

# IKT-1

Intrinsically safe Thermal Camera



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projects

production

implementation

service

## Description of the device

Intrinsically safe Thermal Imaging Camera IKT-1 is an intrinsically safe device, designed to observe thermal imaging in areas in which has a methane and / or coal dust explosion hazard. Imaging is done with a recording sensor in the LWIR (long wave infra-red) range.

The camera allows observation of rooms in mining plants, in particular places where there is a lack of lighting. The implemented algorithms allow to obtain an image of the observed scene optimized for observation / monitoring of the area or standardized for the defined temperature range.

The camera housing provides IP54 protection. The camera is intended for use in underground mine headings, in rooms with the "a", "b", "c" category of methane explosion hazard and in rooms belonging to the "A" and "B" classes of coal dust explosion hazard.

The image from the camera is sent via Ethernet to the recorder or dispatch system - where it is subjected to further analysis.

Application examples:

- observation of temperature distribution and its change trend,
- detecting the presence of people,
- supervision / monitoring of rooms,- observation of machines, heating elements, condition of bearings, etc.
- observation of electrical switches, control of electrical apparatus.

## Basic parameters

|                              |                            |
|------------------------------|----------------------------|
| Power                        | 12 V, 500 mA               |
| Picture Mode                 | monochromatic              |
| Maximum number of frames /   | 15 frames/s                |
| Image resolution             | QVGA+, QVGA, QQVGA         |
| Transmission Medium          | Ethernet over twisted pair |
| Video compression            | JPEG                       |
| Operating temperature range  | 0°C ÷ 40°C                 |
| Dimensions                   | 380x100x100 mm             |
| Weight                       | ca. 3200 g (with handle)   |
| Degree of housing protection | IP-54                      |

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