Electromobility – A future-oriented topic that manufacturers of electric vehicles and their suppliers are addressing to the same extent. The same applies to producers of high-performance rechargeable batteries and high-voltage batteries for use in electric cars, electric buses, e-scooters, e-mopeds and e-bikes. The production and storage of these energy storage devices entails some risks. Especially lithium-ion based batteries constitute fire hazards because they can spontaneously ignite if overheated and release toxic gases when burning.

In order to avoid such a scenario, InfraTec offers a way to monitor assembly and storage halls completely automatically with the thermographic automation solution FIRE-SCAN. The system, consisting of a high-performance infrared camera and corresponding software, self-monitors the temperature development at workstations and storage areas 24 hours a day and reliably localises heat sources. If configurable temperature alarm set points are exceeded in selected areas of the thermal image, FIRE-SCAN triggers an automatic alarm before critical temperatures are reached and enables rapid intervention to prevent a fire.
Alarm Release

- Automatic alarm release when temperature values exceed critical thresholds
- Multi-stage alarming functionality for controlled escalation
- Selection of subareas (sectors) within the thermal image
- Logging and analysis of long-term temperature trends with adjustable time basis
- Documentation of alarm situations to analyse the potential causes of fire
- Modular design concept for tailored solutions

Customised System Concept

- Designed for continuous operation 24/7 without supervision
- Camera feed can be routed to control room or other locations
- Flexible wiring technology (copper or fibre optic cable)
- Uninterruptible power supply*
- System maintenance through integrated PC in the control cabinet (via remote control*)

High-performing Software

- Continuous display of the current thermal images of all sectors (mosaic-overview)
- Simultaneous display of thermographic and colour video live image*
- Camera and system status indication
- Merging of live images of thermography and video camera
- Recording of maximum, minimum and average temperature of each sector
- Single or multi-camera system available
- Graphic data display of temperature-time profiles of all sectors
- Logging of operations
- Filing of image data

High-resolution Infrared Cameras

- Uncooled FPA-Microbolometer detectors
- High geometrical resolution and thermal sensitivity
- High-contrast, brilliant thermal images
- Localisation of hot spots even in dusty or smoke polluted environments
- Spectral range (7.5 … 14) µm
- Real-time data acquisition (Gigabit Ethernet)
- Internal automatic calibration
- Rugged housing according to industrial standard IP65
- Pan/tilt systems to extend the detection areas*
- Extremely high level of system availability
- Digital colour video camera*
- Detector Format
  - Large detector with highest geometric and thermal resolution
- IR-Frame Rate
  - Analysis of temperature changes and gradients in full frame
- GigE Vision Compatible
  - Standard interface for easy integration into existing process environments
- Protection Degree
  - Camera operation under harsh environmental conditions
- Protective Housing
  - Robust metal housing for wide range of environmental conditions and IP rating requirements

* Depending on model

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