



# HydroC™ / PAH Oil-in-Water



Fluorometric methods are widely used in environmental monitoring, analytical chemistry and limnological and oceanographic biology. Oil spills for example at petrol stations or after accidents lead to widespread contamination of soil, surface water and groundwater with BTXE and PAH. Online fluorometers allow continuous measurements and non-destructive sampling in combination with good specificity and low detection limits. In order to meet most of the above mentioned requirements, the CONTROS' HydroC™ / PAH is designed as compact and light underwater unit and capable to work on the water surface as well as down to several hundreds meter water depth.

## HydroC™ / PAH - Sensor for POLYAROMATIC HYDROCARBONS in water ("Oil in Water")

Detector	Optical Xenon flash lamp at 254 nm with 25 nm bandwidth and UV detector at 360 nm with 50 nm bandwidth and in parallel at 254 nm with 25 nm bandwidth.
Function principle	An excitation light source generates short flashes. A small part of the emitted fluorescence light coming from the illuminated cone. A band pass filter reduced the spectral range of the fluorescent light according to the special demands of the monitoring task. The incident light is focused onto the silicon UV photodiode which is measured electronically and converted into a voltage.
Applications, Parameters	<ul style="list-style-type: none"> <li>- humic acids, amino acids, BTXE and polycyclic aromatic hydrocarbons PAH</li> <li>- supervision and online control of fresh water in waterworks and boreholes</li> <li>- monitoring of waste water in industrial and municipal sewage works</li> <li>- crude oil detection, leakage control at offshore oil pipelines with ROV</li> <li>- fuel detection in natural waters and sewage plants</li> </ul>
Operational depth	2000 m (4000m, 6000m on request)
Temperature	0 .. +50 °C, other ranges on request
Measuring range	0...50 ppm (low range output) AND 0...500 ppm (high range output)
Resolution	0.1 ppm
Response time	typ. 500 msec
Calibration	recommended every 12 months
Long term stability	flash lamp control automatic compensation of dropping flash intensity
Lifetime	10 <sup>9</sup> flashes = 3 years of continuous operation (254 nm 50 % intensity drop)
Power supply	wide range 10 .. 30 VDC, typ. 180 mA @ 12V (max. 2.2 W)
Connector	Connector SUBCONN® MCBH8MTI 8-pin
Analogue Output	Two 0 .. 10 V linear sensor reading for low-range and high-range
Digital Output	RS-232C, RS-485, Long-Range-Modem up to 25 km (only binary data format)
Housing	90 d x 280 mm Titanium, other on request
Antifouling	AF Protection head, see Photo above
Weight	2.7 kg / 1.5 kg approx. in air / water
Memory, Datalogger	Option internal SmartDI Datalogger with 2 GB CompactFlash Memory RS-232, RS-495 Output Binary and ASCII / NMEA-0183 Format



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