NOSHOK

INSTRUMENTATION SOLUTIONS FOR

DATA CENTERS AND AI FACTORIES



APPLICATIONS:

Data Center Load Banks

NOSHOK has solutions for critical measuring points including:

- pump discharge
- return line
- sensitive loop sections
- chiller inlet/outlet
- system integration (with IO-Link)
- sensor ports

Cooling Distribution Units (CDUs)

NOSHOK offers solutions for challenges such as:

- precise coolant pressure monitoring in primary/secondary loops
- differential pressure control across filters, cold plates, pumps and heat exchangers
- high accuracy in heavy-duty cooling circuits
- leak detection and system protection
- temperature compensation in variable flow

Reliable monitoring and protection for maximum uptime

that ties directly into modern data centers and AI factories' Building Management System (BMS) or Data Center Infrastructure Management (DCIM) software.

Maintaining accurate pressure, level and temperature management is essential to ensure system uptime, hardware longevity, and energy efficiency. NOSHOK's specialty instruments are specifically designed to excel in these demanding environments.

Optimize your data center systems with NOSHOK precision instrumentation - engineered to keep critical computing infrastructure operating safely, efficiently, and with proven reliability.

OCP BRONZE™ Member

IO-Link

NOSHOK, Inc. 1010 W. Bagley Road | Berea, OH 44017 | Ph 440.243.0888 | Fax 440.243.3472

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NOSHOK

Instrumentation Solutions for Data Centers and AI Factories

IO-Link

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PRIMARY PUMP DISCHARGE MONITORING

PTI10 SERIES INTELLIGENT PRESSURE TRANSMITTER - IO-LINK

Application: Installed immediately downstream of the pump supplying water/glycol coolant to high density compute racks.
Purpose: Continuously measures discharge pressure to ensure sufficient coolant delivery. Abnormal pressure spikes (e.g., due to blockage) or drops (e.g., pump cavitation or leaks) can trigger alarms or automatic pump shutoff.

LIQUID LOAD BANK TANK PRESSURE MONITORING

PT10 SERIES INDUSTRIAL PRESSURE TRANSMITTERS & TRANSDUCERS



Application: Continuous monitoring of the internal pressure of liquid load bank tanks to provide accurate, real-time tank pressure data for the control system.
Purpose: Helps to maintain safe operating pressures, protect tanks and connected equipment from overpressure or vacuum conditions, and ensure reliable performance of the liquid load bank system during testing or load simulation.



MAINTENANCE-FRIENDLY SENSOR PLACEMENT

NOSHOK THERMOWELLS

Application: Used wherever temperature transmitters or RTDs are installed along glycol lines.
Purpose: Allows sensor replacement without draining or shutting down the cooling system, a critical feature in facilities that demand 24/7 operation.

RETURN LINE TEMPERATURE CONTROL

810 SERIES TEMPERATURE TRANSMITTER WITH THERMOWELL

CE



Application: Placed in the coolant return line from the high density compute racks.
Purpose: Monitors how much heat is being removed by the cooling system. Temperature readings feed into control logic that adjusts pump speed or flow valves to maintain optimal cold plate and component temperatures.



DIFFERENTIAL PRESSURE CONTROL FOR HOT & COLD COOLANT CIRCUITS

NOSHOK MANIFOLD VALVES

- Differential Pressure control across filters, cold plates, pumps and heat exchangers – ideal for handling hot & cold coolant
- Built with electropolished 316 Stainless Steel for exceptional durability
- Flexible configurations - choose from 2, 3, or 5-valve models to fit your application requirements
- 100% helium leak tested to 1 x 10^{-4} ml/s for reliable performance

RESULTING BENEFITS FOR DIRECT TO CHIP COOLING SYSTEMS

- Real-time diagnostics of pump and coolant loop performance.
- Early detection of leaks, blockages, or overheating.
- Protection against costly hardware damage due to coolant system faults.
- Maintained uptime with hot-swap sensor capability.
- Seamless integration into smart, automated monitoring systems.

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