Boost data center cooling with Endress+Hauser's instrumentation

Enhance cooling skid efficiency, reduce energy use and ensure sustainability with liquid analysis

Benefits at a glance

- Precise monitoring
- Energy savings
- Real-time data insights
- Proactive maintenance
- Minimized OPEX
- Optimized performance
- Expert assistance
- Smooth operations
- Adaptability
- Reliability

The summary As data centers expand to meet increasing demands, having more efficient liquid cooling systems has become critical to the maintenance of GPU servers. Endress+Hauser's advanced instrumentation, including the Liquiline CM444, Memosens CLS82E, Memosens CUS52D and Memosens CPS11E, ensures precise monitoring and control of cooling skids.

The challenge Modern data centers face significant challenges in managing their cooling systems due to the rapid increase in power and cooling demands driven by AI and machine learning applications. As data centers move from using CPUs to GPUs, it necessitates a change from air-cooling to liquid-cooling of the server racks which increases the demand for more precise monitoring instrumentation. Accurate measurement of pH, conductivity and turbidity is essential to maintain optimal cooling efficiency and prevent system failures. Additionally, data centers aim to boost yield rates while minimizing operational expenses (OPEX) and ensuring consistency.

Our solution Endress+Hauser provides a comprehensive instrumentation solution for building efficient cooling skids. The Liquiline CM444 multiparameter controller, Memosens CLS82E conductivity sensor, Memosens CUS52D turbidity sensor and Memosens CPS11E pH sensor are integrated into the cooling skids to deliver real-time, precise measurements. The Liquiline CM444 controller facilitates seamless data integration and monitoring while the sensors ensure accurate readings of multiple critical parameters. Endress+Hauser's digital solutions offer real-time data insights, enabling proactive maintenance and optimization of data center processes.

To learn more about Endress+Hauser's liquid analysis portfolio, click here or scan the QR code

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People for Process Automation

As data centers expand operations to accommodate the growing demand for AI and machine learning applications, they'll benefit from efficient liquid cooling systems to manage the increased power and cooling needs of the GPUs required for AI and machine learning. Customized cooling skids equipped with the Liquiline CM444 multiparameter controller, Memosens CLS82E conductivity sensor, Memosens CUS52D turbidity sensor and Memosens CPS11E pH sensor are beneficial in providing real-time, accurate measurements of conductivity, turbidity and pH, ensuring optimal cooling efficiency.

The Liquiline CM444 controller integrates seamlessly with the data center's existing systems, providing comprehensive data insights and facilitating proactive maintenance. The Memosens sensors' precise readings allow the data center to maintain consistent high yield rates while minimizing OPEX.

Results The implementation of Endress+Hauser's instrumentation in cooling skids can lead to significant improvements in cooling efficiency. Accurate pH, conductivity and turbidity measurements allow for better control of the cooling process, reducing energy consumption and water usage. Data centers experience optimized performance, enhanced sustainability and fewer instances of downtime, ultimately supporting its growth and operational goals. The digital tools enable proactive maintenance, preventing challenges before they impact performance and contribute to boosting yield rates while minimizing OPEX. Data centers benefit from Endress+Hauser's innovative instrumentation solutions, global reach and commitment to excellence, ensuring high performance and reliability.

Memosens CLS82E conductivity sensor

Memosens CUS52D turbidity sensor

Memosens CPS11E pH sensor

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