EZ7300 Series Online Microbiology Analyzer for Adenosine Triphosphate (ATP)

Applications

- Process Water
- Cooling Water
- Drinking Water

Online monitoring of microbial activity in process water and drinking water applications

The first online microbiology analyzer complying with standard method ASTM 4012-81

The EZ7300 Series monitors total bacterial and pathogen load in water by measuring portions of ATP (adenosine triphosphate) of any type of microbial microorganism present in the water sample i.e. bacteria (pathogenic and non-pathogenic), microalgae and protozoa. The analyser can be used as an Early Warning System in various applications with focus on water safety, when high ATP values indicate a potential risk in surpassing a threshold value of microorganisms in the past or in the near future.

Determination of total, intracellular and free ATP levels

Other than commonly available manual or semi-automated methods, the EZ7300 Series guarantees complete ATP recovery by quantifying different ATP portions in the sample. Operators can now access data on both extracellular (free) and intracellular ATP values, in order to differentiate living biomass from the non-living.

Advanced features

The EZ7300 Online Microbiology Analyser provides results within minutes and an objective, measurable basis for actions against sudden changes in microbial levels in your process:

- Complying with ASTM D4012-81
- Complete ATP recovery
- No bias from the composition of the growth medium such as with plate counting
- Low cost of analysis relative to a large number of results
- Smart automatic features
- Low maintenance, easy replaceable reagent kit
- Multiple stream analysis

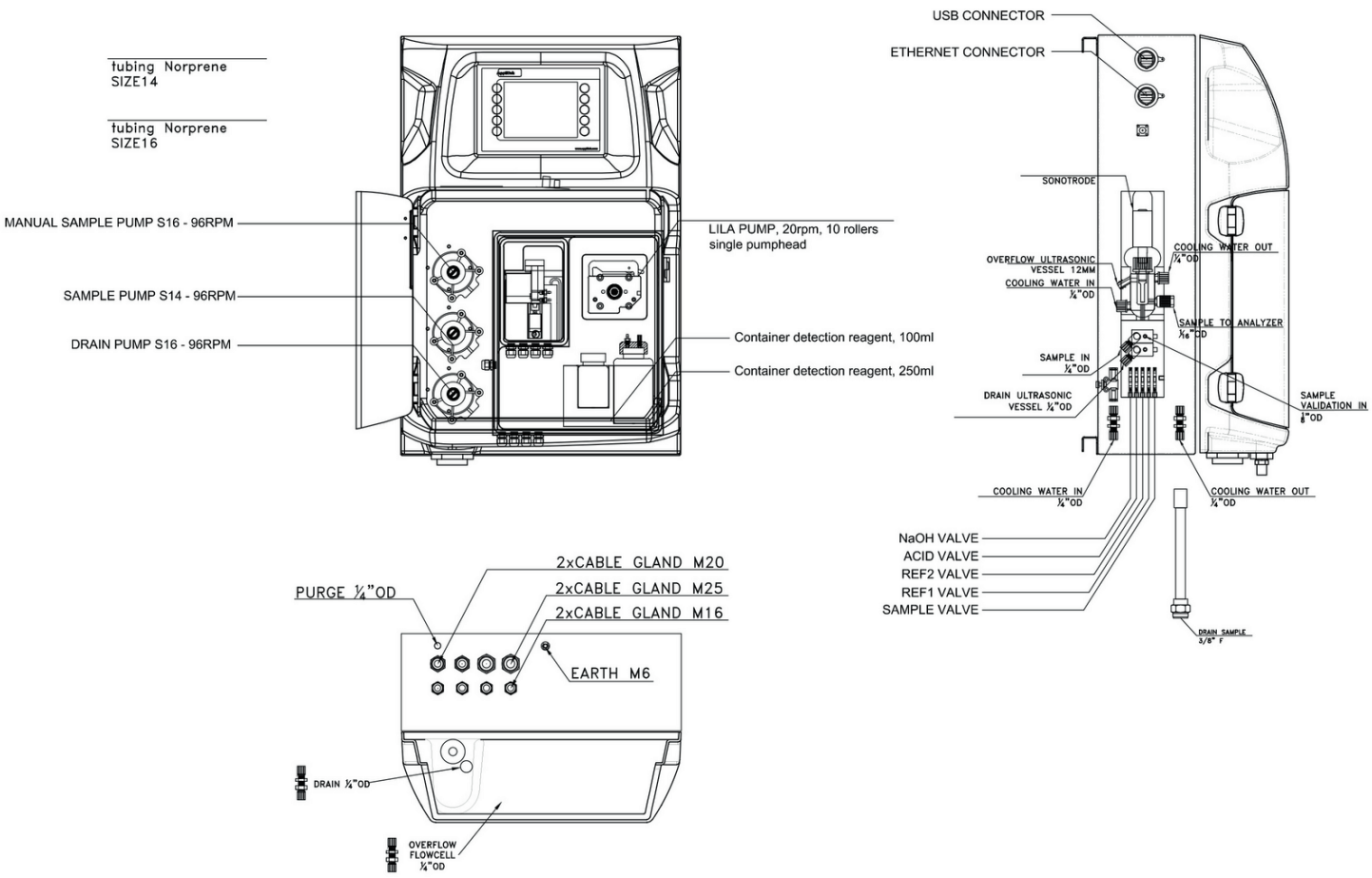
HACH®
Be Right™

Technical Data*

Parameter	ATP
Measurement Method	Determination of Adenosine Triphosphate (ATP) by means of chemiluminescent reaction using luciferin and luciferase, conform with standard method ASTM D4012-81
Range	0.5 - 200 pg/mL ATP
Precision	Better than 4% full scale range for standard test solutions
Lower Limit of Detection (LOD)	≤ 0.05 pg/mL (0.1 pM) ATP
Interferences	High concentrations of Hg^{2+}, Cu^{2+}, Zn^{2+}, Cd^{2+}, Fe^{2+}. Total salt concentrations higher than 1 g/L. pH lower than 5.5 and higher than 8.
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
Sample 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
Demineralized 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 > 2.5 mm^2
Analog 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: Galvanized 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

**Subject to change without notice.*

Dimensions



Hach Service

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

Order Information

ATP, 0.5-200 pg/mL	EZ7300.99	X	X	X	X	X	2
Measurement range settings / Dilution options							
Standard range		0					
Power supply							
Standard 100 - 240 VAC, 50/60 Hz			0				
Number of sample streams							
1 stream				1			
2 streams				2			
3 streams				3			
4 streams				4			
5 streams				5			
6 streams				6			
7 streams				7			
8 streams				8			
Outputs							
1x mA					1		
2x mA					2		
3x mA					3		
4x mA					4		
5x mA					5		
6x mA					6		
7x mA					7		
8x mA					8		
RS232					A		
Modbus TCP/IP					B		
Modbus RS485					C		
1x mA + Modbus RS485					E		
2x mA + Modbus RS485					F		
3x mA + Modbus RS485					G		
4x mA + Modbus RS485*					H		
1x mA + Modbus TCP/IP					I		
2x mA + Modbus TCP/IP					J		
3x mA + Modbus TCP/IP					K		
4x mA + Modbus TCP/IP*					L		
**Combinations of up to 8x mA + Modbus are available.*							
No adaption, standard version						0	

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