



AUTOMATIC EXTINGUISHING CONTROL PANEL  
**IGNIS 1520M**



## AUTOMATIC EXTINGUISHING CONTROL PANEL IGNIS 1520M

The automatic extinguishing control panel IGNIS 1520M is a modern device, designed for fire detection and signalling and for automatic start of extinguishing installation, which nips detecting fire in the bud. The control panel, based on microprocessor technology, is adapted for operation with one zone stable extinguishing installations, having extinguishing agent in the liquid, gas or aerosol form. It contains circuits, monitoring the whole installation both detecting and extinguishing part.

The IGNIS 1520M control panel fulfils all requirements of European Standards: EN 54-2 and EN 54-4 concerning fire alarm control panels and EN 12094-1 concerning devices controlling extinguishing process.

### Fire detection

---

The IGNIS 1520M control panel uses two state of series 40 fire detectors for fire detection. They are installed in two detector lines, operated in coincidence circuit. Start of extinguishing process is possible in the case, when two detectors in two detector lines, installed within the same flooding zone, operate simultaneously. This prevents groundless start of extinguishing equipment in the case of false alarm from only one detector. The control panel eliminates, also, accidental signals from the detectors. First operation of the detector will be ignored, if due to true fire the detector will not operate once again. In the case, when fire detection and extinguishing should be made in area with explosion hazard, the intrinsically safe detectors can be installed, through suitable separators, in the control panel IGNIS 1520 detector lines.

### Alarming about threat

---

The IGNIS 1520 control panel is able to switch automatically extinguishing installation on after fire detection. When it is necessary, this job can be made, also, by a man.

To this goal, two stage alarming is used:

- I stage alarm, started after operation of the detector only on one detector line, requiring verification of threat by the man in determined period of time;
- II stage alarm, starting automatic extinguishing process in the moment, when alarm is confirmed by the detector from the second line.

The man can to speed up extinguishing procedure, by pressing of suitable push- buttons EXTINGUISHING START, installed in or outside the control panel. He can, also, to suspend temporarily extinguishing procedure by pressing of similar push-button EXTINGUISHING STOP, or to stop extinguishing procedure using disable push-button. Information about fire detection or about extinguishing procedure start can be transferred, by the control panel to:

- the closest surroundings ( by switching suitable signalling devices on),
- operator of the superior control panel in the premises,
- fire brigade (through the monitoring system).

### Extinguishing procedure

---

Extinguishing procedure is started by fire confirmation by operation of the detector in the second detector line, or by pressing EXTINGUISHING START push-button. It begins from activation of evacuation signalling devices, in programmed for evacuation period of time, and switching off of technological processes or power supply by the control panel. Then, signalling devices, warning about extinguishing agent outflow from the valves, are switched on. The valves are controlled through two outputs. The control panel outputs, for sealing of flooding room, are switched on with suitable delay. When it is necessary, output delivered additional portion of extinguishing agent, for putting out the fire, can be activated.

The versatility of the control panel is based on the fact, that programmed starting sequences of suitable control outputs and their delays or activation periods, make possible finding of the best option for each type of extinguishing installation.



## Extinguishing installation efficiency checking

The IGNIS 1520 control panel checks not only continuity (detects short-circuit or break) of detector and control lines, connected to the control panel, but, also, supervises, through monitoring lines, condition of cylinders with extinguishing agent (pressure, mass). During releasing of extinguishing agent, the control panel checks its outflow by means of pressure or flow relay contact. Stand by power supply battery placed inside the control panel, ensuring 72 hours of the control panel operation after loss of mains voltage, is continuously charged and its voltage and capacity are checked. The internal memory keeps last 500 events, which were signalled by the control panel, or were connected with manipulations made in the control panel. There is possibility to read out of events on the computer, connected through RS 232 interface in the control panel.

## Technical data

### Power supply:

- essential, mains 50 Hz 230 V +10% -15%
- stand by, batteries 2 x 12V / 7Ah

### Current consumption from batteries after loss of mains voltage:

- during supervision 90 mA max.
- during alarm 3 A max.

External devices control voltage 24 VDC ±15%

### Detector lines:

- number of lines in coincidence 2
- resistance 2 x 120 Ω max.
- end of line resistor value 5,6 kΩ
- quiescent current of detectors in line 2 mA max.

### Monitoring and control lines:

- for EXTINGUISHING START push-buttons
- for EXTINGUISHING STOP push-buttons
- for ADDITION push-buttons
- for EXTINGUISHING DISABLE push-buttons
- for extinguishing agent content checking
- for extinguishing agent outflow
- for executive devices checking
- for automatic operation disable
- for external triggering signal

### Monitoring and control lines parameters:

- connected line resistance 2 x 50 Ω max.
- end of line resistance value 10 kΩ

### Supervised relay outputs:

- releasing devices control I
- releasing devices control II
- ADDITION valve control
- general alarm signalling
- evacuation signalling
- caution signalling

### Supervised relay outputs parameters:

- connected line resistance 2 x 50 Ω max.
- end of line resistance value 10 kΩ
- signalling outputs load capacity 1 A / 24 V
- control outputs load capacity 2 A / 24 V

### Potential free relay outputs without supervision:

- number 11
- contacts load capacity 1 A / 24V
- programmed transmission, alarm and evacuation delay times

- programmed times of pulse controlling extinguishing agent valves 0 to 10 min every 1 s
- programmed times of pulse controlling extinguishing agent valves 0 to 30 min every 1 s

Dimensions 314 x 368 x 106 mm

Mass (without batteries) < 6 kg

Operating temperature range from 5°C to +40°C

# EXTINGUISHING CONTROL SYSTEM BLOCK DIAGRAM

