

***The Thermal imaging camera TIC – PM10 is an equipment belonging to the I group M1 category. It has been designed to be used in hard environmental conditions in mining companies.***

The device allows constant analysis of the surrounding, temperature anomaly detection, which, when diagnosed too late, can cause interruptions of production.

***It can work in explosive atmosphere in underground mining plants:***

- ***where there is no methane „a” explosion hazard,***
- ***with methane "b" or "c" explosion hazard,***
- ***with class A and B coal dust explosion hazard.***

### Implementation

- controlling the heating of equipment, ventilation equipment,
- controlling the heating of the tape and components for conveyors when transporting excavated material,
- controlling machines (to detect overheating of components, bearings)
- thermal diagnostics of electric devices (such as transformers, cables, motors, pumps)
- searching for potential fire ignitions of coal dust and methane,
- detecting hot spots of deposits (prevention, while extracting coal)
- detecting anomalies of temperature (cold and warm places in the environment)
- helping rescuers involved in rescue operations.

### Characteristics

- portable version of intrinsically safe infrared camera built for use in difficult environments found in mines,
- the camera can work in any concentration of methane,
- the camera has an EC Type Examination Certificate type examination certificate, TEST 15 ATEX 0022
- the camera casing is made of plastic with high resistance to mechanical shock,
- the camera has a special sputtered layer on the optics window which protects it from scratches, e.g. by coal dust,
- infrared resolution 80x80, interpolated up to 240x240
- thermal sensitivity  $\leq 100\text{mK}$
- infrared field of view 23.3°
- temperature measurement -20 ... +350 ° C
- long battery life (8 hours)
- operating temperature range -10 ... + 40 ° C,
- compact dimensions of 208x115x60mm,
- low weight 0.55kg,
- increased degree of casing protection IP67,
- light, handy, and easy to use,
- stores in memory infrared photos of observed scenes,
- stores in memory images of observed scenes in visible light,
- allows to determine the temperature of the object viewed in any of its points
- dedicated for services in ventilation, emergency, supervision in the mine and for less advanced users,
- dedicated communication software and camera control as well as viewing and analyzing images.

