



# DIALOG-EX





Analog-addressable system is a modern automated system based on continuous measurement of the controlled parameters with sensors. All data from the detectors of this system type are transmitted to the control panel, where the change of situation at the facility is analyzed using special algorithms. The system is considered to be one of the most advanced and effective ones.

**DIALOG-EX FEATURES:**

- Fire outbreak place detection accuracy and local application fire suppression;
- Operability self-check of the whole system and identification of the cause of failures in case there is any;
- Survival in case of loop opening and short-circuit;
- Integrated circular loop for notification, annunciation and fire-extinguishing systems;
- Control of all functions via the fire alarm control panel;
- No need for operational check;
- Possibility to connect zero-address devices to the loop;
- Cost cut thanks to the use of modern technologies.

# DIALOG-EX ANALOG-ADDRESSABLE SYSTEM

## ADDRESSABLE DOES NOT MEAN ANALOG-ADDRESSABLE!

In non-addressable and addressable systems 'fire decision' is made by the detector itself and then it is transmitted to the fire alarm control panel. In analog-addressable systems values of the parameter (temperature, smoke content within the premises) monitored by the detector are transmitted to the FACP. The FACP constantly monitors ambient conditions in all the premises and on the basis of these data makes decision not only on generation of 'Fire' signal, but also on generation of 'Warning', 'Fault' and other signals. The 'decision' is made by the fire alarm control panel and not the detector.

The AAS constantly monitors ambient conditions in the premises promptly detecting start of temperature (or smoke content) change and sends a warning signal to the console. Therefore, the AAS provides early detection of fire. This means that fire can be easily extinguished thus minimizing possible losses for the facility. In analog-addressable devices offer a possibility to individually set not only 'Fire' and 'Warning' signal generation levels for each detector but also to define algorithms of their combined operation. This means that the AAS can create an optimal fire alarm system at a facility because it allows creating early fire detection system in the most appropriate way for each facility taking into consideration its individual features.

### DIALOG-EX - ANALOG-ADDRESSABLE SYSTEM FOR EXPLOSIVE AREAS.

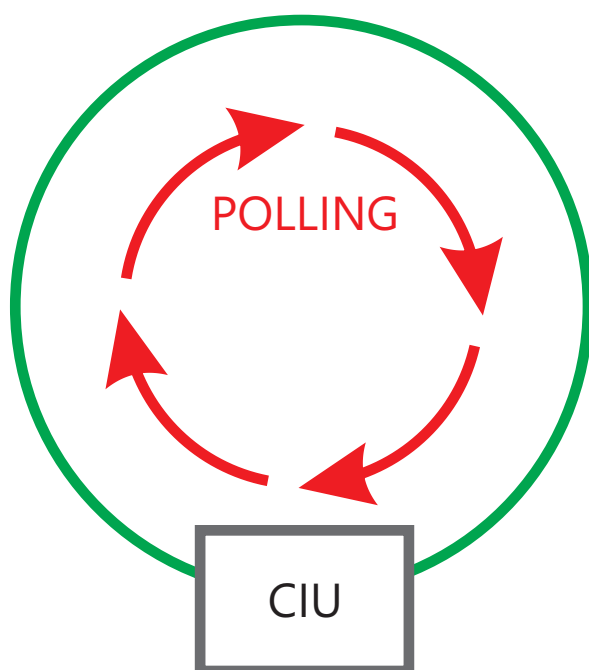
**DETERMINATION OF EXACT LOCATION OF FAILURE AREA OR FIRE OUTBREAK.** During polling, the fire alarm control panel reads in unique sequential numbers of all devices in the loop, thanks to which the operator always knows the exact place of the event in the periphery (loop opening, short-circuiting, failure of any of the devices or fire outbreak).

Number of devices in the loop: up to 225 (systems may as well be extended by installing additional fire alarm control panels DOZOR-1A). This allows considerable cost reduction during installation of the system and use of detectors powered by the loop reduces costs for laying new lines of alarm system by half as a minimum. In accordance with the safety requirements, where installation of two detectors is necessary in case of non-addressable loop, in addressable loop one analog-addressable detector is enough. Besides, use of different address marks provides possibility to use a wide range of non-addressable devices and to control and monitor operation of the facility's automatic fire fighting and engineering systems of any complexity level by simply updating and building up the existing explosive area safety system to up to 128 addressable loops and more.

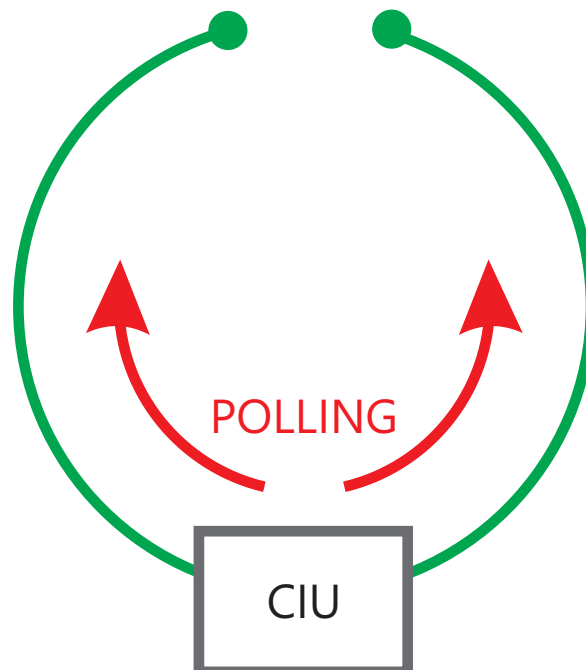
**DETECTOR PERFORMANCE MONITORING (SYSTEM NO. 1 SURVIVABILITY).** In Dialog-Ex AAS there cannot be any faulty detector not detected by the FACP. By way of data exchange with each device in sequence, the device conducts polling via Dozor-07a protocol every 3 seconds. As a result of each device polling, new information on the status of each location of addressable detectors and external devices and their condition is generated, thus providing continuous monitoring of the facility and system elements.

**CIRCULAR LOOP (SYSTEM NO. 2 SURVIVABILITY).** Use of circular alarm loop architecture allows normal operation of Dialog-Ex in case of short-circuit or loop opening with precise detection of exact failure place and address. At the same time, the system is divided into two radial loops without losing their functionality.

## CIRCULAR LOOP



## TWO RADIAL LOOPS



**SYSTEM EFFICIENCY.** Dialog-Ex allows not only detecting the place of possible fire outbreak but also it provides for timely activation of the alert system plotting routes of evacuation of people during early stages of fire outbreak, launch of automatic fire suppression system at the fire outbreak site.

**SYSTEM PROGRAMMING.** Possibility to change sensitivity of the sensors depending on the ambient or operating conditions.

**ZERO MAINTENANCE COSTS.** Continuous self-checking makes system maintenance and (which is important) system functionality routine tests unnecessary.

**INTEGRATION OF ZERO-ADDRESS DEVICES IN DIALOG-EX SYSTEM.** Zero-address devices can be easily integrated into the system. It is done by means of installation of corresponding address marks. However, this does not grant these devices the analog function.

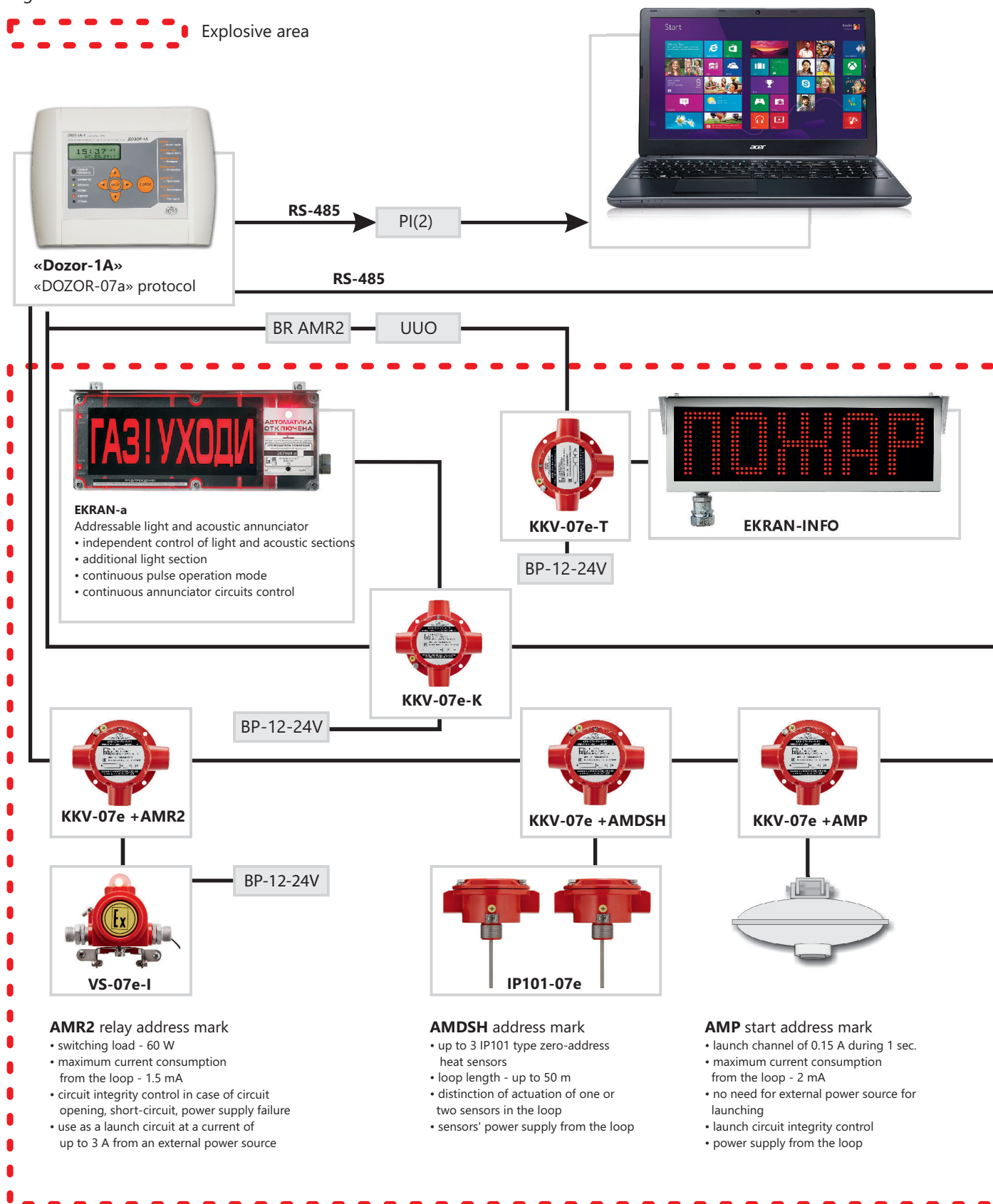
**INTERGRATION OF DIALOG-EX INTO GLOBAL SECURITY SYSTEMS OF AN ENTERPRISE.** Dialog-Ex AAS on the basis of Dozor 1A device provides possibility of integration into 'top-level' security systems such as 'Intellect' and 'Eselta'.

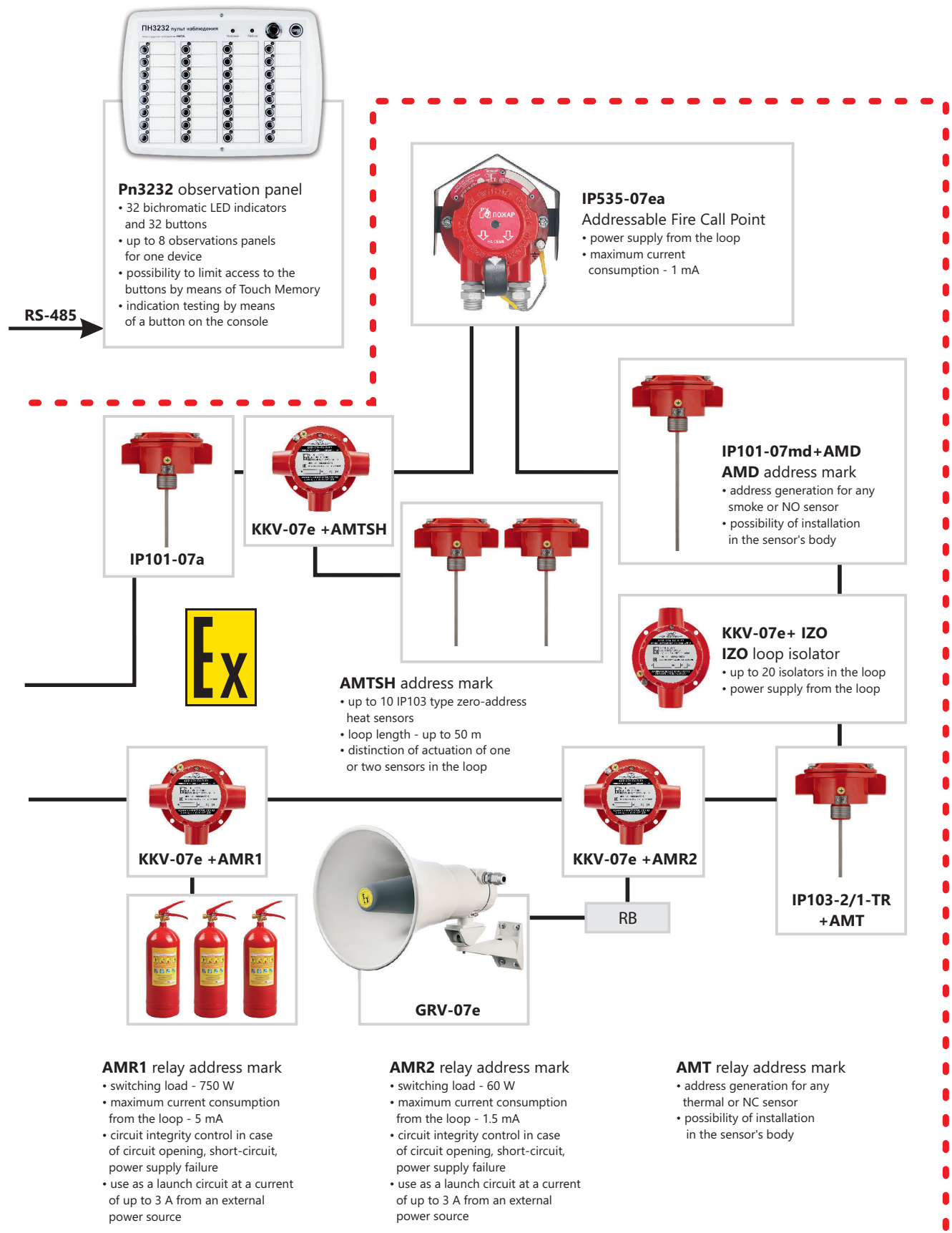
# DIALOG-EX ANALOG-ADDRESSABLE SYSTEM

## DIALOG-EX - ANALOG-ADDRESSABLE FIRE ALARM SYSTEM FOR EXPLOSIVE AREAS

Legend:

 Explosive area



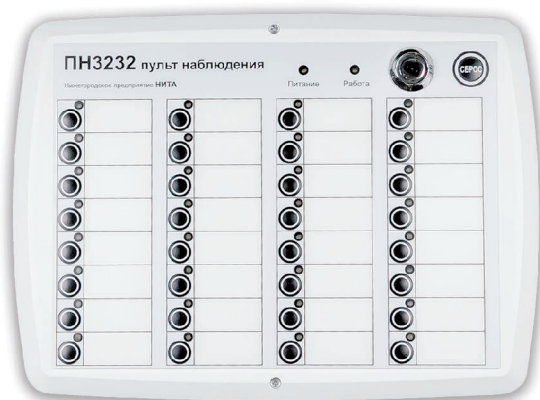




## Pn3232

### Observation panel

The PN3232 observation panel is a microprocessor device designed for displaying information on bichromatic LED indicators and controlling the system by means of the buttons.



### TECHNICAL DATA:

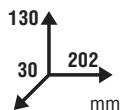
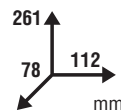
Ingress protection rating	IP30
Operating temperature range, °C	-10...50
Maximum current consumption from power supply source, A	0,15
External power supply source voltage, V	10,5...14
Max. overall dimensions, mm	300*220*15
Body material	PLASTIC
Light indication	Yes
Number of bichromatic LED indicators, pcs.	32
Indicator colores	Green, red
Number of Touch Memory keys providing access to control from the keyboard, pcs.	4
Number of controls (buttons), pcs.	32
Communication channel with the central FACP-1A unit	RS-485
Detector installation mode	By means of the mounting hole to the surface
Number of PN3232 consoles that can be connected to one FACP-1A, pcs.	8
Max. weight, kg	0,3
Lifetime, min., years	10
Warranty period, years	3

## Dozor-1A



### Addressable Security, Fire Alarm and Control Panel with Dozor-07a Protocol

DOZOR-1A addressable security, fire alarm and control panel is designed for creating an effective security and fire alarm system as well as for full-service control of smoke extraction, ventilation, fire alarm, processing equipment and fire extinguishing of all types (gas, powder, aerosol, water and foam) at small facilities of different assignment both in off line mode and in combination with central surveillance panels and fire alarm control panels.



## TECHNICAL DATA:

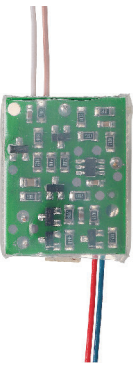


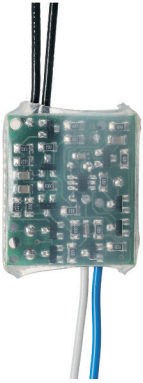


Ingress protection rating	IP30
Operating temperature range, °C	-10...50
Adjustment of addressable devices at the installation site	Possibility to change sensitivity of the sensors depending of the operating conditions
Supported protocol	Doror-07a
Maximum current consumption from power supply source	- without external devices: 230.0 mA - at the maximum load: 2.0 A
Maximum current consumption of addressable devices from addressable loop, max., mA	280
Supply voltage, V	10,5...14
Addressable loop voltage (at FACP-1A output), V	28...38
Addressable loop resistance (at maximum load), max., Ohm	33
Body material	Plastic with LED indicator and control buttons
Max. overall dimensions, mm	202*130*30
Light indication	Yes
Number of circular addressable loops	1
Maximum number of addressable devices in addressable loop, pcs.	255
Number of Dozor series devices integrated into one network	128
Number of recorded events	4000
Detector installation mode	By means of the mounting hole to the surface
Addressable devices operability check	<ul style="list-style-type: none"> <li>- Continuous cyclic polling of addressable devices in the system</li> <li>- Full status monitoring for each addressable device</li> <li>- Continuous control of circuit opening and short-circuiting</li> <li>- Out-of-sequence detection of devices that switched into the activation mode</li> </ul>
Available packages	<p>FACP-1A-1 (Dozor-07a protocol) -Central unit with an indicator and a keyboard on the device body.</p> <p>FACP-1A-2 (Doror-07a protocol) -Central unit WITHOUT indicator and keyboard on the device body.</p> <p>PI1: connection of one or a group of Dozor-1A devices to PC in order to work with the software. PI2: Connection between the PC and a group of DOZOR series devices for creation of integrated systems as well as for working with software</p>
Max. weight, kg	1,0
Warranty period, years	3
Lifetime, min., years	10







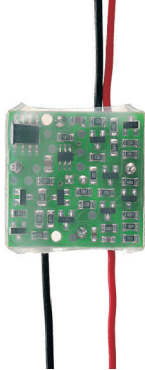


## ADDRESS MARKS



The address mark is a microprocessor device intended for generation of address of one thermal or any contact sensor with normally-closed or normally-opened contacts. Application of address marks allows efficient transformation of a conventional threshold detector into an addressable one.

<p>AMT address mark (NC contacts)</p>		<p>The AMT address mark is intended for generation of address of one thermal or any contact sensor with normally-closed contacts. The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. Application of the AMT allows efficient transformation of a conventional threshold detector into an addressable one. The detector acquires then its own unique address in the system. This provides precise determination of its location when it is actuated. The AMT is a small-size mark and it can be easily installed inside the body of many detectors and explosion-proof switch-boxes KKV-07e. Thanks to that, it can be mounted easily and will become unnoticeable after its installation is complete providing convenience and nice appearance. In addition, cost saving during installation due to reduction of the number of connecting wires and use of cheap sensors may result quite significant as well.</p>
<p>AMD address mark (NO contacts)</p>		<p>The AMD address mark is intended for generation of address of smoke or any contact sensor with normally-open contacts. The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. Application of the AMD allows efficient transformation of conventional, threshold detectors, for example, smoke and flame detectors and call points as well as any other sensors with NO dry contacts into addressable ones. In this case the detector acquired its own unique address in the system.</p> <p>This provides precise determination of its location when it is actuated. The AMD is a small-size mark and it can be installed inside the body of many detectors, for example, smoke detectors or call points and explosion-proof switch-boxes KKV-07e.</p>
<p>AMTSH loop address mark (NC contacts)</p> 		<p>The AMTSH address mark is intended for generation of threshold-oriented alarm loop (AL) for thermal or any other contact sensors with normally-closed contacts. The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. Application of the AMTSH allows formation of threshold-oriented alarm loops for conventional, cheap detectors, for example, thermal detectors, call points, and SMK as well as any other sensors with NC dry contacts. In this case the alarm loop acquires its own unique address in the system and is controlled by the address mark. This provides precise determination of the loop's location in case of actuation or failure. As a matter of practice, the AMTSH is often installed before the premise into which the threshold-oriented loop is brought in. Other options of the address mark application are possible as well.</p>
<p>AMTSH loop address mark (NO contacts)</p> 		<p>The AMDSH address mark is intended for formation of threshold-oriented alarm loop for smoke or any other contact sensors with normally-open contacts. The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. The address mark provides power supply of power consuming sensors. Application of the AMDSH allows formation of threshold-oriented alarm loops for conventional, cheap detectors, for example, smoke, flame detectors and call points (as well as arbitrarily NO dry contacts). In this case, the loop acquires its own unique address in the system and is controlled by the address mark. This provides precise determination of its location when it is actuated. Actuation of formed threshold-oriented alarm loop is possible both by one and two sensors. As a matter of practice, the AMDSH is often installed before the premise into which the threshold-oriented loop is brought in. Other options of the address mark application are possible as well.</p>

<p>AMR1 Heavy-Current Relay Address Mark</p> 		<p>The relay address mark is a microprocessor device with controlled circuit integrity control as per current requirements of the 'Technical Regulations on Fire Safety Requirements' (TRoFSR). The mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. On the one hand, the address mark constantly transfers to the FACP-1A information on its status and on the other hand receives commands to connect and disconnect load from the FACP-1A.</p> <p>The address mark AMR1 is designed for controlling by means of the external load via the relay bridging contacts fire and smoke dampers, production equipment and launching fire-extinguishing modules.</p>
<p>AMR2 Low Consumption Relay Address Mark</p> 		<p>The address mark AMR2 is designed to control the external load via the relay bridging contacts with controlled circuit integrity control as per current requirements of the 'Technical Regulations on Fire Safety Requirements' (TRoFSR). The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected. On the one hand, the address mark constantly transfers to the FACP-1A information on its status and on the other hand receives commands to connect and disconnect load from the FACP-1A. When receiving an activation command, the AMR2 mark not only is able to connect the load but also to work in flashing mode at 1 Hz frequency. The flashing mode in activated mode is often used when various light and acoustic annunciators are connected to the mark.</p> <p>As a matter of practice, the AMR2 is usually used for controlling various annunciators, valves and dumpers (fire, smoke dumpers, etc.), production equipment and for launching (gas, powder, aerosol) fire-extinguishing modules.</p>
<p>AMP Start Address Mark</p>		<p>The AMP start address mark is designed for generation of current pulse in order to activate fire-extinguishing modules or other equipment. It is provided with start circuit integrity control as per current requirements of the 'Technical Regulations on Fire Safety Requirements' (TRoFSR). The address mark is connected to the addressable loop formed by the FACP-1A through which data transfer and power supply is effected.</p> <p>As a matter of practice, the AMP is used for launching of various fire-extinguishing modules, activated by destruction of a pyrotechnic squib. Usually, these are powder fire-extinguishing modules.</p>
<p>IZO Addressable Loop Isolator</p> 		<p>The addressable loop isolator IZO is designed for isolating of a portion of the loop in case of short-circuiting. The isolator is connected to the addressable loop formed by a FACP-1A, and it is an independent device that is only fed from the loop. It is activated by the loop disruption.</p> <p>On a practical level, presence of various IZO's in one addressable loop allows a more precise localization of the damaged portion maintaining operability of the rest of the addressable devices.</p>

# DIALOG-EX ANALOG-ADDRESSABLE SYSTEM

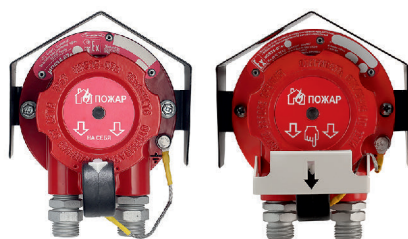
## ADDRESSABLE EQUIPMENT:



### IP101-07a

#### Explosion-Proof Addressable Programmable Heat Fire Detector

It is designed for detection of any inflamation followed by temperature rising within the monitored area and for transferring to a receiving and controlling instrument of the current temperature value, as well as for detection of fire signs in case the ambient temperature exceeds the preset threshold and/or the temperature growth rate. It is designed for operation only as part of addressable loop of devices with support of Dozor-07a protocol.

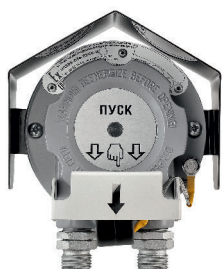


### IP535-07ea (A, B)

#### Explosion-Proof Addressable Fire Call Point

It is used for manual generation of fire alarm signal in explosive areas; it is designed for sending an alarm message to the fire alarm loop when the driving element is pulled out.

It is designed for application only as part of addressable loop of instruments supporting the Dozor-07a protocol



### IP535-07ea-START

#### Addressable explosion-proof remote start-up device

It is designed for launching the executive mechanisms of fire-fighting, smoke removal systems, etc., for application only as part of addressable loop of instruments supporting the Dozor-07a protocol



### IPP-07ea-330-1

#### Explosion-Proof Addressable Flame Fire Detector Gelios - 3 IK

Multirange flame detector for detection of ignition of various substances based on electromagnetic radiation of flame in IR band (three infrared sensors are available). The detector is designed for application only as part of addressable loop of instruments supporting the Dozor-07a protocol



### IPP-07ea-329/330-1

#### Explosion-proof addressable flame fire detector Gelios - IK/UF

Multirange flame detector for detection of ignition of various substances based on electromagnetic radiation of flame in UV and IR bands (ultraviolet and infrared sensors are available). The detector is designed for application only as part of addressable loop of instruments supporting the Dozor-07a protocol

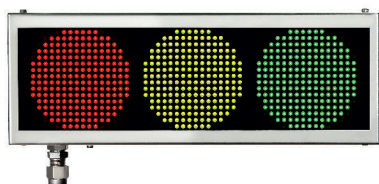
## ADDRESSABLE EQUIPMENT:



### EKRAN-a (KKV)

#### Explosion-proof addressable fire annunciator

It is designed to be used as a light or light and acoustic means of notification and information indicator; it provides light or acoustic signal in explosive areas. It is designed for operation only as part of addressable loop of devices with support of Dozor-07a protocol

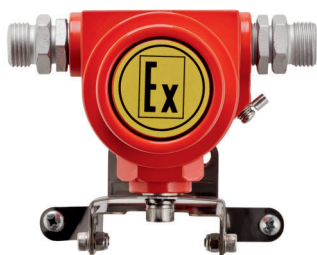


### EKRAN-INFO-RGB-a

#### Multi-Color Explosion-Proof Addressable Fire Annunciator

The annunciator is designed to be used in explosive environments as a light, acoustic or combined means of notification, information indicator and panel; it provides signals in fire and security alarm systems operating in combination with FACP Dozor-1A via the Dozor-07a protocol.

The annunciator can be used for indication of equipment operation modes and for alerting the personnel in case of emergencies or other situations. It can be used as an all-purpose illuminated information panel with capability of remote control. The annunciator provides multi-colored imaging (7 colors) - red, pink, yellow, green, sky-blue, blue, white



### VS-07e-a-Ex-Z

#### Explosion-proof acoustic addressable fire annunciator (siren)

The annunciator is designed for generation of acoustic signals in fire and security alarm systems, in joint operation with any fire alarm control units.

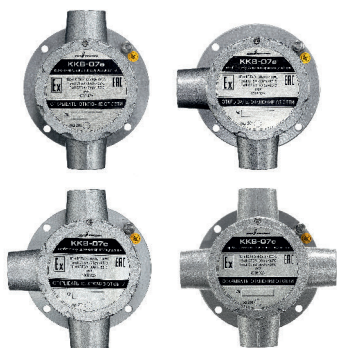
The annunciator is designed for operation only as part of addressable loop of devices with support of the Dozor-07a protocol.



### VS-07e-a-Ex-ZI

#### Explosion-proof acoustic addressable fire annunciator with indication

It is designed for generation of acoustic signals with indication (light and acoustic) in fire and security alarm systems, in joint operation with any fire alarm control units. The annunciator is designed for operation only as part of addressable loop of devices with support of the Dozor-07a protocol.



### KKV-07e-Ex-A-R1-U/P/T/K

#### R1 frame size explosion-proof aluminum switch-box with a transition board for installation of address marks.

The explosion-proof boxes KKV-07e-A with transition board is designed for installation of address marks as well as for connection and branching of general and special purpose electrical circuits (control and power cables of automatic and telemechanics systems, control and alarm circuits, etc.) in explosive areas.