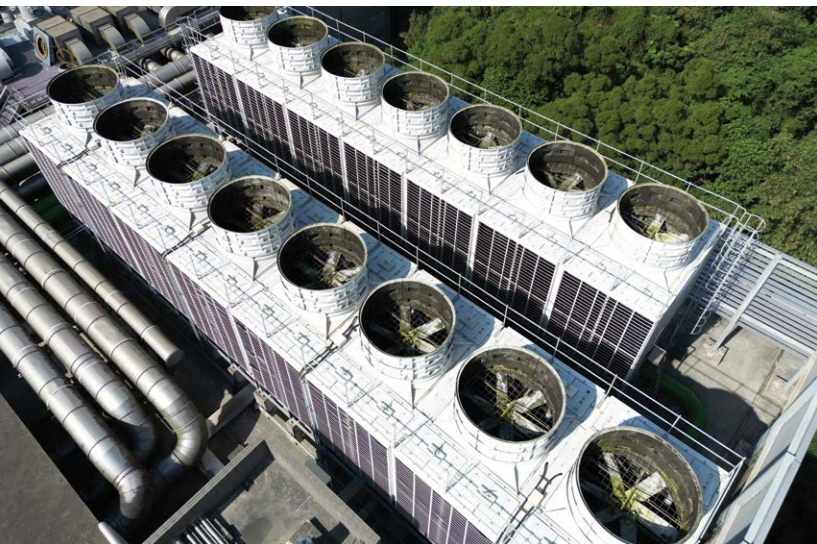


Solutions for Data Centers



Outsmart Downtime

Get Continuous Visibility Across Critical Assets

Monitor cooling infrastructure across rooftop, gray space, and white space environments without complex system overhauls.

Data center uptime depends on mechanical systems operating reliably 24/7. Cooling infrastructure, from rooftop units and chillers to CRAH systems and pumps, operates

continuously under load. Most failures begin as small mechanical or electrical changes long before alarms are triggered.

Banner solutions help monitor these assets across rooftop, gray space, and white space environments, delivering actionable visibility without complex infrastructure changes.



Common Areas and Equipment to Monitor

Facility Cooling Equipment

- Chillers
- Cooling towers
- Condenser fans
- Pumps
- Heat exchangers

Focus: Vibration, motor current, temperature, airflow performance

Mechanical & Electrical Rooms

- Electrical panels
- Pump systems
- Control panels/
support equipment

Focus: Bearing wear, load imbalance, overheating, pressure changes

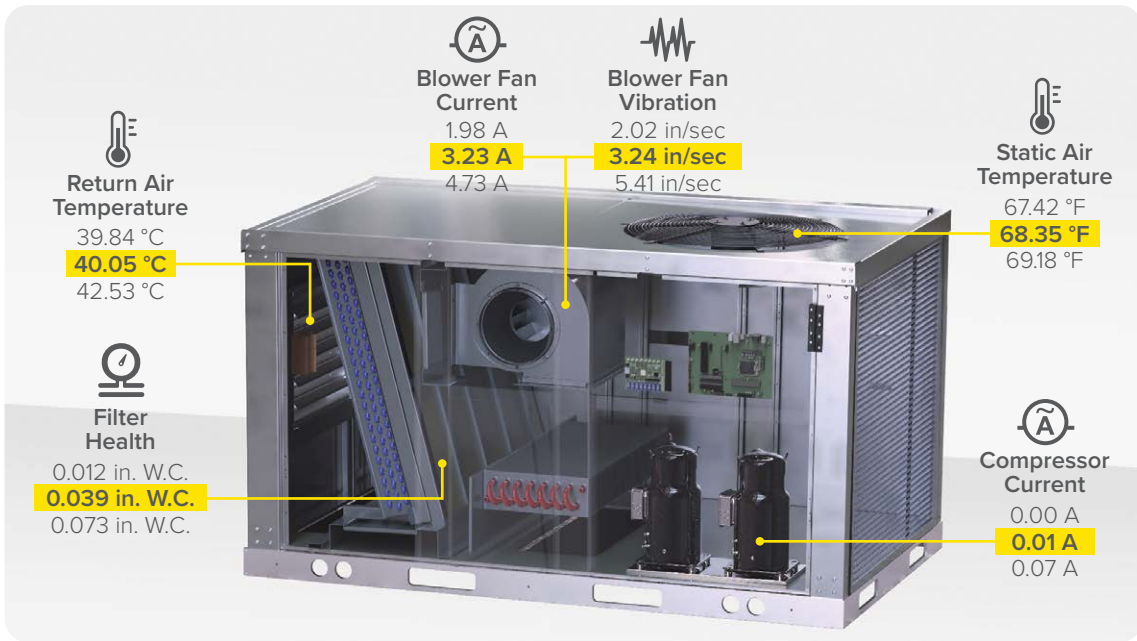
White Space Cooling Equipment

- CRAH/CRAC units
- In-row cooling
- Airflow/pressure
monitoring points

Focus: Airflow, differential pressure, motor condition, thermal rise

Application Spotlight: Rooftop Units

Mechanical and electrical components within RTUs rarely fail without warning. Bearing wear, imbalance, rising current draw, and thermal stress typically develop gradually — creating measurable changes well before a functional failure occurs.



Monitoring these signals provides early visibility into equipment condition, allowing maintenance teams to address degradation before cooling capacity, efficiency, or system redundancy is compromised.

Capturing these signals enables early intervention, helping teams preserve cooling capacity, maintain redundancy margins, and avoid unplanned service events.

Monitor the Signals That Matter

Banner offers a variety of sensor types to monitor any piece of equipment. Below are some of the common sensor measurements for condition monitoring, and the sensors compatible with our monitoring gateways provide access to all of this critical performance data.

Mechanical Condition

Detect gradual degradation before airflow or cooling capacity is affected.



Differential Pressure



Surface Temperature



Vibration



Ambient Temperature & Humidity

Electrical Condition

Identify load changes, overheating, and electrical anomalies early.



Motor Current



Panel Temperature



Voltage Monitoring



Discrete Status Signals

Need to Monitor a Third-Party Device?

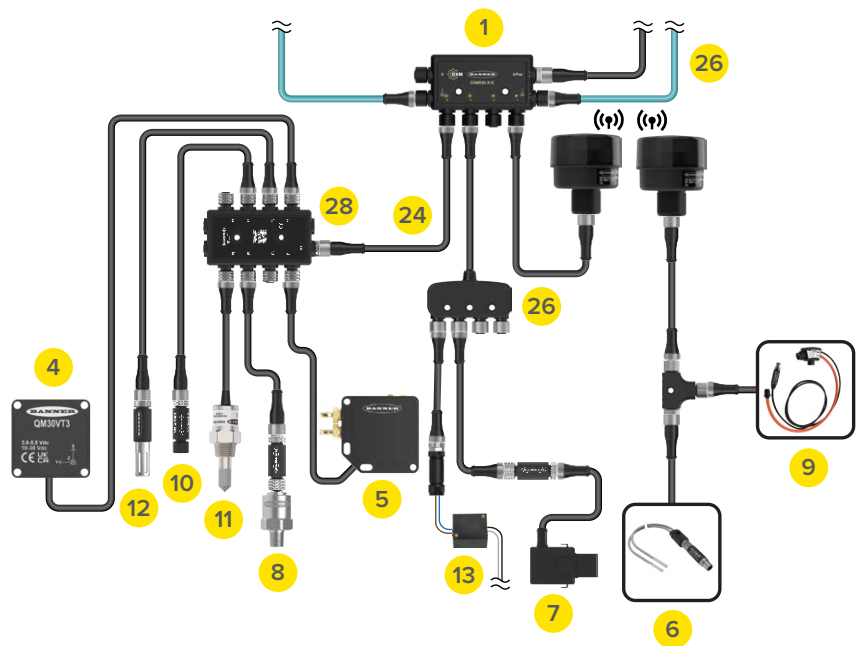
In addition to native monitoring devices, Banner solutions can integrate third-party analog, discrete, and Modbus signals — enabling unified visibility without replacing existing instrumentation.

- 4–20 mA inputs
- Discrete I/O
- 0–10 V signals
- Modbus RTU devices

Scalable Monitoring Architecture

Wired Condition Monitoring Example

Build complete monitoring solutions from Banner's sensors, converters, and connectivity components that connect devices to a DXM.



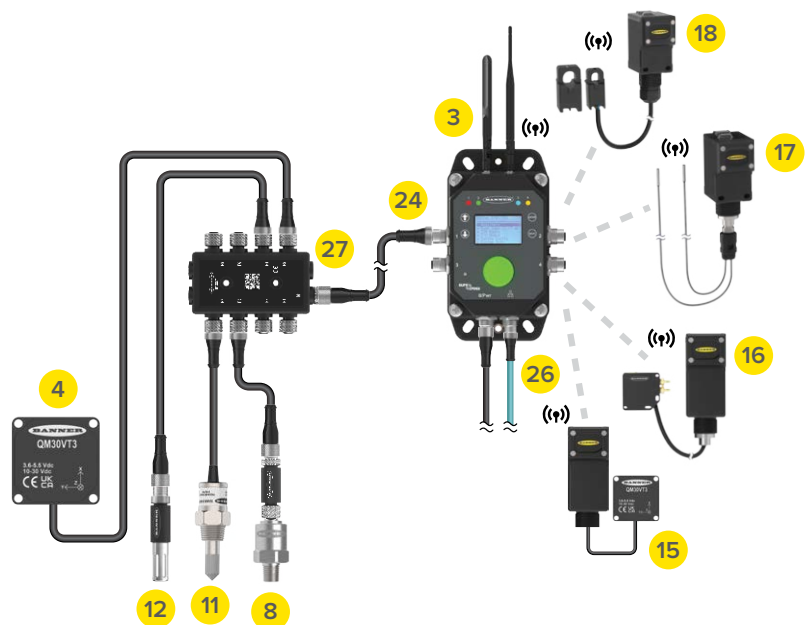
Wireless Condition Monitoring Example

Extend monitoring to hard-to-reach assets in a performance network using Banner's wireless sensors and nodes that connect devices to a DXM with less wiring.



Hybrid Condition Monitoring Example

Connect wired and wireless devices in one complete monitoring solution using Banner's sensors, nodes, converters, and connectivity components to bring data from across a facility to a DXM.



All The Devices To Monitor Your Data Center



1 DXMR90 Industrial Controller



2 DXMR110-8K IO-Link Master



3 DXM1200-X2 IIoT Gateway

Wired Condition Monitoring Products



4 QM30VT Vibration and Temperature Sensor



5 Differential Pressure Sensor



6 S15C In-Line Converter with Thermistor(s)



7 S15C In-Line Converter with Current Transformer



8 S15C Pressure Sensor



9 S15S Rogowski Coil Current Sensor



10 S15S Infrared Non-Contact Temperature Sensor



11 S24 Dew Point Sensor



12 S15S Temperature and Humidity Sensor



13 S15C AC Voltage Sensor



14 S15C Converter to Monitor Third-Party Devices

Wireless Condition Monitoring Products



15 QM30VT Vibration and Temperature Sensor



16 Differential Pressure Sensor & Wireless Node



17 All-In-One Dual Thermistor Sensor



18 All-In-One Current Transformer Sensor



19 All-In-One Pressure Sensor



20 All-In-One Temperature Sensor



21 All-In-One Dew Point Sensor



22 All-In-One Ultrasonic Sensor



23 All-In-One Temperature and Humidity Sensor Node

Connectivity Products



24 Signal Cordsets



25 Data Cordsets



26 Splitters



27 Molded Junction Blocks

Get Connected with Banner

From screwless field-wireable connectors and double-ended cordsets to in-line lighting and I/O junction blocks, our off-the-shelf and made-to-order solutions connect devices and keep systems running.

Splitters

Splitter cables are used to make cables more versatile in applications. When attached to a cable they are now able to power multiple devices, cutting back on cost of accessories and adapts to changing needs.

Receptacles

Quickly and easily bring power and signals all the way home to protected areas with M12 and M8 receptacles.

Cordsets

Quick-disconnect cordsets allow sensor, lighting, and safety devices to be replaced or moved quickly and are available in both single- and double-ended models.



Adapters

Banner's adapters add confidence to systems by providing signal integrity and routing where needed. Adapters reduce troubleshooting and installation times and can be used with any connecting product.

Junction Blocks

Top Exit I/O Junction Blocks simplify I/O distribution and wiring. Molded Junction Blocks easily consolidate wires from different sources into one convenient, customized central hub.

Field Wireables

Straight and right-angle barrel options with male or female connectors fit space, routing, and device requirements. Screwless termination options include Slide Lock and IDC for fast, reliable wiring.

Custom Connectivity

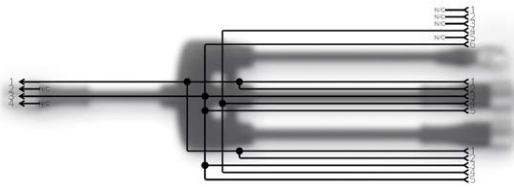
By creating products designed to fit your specific applications, Banner transforms your connectivity needs into seamlessly integrated, custom-tailored solutions that set the standard for reliability and performance. Cordsets with customized wiring and connectors, unique molded junction blocks, and personalized labels and markings come ready right out of the box.

Available In
ANY LENGTH
to the nearest 0.1 meter



Cable Length

Cable length affects how easily a system is installed and routed. Banner offers custom cordsets built to exact lengths in 0.1 meter increments, ensuring each cable fits precisely where it is needed, reducing excess slack, installation time, and cable clutter.



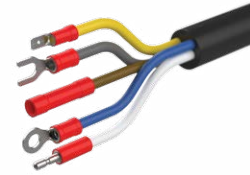
Wiring

Reduce the number of components on your machine and eliminate wiring errors by consolidating cordsets, splitters, and field-wireable connectors into one custom cordset. Banner can configure a custom cordset with the right connectors along with the exact wiring terminations you need for your unique application.



Molded Junction Blocks

Address very specific wiring and power distribution needs with Banner's Molded Junction Blocks, a cost-effective unit with a lower cost of entry than potted plastic or metal blocks. Available in up to eight- and twelve-port designs, all ports can be customized with a variety of different connections.



Terminations

Banner offers customizable end-of-wire terminations designed to match exactly how your system is built, including ring terminals, fork terminals, spade terminals, ferrules, and stripped or tinned leads. These options can be applied to single or multi-conductor cables and combined with specific lengths, pinouts, and labeling to deliver a complete, ready-to-install solution.



Connectors and Specialty Cables

Do the devices on your machine have unique connectors that make sourcing connectivity difficult? Banner can customize a cordset to have the exact combination of connectors to get the devices on your machine connected, helping to reduce assembly time, and allowing you to stock fewer parts.



Labeling and Marking

Build a cohesive brand identity, communicate product specifications, and simplify troubleshooting and installation processes with custom labels and markings.

More Solutions for Data Centers



Task Lighting

Industrial LED lighting products are high-quality and energy-efficient lights that provide years of maintenance-free operation.



Indicators

LED indicators offer a wide variety of bright, highly visible models ranging from daylight visible to multiple colors in one device.



Touch Buttons

Banner is the leader in ergonomic, visual and sealed operator touch buttons for industrial applications.



Displays

Industrial LED message displays quickly and clearly communicate critical status, process, and other machine information.

Get to Know Banner

Banner Engineering designs and manufactures industrial automation products including sensors and measurement devices; lighting, indicators, and displays; connectivity; condition monitoring solutions; machine safety products; industrial wireless systems; remote I/O; plus barcode scanners and machine vision. By listening to customers and engineering solutions that remove production constraints so they can achieve operational goals, Banner is an integral part of making many of the things we use every day, from food and medicine to cars and electronics. In fact, a high-quality, reliable Banner product is installed somewhere around the world every two seconds. Headquartered in Minneapolis since 1966, Banner is an industry leader with more than 10,000 products, operations on five continents, and a worldwide team of more than 5,500 employees and partners. Our dedication to innovation and personable service makes Banner a trusted source of smart automation technologies to customers around the globe.

60+

Years Expertise and Personable Service

5,500+

Employees and Field Representatives

10,000+

Innovative, High-Quality Products

30+

International Locations on Five Continents



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