



### Subsea Fluorometer for Polycyclic Aromatic Hydrocarbons

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 the above mentioned requirements, the HydroC™ / PAH is designed as compact and light underwater unit and capable to work on the water surface as well as down to 500 meter or deeper water depth.

Detector	Optical Xenon flash lamp at 254 nm / UV detector at 360 + 254 nm
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>
Mounting	All directions, 10 cm free water in front of the optic required
Operational depth	500 m shallow water, 2000m, 4000m • Special 6000m deep sea extended rating
Temperature	0 .. +50 °C • Other ranges on request
Measuring range	0...50 TFCS / ppb (see note) low range output: digital 0...500 TFCS / ppb (see note) high range output: digital and analogue
Resolution	0.1 TFCS / ppb (see note)
Response time	typ. 500 msec
Warm-up time	< 10s for switching off/on under water
Calibration	recommended every 12 months
Lifetime	10 <sup>9</sup> flashes = 3 years of continuous operation (254 nm 50 % intensity drop)
Power supply	wide range 12 .. 28 VDC • 240 mA @12V • max. 3.0 W
Connector	Connector SUBCONN® MCBH8MTI (8-pin male)
Analogue Output	0 .. 5 V linear • Configurable for high-range (standard) or for low-range
Digital Output	RS-232C (app. 50m) • Optionally RS-485 (app. 3km)
Housing	68 d x 280 mm (500m, standard) • 75 d x 320mm (4000m, 6000m) • Titanium
Antifouling	Innovative nano-coating on the optical lens prevents oil-films and fouling
Weight	1.8 kg / 1.0 kg approx. in air / water (500m version, standard) 4.4 kg in water (4000m, 6000m version)
Digital Output	RS-232C • Optionally RS-485 • Data format Binary
Software	Windows® Software DETECT™ included • User-software is easy to adapt
Options	External or internal Datalogger 2 GB Flash Memory (on request) • External Lilon PowerPacks 41Ah (1 week cont. operation time)

*Note: the instrument will be calibrated in TFCS "The Fluorescence Concentration Standard" units equal to "ppb" for any substance. Depending a real substance, a provided multiplier must be used, e.g. "141" for gasoline. In this case the unit is moved from "ppb" to "ppm" or "µg/l". The physical sensitivity of the instrument is of course unchanged.*

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