

Water Quality Monitor

Continuous Coolant Monitoring for
Liquid-Cooled Data Centers

Real-Time Coolant Intelligence

The Nexatherm Water Quality Monitor provides **continuous, in-line visibility into coolant condition and liquid-cooling system performance**. The integrated unit monitors critical water-quality and operating parameters, helping facility teams identify abnormal conditions, protect thermal infrastructure, and reduce dependence on periodic manual sampling.



5-Parameter Monitoring

Tracks coolant quality & system conditions



Integrated Flow Cell

Designed to reduce bubble interference



50 µm Filtration

Protects sensors from suspended contaminants



Active Leak Protection

Detects leaks & supports automatic isolation



Online Calibration

Simplifies sensor verification & maintenance



Flexible Integration

RS485 Modbus communication & USB export



i-WATER-MOI001

Key Specifications

Parameters	5
Working Medium	propylene glycol/water
Rated Flow	8 L/min at 1 bar (2.1 gpm at 14.6 psi)
Filtration	50 µm
User Interface	10-in. touchscreen
Communication	RS485 Modbus
Dimensions	460 W × 680 H × 220 D mm (18.1 W × 26.8 H × 8.7 D in.)
Net Weight	60 kg (132 lb)



Protect Cooling Performance

Identify changing coolant conditions before they affect system operation.



Simplify Maintenance

Centralize monitoring, calibration, alarms, & data access.



Improve System Visibility

Continuously track coolant & operating conditions between manual tests.

Typical Applications

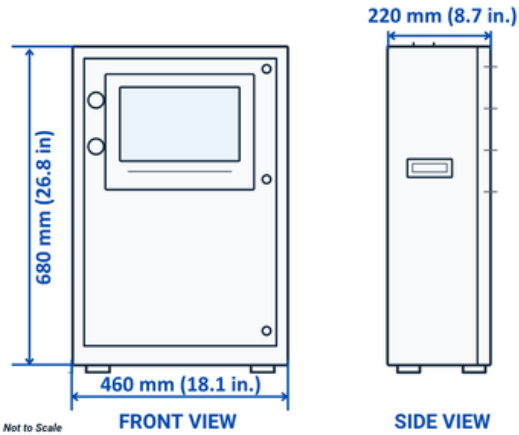
- ◆ Direct-to-chip cooling
- ◆ Coolant distribution units
- ◆ Data center secondary loops
- ◆ Coolant-quality trending
- ◆ System commissioning
- ◆ Preventive maintenance
- ◆ Liquid-cooling test environments
- ◆ Research & validation systems

Water Quality Monitor

TECHNICAL SPECIFICATIONS

System Overview

The Nexatherm Water Quality Monitor integrates coolant-quality sensing, flow and pressure monitoring, filtration, leak detection, alarms, and controls within a compact enclosure. Designed for closed-loop liquid-cooling systems, its dedicated flow cell maintains consistent sensor exposure and helps reduce interference from entrained air.



Monitoring System

Working Medium	propylene glycol/water
Parameters Monitored	5
Rated Flow	8 L/min at 1 bar (2.1 gpm at 14.6 psi)
Tested Flow Range	4–28 L/min (1–7 gpm)
System Pressure	9.8 bar (143 psi)
Filtration	50 µm stainless steel

Measurement Performance

Parameter	Measurement Range	Accuracy
pH	0–14 pH	±0.02 pH
Conductivity	0–10,000 µS/cm	±3%
Turbidity	0–20 NTU	±2%
PG Concentration	0–100%	±0.1%
Temperature	-20 to 80°C	±0.1°C

Operating Requirements

Power Supply	108–253 VAC, 50/60 Hz
Power Consumption	50 W
Operating Temp.	4–50°C (39–122°F)
Storage Temp.	-20 to 60°C (-4–140°F)
Relative Humidity	10–90%, non-condensing

Fluid System

Main Piping	SUS304 stainless steel
Wetted Components	SUS316, PEEK, ceramic
Seals	EPDM
Flow Switch Setpoint	1.0 GPM
Pipeline Interface	UQD08 (optional)

Controls & Data

User Interface	10-in. color touchscreen
Communication	RS485 Modbus
Data Export	USB-A 2.0
Calibration	Built-in online program
Protection	Leak, filter DP & fault alarms

Physical Specifications

Dimensions	460 W × 680 H × 220 D mm (18.1 W × 26.8 H × 8.7 D in.)
Net Weight	60 kg (132 lb)
Enclosure	Integrated cabinet
Installation	Wall-mounted or floor-standing
Maximum Altitude	2,000 m (6,560 ft)

Standard Features

- Five-parameter monitoring
- Dedicated sensor flow cell
- 50 µm stainless steel filtration
- Filter differential-pressure monitoring
- Leak detection with motorized isolation
- Online calibration & temperature compensation
- 10-inch color touchscreen
- Fault & parameter alarms
- RS485 Modbus
- USB data export