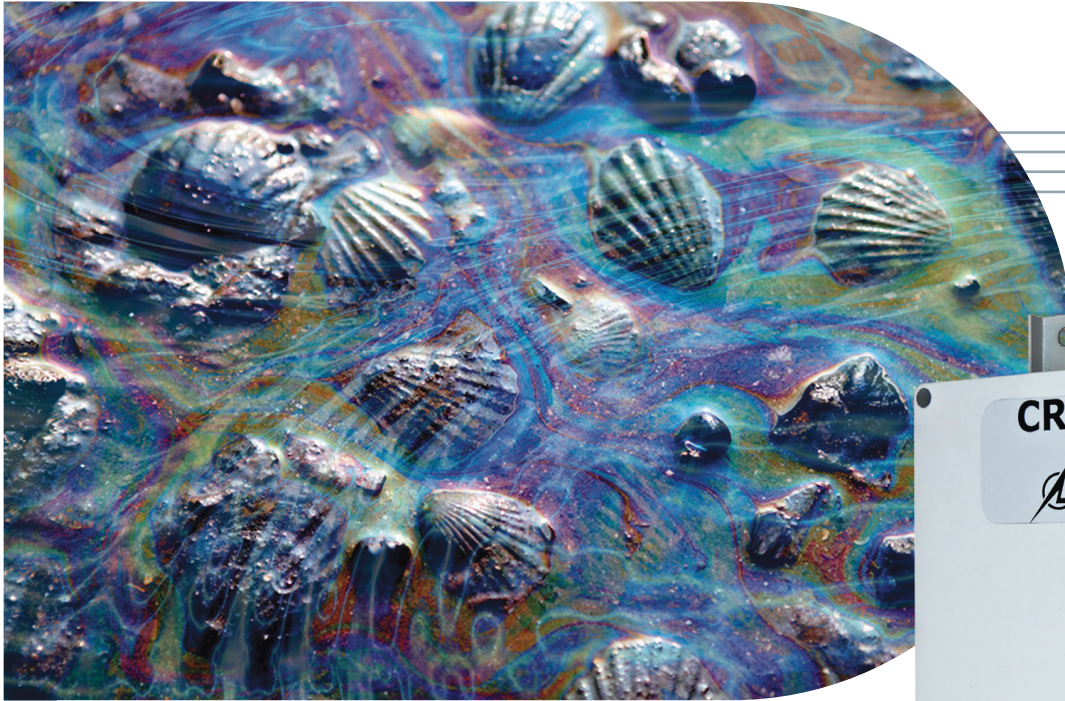


CRAB

Optical sensor of the water surface oil slicks



CRAB is an easy-to-operate, active optical sensor of the water surface oil slicks. The instrument detects the presence of oil using laser sensing with a vertical spot light beam and measuring the differences in the reflection properties of water and oil products.

FEATURES AND BENEFITS

- ❖ Non-contact active optical sensor, no sampling
- ❖ High sensitivity: detection of oil slicks > 0.5 micron
- ❖ Low interference from scattered radiation due to the laser emitter power
- ❖ Enhanced detection under different surface conditions: possible waviness of the wave surface up to 20°
- ❖ Conveniently mounted above the water on the customized height (up to 20m)
- ❖ The dust and waterproof housing: CRAB can be installed on a bridge, buoy, platform, etc.

APPLICATIONS

- ❖ Ecological monitoring of water surfaces
- ❖ Monitoring of industrial waste water



PRINCIPLE OF OPERATION

CRAB consists of an emitter based on semiconductor laser diode and single-channel optoelectronic receiving system. The measurement data is processed by a built-in microcontroller (ATMEGA16).

After the preset time (from 30 to 60 seconds), the normalized signal is received on the analog output (current loop 4-20 mA) and the digital output (RS-485 interface) of the instrument. When the oil products appear, the signal exceeds the threshold level. At the same time, the internal relay transmitter is activated.

SPECIFICATIONS

Sensitivity (minimal detectable oil slick thickness)	0.5 µm
Water surface agitation degree	Up to 20 °C
Distance to the water surface	Up to 20 m
Distance to the receiving system	Up to 1000 m
Communication ports	RS485, current loop 4-20 mA
Power supply	12-15V, 0.2A
Power consumption	Up to 3W
Ambient conditions	Temperature: -10 °C to +50 °C Humidity: up to 100% (rain)
Dimensions ¹	160x160x110 mm 300x300x200mm
Weight	2 kg (55 lbs)

¹ - At a distance up to 5m the dimensions are 160x160x90mm. If the distance is from 5m to 15m, the dimensions are up to 300x300x200mm.

EQUIPMENT AND OPTIONS

- ❖ CRAB optical sensor
- ❖ Power module

WARRANTY

CRAB optical sensors are covered by a 12-month warranty.

SERVICE

Our service engineers install CRAB optical sensors at the height specified by a customer. Consultations and initial training specific to the customer needs complete the installation.

LUMEX
INSTRUMENTS

The information and specifications in this publication are subject to change without notice.

Lumex Instruments Canada
0890278 B.C. Ltd.
Unit 207, 31510 Gill Ave.,
Silver Creek Industrial Park
Mission, B.C., V4S0A1, Canada
Phone: +1 604-820-8085
+1 866-233-6057
E-mail:
sales@lumexinstruments.com
www.lumexinstruments.com

Lumex Analytics GmbH
Naher str., 8
24558 Wakendorf II, Germany
Tel.: +49 (0) 4535 297-756
Fax: +49 (0) 4535 297-783
E-mail: info@lumexanalytics.de
www.lumexanalytics.de

Lumex-Marketing LLC
pr. Obukhovskoy Oborony, 70,
bldg. 2, St. Petersburg 192029,
Russia
Tel.: +7 (812) 718-5390
Fax: +7 (812) 718-5399
E-mail: sales@lumex.ru
Post address:
BOX 1234, St. Petersburg,
190000, Russia
www.lumex.ru

Beijing Lumex Analytical
Equipment Co. Ltd.
Level 19, Tower E2, Oriental
Plaza, 1 East Chang An Avenue,
Dong Cheng District,
Beijing 100738, China
Tel.: +86 (10) 6412-9525
Fax: +86 (10) 6242-3844
E-mail:
lumexcn@lumex.com.cn
www.lumexcn.com