name	Oil on water monitor (non explosion proof version)
Model	ODL-1600 ODL-1610
Measurement object	Oil slick floating on water surface or dry surface (floor)
Measurement method	Reflectance of visible light
Sensor distance	0,3 – 3,0 m above water or floor surface (0,3 – 5,0 m for smooth water surfaces - for example located indoors) (**ODL-1600**) 0,3 – 6,0 m above water or floor surface (0,3 – 10,0 m for smooth water surfaces - for example located indoors) (**ODL-1610**)
Light source	Class 2 semiconductor laser diode (red)
Configuration	Detector and transmitter housed in separate enclosures
Ingress protection	IP 65
Ambient conditions	Temperature: -10 – 50° C Humidity: 5 – 95 % RH
Sample temperature	No freezing
Output signals	4 – 20 mA max load 600 Ohms (additional alarm status selectable) It is also possible to set analogue output to ODL-20 compatibility mode (normal conditions: 18 mA, oil detected 20 mA, instrument malfunction 16 mA)
Contact switching output signals	Total 6 contacts available ("a" contact x 5, "c" contact x 1) Oil alarm, under maintenance (ST BY mode setting), Detection error (water surface detection error, reflected light error, ambient light error), Instrument error (laser output error, internal temperature error) power failure (selectable closed or open during power failure) Contact rating: 30 VDC, 0,1 A
Digital communication system	➢ Based on RS 485 (isolated) ➢ Available Baud rates: 2400, 4800, 9600, 19200, 38400, 57600 ➢ Protocol: MODBUS / RTU ➢ Data length: 8 bits ➢ Parity: select from None, Odd, Even ➢ Stop bits: 1 Bit ➢ Data order: Big Endian
Operating power	100 – 240 VAC ± 10 %, 50/60 Hz
Power consumption	Approx. 10 VA (normal), approx. 15 VA (max). When optional heater is installed consumption will be approx. 30 VA
Weight	Transmitter: approx. 2,2 kg Detector section: approx. 14 kg (**ODL-1600**) approx.. 26 kg (**ODL-1610**)
External dimensions	Transmitter: approx 181 (w) x 180 (h) x 95 (d) mm Detector: approx 240 (diameter) x 443 (l) mm (**ODL-1600**) approx.. 307 (∅) x 577 (h) (mm) (**ODL-1610**)
Construction materials	Transmitter: die cast aluminium Detector: die cast aluminium
Surface finish	Metallic silver
Electrical connections	Transmitter: six cable glands for 6 – 12 mm diameter cable, G1/2 threaded connections when gland removed Detector: two cable glands for 6 – 12 mm diameter cable, G1/2 threaded connections when gland removed
Connecting cable lengths	Transmitter to detector: max 100 m (power and communication cable) Transmitter to receiving device: max 100 m (digital communication)

Example of installations

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