

PYROspy®

Infrared early fire detection
with 360° all-round viewing
and targeted extinguishing





Everything in view with the patented 360° “Thermo Radar”

The patented PYROspy® infrared detection method enables thermal monitoring of buildings, warehouses and outdoor areas.

Like a radar, PYROspy® continuously scans heat patterns in radii of up to 23 m (PYROspy® eco) or 115 m (PYROspy® pro).

If critical temperatures are detected, the system triggers an alarm, records all data related to the incident, initiates extinguishing procedures, notifies the fire services and continuously informs designated persons about the alarm status using live images.

Seeing more with autofocus, live video and 14x optical zoom

To detect fire sources as early as possible, PYROspy® pro analyses both thermal and video images simultaneously. PYROspy® pro is equipped with an integrated infrared camera with autofocus making it ideal for monitoring objects with fluctuating viewing distances (e.g. recycling centers, bulk goods warehouses with varying fill levels and large open-air warehouses).

Fire detection, alarm signaling to the fire alarm control panel (FACP) and extinguishing via different extinguishing systems is fully-automated.

A manual operating mode is also available for detailed viewing of a location and initiating fire prevention measures before a fire alarm is triggered. One click on the operating terminal moves the powerful 14x video zoom camera together with the IR camera to the required position, displays the current thermal and video image, and assesses the location for potential fire sources.



Experience and AI prevent false alarms

PYROspy® is based on 30 years of experience in applied infrared technology and early fire detection.

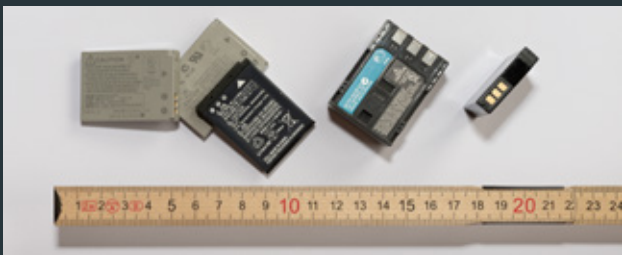
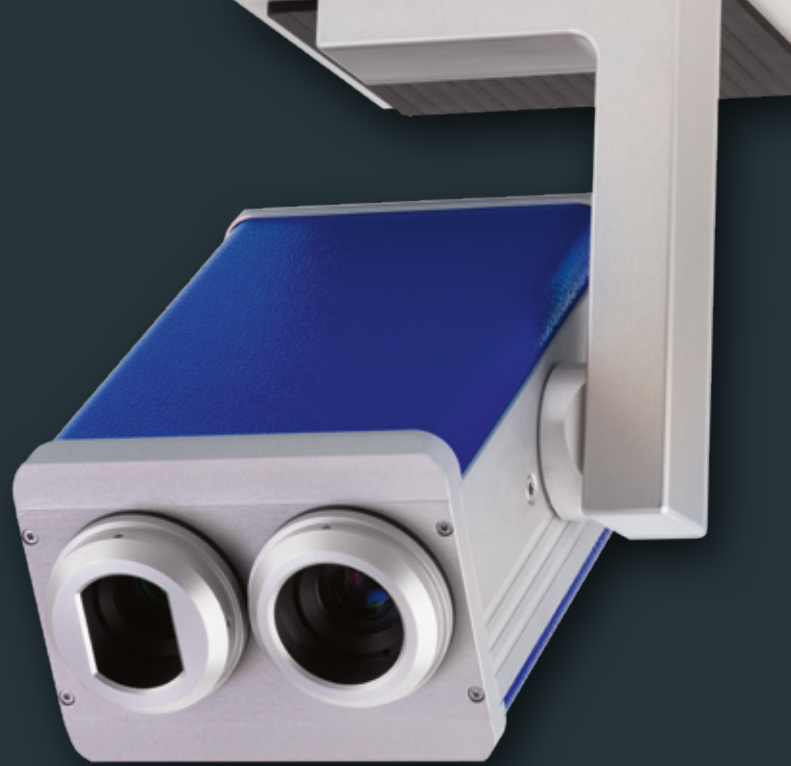
Our patented abiroVision software uses a range of features and intelligent, secure algorithms to detect and exclude non-hazardous hotspots with a high degree of reliability. Alarms are then only triggered if there is a real reason for them.



Detecting fires early via smart temperature monitoring

The earlier a fire hazard is detected, the sooner a fire can be stopped or prevented. Conventional fire alarm systems only detect fires at more advanced stages (e.g. with the presence of smoke/flames), but the PYROspy® series of infrared fire detectors can detect fires earlier. They “see” excessively hot material surface temperatures long before smoke or flames appear. If a potential fire source is detected at an early stage, immediate measures can be taken, i.e., the targeted automatic cooling of a hotspot.

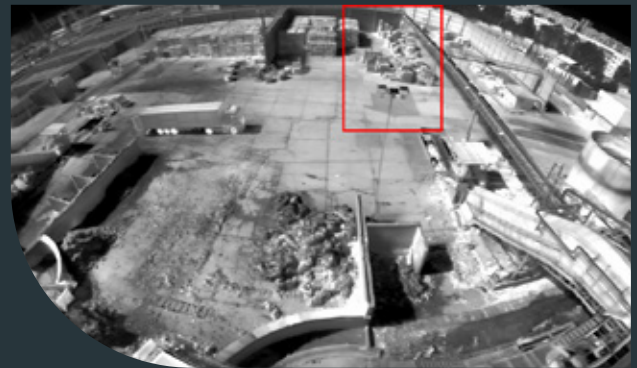
PYROspy® is an all-in-one infrared early fire detection system with innovative 360° all-round vision that extinguishes fires before they escalate into dangerous blazes.



The aim is to detect potential fire sources, e.g., small lithium batteries, as soon as they begin to heat up. Higher spatial resolution in infrared monitoring, i.e., more detection points per square meter, means fire sources can be detected earlier.



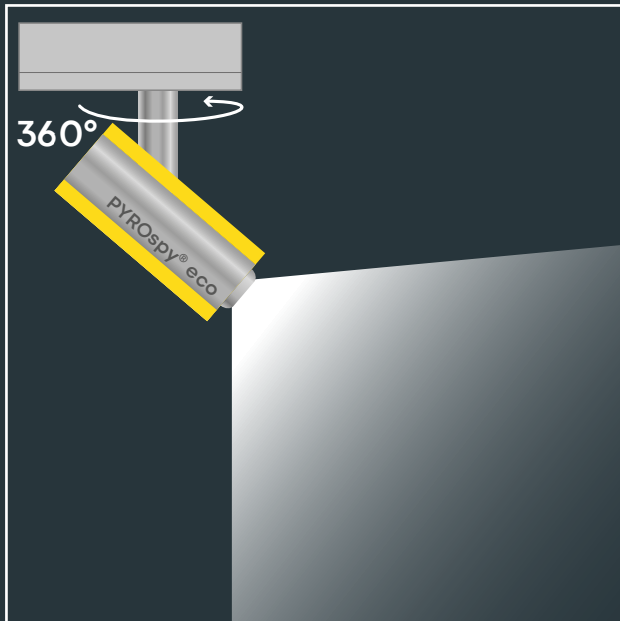
Fixed infrared cameras for fire detection generally use lower spatial resolution to monitor large areas and therefore only trigger alarms much later.



Orglmeister early fire detection systems scan entire monitored areas quickly and periodically. The much higher spatial resolution means small fire sources such as defective batteries can be detected several minutes earlier. Scanning times are quick due to the high resolution.

A single camera system achieves very high radiometric spatial resolution. Fire hazards can then be detected and localized at an extremely early stage. This gives you time to take action against developing fires much sooner.

PYROspy® is therefore a clear winner when compared to fixed IR fire detection cameras.



PYROspy® eco Monitoring small depots

PYROspy® eco is mainly suited to monitoring small storage facilities. The maintenance-free rotation system has been tried and tested over many years and enables 360° monitoring in just 20 seconds.

- Cost-effective entry into IR early fire detection scanning.
- Equipped for operating fire monitors and water-mist turbines.
- 10-year warranty on mechanical parts / drive electronics.

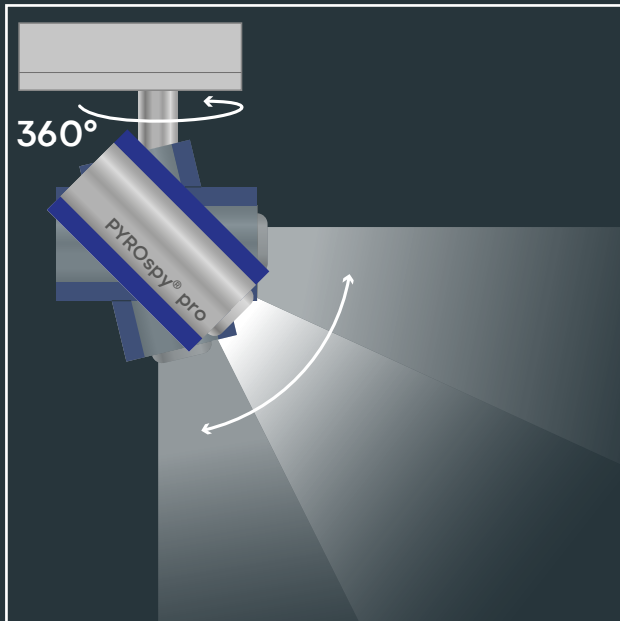
High spatial resolution of immediate surroundings

PYROspy® eco enables 360° scans with a spatial resolution of almost 1 million measuring points, i.e., equivalent to multiple high-resolution fixed camera systems.

Permanently staffed alarm centers. Are they practical?

A permanently staffed alarm center that has to differentiate between a developing fire and a false alarm can be dangerous – due to the human factor: „Do I call the fire service now? But it might just be another false alarm that will get me into trouble. So do I wait until it's definitely on fire and avoid any stress?“ Such questioning is already wasting time. PYROspy® therefore focuses on detecting developing fires at the earliest possible stage, long before smoke or fire appears. With PYROspy® directly controlling immediate, targeted extinguishing, a fire is usually extinguished in the initial phase with minimal collateral damage (operational downtimes, fire damage). Evaluation via a permanently staffed alarm center is both superfluous and slow. PYROspy® does it better and more reliably. And costs are better controlled because operating alarm centers will become increasingly more expensive.



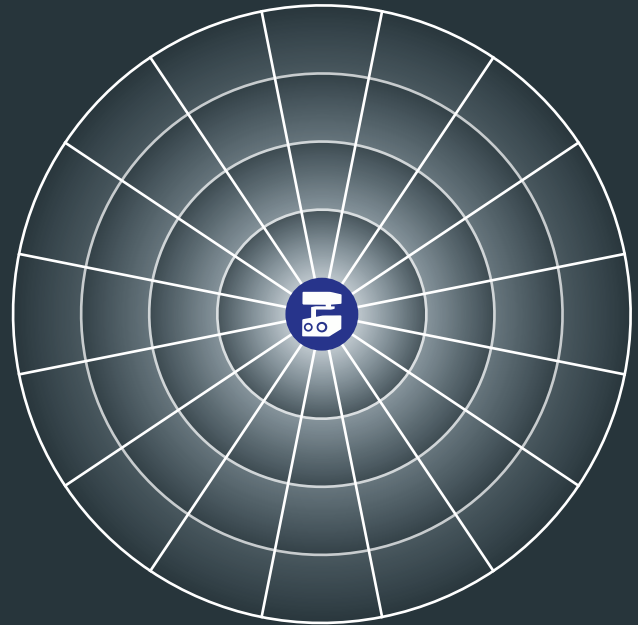


PYROspy® pro

Monitoring large areas

PYROspy® pro is ideal for monitoring large storage facilities. The maintenance-free, self-monitoring pan/tilt system has been tried and tested over many years and is designed for years of continuous operation. An integrated zoom video camera together with a high-resolution IR autofocus camera enables very small and distant objects to be detected. PYROspy® pro is therefore ideal for detecting and extinguishing very small and distant fire sources, such as lithium-ion batteries, with pinpoint accuracy. This is the best way to instantly prevent potential fire sources from escalating into blazes.

- Smart detection to avoid false alarms, e.g., from hot exhausts.
- Video camera for extended detection functions.
- Smart detection of sun reflection to enable outdoor use.
- Smart control of fire extinguishing monitors to prevent fires using minimal extinguishing agent.
- 10-year warranty on mechanical parts / drive electronics.



Maximum spatial resolution

using a single camera system

The patented abiroVision software guarantees seamless 360° all-round viewing of the fire-monitored area using 10.3 million measuring points. This is equivalent to dozens of fixed camera systems!

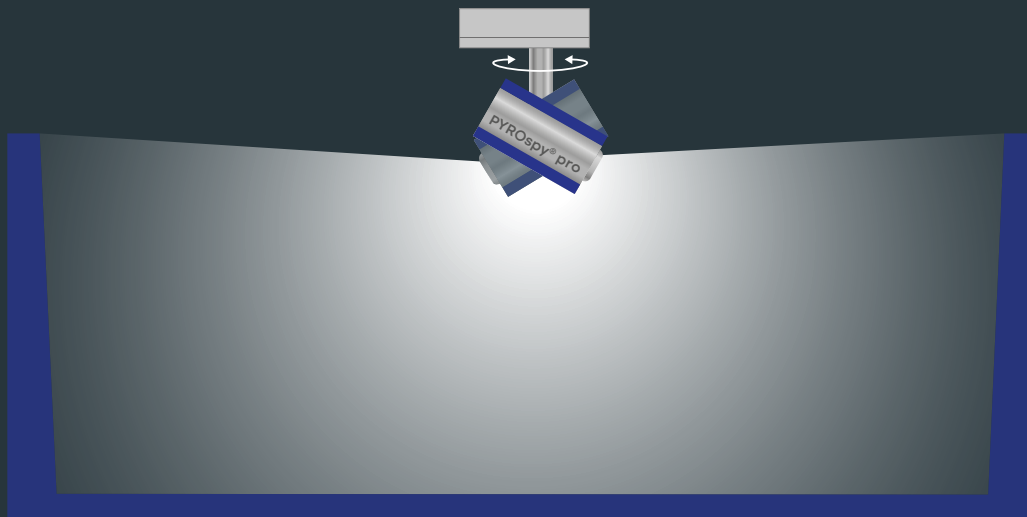
Scanning the entire area with the PYROspy® pro generally takes around one minute. Ten to 30 minutes are generally required for defective small lithium batteries to heat up and become fire sources.

Clear winner in early fire detection

PYROspy® pro provides maximum protection against fires via its first-class detection of non-hazardous hot-spots (hot exhausts and engines, sun rays, etc.), high spatial resolution and intelligent autofocus, which also ensures the best spatial resolution in IR detection.

Experience from almost 500 customer installations proves our technology minimizes fire damage, personal injury, environmental damage and operational downtimes.

PYROspy® and PYROsmart® – How do they differ?



PYROspy® pro is used for 360° viewing around the mounting point and is ideal for low spaces.

The monitoring area is displayed as a circular panoramic image.

PYROsmart® pro primarily monitors the center axis below the mounting point and is therefore ideal for deep spaces such as waste bunkers, but also for any type of warehouse and open space.

The monitoring area is displayed as a standard panoramic image.



Gaining time for immediate, automatic extinguishing

When it's clear that a fire is about to start, preventive measures – cooling down the hotspot – should be taken immediately.

This is the philosophy behind PYROspy®. The time gained between detecting a hotspot and a fire breaking out can be used for direct and targeted cooling and/or the deployment of extinguishing systems. Targeted extinguishing leaves unaffected areas untouched and ensures that operations can continue.

A promptly cooled („extinguished“) hotspot is the best protection against fires. Automatically extinguishing a possible source of fire in a targeted manner places high demands on technology. Orglmeister has years of experience in automatic extinguishing systems. In the event of an alarm, the smart PYROspy® extinguishing software controls targeted extinguishing using standard fire monitors – fully automatically with dynamic adaptation to actual circumstances.

A selection of electronically controlled extinguishing monitors compatible with PYROspy®:



Akron Brass –
Streammaster II



Alco –
APF 2.5-DC EVO



Alco –
APF 3C AC



Elkhart Brass –
Cobra EXM2



EmiControls –
FT10e



FireDos –
M1 - M9



InnoVfoam –
FwmEl



Johnson Controls –
SKUM



Rosenbauer –
RM15/35



Unifire –
Force 50/80



PYROspy® – Capabilities and features

	PYROspy® eco	PYROspy® pro
Application area	Indoors, smaller areas	Indoors & outdoors, larger areas, variable distances
Monitoring area	23m radius (Ø 46m), approx. 1.650 m²	115m radius (Ø 230m), approx. 31.400 m²
Infrared camera	Approx. 160,000 measuring points at 95° x 70° → 1x resolution Temp. detection: -30° C – 630° C IR motor/manual focus	Approx. 160,000 to 200,000 measuring points at 24° x 18° → 16x to 20x resolution Temp. detection: -30° C – 630° C IR autofocus
Optical aperture angle (IR)	95°	24°
Video camera	x	✓ 14x optical zoom
Rotating / Panning	✓ x	✓ ✓
Representation	Infrared false-color image in 360° all-round viewing	Continuous infrared false-color image / video image in 360° all-round viewing and live infrared detection window
Software	abiroVision® with patented, continuous radial image display	abiroVision® with patented, continuous radial image representation and standard non-hazardous detection
FACP compatible alarm outputs	✓	✓
Extinguishing control	✓ Control of max. one fire monitor	✓ Smart operation of multiple fire monitors
VdS device approval	Under approval	Under approval
FM approvals	Approved: FM24US0039	Approved: FM24US0039
Permissible ambient temperature	-25° C – 70° C	-25° C – 70° C
Dimensions (height x width x length) / weight	29 x 24 x 24 cm / 5,8 kg	39 x 24 x 39 cm / 8,5 kg

© 07.2024 – Technical changes possible

The early detection of critical temperatures is better than fire detection. It makes all the difference in professional fire protection.

