# BATTERY MONITORING WITH IR TEMPERATURE MEASUREMENT

*FIRE PROTECTION FOR EVERY STAGE OF USE*

**Battery monitoring** | **Fire prevention** | **Electric cars**

## Customer requests

It is no secret that e-cars and battery manufacturers are growing inexorably across all industries. Likewise, the **risk of a fire breaking out** is **increasing**. **Lithium-ion batteries** are the most effective batteries in the world, but also the most dangerous. Once a li-battery has ignited it is almost impossible to extinguish confirm fire stations worldwide.

Additionally high temperature occur while a li-battery burns. The most effective way is to react as fast as possible to identify hotspots of defect battery cells for removal.

**Thermal monitoring** of lithium-ion batteries is gaining importance during:

- *production*
- *transport*
- *and after fire-fighting operations*
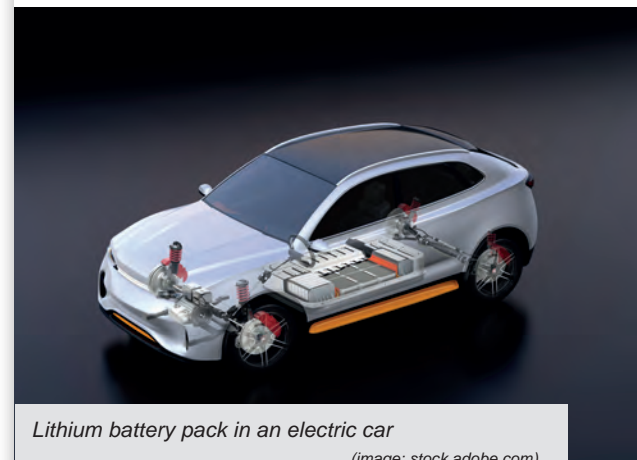- *storage*
- *disposal*
- *commisioning*



*Electric car lithium battery pack and wiring*
*(image: stock.adobe.com)*

## Solution by Optris – Battery Monitoring System

Our solution: Early hotspot detection to avoid the **risk of a fire or explosion** and associated **health damage, expensive downtimes** and **resources**. This system contains the **Optris infrared cameras** (**Xi series** or **PI series**) and the **license-free software** optris **PIX Connect.** Measurement of batteries on label or insulator on anode or cathode. The advantages of the system:

- Robust & compact design (IP67) allows quick and easy installation
- Up to 125 Hz measurement
- Stand alone System (Xi 410)
- Automatic hotspot detection with alarm output
- Multiple cameras visible on one software screen simultaneously

- Direct Ethernet (Xi 410)
- Different optics available
- Self-monitoring system (fail-safe signal)
- Camera resolution up to 640 x 480 pixels
- Display infrared images on a standard PC or with IRmobile App on a mobile device



*Lithium battery pack in an electric car*
*(image: stock.adobe.com)*



**Xi series** | **PI series**

**Optimal for use in the application field of battery monitoring**

## Further advantages / Summary

The Optris cameras are **easy to install** and can be integrated in a network. The **additional PI NetBox** reduces the Ethernet data traffic to the final PC system and acts as an **extra safety instance** (**Watchdog-Function!**). Besides a **great price/performance ratio**, Optris has a worldwide network of highly qualified distributors and partners offering local technical support.

**optris** infrared measurements