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## LISA – The innovative SAC<sub>254</sub> sensor by TriOS

Long-lasting and energy-efficient UV-LED technology and a robust design are the outstanding features of LISA. Like all TriOS sensors LISA uses the unique nano-coated windows in conjunction with compressed air flushing to achieve long operating times without cleaning.

The innovative TriOS G2 interface allows quick and easy integration of the sensor into existing process control systems or external data logger. In addition to the integrated network interface, LISA is available with digital or analog output. The

sensor is configured with ease through any standard web browser on a PC, tablet or Smartphone.

The optical path length can be adapted to the application at any time by various adapters. An automatic turbidity compensation is carried out via a second measuring channel.

LISA can be configured through application-specific correlation for direct output of BODeq, CODeq, TOCeq.

LISA – Cutting-edge measurement technology at low investment and operating costs.

## **Benefits**

- Without sampling and preparation of test samples
- · Real-time sensor
- · Without reagents
- · Optical window with nano coating
- · LED technology

## **Applications**

- Sewage treatment plants
- · Environmental monitoring
- · Drinking water
- Monitoring of UV-disinfection systems

| Path<br>length | Parameter | Measuring range | Detection<br>limit |
|----------------|-----------|-----------------|--------------------|
| 1 mm           | SAC254nm  | 0-1500/m        | 4/m                |
|                | CODeq     | 0-2200 mg/L     | 8 mg/L             |
|                | BODeq     | 0-700 mg/L      | 2.5 mg/L           |
|                | TOCeq     | 0-880 mg/L      | 3 mg/L             |
| 10 mm          | SAC254nm  | 0-150 /m        | 0.4 /m             |
|                | CODeq     | 0-220 mg/L      | 0.8 mg/L           |
|                | BODeq     | 0-70 mg/L       | 0.25 mg/L          |
|                | TOCeq     | 0-90 mg/L       | 0.3 mg/L           |



## Technical Specifications LISA UV

| Measurement technology           | light source     | 2 LED (254 nm, 530 nm)                               |  |  |
|----------------------------------|------------------|--|--|--|
|                                  | detector         | Photo diode + filter                                 |  |  |
| Measurement principle            |                  | Attenuation, transmission                            |  |  |
| Optical path                     |                  | 1 mm, 2 mm, 5 mm, 10 mm, 50 mm                       |  |  |
| Parameter                        |                  | SAC <sub>254</sub> , CODeq, BODeq, TOCeq             |  |  |
| Measuring range                  |                  | See parameter list                                   |  |  |
| Measurement accuracy             |                  | 0.2 %  |  |  |
| Turbidity compensation           |                  | at 530 nm  |  |  |
| Data logger                      |                  | ~ 2 MB   |  |  |
| T100 response time               |                  | 4 s  |  |  |
| Measurement interval             |                  | ≥ 2 s  |  |  |
| Housing material                 |                  | Stainless steel (1.4571/1.4404) or titanium (3.7035) |  |  |
| Dimensions (L x Ø)               |                  | 300 mm x 48 mm (with 10 mm path)                     |  |  |
| stainless steel                  |                  | ~ 1.6 kg (with 10 mm path)                           |  |  |
| Weight                           | titanium         | n/a  |  |  |
|                                  |                  |  |  |  |
| Interface                        | digital          | Ethernet (TCP/IP)                                    |  |  |
|                                  |                  | RS-232 or RS-485 (Modbus RTU, TriOS)                 |  |  |
|                                  | analog           | Ethernet (TCP/IP)                                    |  |  |
| D                                |                  | 420 mA   |  |  |
| Power consumption Power supply   |                  | ≤ 1 W<br>12-24 VDC (± 10 %)                          |  |  |
| rower supply                     |                  | 12-24 VDC (± 10 %)                                   |  |  |
| Maintenance effort               |                  | ≤ 0.5 h/month (typical)                              |  |  |
| Calibration/maintenance interval |                  | 24 months  |  |  |
| System compatibility             |                  | Modbus RTU   |  |  |
|                                  |                  | or: Analog Out (420 mA)                              |  |  |
| Guarantee                        |                  | 1 year (EU: 2 years)                                 |  |  |
| INSTALLATION                     |                  |  |  |  |
|                                  | with SubConn     | 30 bar   |  |  |
| Max. pressure                    | with fixed cable | 3 bar  |  |  |
|                                  | in FlowCell      | 1 bar, 2-4 L/min                                     |  |  |
| Protection type                  |                  | IP68   |  |  |
| Sample temperature               |                  | +2+40 °C   |  |  |
| Ambient temperature              |                  | +2+40 °C   |  |  |
| Storage temperature              |                  | -20+80 °C  |  |  |
| Inflow velocity                  |                  | 0.1-10 m/s   |  |  |
|                                  |                  |  |  |  |