

Real-time, On-line Microbial Monitoring For Pharmaceutical Waters



Improve Process Control and Production Efficiency

- Continuous monitoring with results every two seconds
- No sample preparation or incubation required
- Optimize sanitization frequency and rinse time



Control Product Quality with Highly Sensitive Technology

- Count individual microorganisms down to 0.3µm in size
- Technology does not rely on the formation of a colony
- Ability to detect viable but nonculturable (VBNC) bacteria



Minimize Risk and Reduce Cost

- Eliminate 5 - 7 day waiting period for plate count results
- Release product/water without delay
- Reduce costs of investigating false positives associated with plate counting
- Real-time monitoring and trending data to react prior to an out of specification event



Global Compliance

- Regulatory agencies encourage the use of alternative, rapid microbiological methods
- Challenges and risks of plate count methods are recognized by global pharmacopeias



7000RMS

Real-time Microbial Detection

The 7000RMS™ combines two well-established measurement techniques, laser-induced fluorescence and Mie scattering, to count individual microorganisms present in pharmaceutical grade waters. The 7000RMS delivers continuous, 24/7 monitoring of bioburden contamination without collecting a sample or waiting days for plate count results.

Used in parallel with plate counting, the 7000RMS leads to better microbial control of the water system, reduces risk of releasing contaminated water, improves process control, and allows for rapid corrective action to occur.

Learn more about the 7000RMS at:

► www.mt.com/7000RMS

Technical data of the 7000RMS

General Specifications

Flow rate	30 mL/min
Detection limit	1 AFU (Auto Fluorescent Units)
Minimum detection size	≥ 0.3 µm
Measurement range	0 - 10,000 AFU/mL
Analysis time	Continuous
Response time	2 seconds (1 mL)
Data communication	- Ethernet - standard RJ 45 / Wi-Fi capable - SCADA connectivity via Modbus TCP - Analog output channels; 4 - 20 mA standard, with configurable output ranges - USB

Water Requirements

Temperature (non-condensing)	5 - 90 °C (41 - 194 °F)*
Inlet pressure	20 - 80 psig (2 - 5.5 bar(g))** ¹
Type/Quality	Purified Water (PW), Ultrapure Water (UPW), Water for Injection (WFI)

Power/Installation/Enclosure

Power requirements	100 - 240 VAC 50 - 60 Hz 5A Use the power cord included with the instrument 8.2' (2.5 m) cord length provided standard
Monitoring location	At-line to drain
Ambient temperature (non-condensing)	0 - 37 °C (32 - 98.6 °F)*
Inlet connection	0.125" (3 mm) O.D.
Outlet connection	0.125" (3 mm) O.D.
Wall mount	Anti-vibration shelf required (P/N 58 079 700)
Enclosure material	Stainless steel
Physical dimensions (WxHxD)	22.2" (56.4 cm) W x 24.25" (61.6 cm) H x 12" (30.5 cm) D
Weight	73.4 lbs (33.3 kg)

Environmental Conditions

Use	Indoor use
Altitude	Up to 6562' (2000 m)
Environmental Temperature	5 - 35 °C (41 - 95 °F)
Environment	Pollution degree 2
Humidity (non-condensing)	80% maximum relative humidity up to 31 °C (87.8 °F) decreasing linearly to 50% relative humidity at 40 °C (104 °F)
Voltage	MAINS supply voltage fluctuations up to ±10% of the nominal voltage of 100 - 240 VAC 50 - 60 Hz TRANSIENT OVERVOLTAGES: up to levels of OVERVOLTAGE CATEGORY II TEMPORARY OVERVOLTAGES occurring on the MAINS SUPPLY

* Temperature below 15 °C or above 45 °C requires Sample Conditioning Coil (included)

** Process pressure above 80 psig (5.5 bar(g)) requires optional High Pressure Regulator (P/N 58 091 552)

¹ Calibration, cleaning and grab sample requires sample pressure of 0 psig (0 bar(g))



The 7000RMS analyzer is certified as a Class 1 laser product. The 7000RMS unit contains a Class 3B Laser System, as specified by IEC 60825-1 Ed.3 (2014).

Applications

Continuous monitoring of PW, WFI and UPW

- Distribution loops
- Sub loops
- Point-of-Use
- Return loops
- Recirculating storage tanks
- Post purification before storage

www.mt.com/thornton

For more information

METTLER TOLEDO Group

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Subject to technical changes

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58 087 053 Rev F 03/19



Quality certificate.

Development, production and testing to ISO 9001.



CE Compliant



UL listed
Meets Canadian Standards