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| **PLEASE NOTE: The following specification contains areas, highlighted with the [ ] symbol. In these areas, the engineer has to make a selection, add specific, project related information and has to delete what is not applicable for the specific project.** |

**Single or multi-stream online Microbial Activity / ATP Analyser**

Analyser for automatic measurement of Microbial Activity / ATP in water. The method is by means of chemiluminescent reaction using luciferin and luciferase. The analyser is capable of detecting both extracelluar (free) and intracellular ATP to differentiate between living and non-living biomass from any microbial species. Reagents are dosed by high precision micropumps. It performs automatic priming, cleaning, calibration and validation. Up to 8 process streams can be monitored. Single sample ("grab sample") measurement is possible.

**Technical Data**

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| **Measurement method** | Determination of Adenosine Triphosphate (ATP) by means of chemiluminescent reaction using luciferin and luciferase, conform with standard method ASTM D4012-81 |
| **Measuring range** | See Scope of delivery section |
| **Precision** | Better than 4% full scale range for standard test solutions |
| **Detection limit** | ≤ 0.05 pg/mL (0.1 pM) ATP |
| **Cycle time** | 7 - 10 minutes incl. sample lysis |
| **Automatic cleaning** | Yes |
| **Calibration** | Automatic, 2-point; frequency freely programmable |
| **Validation** | Automatic; frequency freely programmable |
| **Ambient temperature** | 7 - 23 °C ± 4 °C deviation at 5 - 95% relative humidity (non-condensing) |
| **Reagent requirements** | Keep between 4 - 8 °C during operation, shielded from light. For prolonged storage, store at -20 °C in a dark environment. |
| **Sample pressure** | Maximum 3 bar for direct injection or by external overflow vessel via the grab sample pump |
| **Flow rate** | 100 - 300 mL/min |
| **Sample temperature** | 5 - 30 °C |
| **Sample quality** | Maximum particle size 100 µm, ≤ 0.1 g/L; Turbidity ≤ 50 NTU |
| **Power** | 100 - 240 VAC, 50/60 Hz  Max. power consumption: 120 VA |
| **Instrument air** | Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air |
| **Demineralised water** | For rinsing |
| **Drain** | Atmospheric pressure, vented, min. Ø 64 mm |
| **Earth connection** | Dry and clean earth pole with low impedance ≤ 1 Ohm) using an earth cable of ø 2.5 mm² |
| **Analogue outputs** | Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option) |
| **Digital outputs** | Optional: RS232, Modbus (TCP/IP, RS485) |
| **Alarm** | 1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts |
| **Protection class** | Analyser cabinet: IP55 / Panel PC: IP65 |
| **Material** | Hinged part: Thermoform ABS, door: plexiglass  Wall section: Galvanised steel, powder coated |
| **Dimensions ( H x W x D)** | 690 mm x 465 mm x 330 mm |
| **Weight** | 30 kg |
| **Certifications** | CE compliant / UL certified |

**Scope of delivery**

[ ] (delete what is not needed)

Analytical Instrument

Online analyser for Microbial Activity / ATP

Measuring Range

0.5 - 200 pg/mL ATP

Process Streams/Channels

[\_\_\_\_\_] streams (fill in, select up to 8)

Accessories and options

[\_\_\_\_\_]x 4-20 mA outputs (fill in, select up to 8)

[\_\_\_\_\_]x 4-20 mA Outputs and Modbus RS485 (fill in, select up to 4)

[\_\_\_\_\_]x 4-20 mA Outputs and Modbus TC/IP (fill in, select up to 4)

[ ] Modbus RS485

[ ] Modbus TCP/IP

[ ] RS232

[ ] Filtration System, for immersion, pore size [\_\_\_\_\_] µm (fill in, select from 50/100/200 µm)

[ ] Filtration System, fast loop, pore size [\_\_\_\_\_] µm (fill in, select from 50/100/200 µm)

[ ] Table stand

[ ] Floor stand

Services

[ ] Manufacturer’s services to perform start-up on instrument to include basic operational training and certification of performance of the instrument.

[ ] Manufacturer’s Service Agreement that covers all the manufacturer’s recommended preventative maintenance, regularly scheduled calibration and any necessary repairs beginning from the time of equipment start-up through to end user acceptance / plant turnover and the first 12 months of end-user operation post turnover.

**Brand:** Hach

**Product:** EZ7300 Microbial Activity / ATP Analyser

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