Data Center Case Study

EXERTHERM by EATON

Thermal Sensors Help Prevent Power Outages For Global Tech Giant

Key Benefits of Thermal Sensors

1. Detect temperature variations that are a tell-tale sign of potential electrical equipment failures that could cause disruption to mining operations.

2. Offer a non-contact means of measuring and monitoring temperatures in critical electrical assets that improve on-site safety for mining personnel.

3. Minimize the risk of losses due to equipment failure and overall maintenance cost of capital-intensive mining equipment.

Continuous Thermal Monitoring (CTM) For Data Centers

With globally distributed data centers, edge computing nodes and service operation hubs, this technology giant demands reliable power to deliver hundreds of cloud products and enterprise services.

The Problem

Maintenance Schedule

Maintaining electrical availability is key across the client's organization: the need for a reliable supply of electrical power is critical. However, asset maintenance presented risks, and was made more challenging due to a zero-hot
work policy.

Periodic Inspection

Inspection practices utilised infrared (IR) windows to perform thermal scanning of critical electrical assets to monitor the temperature. To carry out these periodic inspections of electrical switchgear, equipment had to be de-energized to conform with operational procedures and the zero-hot work policy. By the time the switchgear was inspected, any problematic hot spots would no longer be visible.

Unplanned Power Outages

Compromised assets and potential failures were only detected during the inspection, just a moment in time. The risk of an unplanned power outage

The Solution

24x7 Thermal Monitoring

To increase safety and maximize operational uptime, the client installed Exertherm's continuous thermal monitoring solution. Permanently installed thermal monitoring sensors negate the need for manual thermographic inspections and enable a significantly more cost-effective maintenance cycle. With their typical lifespan of 5 years and poor line-of-sight challenges, it also eradicated the use of IR windows.

Real-time Data

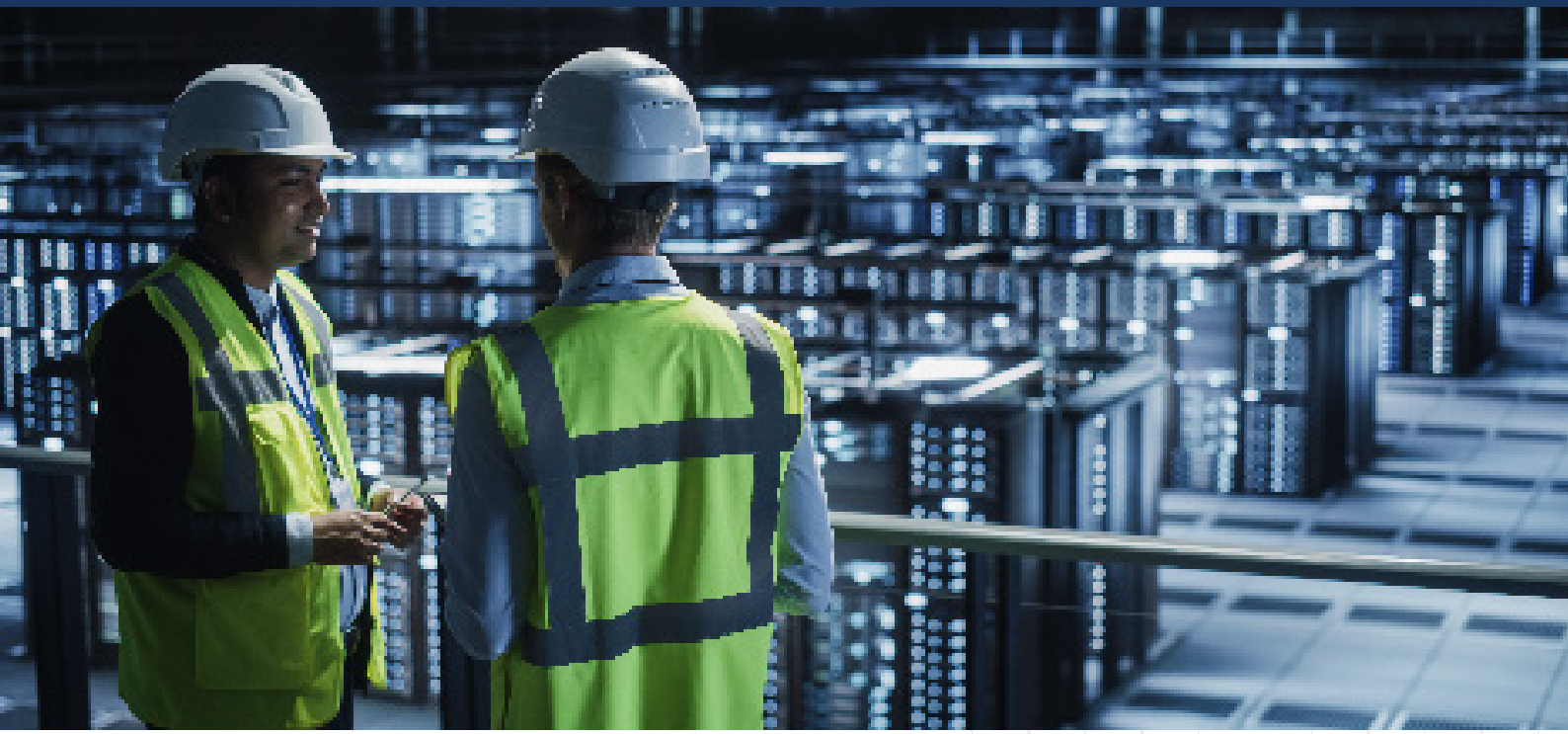
The CTM solution continuously detects hotspots, mitigating the risk of electrical outages occurring in critical electrical joints. The production of real-time data enables operators to track asset health and observe trends. The uniformity of data produced by Exertherm's permanently installed thermal monitoring sensors eliminates the inconsistency issues created through the use of different IR camera brands, incorrect calibration, and the individual technician's interpretation.

Cost Saving

The evolution from periodic inspection to predictive maintenance continues to deliver numerous benefits for the organization. As well as transformational data and cost savings for a sustainability-conscious modern data center, Exertherm's CTM solution improves safety and delivers more reliable system uptime.

Testimonial

…the Exertherm continuous monitoring solution is now part of our base electrical switchgear specification for all new build data centers globally, reducing the risk of outages and future proofing our new equipment.



Need To Improve Electrical Resilience?

Discover the benefits of continuous thermal monitoring:

Discover CTM Applications