



KONICA MINOLTA



BATTERY FIRE DETECTION

COMPLETE SOLUTION PACKAGE

Giving Shape to Ideas

DOES YOUR BUSINESS HAVE A BATTERY ROOM?

Whether for charging forklift batteries, keeping redundant power supply or powering any other mobile vehicles – battery rooms have become an integral part of logistic centers and other industrial sites. Using electric forklifts has become more popular due to lower operating costs, lower noise levels and good impact on the environment. The traction batteries that are used, however, require some special handling – they fume hydrogen, may leak acid and they heat up during the charging process. There are regulations regarding what the battery rooms should be equipped with, especially to handle the hydrogen being generated. An important part of ensuring safety of battery rooms is constant temperature control of the batteries themselves, as well as surrounding equipment.

Konica Minolta Video Solutions Services offers a complete solution to monitor the battery rooms in a safe, convenient and round-the-clock way using robust and sophisticated thermal cameras.

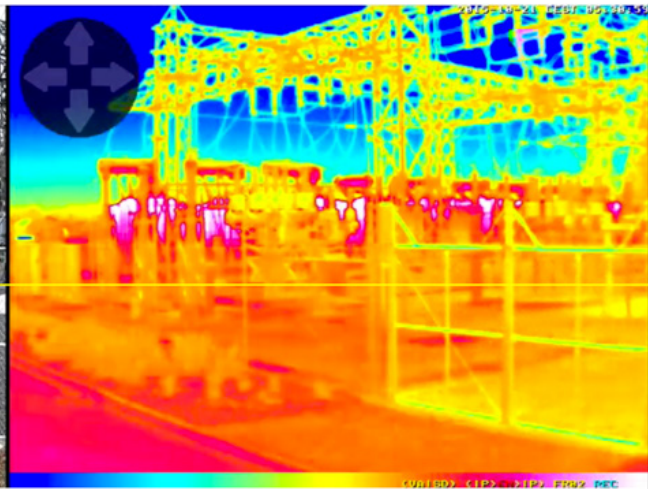
HOW DOES IT WORK?

Thermal cameras can see way beyond human vision. What we can see is simply a reflected light within quite a narrow fragment of the electromagnetic spectrum. Thermal energy, or simply – heat- has much longer wavelength than visible light. This is where thermal sensors fill in the gaps by capturing those wavelengths and then interpreting them as an image that human eye can understand. Most advanced thermal sensors also include thermal radiometry technology that make it possible to accurately measure the temperature of each pixel in the observed scene

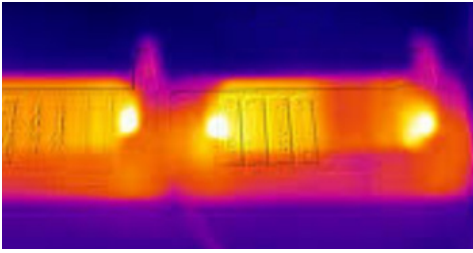
VISUAL SENSOR



THERMAL SENSOR



The main component of the solution is the **Mobotix M73 hybrid thermal camera**. With its world famous modular design, M73 integrates a thermal sensor, visual sensor as well as – for example - a speaker module. **All in one enclosure.** The **visual sensor** allows you to have a clear overview of the scene, monitoring the employees and the property. The **thermal sensor** continuously keeps track of the temperatures of desired areas. You can configure 20 independent areas that the camera will monitor with a **precision of 0,1°C**. Upon meeting the preconfigured conditions, the camera will react in a number of ways- fully customizable to fit your needs. The **built-in speaker** module can warn the staff on site about the potential dangers, if needed. For maximum reliability, the M73 comes with an **internal DVR** that securely stores the recordings.



Thermal image - See beyond human vision!



MOBOTIX M73



Robust, industrial design

① EARLY WARNING

The camera monitors the battery room 24/7. Each battery, each rectifier (charger) or even the area around can be monitored for any temperature abnormalities.

② REASSURANCE

The 4K UHD resolution visual sensor allows for a high quality overview of the area, monitoring the staff and the premises.

③ CUSTOMIZABLE

The modular design allows for a built-to-order setup.

The thermal sensor :

- CIF or VGA resolution, mx.9FPS
- 17° Tele- to 90° wide angle thermal lens

The visual sensor:

- 4K UHD or Ultra LowLight 4MP
- Viewing angle from 15° up to 120°

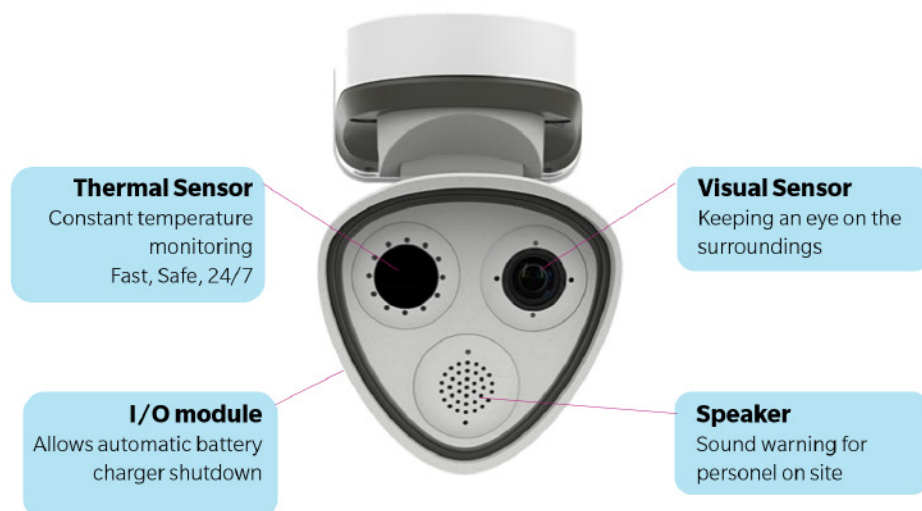
Additional modules:

- Speaker & Microphone
- IR light
- MultiSense – PIR, brightness & temperature, mic

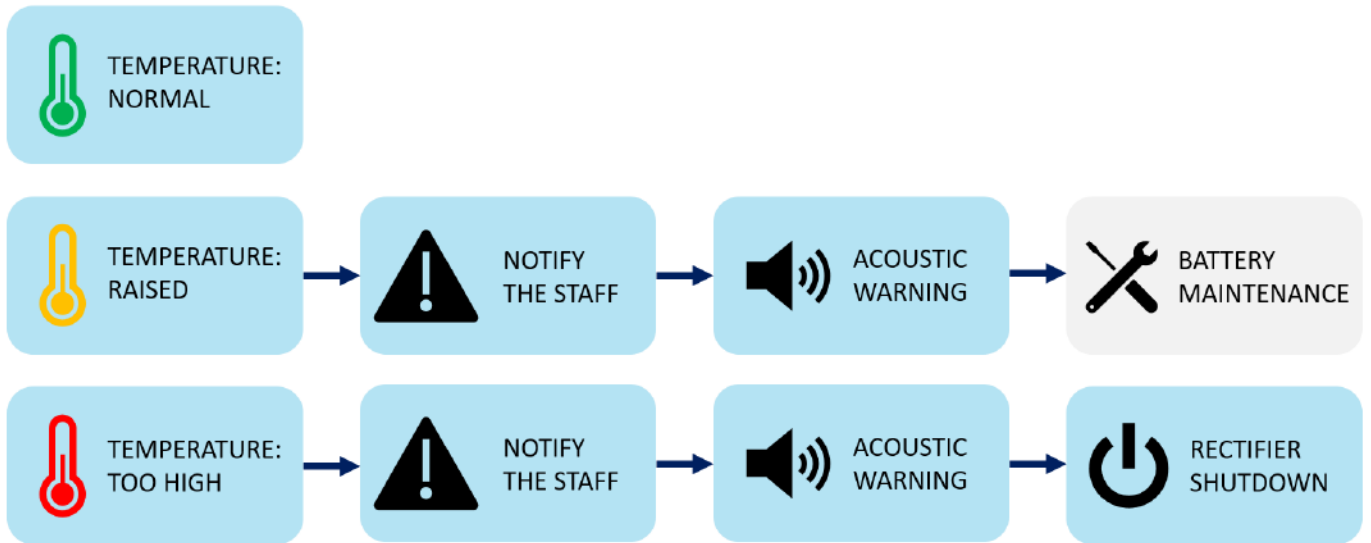
④ EMERGENCY HANDLING

Upon detection of any abnormalities, the camera event handling system can react in a pre-configured way. Depending on the severity of the event, the camera can send notifications, broadcast an acoustic warning, and even switch off the battery charger using its built-in I/O module.

ALL-IN-ONE DEVICE



FULLY CONFIGURABLE EVENT HANDLING



WHAT ARE YOUR BENEFITS?

- Immediate detection of elevated temperature
- One device monitors the temperature of many batteries, the chargers (rectifiers) and the area surrounding for smoking individuals
- Thermal camera runs 24/7 – it is a safe and reliable way to monitor the temperature of the cells, without the need of exposing a person with a handheld thermometer
- In case of detecting abnormalities, the camera can send notifications to the maintenance staff and broadcast warnings via its speaker to the staff in the battery room
- I/O module can automatically send a command to the battery chargers to shut down – immediately and remotely
- Saving money on insurance
- Preventing rather than containing



» Preventing battery overheating is not only a safety measure, but also a substantial money-saver not having to replace the batteries as often as before. «

Logistics center safety manager

WHAT IS YOUR RETURN OF INVESTMENT?

The battery room overheating solution is on the same level of importance as a fire protection system or an anti-burglary alarm. Preventing fires rather than trying to contain them brings an obvious value to every kind of business that simply cannot be overlooked. There are additional benefits, however, that advocate for using thermal cameras in battery rooms:

Battery maintenance & Lifetime extension

A typical, small battery room may be equipped with battery units worth £17K or more. Certain kinds of batteries require regular maintenance and refilling of a coolant agent. If maintenance is not performed routinely, the battery lifetime may decrease significantly which means all of the battery units might need to be replaced after a year of operation. A well maintained system that is charged properly and well maintained (kept in the right temperature, environment and regularly refilled with the necessary coolant) can have an extended longevity of up to 6 years! Thermal cameras can precisely measure the temperature of the batterie cells, as well as the coolant valves in order to notify maintenance staff when it's time to refill the liquid.

Insurance rebates

When it comes to battery room insurance calculations, the insurance companies have adopted an approach similar to evaluating monthly fees for premises – for example- secured by CCTV cameras or company cars with built-in GPS trackers.

Manpower costs

In most cases, battery rooms require personnel to monitor the temperature of the cells, control the operation of the rectifiers and any other related systems, as well as perform or arrange coolant refill. This obviously generates the need to hire dedicated employees that work in shifts, around the clock. On one side- this generates costs, on the other – the process is prone to human error and even more issues arise when one (or more) of those employees is unavailable (sick leave, holidays, etc).



MOBOTIX S74



MOBOTIX M73



KONICA MINOLTA



LET'S TALK

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