POLON-ALFA

POLISH PRODUCT

AUTOMATIC FIRE EXTINGUISHING CONTROL PANEL

IGNIS 2500

SINGLE OR MULTI-ZONE

CONTROL SYSTEM

OF AUTOMATIC EXTINGUISHING

IGNIS 2500

Purpose

The IGNIS 2500 automatic extinguishing control panel is a device designed for use in fixed fire-fighting systems and for the following tasks:

- activating fixed fire extinguishing devices based on the signal received from automatic detectors or from manual „start";
- signalling a fire detected by the cooperating detectors,
- the control of fire alarms, safety devices, sealing devices, etc.,
- transmission of information on fire risk or on the implementation of steps in the automatic extinguishing procedure to the monitoring systems.

IGNIS 2500 can also work in a multi-zone set, consisting of several control panels and a common extinguishing agent resource, and as an addressable control panel, integrated with a master fire alarm system based on the POLON 6000 control panel, where it operates on an addressable loop.

The IGNIS 2500 control panel is compatible with two-state (conventional) detectors, series 30 and 40, buttons for manual start, pause, interlock and alarm devices manufactured by POLON-ALFA S.A.

Basic features

- a single-zone or a two-zone control panel (in two versions: conventional and addressable)
- possibility of creating multi-zone sets with the use of several control panels
- fire detection
- control of fixed fire-fighting devices
- messages on the graphic LCD display
- display of countdown delay times
- event memory
- possibility of configuration and reading of events using a PC
- compatibility with conventional detectors series 30 and 40 produced by POLON-ALFA
- compatibility with addressable systems (IGNIS 2500 addressable version)
- operation of up to 20 IGNIS 2500 control panels in the addressable version on a single POLON 6000 system detection line
- up to 6 conventional detection lines in one extinguishing zone
- up to 16 control lines
- up to 10 supervised potential control outputs
- high flexibility of parameter programming and configuration
- emergency power supply - 72 hours
- compliance with EN-12094-1, PN-EN54-2, PN-EN54-4 standards.

Fire detection

The IGNIS 2500 control panel, for fire detection, uses two-state 30 or 40 series fire detectors, installed on detection lines operating in a coincidence system.

The extinguishing procedure can be started when two detectors installed on two lines within the extinguished zone are actuated simultaneously. This prevents unjustified activation of the extinguishing devices in case of false triggering of only one of the detectors.

The control panel also enables elimination of accidental signals from the detectors. The first detector trip will be ignored if it does not trip again as a result of a real fire.

For fire detection and extinguishing in potentially explosive atmospheres, intrinsically safe detectors can be installed on the IGNIS 2500 detector lines using suitable separators.

DANGER ALERT

Danger alert

The IGNIS 2500 can automatically activate the fire-fighting system when a fire is detected. If the need arises - this can also be done by a human.

For this purpose, two-stage alarming is used:
- 1st stage alarm, activated after triggering a detector on one detection zone only, requiring a human verification of the threat within a specified time;
- 2nd stage alarm, which activates the automatic fire extinguishing procedure upon confirmation of the alarm by a detector from the second line.

The control panel operator may accelerate the extinguishing procedure by activating the appropriate EXTINGUISHING START buttons installed in or outside the control panel. It can also temporarily stop the extinguishing procedure by pressing similar EXTINGUISHING STOP buttons or by pressing the blocking button - stop the extinguishing procedure.

The control panel may, through appropriate outputs, notify about the fact of fire detection and the commencement of the extinguishing procedure:
- the immediate surroundings (by switching on the relevant signals);
- operation of the superior fire alarm control panel in the facility;
- fire brigade (through the monitoring system).

Extinguishing procedure

The fire extinguishing procedure is started by confirming the fire by activating the detector on the second detection line or pressing the START EXTINGUISHING button. It begins with activation by the control panel, in the time programmed for evacuation, of evacuation signalling devices and switching off of technological processes or power supply. Then, alarms are switched on to warn of the beginning of the extinguishing agent outflow, released through valves controlled by two outputs. The control panel outputs, intended for air-tight sealing of the extinguished room, are activated with a suitable delay. Additionally, if there is such a need, an output can be activated providing an additional portion of the extinguishing agent for post-extinguishing activities.

The versatility of the control panel lies in the fact that the programmable sequences of activation of the relevant control outputs and their delays or control times enable finding the most advantageous option for each type of extinguishing installation.

Control panel versions

The IGNIS 2500 control panels in single-zone and two-zone versions can operate independently, where each zone has its own extinguishing agent resource or in multi-zone systems with a common extinguishing agent resource. It is also possible to combine from two to four one-or two-zone units into a multi-zone set.

In a multi-zone configuration, the panels can transmit signals to each other allowing:
- activating the output controlling e.g. a common solenoid valve, located in any control panel belonging to the set,
- programming the outputs to release a different amount of extinguishing agent, depending on the size of the zone,
- configuration of automatic blocking of starting extinguishing in other zones, if a discharge has already occurred in one zone.

Cooperation with fire systems

The IGNIS 2500 is equipped with universal potential-free relay outputs, allowing you to transmit basic status signals to most fire systems or monitoring stations.

The control panels in the addressable version are equipped with the MKA-25 addressable communication modules, which enable cooperation with the POLON 6000 addressable system. In this option, the control panel becomes an addressable element that communicates with the POLON 6000 control panel using a linear protocol.

In addition to the detectors, an addressable detection line may contain up to 20 IGNIS 2500 control panels.

OPERATION IN THE ADDRESSABLE LOOP OF POLON-ALFA SYSTEMS

POLON 6000

IGNIS 2500

IGNIS 2500

IGNIS 2500

IGNIS 2500

Technical data

General parameters	Overall dimensions W x H x D Weight (without batteries) Housing tightness Operating temperature range Environmental class Permissible operating relative humidity Transport temperature range	400 x 403 x 184,5 mm < 8 kg IP 30 -5°C ÷ +40°C A 95% at +40°C -25°C ÷ +55°C
Power supply	**Basic power supply** (mains 230 V) Voltage	 230 VCA +10 ...-15% - 50 Hz
	Backup power supply 2 batteries Voltage Maximum operating time on stand-by power*	 2 x 12 V, 7 ÷ 18 Ah 24 V 72 h
MSG-25 module	Number of modules Current consumption (no load on outputs)	1 ÷ 2 22 mA
Detection lines	Maximum number of lines* Number of linear elements in a line Maximum detection monitoring current Total line detection current maximum	6 32 2 mA 7 mA
Control lines	Maximum number of lines* Maximum number of buttons: EXTINGUISHING START, EXTINGUISHING STOP, EXTINGUISHING BLOCK	16 32
Supervised potential outputs	Maximum number of outputs* Maximum current of L7, L8 outputs Maximum current of L9 + L16 outputs	10 2 A 0,7 A
Potential-free relay outputs	Maximum number of outputs Maximum current Maximum voltage	6 1 A 30 V
COOPERATION WITH DEVICES		
Interface for connection with a computer	Control panel configuration Readout of events	USB
Types of push buttons installed on control lines: Cooperation with fire alarm control panels	- PU-61 - EXTINGUISHING START - PW-61 - EXTINGUISHING STOP - PB-61 - EXTINGUISHING BLOCK - PD-61 -ADDITION START POLON 6000 fire alarm control panel (addressable version of IGNIS 2500 control panel)	
Types of fire-fighting systems:	- high pressure - low pressure	
Extinguishing zones	Number of zones Possibility to create multi-zone sets	1 ÷ 2 Yes
Event memory	Number of events	≥1000

OPTIONAL MODULES EXPANDING THE NUMBER OF INPUTS AND OUTPUTS		
MSS-25 module	Zone signalling module for the second extinguishing zone Number of modules Current consumption	 1 24 mA
MKS-60 module (optional)	Number of modules, maximum** Current consumption (no load)	2 15 mA
Control lines	Number of lines	2
Supervised potential outputs	Number of outputs Maximum current	2 0,5 A
Potential-free relay outputs	Maximum number of outputs Maximum current	2 1 A
MWS-60 module (optional)	Number of modules, maximum** Current consumption (no load)	2 15 mA
Supervised potential outputs	Number of outputs Maximum current	4 0,5 A
MPK-60 module (optional)	Number of modules, maximum** Current consumption (no load)	2 15 mA
Supervised potential outputs	Number of outputs Maximum current	4 0,5 A
MKA-25 module	Communication module with the POLON 6000 system detection line (standard equipment of the IGNIS 2500 addressable version)	

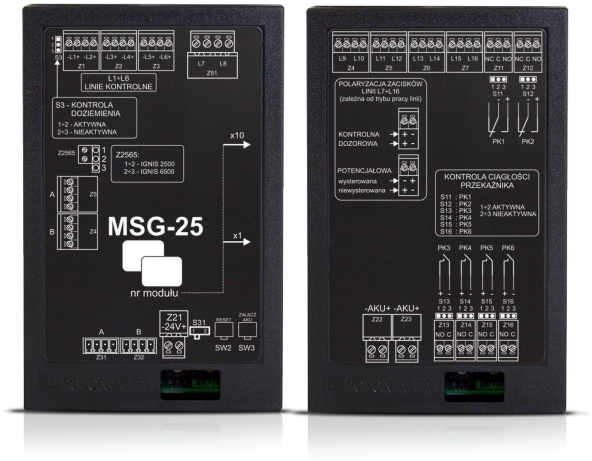
* The number of lines depends on the configuration - detection lines can be configured as control or potential, and potential lines as control.
The sum of all lines (outputs) of 1 module MSG-25 is 22.
The time of operation on backup power supply depends on the control panel configuration.
** The control panel provides space for two optional modules.

Name	IGNIS 2500 conventional version
IGNIS 2500	Single-zone control panel (not expandable)
IGNIS 2500R	Single-zone control panel (expandable)
IGNIS 2500-2	Two-zone control panel (not expandable)
IGNIS 2500-2R	Two-zone control panel (expandable)

Name	IGNIS 2500 addressable version
IGNIS 2500A	Single-zone control panel (not expandable)
IGNIS 2500AR	Single-zone control panel (expandable)
IGNIS 2500-2A	Two-zone control panel (not expandable)
IGNIS 2500-2AR	Two-zone control panel (expandable)

MSG-25 fire-extinguishing control module

In the IGNIS 2500 control panels, the MSG-25 module is the main module responsible for controlling fixed extinguishing devices and supervising their condition.



MSO-25 signalling and operating module

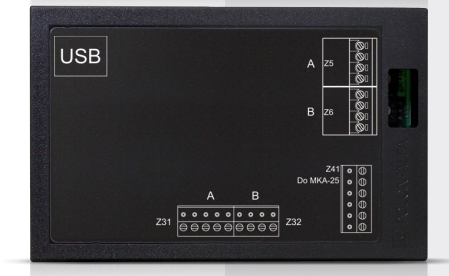
The MSO-25 module is intended for the basic signalling and operation of the IGNIS 2500 control panel. In the two-zone control panel version, it is supplemented with an additional MSS-25 zone signalling module.

MPK-60 relay output module (potential-free)

The MPK-60 module is equipped with 4 programmable, universal relay outputs intended to transmit status or control external devices. It has potential-free bistable relays with NC, C, NO changeover contacts. Each relay output contains a continuity check circuit that can be enabled/disabled.

MWS-60 signal output module (potential)

The MWS-60 module enables the control of alarm devices. It is equipped with 4 potential outputs containing a detection circuit to detect interruption, short-circuit and overload of the connected lines.



MKS-60 monitoring and control module

The M KS-60 module is equipped with the following outputs/inputs, used to control and supervise the fire protection devices that cooperate with the automatic fire extinguishing system:
- two bistable potential-free relay outputs with load capacity 1 A/30 V,
- two potential outputs with 0.5 A load capacity,
- two control line inputs.

EXAMPLE SET OF EXTINGUISHING CONTROL SYSTEM DEVICES

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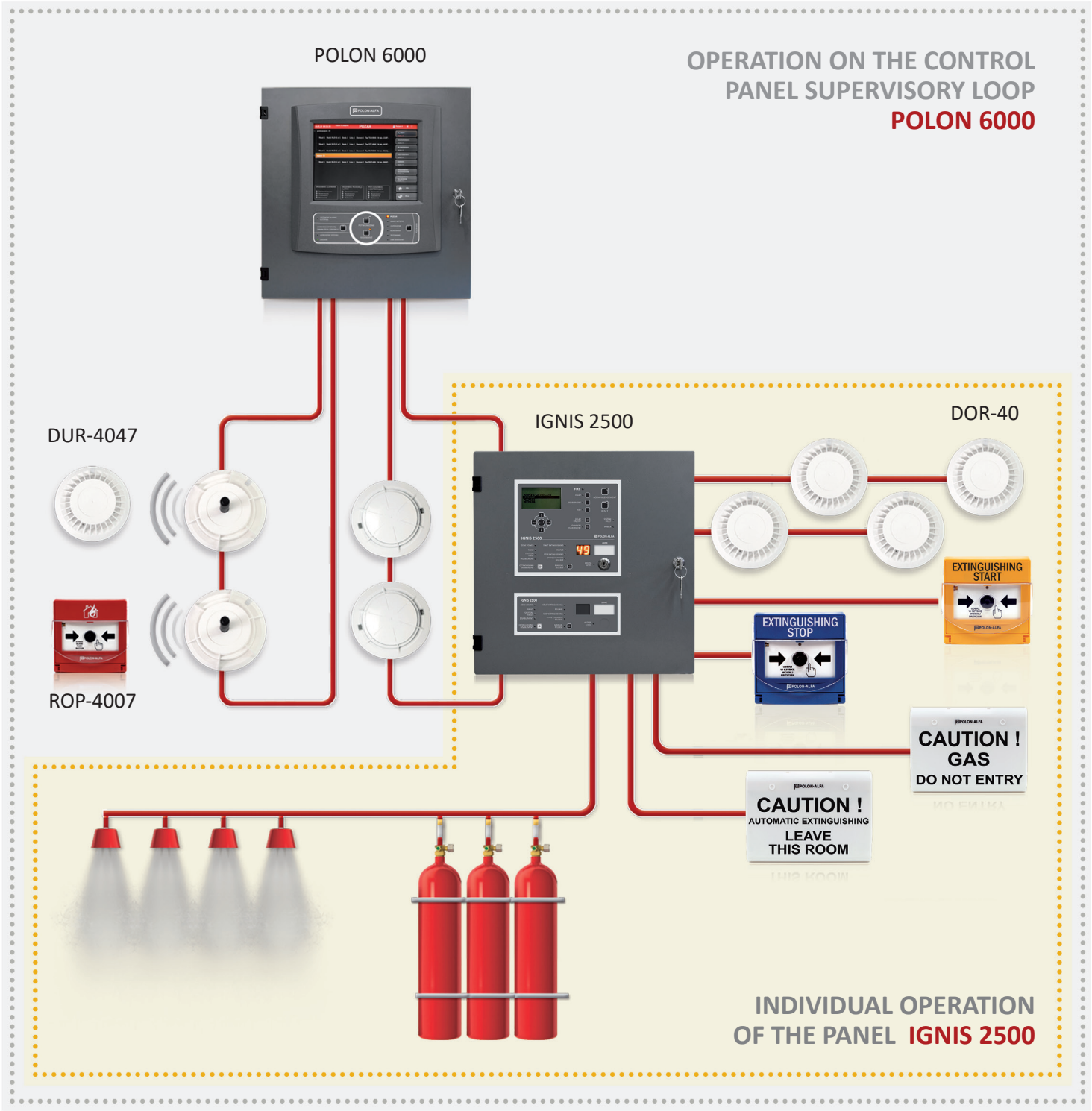

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