



# **FIRE DETECTION** AND ALARM SYSTEMS

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*well designed* SECURITY

# DISTRIBUTED FIRE ALARM PANEL

## FIRE ALARM SYSTEM POLON 6000



### Overview

The addressable, interactive POLON 6000 fire alarm system is a set of latest technology equipment, designed for very fast detection and signaling of fire, precise indication of fire origin, control of fire protection safety devices, and information of appropriate intervention services or building guards about fire. It enables protection of mid-size, large and very large facilities, especially so called “intelligent” buildings with huge amount of fire protection safety devices. POLON 6000 can be easily integrated with many existing building management systems.

Due to its specific features it enables to arrange perfect set of necessary devices, well-fitted to building conditions.

The POLON 6000 system is based on newly designed control panels with distributed architecture and new set of line elements (6000 series), supplemented with line elements of series 4000 with changed software version.

All devices of the POLON 6000 system meet requirements of the latest edition of EN 54 European Standards.

### The POLON 6000 control panel with a distributed architecture

The POLON 6000 control panel was designed based on the idea of a module device with a distributed architecture.

It consists of many unified modules of various types, installed inside standardized cabinets. Cabinets can be arranged as separate units or combined in sets (so called nodes) and can be located in different places of protected building, even if those locations are distant. All modules within one node and nodes between themselves are connected with a common, doubled (redundancy) digital communication bus.

Each control panel can be flexibly assembled with modules and nodes well-fitted to individual building requirements. Such solution enables the arrangement of the control panel equipment, installed in required locations. This provides maximum optimization of the system, reduction of cost of installation while the system is still extremely reliable and functional. All that is possible thanks to implementation of doubled main processor controllers, communication buses and cable connections between nodes.

The POLON 6000 control panel consists of the PSO-60 panels with 10” touch screen, functional modules: detection lines MLD-61 and MLD-62, input-output modules MKS-60, relay outputs MPK-60, signaling outputs module MWS-60, high current relay outputs MPW-61, supervision inputs MWK-60, supply modules MZP-60 and transmission modules MTI-61, MTI-62, MTI-63.

PSO panels and modules are installed inside the cabinets with standard dimensions, which can be mechanically connected. A set of such mechanically connected cabinets create a control panel node. The control panel has to have at least one node in which main control panel PSO-60 (having number 1) is installed. This is the “main node” of the control panel. There is always only one “Main node” in the system. The rest of elements (modules) of the control panel is configured in form of external nodes which are connected to the “main node”. The communication between nodes is provided by means of doubled cable connection (RS-485) or doubled fiber optic cables. Each node shall be equipped – depending on the size of node and expected current consumption – with one or more supply modules. Each node can contain line modules with connected detection lines, input-output modules for direct control or supervision of fire safety devices. In each external node the PSO-60 panel can be implemented, acting as the parallel operation panel.

# ► FIRE CONTROL PANEL **POLON 6000**



## ► Operator panel **PSO-60**

- 10" touch screen (800 x 600 pixels)
- double controller for redundancy purpose
- 2 channels for communication with functional modules
- up to 99 controllers in one distributed fire alarm panel

## ► Detection line modules **MLD-61 and MLD-62**



- 2 loops with max 250 devices
- including detection line voltage converter (MLD-61)
- without detection line voltage converter (MLD-62)
- A/B loop class

## ► I/O module **MKS-60**



- 2 potential-free relay outputs (1A, 30V)
- 2 potential outputs (0,5A, 30V)
- 2 monitoring inputs
- 2- or 3-state monitoring
- programmable fail-safe function

## ► Outputs module **MPK-60**



- 4 potential-free relay outputs (1A, 30V)
- relay output line continuity monitoring
- programmable fail-safe function

## ► Outputs module **MWS-60**



- 4 potential outputs (0,5A, 30V)
- full line monitoring
- programmable fail-safe function

## ► Inputs module **MWK-60**



- 8 monitoring inputs
- 2- or 3-state monitoring

## ► Outputs module **MPW-61**



- 2 high voltage potential-free relay outputs (5A, 230V)
- 2 high voltage monitoring inputs
- 2- or 3-state monitoring
- programmable fail-safe function

## ▶ FIRE CONTROL PANEL **POLON 6000**



### ▶ Conventional lines module **MLK-60**

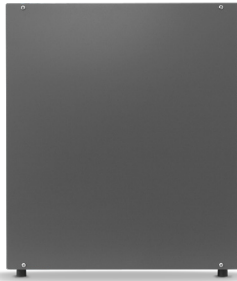
- 8 Conventional lines
- 32 Conventional detectors per line or
- 10 MCPs per line or



### ▶ Cabinets **OM-61 | OM-62 | OS-61**

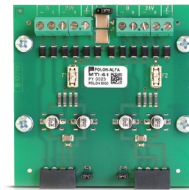
elements of the control panel can be installed in several types of cabinets:

- OM-61 - dedicated for installation of functional modules, power suppliers and batteries,
- OM-62 - dedicated for installation of the operator panel PSO-60, printer and other modules or batteries,
- OS-61 - dedicated for installation of the operator panel PSO-60 only



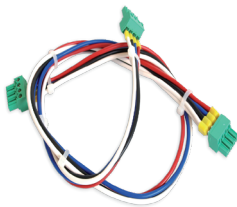
### ▶ Battery containers **OA-61 | OA-62**

- OA-61 dedicated for batteries up to 134Ah
- OA-62 dedicated for batteries up to 90Ah
- cables included



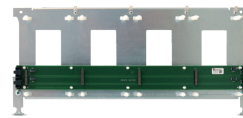
### ▶ Nodes' interfaces **MTI**

- MTI-61 – max distance 3 m, provides power supply
- MTI-62 – max distance 1200 m, galvanic separation, doesn't provide power supply
- MTI-63 – fibre optic communication with single-mode or multi-mode cable



### ▶ Connection cables

- LK-61-035 (35 cm)
- LK-61-050 (50 cm)
- LK-61-070 (70 cm)
- LK-61-090 (90 cm)
- LK-61-320 connection wire for WPO-60 (320 cm)
- LK-62-035-050 Wire splitter for SM-60, MTI-xx or MZ-60-xxx (35/50 cm)



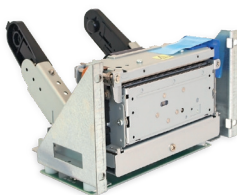
### ▶ Assembly frame **SM-60**

- max 4 function modules
- provides power supply and communication
- requires mounting brackets



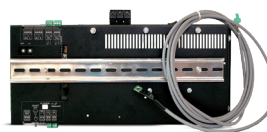
### ▶ Brackets **WP-61/WL-62 and WP-63/WL-64**

- mounting brackets for assembly frames installation



### ▶ Printer **MD-60**

- fast thermal printer
- mounted inside main cabinet



### ▶ Power supply units **MZ-60-150, MZ-60-300**

- provides power for all functional modules
- fault and alarm relay
- self-monitoring function

## ▶ ADDRESSABLE DETECTORS AND MODULES **POLON 6000** & **POLON 4000**



### ▶ Smoke detector DUO-6046

- double sensor (IR,UV)
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator
- EN 54-5, EN 54-17



### ▶ Smoke and heat detector DUT-6046

- double smoke sensor (IR,UV)
- double heat sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator
- EN 54-5, EN 54-7, EN 54-17



### ▶ Smoke heat detector and CO DTC-6046

- double smoke sensor (IR,UV)
- double heat sensor
- CO sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator



### ▶ Heat detector TUN-6046

- heat sensor
- soft addressing
- programmable temp. classes: A1, A2, B, A2S, BS, A1R, A2R or BR
- low current consumption
- built-in short circuit isolator
- EN 54-7, EN 54-17



### ▶ Beam smoke detector DOP-6001

- IR smoke detection
- soft addressing
- automatic drift compensation
- auto-alignment function
- built-in laser pointer
- programmable sensitivity
- low current consumption
- built-in short circuit isolator
- EN 54-12, EN 54-17



### ▶ Manual call point ROP-4001M(H)

- indoor and outdoor application
- flush mounting
- wall mounting with assembling frame
- soft addressing
- low current consumption
- built-in short circuit isolator
- EN 54-11 (type B)



### ▶ Conventional line interface ADC-4001M

- soft addressing
- 6 modes of operation
- built-in short circuit isolator
- EN 54-18



### ▶ Addressable siren SAL-4001

- indoor application
- soft addressing
- 3 sound patterns
- 3 power options
- built-in short circuit isolator
- EN 54-3

## ▶ ADDRESSABLE DETECTORS AND MODULES **POLON 6000** & **POLON 4000**

### ▶ Addressable siren SAW-6000



- SAW-6001 - sound
- SAW-6006 - voice & sound
- soft addressing
- 16 sound patterns - programmable
- 2 power options
- built-in short circuit isolator
- EN 54-3, EN 54-17



### ▶ Wireless devices' adapter ACR-4001

- wireless communication with line elements
- loop powered
- communication with max 16 devices
- soft addressing
- built-in short circuit isolator
- EN 54-18, EN 54-25

### ▶ Wireless smoke detector DUR-4047



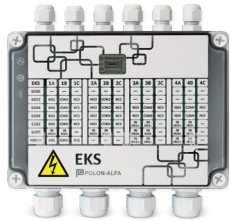
- UV wireless smoke detector
- battery powered (2xCR123)
- 3 years of operation
- soft addressing
- automatic drift compensation
- built-in short circuit isolator
- EN 54-5, EN 54-25



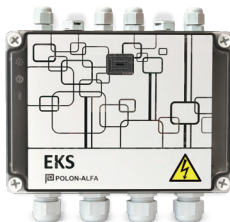
### ▶ Wireless manual call point ROP-4007(H)

- UV wireless smoke detector
- battery powered (2xER14505V)
- 3 years of operation
- indoor and outdoor application
- flush mounting
- wall mounting with assembling frame
- soft addressing
- EN 54-11 (type B), EN 54-25

### ▶ I/O devices EKS-6000\*



- EKS-6044 - 4 outputs
  - (2 A/230 V/62,5 VA)
  - 4 inputs (LV)
- EKS-6022 - 2 outputs
  - (2 A/230 V/62,5 VA)
  - 2 inputs (LV)



- EKS-6004 - 4 outputs
  - (2 A/230 V/62,5 VA)
- EKS-6040 - 4 inputs (LV)
- EKS-6202 - 2 outputs
  - (2 A/230 V/62,5 VA)
  - 2 inputs (HV)
- EKS-6400 - 4 inputs (HV)
- EKS-6222P - 2 outputs
  - (12 A/230 V/2,76 kVA)
  - 2 inputs (LV)
  - 2 inputs (HV)
- soft addressing
- extensive programming capabilities
- IP66 protection
- built-in short circuit isolator
- EN 54-18, EN 54-17

\*dedicated for POLON 6000 only

### ▶ Power Supply Units PZB 6000



- fire approved addressable power supply unit: 2A, 4A, 8A, 16A, 24VDC
- EN54-4, EN54-17, EN54-18

### ▶ Detector's base G-40



- for all addressable and conventional detectors
- increased tightness
- screwless connection
- shield connector included
- optional assembly ring P-40
- optional base attachment PG-40

# ▶ FLAMMABLE AND TOXIC GASES DETECTION SYSTEM



INCRECIBLE FLEXIBILITY  
IN OUTPUTS  
CONFIGURATION

## CDG 6000

The gas detection system enables the detection and signalling of flammable gases leakage (natural gas-methane, propane-butane gas) and dangerous concentrations of carbon monoxide. The system consists of a CDG 6000 gas detection unit and several addressable PSG-6000 gas detectors operating in the control panel line.

Depending on the detectors used, the gas detection system can be used in garages, allowing for simultaneous control of ventilation. It can also be used in gas boilers, allowing the gas shut off valve to be operated in case of unsealing of the system.

It is complemented by ASG-2000 (autonomous gas detectors) that can work independently or create small system of several cooperating detectors.

## Gas detection control panel CDG 6000

The CDG 6000 Addressable Gas Detection Panel is designed to signal the leakage of combustible gases (CNG, LPG) and dangerous concentrations of carbon monoxide (CO), upon receipt of information from its associated PSG-6000 gas detectors.

The control panel triggers the ventilation in order to remove excess harmful gases from the room and may also provide a control signal to the gas shut off valve. By means of built-in monitoring lines it is possible to control the status of controlled external signalling and control devices. The CDG 6000 is capable of transmitting alarm information to the fire alarm systems installed on the premises of the POLON 4000 / POLON 6000.

The CDG 6000 can signal three alarm levels related to the corresponding gas levels reported by the connected detectors. The control panel indicates alarming detector by displaying it's number on the display. The panel has an extensive self-diagnostic and connected external devices diagnostic system.

Similarly to alarms, also any faults information in the system is displayed on the control panel display. All the information is stored in the internal non-volatile memory of the control panel as an event log. The capacity of the log is 1000 events.

Configuring and programming of the CDG 6000, as well as reading the event log, is performed using the CDG6000 Configurator. Addressable PSG-6000 detectors work on a specially designed detection line, which can configured either as an open line or a loop.

In the loop mode, the end of the line must be connected back to the control panel. This allows the system to work properly even when the line has got a single brake.

Detectors have built-in short circuit isolators which, when activated, isolate the short circuit in the line so that the maximum number of detectors is still working properly.

## Technical data

### Power supply:

• Mains input voltage	230V+10%-15%/50Hz
• Battery	1x 12 V / 2,3 Ah
Number of detection lines	1
Operating gas detectors	type PSG-6000
Max detectors' number in the line	16
Relay outputs	4
Relay outputs' max current load	8A/30VDC, 8A/250VAC
Shut-off valve control output	12V / 10A
Monitoring inputs	4
Auxiliary devices power supply output	0,5A/12V
Events log	1000
Operating temperature range	from -10°C to +55°C
Enclosure IP rate	IP 56
Dimensions (without cable glands)	300x230x86 mm

**EASY INSTALLATION**  
= **LOW COSTS**

# PSG-6000



## Addressable gas detectors range PSG-6000

Addressable PSG-6000 gas detectors are designed to detect and continuously monitor the presence of flammable and toxic gases in potentially hazardous areas, especially in garages and boiler rooms. Each detector has a set of three alarm thresholds, related to a strictly defined concentration of gas in the air. When they are exceeded, the detectors send information to the cooperating CDG 6000. The control panel also states that the sensor has been damaged or that it needs to be calibrated. Detectors have built-in removable gas sensor modules.

PSG-6000 detectors operate only on surveillance lines of addressable CDG 6000 gas detection panels. They require additional, external 12 V or 24 V DC power supply (except PSG-6103).

Addressable detectors range PSG-6000 are available in the following variants:

Type of detector	Detected gas	External DC power
PSG-6001	CNG (natural gas)	9 to 30 V DC
PSG-6002	LPG (propane-butane)	9 to 30 V DC
PSG-6003	CO (carbon monoxide)	9 to 30 V DC
PSG-6103	CO (carbon monoxide)	loop powered

## Technical data

### Power supply:

PSG-600x **from 9 to 30 V DC**  
PSG-6103 **loop powered**

Current consumption from external PSU:

PSG-600x **30 mA / 12 V, 15 mA / 24 V**

Current consumption from detection line:

PSG-600x **< 150 µA**

PSG-6103 **< 250 µA**

### Type of the sensor:

PSG-6001, PSG-6002 **solid-state**

PSG-6003/PSG-6103 **electromechanical**

Sensor's lifetime **max 10 years**

Number of alarm thresholds **3**

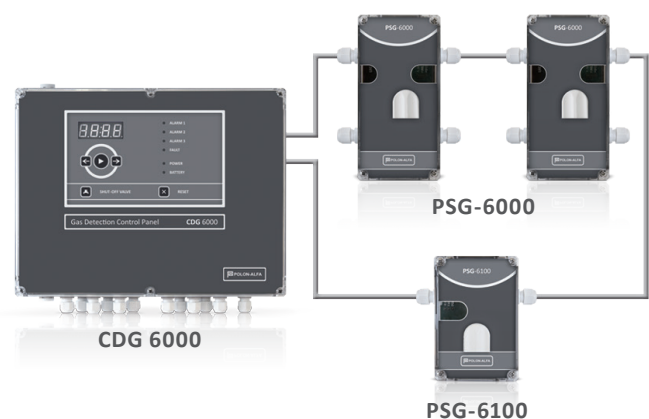
Operating temperature range **from -20°C to +50°C**

Enclosure IP rate **IP 54**

### Dimensions:

PSG-600x **124x160x68 mm**

PSG-6103 **124x120x68 mm**







## Autonomus gas detectors range ASG-2000

Autonomous ASG-2000 gas detectors range ASG-2000 are designed to detect flammable and toxic gases in hazardous areas such as garage, car parking and boiler room etc. Each detector has got three alarm thresholds, strictly related to a defined gas concentration in the air.

When the particular threshold is exceeded, the detector's optical indicator is activated and appropriate outputs for controlling the external sounder beacon are activated.

It is also possible to start ventilation to vent and remove harmful gases from the room.

ASG-2000 detectors are designed for independent operation, but can be also connected between creating a small gas detection installations.

Detectors have got built-in interchangeable gas sensor modules that reduce the cost of their operation. If it is necessary to perform the sensor calibration, the detector will indicate that. Detector enclosure guarantee a high IP rate, allowing them to be installed in a difficult environmental conditions. Detectors are powered with an external 12 V DC (24 V DC) power supply or with a 230 V AC.

## Technical data

### Power supply:

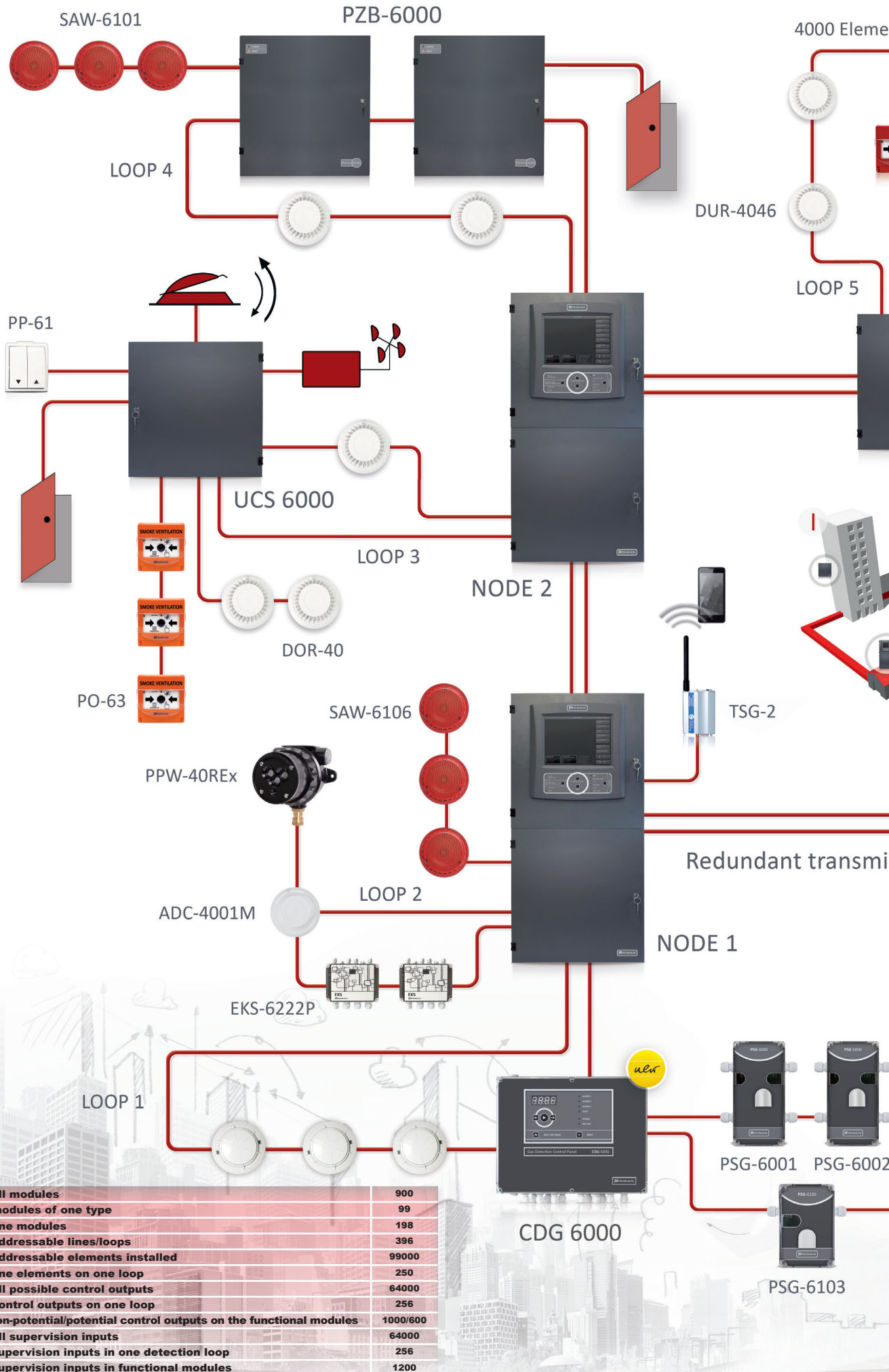
ASG-200x	from 9 to 30 V DC
ASG-200xHV	230 V ± 10% AC
Max current consumption	120 mA / 12 V; 60 mA / 24 V

### Type of the sensor:

ASG-2001/HV, ASG-2002/HV	solid-state
ASG-2003/HV	electromechanical
Sensor's lifetime	max 10 years
Number of alarm thresholds	3
Alarm relays' current load	3 A / 30 V DC, 3 A / 250 V AC
Operating temperature range	from -20°C to +50°C
Enclosure IP rate	IP 54
Dimensions	80x216x68 mm

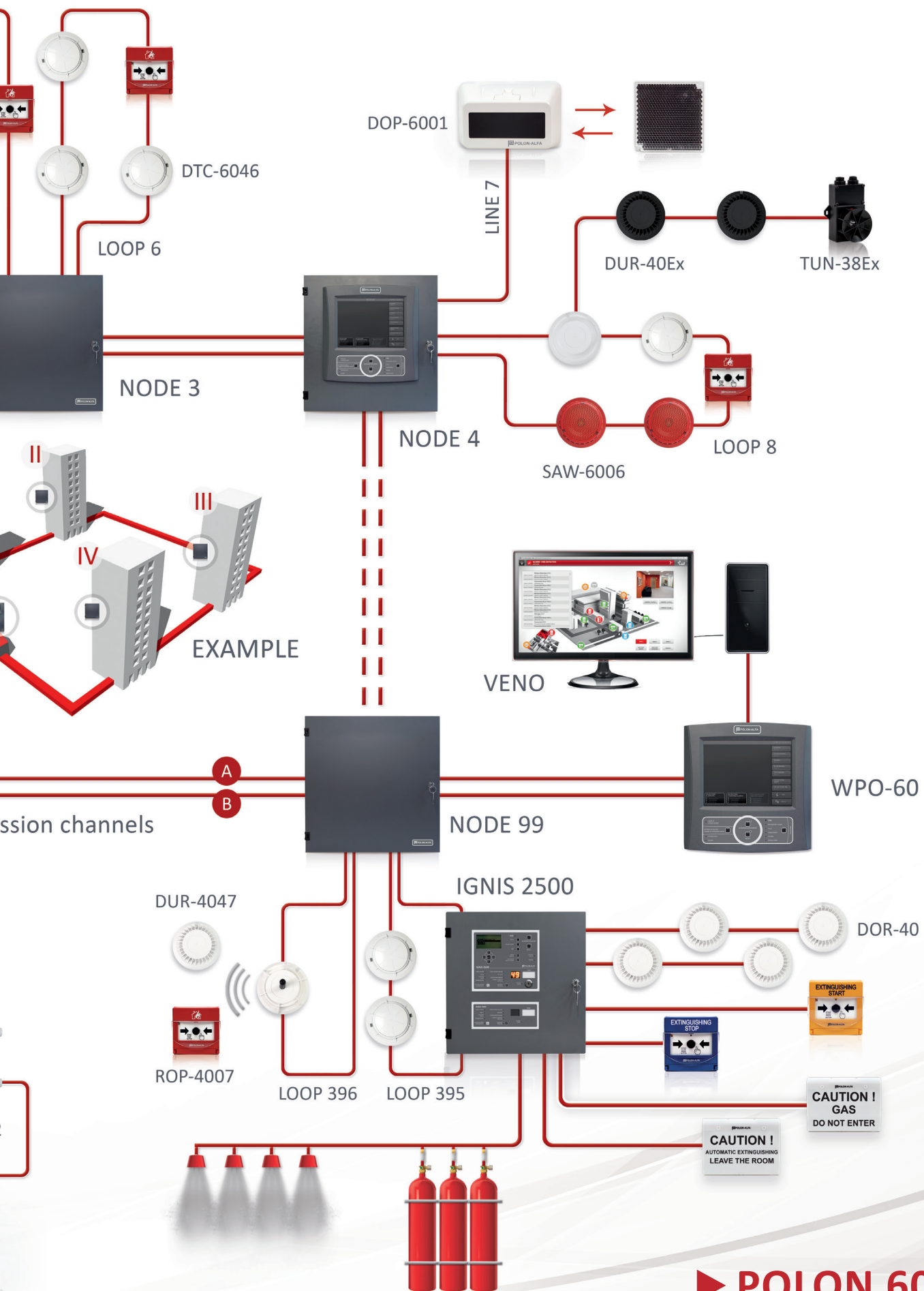
Autonomous detectors range ASG-2000 are available in the following variants:

Type of detector	Detected gas	External DC power
ASG-2001	CNG (natural gas)	9 to 30 V DC
ASG-2001HV	CNG (natural gas)	230 V AC
ASG-2002	LPG (propane-butane)	9 to 30 V DC
ASG-2002HV	LPG (propane-butane)	230 V AC
ASG-2003	CO (carbon monoxide)	9 to 30 V DC
ASG-2003HV	CO (carbon monoxide)	230 V AC



number of all modules	900
number of modules of one type	99
number of line modules	198
number of addressable lines/loops	396
number of addressable elements installed	99000
number of line elements on one loop	250
number of all possible control outputs	64000
number of control outputs on one loop	256
number of non-potential/potential control outputs on the functional modules	1000/600
number of all supervision inputs	64000
number of supervision inputs in one detection loop	256
number of supervision inputs in functional modules	1200

nts 6000 Elements



► **POLON 6000**

**DISTRIBUTED FIRE DETECTION AND ALARM SYSTEM**

[ INTERACTIVE ]

## INDISPENSABLE FOR MIDDLE-SIZE AND BIG FACILITIES

### FIRE ALARM SYSTEM POLON 4000



#### Overview

Interactive, addressable fire alarm system POLON 4000 is the set of devices, designed for detection and signalling of fire, informing the suitable intervention services and for control of fire-fighting protecting devices. It enables for fire protection of middle-size, big and very big buildings. It is perfectly suitable for application in safety and security systems of intelligent buildings, because it is able to deliver a lot of digital information to integration and supervision systems, as well as to fire monitoring systems. POLON 4000 system bases on the principle of intelligent co-operation between all elements creating the system. Applied original protocol of signals transmission in detector loops and suitable control panels' and line elements' software, allow for interactive co-operation of line elements with the control panel and line elements between them.

Information exchange feature between fire detectors, which gives very early information about events in the protected area, ensures automatic analysis of situation detected by the system. This process allows to distinguish the fire condition from false alarms. Fire alarm control panels POLON 4900 and POLON 4500 can work in a hierarchical network with ring structure. The max number of control panels working in network can be 31. This enables flexible design of protection system in very big or dispersed buildings. There is possibility of full information interchange between individual elements in the ring structure. One control panel can be chosen as superior (master) in relation to all remaining, subordinated (slave) and co-ordinate operation of the system.

High operation reliability of POLON 4000 system is guaranteed by doubled processors circuits of the control panels (redundancy). All line elements in POLON 4000 system have built-in short-circuit isolators. Setting of line elements addresses can be also made with program, without using micro switches. All information about element are placed in its non-volatile memory and are read-out by the control panel after installing element in a detector line. Due to application of radio detectors, POLON 4000 system can be installed in places, where using of detector lines made with wires is not possible. Elements of POLON 4000 system fulfil requirements of the latest editions of series EN 54 European Standards.

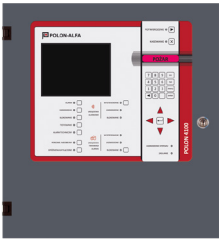
#### Design and functions

The POLON 4000 control panels can have equipment with 8 addressable loops, with possibility to address max 127 line elements in each loop. With this control panel can work over 1000 addressable elements. Network operation of 31 control panels increases this number to over 31 000 elements. Addressable detectors working with any control panel can be assigned to detection zone and named with user communicate that can consist with two lines of text with 32 characters in each. Moreover, there is possibility to program own communicates for, so called, technical alarms and unmaskable faults, that refers to supervising functions of different kind of sub-systems or safety devices that the control panel can provide. Large graphic displayer facilitates communication of the user with the control panel. One of 17 alarming variants for each detection zone can be selected with software. Different alarming variants, responding to different detection algorithms, allow for optimal utilisation of possibilities offering by the system for fire detection taking into account environmental conditions existing in individual facilities.

Due to advanced software, the control panel enables to create fire detection installation with flexible physical and logical structure. The POLON 4000 control panels can control of the signalling and fire protective devices using potential free relays' outputs, 24 V outputs and monitoring inputs. Apart from this, unlimited control possibilities give input/output module EKS-4001 and EWS-4001 control module with 8 outputs, which are installed in detection loop. Serial interfaces RS-232 and RS-422 make possible connection to the control panel of computer keyboard, bar code scanner identifying line elements, digital monitoring system, integration and installation supervising system.

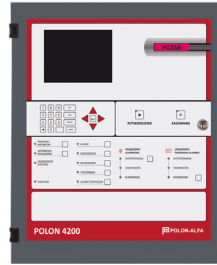
Memory records and stores 2000 of last events, which appeared during system operation. Register of these events can be printed out on a paper, in the order of date and time, by the built in thermal printer, or shown on the control panel display as well as downloaded to the computer. The POLON 4500 control panel is an extended version of the POLON 4900 control panel. The POLON 4500 control panel meets the requirements of both EN 54 and EN 12094-1 standards.

## ▶ FIRE ALARM CONTROL PANELS **POLON 4000**



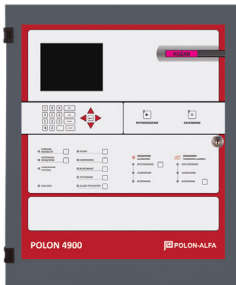
### ▶ **POLON 4100** fire alarm panel

- 2 loops with 64 addresses
- 3 supervised relay outputs
- 2 monitoring inputs
- supervised signalling line
- 240x320pix graphic display
- EN 54-2



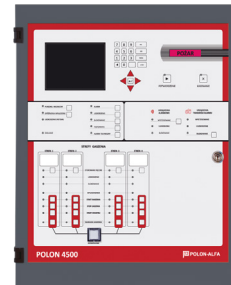
### ▶ **POLON 4200** fire alarm panel

- 4 loops with 64 addresses
- 8 supervised relay outputs
- 2 monitoring inputs
- 2 supervised signalling lines
- built-in printer
- 240x320pix graphic display
- EN 54-2



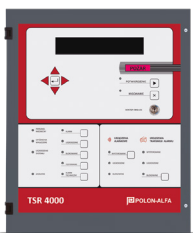
### ▶ **POLON 4900** fire alarm panel

- 4 loops with 127 addresses
- optional 4 loops card
- network operation - MSI-48 required (up to 31 panels)
- 16 supervised relay outputs
- 8 monitoring inputs
- 8 supervised signalling lines
- redundancy "on board"
- built-in printer
- 240x320pix graphic display
- EN 54-2



### ▶ **POLON 4500 - fire alarm** and extinguishing panel

- 4 loops with 127 addresses
- up to 4 extinguishing zones
- network operation - MSI-48 required (up to 31 panels)
- 16 supervised relay outputs
- 8 monitoring inputs
- 8 supervised signalling lines
- built-in printer
- 240x320pix graphic display
- EN 54-2, EN 12094-1



### ▶ **TSR 4000** remote operator panel

- up to 16 TSRs connected to one FACP
- relay output
- signalling line
- LCD display



### ▶ **Smoke detector** **DOR-4046**

- IR smoke sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator
- DOR-4043 for POLON 4100 and POLON 4200
- EN 54-5



### ▶ **Smoke detector** **DUR-4046**

- UV smoke sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator
- DUR-4043 for POLON 4100 and POLON 4200
- EN 54-5



### ▶ **Heat detector** **TUN-4046**

- heat sensor
- soft addressing
- programmable temp. classes: A1, A2, B, A2S, BS, A1R, A2R or BR
- low current consumption
- built-in short circuit isolator
- TUN-4043 for POLON 4100 and POLON 4200
- EN 54-7

## ► FIRE CONTROL PANEL **POLON 4000**



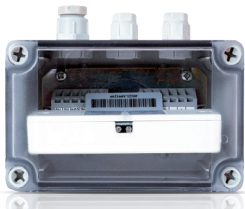
### ► Smoke and heat detector **DOT-4046**

- IR smoke sensor
- heat sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator
- EN 54-5, EN 54-7



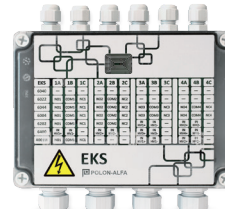
### ► Smoke and flame detector **DPR-4046**

- IR smoke sensor
- flame sensor
- soft addressing
- programmable parameters
- low current consumption
- automatic drift compensation
- built-in short circuit isolator



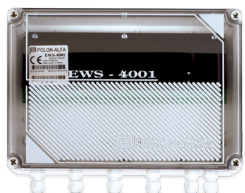
### ► I/O devices **EKS-4001**

- one relay output (2 A, 30 V)
- 2 monitoring inputs
- 3 types of enclosures
- IP67 protection
- built-in short circuit isolator
- EN 54-18, EN 54-17



### ► I/O devices **EKS-4001W**

- one relay output (2 A, 230 V, 60 W)
- 2 monitoring inputs
- integrated enclosure
- IP67 protection
- built-in short circuit isolator
- EN 54-18, EN 54-17



### ► Multi-output device **EWS-4001**

- eight relay output (2 A, 30 V)
- integrated enclosure
- IP67 protection
- built-in short circuit isolator
- EN 54-18



### ► Multi-input device **EWK-4001**

- eight monitoring inputs
- integrated enclosure
- IP67 protection
- built-in short circuit isolator
- EN 54-18



### ► Modbus RTU converter **CM-181**

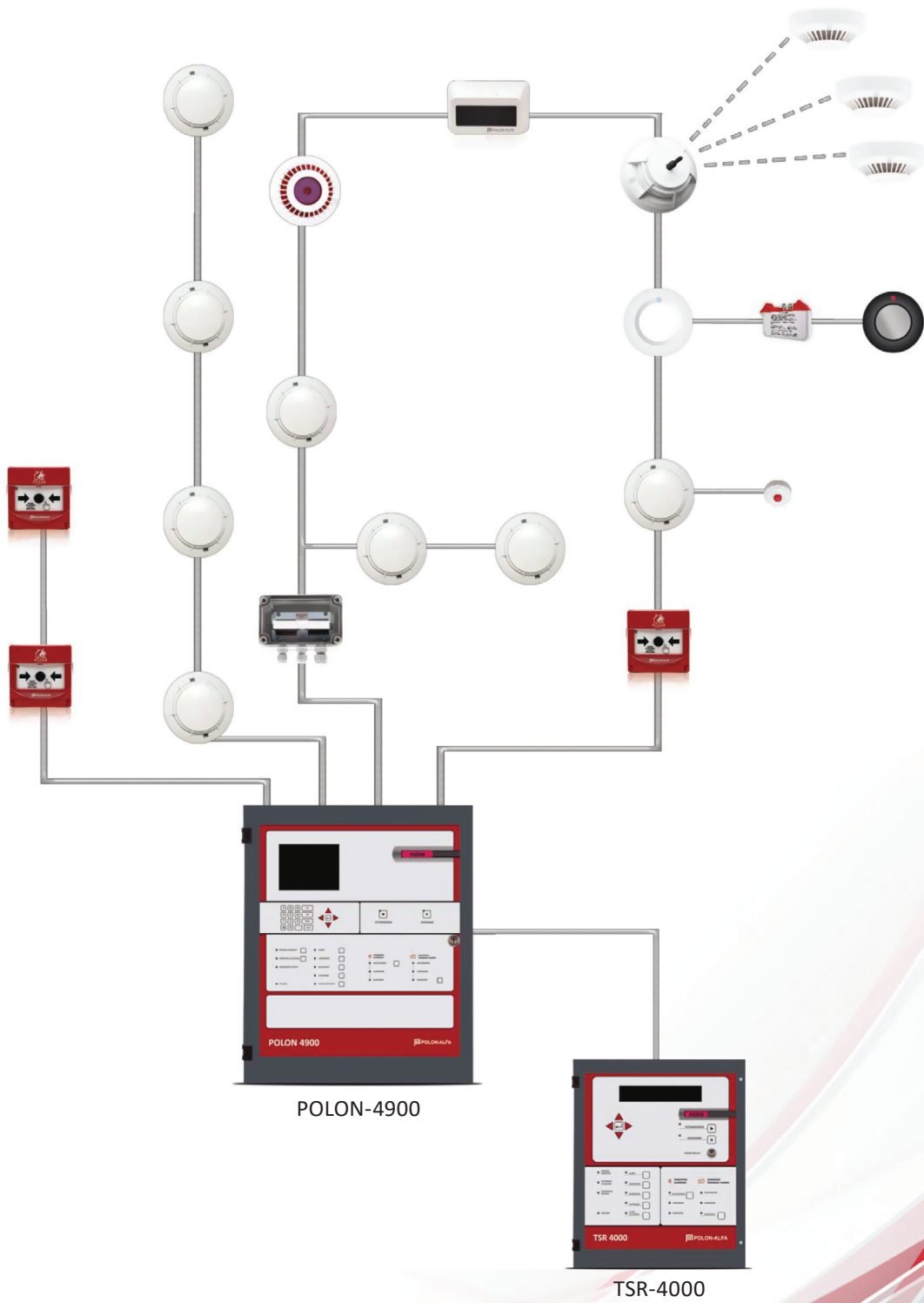
- PMC 4000 to Modbus converter
- integration and visualisation
- RS 232 and RS 485
- DIN rail installation



### ► BACnet MS/TP converter **CM-182**

- PMC 4000 to BACnet converter
- integration and visualisation
- RS 232 and RS 485
- DIN rail installation

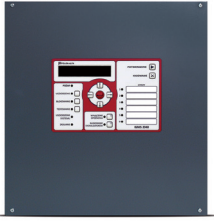
► FIRE CONTROL PANEL **POLON 4000**



**POLON 4000** SAMPLE DETECTION LINES

## ▶ CONVENTIONAL FIRE ALARM SYSTEM **IGNIS 1000** & **IGNIS 2000**

### ▶ **IGNIS 2040 - fire alarm panel**



- max 6 detection zones
- max 2 signalling lines
- fault relay
- alarm relay
- 6 zone relays
- EN 54-2

### ▶ **IGNIS 2500**



- one or two extinguishing zones (MSG-25 modules)
- MGS-25 module parameters:
  - 6 relays
  - 6 inputs
  - 4 potential outputs
  - 6 conventional detection lines
- optional module: MKS-60, MWS-60, MPK-60 (see page 3)
- optional MKA-25 module for communication with POLON 600 panel
- EN 54-2, EN 54-4, EN 12094-1

### ▶ **Smoke detector DOR-40**



- IR smoke sensor
- low current consumption
- automatic drift compensation
- EN 54-5

### ▶ **Smoke detector DUR-40**



- UV smoke sensor
- low current consumption
- automatic drift compensation
- EN 54-5

### ▶ **Heat detector TUP-40**



- heat sensor (A1R)
- low current consumption
- EN 54-7

### ▶ **Smoke and heat detector DOT-40**



- IR smoke sensor
- heat sensor (A1R)
- low current consumption
- automatic drift compensation
- EN 54-5, EN 54-7

### ▶ **Heat and flame detector TOP-40**



- heat sensor (A1R)
- flame sensor
- low current consumption

### ▶ **Manual call point ROP-63(H)**



- indoor and outdoor application
- flush mounting
- wall mounting with assembling frame
- EN 54-11 (type B)



## ▶ CONVENTIONAL FIRE ALARM SYSTEM **IGNIS 1000** & **IGNIS 2000**



### ▶ Remote alarm indicator **WZ-31**

- additional optical alarm notification
- small dimensions
- powered from the connected detector

### ▶ **START/STOP** extinguishing buttons **PU-61, PW-61**



- activation or stopping the extinguishing process
- works with IGNIS 1520M and POLON 4500
- flush mounting
- wall mounting with assembling frame
- EN 12094-3



### ▶ Warning devices **SE-1, SW-1**

- SE-1 evacuation warning device – inform about the need to leave extinguishing area
- SW-1 warning device – alerts to enter to the extinguishing area
- powered from the extinguishing panel
- built-in buzzer and flasher

### ▶ Intrinsically safe smoke detector **DUR-40Ex**



- UV smoke sensor
- low current consumption
- automatic drift compensation
- dedicated to the explosive zones
- II 2G Ex ib II C T6 Gb
- EN 54-5, ATEX



### ▶ Intrinsically safe heat detector **TUN-38Ex**

- programmable temp. classes: A1R, A1S, BR or BS
- no base required
- low current consumption
- dedicated to the explosive zones
- II 2G EEx ib IIC T5/T6
- IP54 protection
- EN 54-7, ATEX



### ▶ Intrinsically safe flame detector **PUO-35Ex**

- UV flame sensor
- low current consumption
- dedicated to the explosive zones
- II 2G EEx ib IIC T6
- requires G-33 base
- standard version available
- IP44 protection
- EN 54-10, ATEX



### ▶ Fireproof triple IR flame detector **PPW-40REx**

- flame detection based on three independent flame sensors
- unique self-test feature
- built-in event log
- fire and fault relays
- current loop output 4-20 mA
- RS-485 for digital communication and programming
- II 2G Ex ib II C T6 Gb
- II 1D Ex ta IIIC T85°C
- IP66 protection
- EN 54-10 (class 1) ATEX approved

### ▶ **GSM transmitter TSG-2**



- communication through GSM network
- connection through RS-232
- dedicated for POLON 4000 and POLON 6000
- 5 inputs
- configuration with the computer
- free programming

# ▶ UNIVERSAL BEAM SMOKE DETECTOR **DOP-6001R**



EN 54  
CERTIFIED



TRANSMITTER  
AND RECEIVER  
MOUNTED IN ONE HOUSING  
- SIGNIFICANT ECONOMY  
IN WIRING



ADJUSTABLE SENSITIVITY  
THRESHOLD LEVELS



ALARM AND  
FAULT RELAYS



LARGE COVERAGE  
AREA: 5-100 M  
OPERATION RANGE



EASY OPTICAL  
PATH ALIGNING WITH  
LASER POINTER



UNIQUELY SUITABLE  
FOR SMOKE DETECTING



OPERATES WITH ANY  
FIRE ALARM SYSTEM

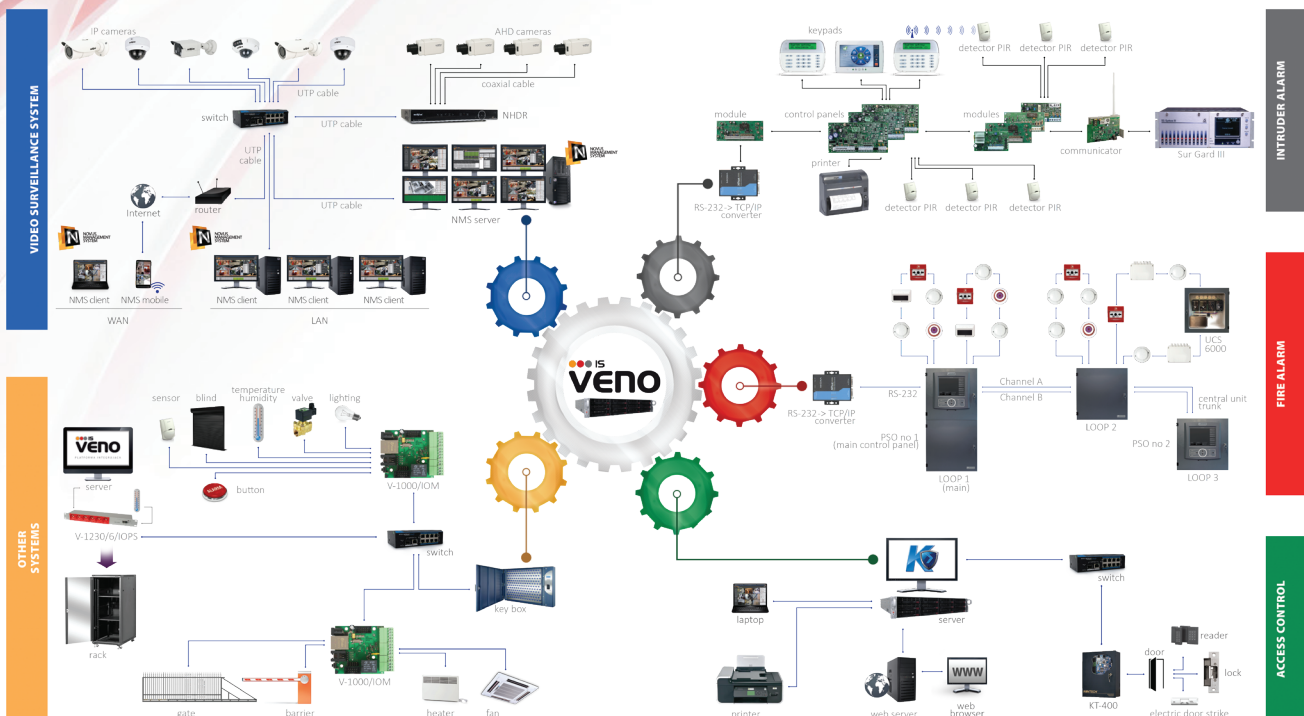


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## VENO SOFTWARE FOR INTEGRATION AND MONITORING

- ✓ Integrating Fire Alarm, CCTV, Access Control, Intruder Alarm and Environmental Control Systems
- ✓ Effective safety management in a facility
- ✓ One common interface for all systems
- ✓ Wide range of applications
- ✓ Separate panels for administrator and operator
- ✓ Comfortable operation on touch screen monitors
- ✓ Full stability
- ✓ Flexible configuration, non-standard functionalities
- ✓ Alarm notification
- ✓ Facility visualization
- ✓ Interactive device icons
- ✓ Voice messaging
- ✓ Advanced scenarios of system reactions to alarm events
- ✓ Pseudo-code function
- ✓ Schedule to execute scenarios
- ✓ Event log
- ✓ Alerts through client application, E-Mail or SMS





Advanced Solutions Engineering Company

طراحان نوین راهکار (سهامی خاص)

## TARRAHANE NOVIN RAHKAR (ASEC)

ASEC, established by a group of experienced engineers and managers with more than 20-years activity in the field of engineering and supply of high-quality systems for buildings and industrial sites.

The company specializes not only in the design and implementation of the Fire Alarm/ Extinguishing Systems (FAS/FES) based on the NFPA/EN standards, but also supplying projects' requirements via its large network of distributors all around the country. ELV and security systems including Video Surveillance System, Access Control System and... are engineered and realized by experts, at the scale of mid-range to large projects.

Special cables are supplied with application in Instrumentation and the Fire Protection Systems certified by international bodies such as LPCB, VDE, BASEC, ... with demands in buildings, industry and offshore projects as one other ASEC specialty with hundreds of successful references.

### Fire Protection Systems

- Fire Alarm Systems (Conventional/Addressable)
- Wireless Fire Alarm System
- Gas Detection System
- Special Cables Supply
- Approved Water Pump-sets
- Gas Suppression System
- Foam Extinguishing System

### Low-Current Systems

- Video Surveillance System
- Access Control System
- Public Alarm/Voice Evacuation System
- Intruder Alarm System
- Environmental Monitoring System
- ELV Integration System

 POLON-ALFA *FireAngel.* *TKable*



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