

Thermal panel monitoring

Continuing to monitor the temperature panel remains a crucial step in fire prevention.



Electrical fires can have devastating consequences

- Faulty electrical equipment or installations can lead to fires. Malfunctioning systems, short circuits, and electrical arcs are common causes.
- Loose electric connections can pose fire hazards, especially when equipment is subjected to vibrations during shipping and operation.
- Monitoring the temperature of critical components such as power distribution, transformers, or power supplies is not always practical.
- Scheduled maintenance plays a crucial role in mitigating the risk of fire incidents. However, it's essential to recognize that it might not always be sufficient.

Three levels solution for Thermal panel monitoring

- Analyze the tendency of temperature rise to predict overheating, even in environments with significant ambient temperature fluctuations. Automatically set the optimal threshold alarm for each segment of the acquired thermal image.
- Receive Notifications. To prevent unforeseen exothermic reactions, set up notifications through email, SMS, or social media platforms like Telegram. These alerts will keep you informed about any critical temperature changes in the panel.
- Identify Root Cause Remotely. Use a WIFI, 4G, or ethernet remote connection to analyze occasional abnormal temperatures in the panel. By doing so, you can pinpoint the specific reasons behind these anomalies without being physically present.

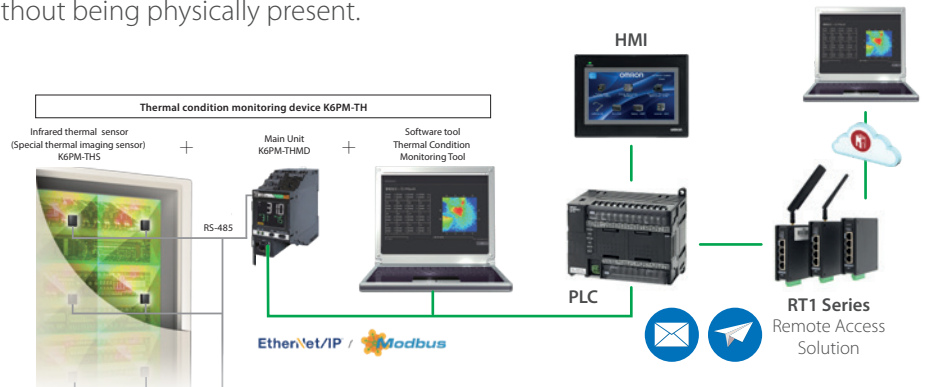
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OMRON approach for thermal panel monitoring

The K6PM device enables precise temperature measurement within a panel without the need to open the panel door. This non-intrusive method ensures safety and efficiency. This real-time monitoring allows for early detection of anomalies. If any unexpected panel component failure occurs, the NX1P2 PLC triggers an **instant notification alert** via the **RT1 remote access solution**. RT1 also allows to identify Root Cause Remotely pinpoint the specific reasons behind these anomalies without being physically present.



IR sensor
Up to 31 pcs can be connected



| OMRON products | Items references |
|-------------------------------------|--|
| NX1P2-Compact controller | NX1P29024DT1: 24 Digital Transistor I/O (PNP), EtherCAT (4 PTP axes, 16 EtherCAT nodes), EtherNet/IP and 1 serial option port |
| RT100 Remote Access Solution | RT100-EMM3010: SiteManager LAN, 10 Device Agents, 3x Ethernet Ports, 1x Micro SD slot, 1x USB port |
| K6PM Thermography Monitoring | K6PM-THMD-EIP: 24 VDC, transistor control output, Push-in Plus, LCD display, EtherNet/IP and Modbus TCP K6PM-THS3232: Infrared thermal sensor, 24 VDC, 0°C - 200°C, FOV 90° × 90° |

Complete your equipment with:

Monitoring Relay K8 series



Ideal for prevention of excessive temperature increase in the panel. It is acting as redundant prevention device and is equipped with prohibits changing features for alarm threshold, operating method, and modes setting.

Electronic Circuit Breaker S8VP-CP series



Unlike fuses, circuit breakers functionally open a switch to turn off all electrical current before excess current can lead to a fire. Performing sequential and load-dependent start-up of the outputs avoid high inrush current.

Innovations in Panel Building



The use of components with a uniform height ensures unobstructed airflow. As a result, heat is easily dissipated. Reducing the temperature inside the panel increases product reliability, decreases failure rates, and prolongs product life expectancies.

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