OSCAR

60SX00000



Online hyperspectral integrating cavity absorption meter

OSCAR is a high-end absorption meter that works on the PSICAM principle (Point Source Integrating Cavity Absorption Meter). This principle makes it possible to measure absorption without any interferences such as scattering from particles.

OSCAR can be used in the laboratory as well as in-situ, profiling or on moorings. Internal data storage and low power consumption also enable long-term use in autonomous installations.

Advantages

- PSICAM principle
- Interchangeable integration spheres in Ø 50 mm or Ø 80 mm
- Flow-through operation
- Low power consumption

Applications

- Water quality
- Satellite validation
- Algae blooms
- Biology
- Marine optics

OSCAR was developed in cooperation with the Helmholtz-Zentrum Geesthacht (formerly GKSS Research Center Geesthacht).

Helmholtz-Zentrum Geesthacht
Zentrum für Material- und Küstenforschung

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Technical specifications

Measurement technology	**Light source**	12 LEDS
	Detector	High-end miniature spectrometer
		256 channels
		360 to 720 nm
		3.3 nm/pixel
Measuring principle		Absorption
Optical path		80 mm or 50 mm

Parameters	Absorbance
Turbidity compensation	yes
Data logger	2 GB
Response time T100	≤ 2 min
Measuring interval	≤ 1 min

Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)	
Dimensions (L x Ø)		450 mm x 135 mm*	~ 17.7" x 5.3"*
Weight	**VA**	~ 6.2 kg	~ 13.6 lbs
	Ti	~ 5.5 kg	~ 12.1 lbs

*without hose connection

interface	**digital**	Ethernet (TCP/IP)
		RS-232 or RS-485 (Modbus RTU)
Power consumption		≤ 4 W
Power supply		12 - 24 VDC (± 10 %)

Maintenance effort	≤ 0.5 h/month (typical)
Calibration/ maintenance interval	24 months

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System compatibility	Modbus RTU
Warranty	1 year (EU & USA: 2 years)

Installation

Max. Pressure	**with SubConn**	30 bar	~ 435.1 psi
	in Cavity	1 bar higher than ambient, 2...4 L/min	~ 14.5 psi higher than ambient, 2...4 L/min
Protection class		IP68	

Sample temperature	+2...+40 °C	~ +35.6...+104 °F
Ambient temperature	+2...+40 °C	~ +35.6...+104 °F
Storage temperature	-20...+80 °C	~ -4...+176 °F

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