

2014



**INTRUSION ALARM
SYSTEMS**



**ACCESS CONTROL
SYSTEMS**



**FIRE ALARM
SYSTEMS**



**FIRE SUPPRESSION
SYSTEMS**



**VOICE ANNOUNCEMENT
SYSTEMS**



**SECURITY
MANAGEMENT
SYSTEMS**



**POWER
SUPPLIES**



CONTENTS

ABOUT THE COMPANY	4
CASE STUDIES	5
INTRUSION ALARM SYSTEMS.....	7
ACCESS CONTROL SYSTEMS	16
FIRE ALARM SYSTEMS	18
FIRE SUPPRESSION SYSTEMS	23
VOICE ANNOUNCEMENT SYSTEMS	26
SECURITY MANAGEMENT SYSTEMS	27
POWER SUPPLIES	29



Have a good reading



THE BOLID COMPANY

offers hardware and software platforms for comprehensive security systems of buildings and facilities

Why Do Customers Prefer Our Products?

Integrated security solutions from the Bolid Company are:

1

Cost Effective

The concept of creating security systems as the integration of individual functional modules allows only necessary equipment to be included in designs and projects

2

Reliable

The basis of the reliability is the continuous monitoring of all modules and connected detectors as well as their capability for standalone operations in case of communication failures. All modules are housed in plastic enclosures with tamper alarms

3

Easy to Use

This modular system is highly flexible to meet the size and requirements of your project or site. All modules are networked via RS-485 interface and can be installed anywhere in the premises. Easy programming allows you to configure the system quickly and faultlessly

ABOUT THE COMPANY

The Bolid innovation and research enterprise has been operating on the security system market since 1991.

It is now one of this sector's leading companies. We develop, manufacture, and deliver the hardware and software required to set up fire and security alarm systems, automatic fire fighting systems, access control, video surveillance and building management systems, and GPS/GLONASS vehicle location/tracking services. Providing the market with high quality and reliable products, the Bolid Company helps people to protect their life and property.

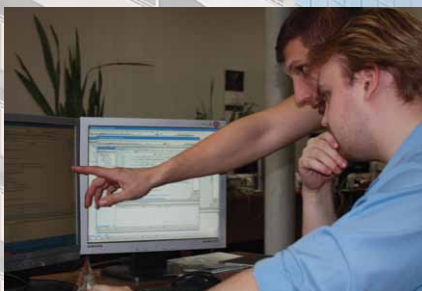
The state-of-the-art production process built on the unique equipment of world-renowned companies allows the products to meet international standards and the requirements of ISO 9001:2008.



Our products have won numerous awards and diplomas at such major international exhibitions as MIPS, Security Technologies, Hi-Tech House & Building, SFITEX, and other events.

The Bolid Company operates a developed chain of dealerships in Russia and CIS and is going to enter the international market.

We offer a lot of high quality and affordable equipment and software required to solve the full range of security tasks. It is the approach including using of low-cost components, modular design of the system, a single hardware interface, and the standardized communication protocols between devices that allows the Bolid Company to dominate security markets of Russia, Belarus, Kazakhstan, and Armenia.



CASE STUDIES



The analog addressable fire alarm system and intrusion alarm system for Auchan hypermarkets in Russia, one of the largest international retail chains



The analog addressable fire alarm system and intrusion alarm system for a group of administrative buildings of Moscow Domodedovo Airport



The analog addressable fire alarm system, intrusion alarm system, and access control system for Kutuzoff Tower in Moscow, a class "A" prestigious business center



The analog addressable fire alarm system and intrusion alarm system for Crocus Expo in Moscow, one of the largest and most promising exhibition venues in the world



The analog addressable fire alarm system, fixed gaseous extinguishing system, fixed water extinguishing system, access control system for Bauman Moscow State Technical University, the first and one of the largest technical universities in Russia, scientific center and particularly valuable object of cultural heritage of the peoples of Russia



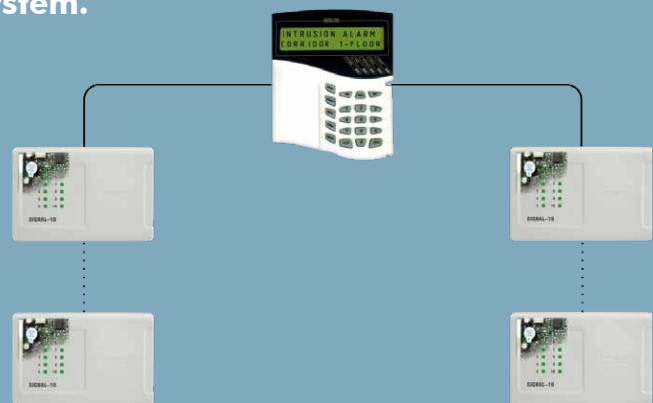
The analog addressable fire alarm and extinguishing system and intrusion alarm system for Stan 5000 of Magnitogorsk Metallurgical Combine, one of the largest Russia plants equipped with a state-of-the-art sheet-rolling shop

The hardware platform of Fire and Intrusion Alarm Systems are control panels designed on the approach of decentralizing and integrating local modules of different functionalities: control devices, addressable and non-addressable loop modules, relay modules, input/output modules and indicating modules.

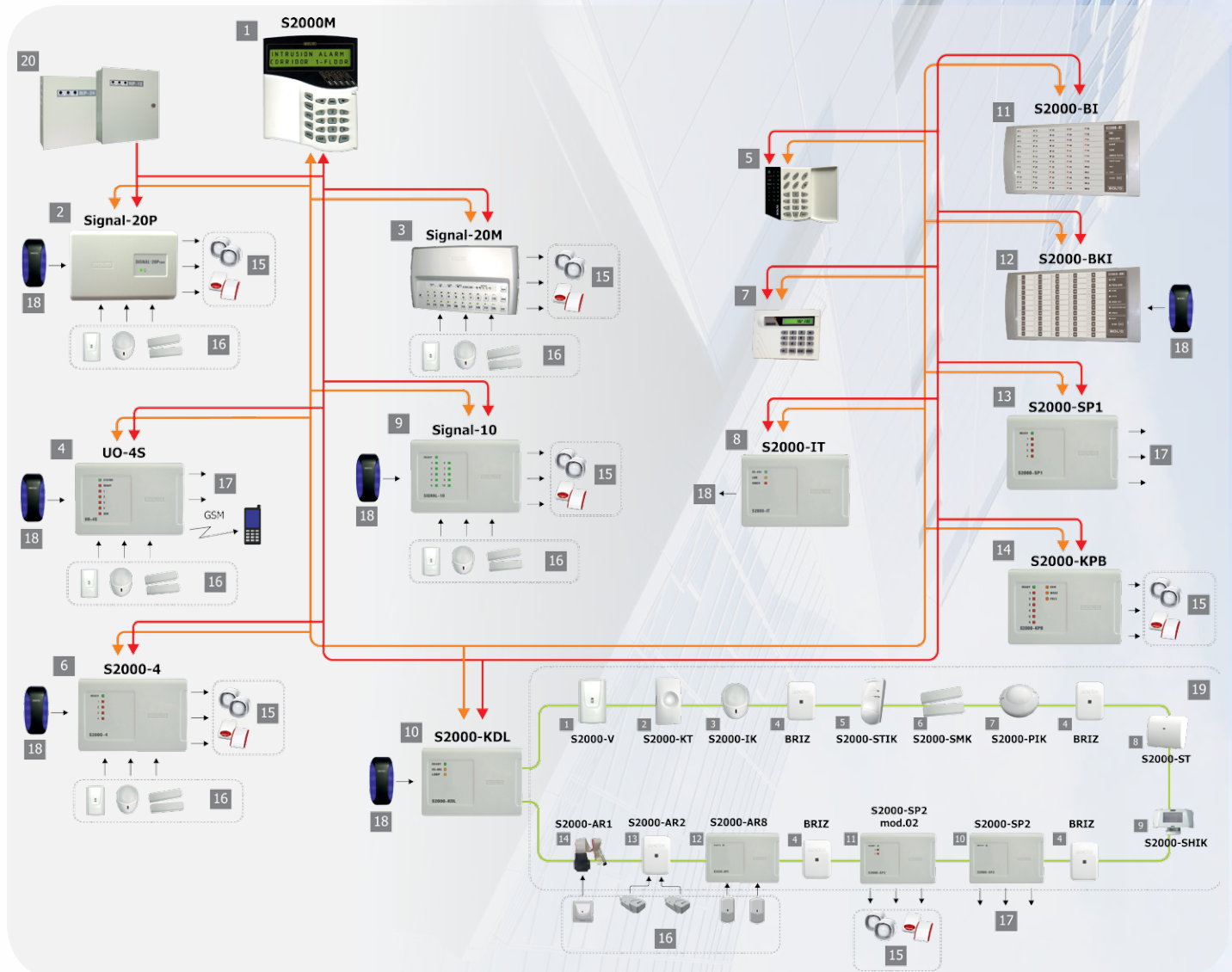
The same approach is used for the creation of a networked access control system.

Fire alarm systems are integrated with extinguishing agent release systems and voice announcement devices.

The software platform provides all the systems with a single info sphere and allows creating a single security management system.



INTRUSION ALARM SYSTEMS



Distributed Modular Intrusion Alarm Panel

- | | | |
|--|---|----------------------------------|
| 1. Control Console | 14. Executive Module | 19.8 Glass Break Detector |
| 2. Alarm Loop Module | 15. Light and Sound Alarms | 19.9 Curtain PIR Motion Detector |
| 3. Alarm Loop Module with Local Arming/Disarming | 16. Conventional Intrusion Detectors | 19.10 Relay Module |
| 4. GSM Notification Module | 17. Alarm Transferring | 19.11 Executive Relay Module |
| 5. Keypad with LED Indication | 18. Proximity Card or iButton Reader | 19.12 Eight-Input Module |
| 6. Alarm Loop Module | 19. Addressable Devices | 19.13 Double-Input Module |
| 7. Keypad with LCD-Display | 19.1 Shock Detector | 19.14 Single-Input Module |
| 8. Telephone Alarm Communicator | 19.2 Panic Button | 20. Power Supplies |
| 9. Alarm Loop Module | 19.3 PIR Motion Detector | |
| 10. Analog Addressable Loop Module | 19.4 Short Circuit Isolator | |
| 11. Indicator Module | 19.5 Combined Motion and Glass Break Detector | |
| 12. Control and Indicator Module | 19.6 Magnetic Contact | |
| 13. Relay Module | 19.7 Ceiling-Mount Motion Detector | |

All modules integrated in the intrusion alarm control panel are combined by the RS-485 information interface bus. The number and types of modules are selected depending on the intrusion alarm system requirements. The modules are able to operate various detectors including addressable intrusion detectors manufactured by the Bolid Company.

PANEL COMPONENTS

A distributed modular panel:

- Can comprise up to 127 addressable modules
- Features a rational distribution of the modules over the premises
- Supports up to 2048 zones
- Supports up to 256 outputs
- Supports up to 511 zone groups



S2000M / CONTROL CONSOLE

- Centralized control of addressable modules
- LCD
- Receiving modules' messages via the RS-485 interface bus
- Connecting a printer to print events
- Button keypad
- Security passwords



S2000-KS / KEYPAD WITH LED INDICATION

- Controls a group of zones or zones individually
- LEDs for indicating statuses of zones/zone groups
- Button keypad
- Security passwords
- Receiving messages from the control console via the RS-485 interface bus
- Audible alarms
- Operates under S2000M Control Console or standalone



S2000-K / KEYPAD

- Controls a group of zones
- Green backlit LCD
- Button keypad
- Security passwords
- Receiving messages from the control console via the RS-485 interface bus
- Displaying messages for a group of zones
- Audible alarms
- Operates only with S2000M Control Console



SIGNAL-10 / ALARM LOOP MODULE

- Operates under S2000M Control Console or standalone
- Ten alarm loops
- Alarm Loop Types: Intrusion, Intrusion with Tamper Monitoring, Entrance, Panic
- Can be controlled from a reader, the control console, or keypad
- Four outputs including two dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10.2 V to 28.4 V



SIGNAL-20P / ALARM LOOP MODULE

- Operates only under S2000M Control Console
- Twenty alarm loops
- Alarm Loop Types: Intrusion, Intrusion with Tamper Monitoring, Entrance, Panic
- Can be controlled from a reader, the control console, or keypad
- Five outputs including three dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10.2 V to 28 V



SIGNAL-20M / ALARM LOOP MODULE

- Operates under S2000M Control Console or standalone
- Twenty alarm loop modules
- Alarm Loop Types: Intrusion, Intrusion with Tamper Monitoring, Entrance, Panic
- Can be controlled by its own buttons or from the control console or keypad
- Five outputs including three dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power supplies (primary and backup)
- Input voltage: 10.2 V to 28 V



S2000-4 / ALARM LOOP MODULE

- Operates under S2000M Control Console or standalone
- Four alarm loops
- Alarm Loop Types: Intrusion, Intrusion with Tamper Monitoring, Entrance, Panic
- Can be controlled from a reader, the control console, or keypad
- Four outputs including two dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10.2 V to 28.4 V



S2000-KPB / EXECUTIVE MODULE

- Operates under S2000M Control Console
- Six executive outputs
- Maximum commuting current: 2 A
- Commuting output voltage from module's power supply
- Maximum circuit failure monitoring current: 1.5 mA
- Input voltage: 12 V to 24 V
- Monitoring executive device circuits for open/short circuit failures
- Blocking executive device actuation in case of module's breakdown
- Tamper switch



S2000-SP1 / EXECUTIVE RELAY MODULE

- Operates under S2000M Control Console
- Four dry contact outputs
- Input voltage: 10 V to 28 V



S2000-BI / INDICATOR MODULE

- Operated by the control console
- Input power: 10.2 V to 28.0 V
- Indicates the statuses of the 60 protection zones
- Indicates system events using 8 LEDs



S2000-BKI / CONTROL AND INDICATOR MODULE

- Operated by the control console
- Input voltage: 10.2 V to 28.0 V
- Indicates the statuses of the 60 protection zones
- Indicates system events using 8 LEDs
- Arms and disarms 60 protection zones
- Reader input to control zone groups



UO-4S / GSM 4-ZONE ALARM MODULE

- Four alarm loops
- Alarm Loop Types: Intrusion, Intrusion with Tamper Monitoring, Entrance, Panic
- Can be controlled from a reader, the control console, or keypad
- Three dry contact outputs
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 12 V
- Transmitting alarms via GSM channel
- Message formats:
 - Contact ID
 - synthesized voice messages
 - sms (28 message types)

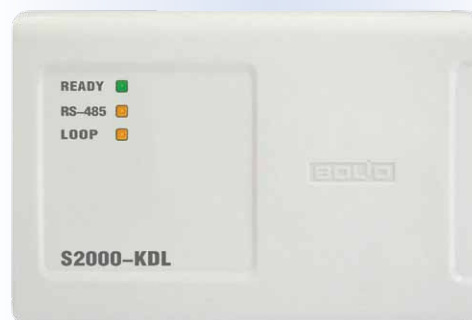


S2000-IT / TELEPHONE ALARM COMMUNICATOR

- Operates under S2000M Control Console
- Input voltage: 10 V to 27 V
- Receives messages from the control console via the RS-485 interface bus
- Information transmission format:
 - Synthesized voice messages
 - Ademco format Contact ID

S2000-KDL /ANALOG ADDRESSABLE ALARM LOOP MODULE

- Operates under S2000M Control Console
- Two addressable alarm loops or one polling loop monitored for open and short circuit failures
- Up to 127 connectable addressable devices
- Can be controlled from a reader, the control console, or keypad
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10 V to 28 V



Addressable Devices



S2000-V / ADDRESSABLE SHOCK DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Detects attempts to break through:
 - Concrete walls and ceilings in thickness of at least 0.12 m
 - Brick walls in thickness of at least 0.15 m
 - Wood constructions in thickness of 20 to 40 mm
 - Plywood in thickness of at least 4 mm
- Light indication of operation modes and vibration of protected construction, low input voltage, and detector's troubles
- Indication control option
- Measures polling loop voltage at the point of its location
- Five sensitivity levels
- Tamper switch
- Demounting monitoring



S2000-SMK / ADDRESSABLE MAGNETIC CONTACT

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Reaction time: 0.3 s max
- Gap distance: over 10 mm
- Protected against false alarms



S2000-KT / PANIC BUTTON

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Reaction time: 0.3 s max



S2000-IK / ADDRESSABLE PIR MOTION DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Protected against electromagnetic fields
- No response to hot air streams (convection)
- Protected against communication line surges
- Alarm indication optionally



S2000-ST / ADDRESSABLE GLASS BREAK DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Range: 6 m
- Multilevel algorithm of micro processing
- Auto adjustable sensitivity levels
- High false alarm immunity



S2000-STIK / ADDRESSABLE COMBINED MOTION AND GLASS BREAK DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Range
 - Glass break detection: 6 m
 - Motion detection: 12 m
- Micro processing signals
- High false alarm immunity
- Measures power voltage
- Discrete acoustic sensitivity adjustment
- Red LED for motion detection
- Green LED for glass break detection
- Indication control



S2000-SHIK / ADDRESSABLE CURTAIN PIR MOTION DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Vertical zone range: 5 m max
- Deviation angle: 70°
- Horizontal zone range: 7 m max
- Detects motion with a speed of 0.3 to 3.0 m/s
- Protected against off-side exposure
- Tamper switch
- Detection zone can be adjusted using the bracket
- Indication can be disabled



S2000-PIK / ADDRESSABLE CEILING MOUNT MOTION DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Detection zone diameter:
 - 5 m, if installed at a height of 2.5 m from the floor
 - 10 m, if installed at a height of 5 m from the floor
- Detection zone angle of view:
 - 360 degrees in horizontal plane
 - 90 degrees in vertical plane
- Two PIR receivers
- Digital processing of the signal
- Detecting motion in all directions (transverse, radial, diagonal)
- Double-side indication
- Indication control
- Tamper switch
- Protecting PIR receivers against insects
- Temperature change compensation



S2000-AR1 / ADDRESSABLE SINGLE-INPUT MODULE

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Connects a single independent loop with conventional dry contact detectors into the polling loop (plus one zone for tamper monitoring)
- Housed inside a fire or intrusion four-wire detector



S2000-AR2 / ADDRESSABLE DOUBLE-INPUT MODULE

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Connects two independent loops with conventional dry contact detectors into the polling loop
- Monitors four-wire detectors



S2000-AR8 / ADDRESSABLE EIGHT-INPUT MODULE

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Connects eight independent loops with conventional dry contact detectors into the polling loop
- Monitors four-wire detectors



S2000-SP2 / ADDRESSABLE EXECUTIVE RELAY MODULE

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Two relay outputs
- Maximum commuting power of each relay: 30 VA
- Maximum commuting voltage: 100 V
- Maximum commuting current for a single channel: 2 A



S2000-SP2 REV. 02 / ADDRESSABLE EXECUTIVE RELAY MODULE

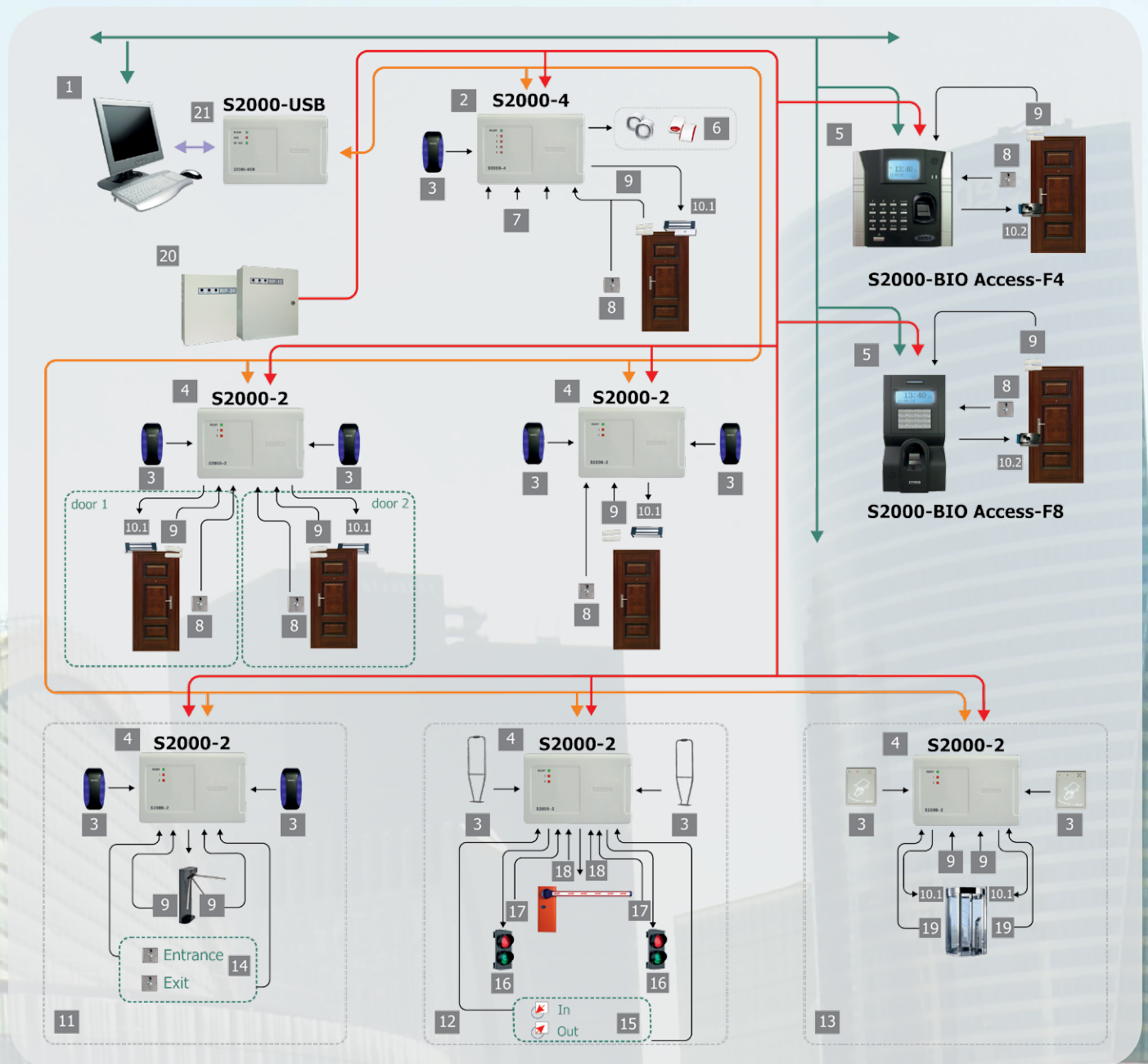
- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Two monitored relay outputs
- Monitoring circuits for open/short circuit failures
- Maximum commuting current of the relay: 1 A
- Commuting voltage (from module's power supply): 12 V to 24 V
- Maximum circuit failure monitoring current: 1.5 mA
- Galvanic isolating controlled output from the polling loop
- Disabling output actuation in case of a module trouble



BRIZ / SHORT CIRCUIT ISOLATOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Isolates the segment of the addressable polling loop where a short circuit failure has occurred
- Can be used for various topologies of the multiplex addressable polling loop including ring, tree, or combined

ACCESS CONTROL SYSTEMS



Networked Access Control Systems

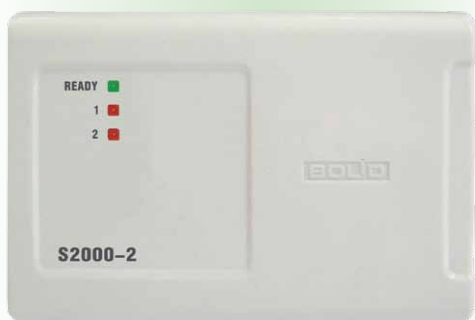
1. Orion Pro Software
2. Access Control Panel
3. Proximity Card or iButton Reader
4. Access Controller
5. Biometric Access Controller
6. Alarm Transferring
7. Monitored Inputs
8. Exit Button
9. Passage Sensor

10. Locking Devices:
 - 10.1 Magnetic Lock
 - 10.2 Electric Strike
11. Turnstile
12. Barrier
13. Airlock Booth
14. Manual Turnstile Control
15. Manual Barrier Control
16. Traffic Light

17. Vehicle Presence Detector
 18. Vehicle Passage Sensor
 19. Unlock Button
 20. Power Supplies
 21. Interface Converter
- RS-485
— USB
— Ethernet
— Power

Access control systems are based on multi-purpose S2000-2 Access Controller supporting a number of control algorithms. The controllers can operate standalone or networked via RS-485 interface bus with transferring messages to connected Operator PC.

SYSTEM COMPONENTS



S2000-2 / ACCESS CONTROLLER

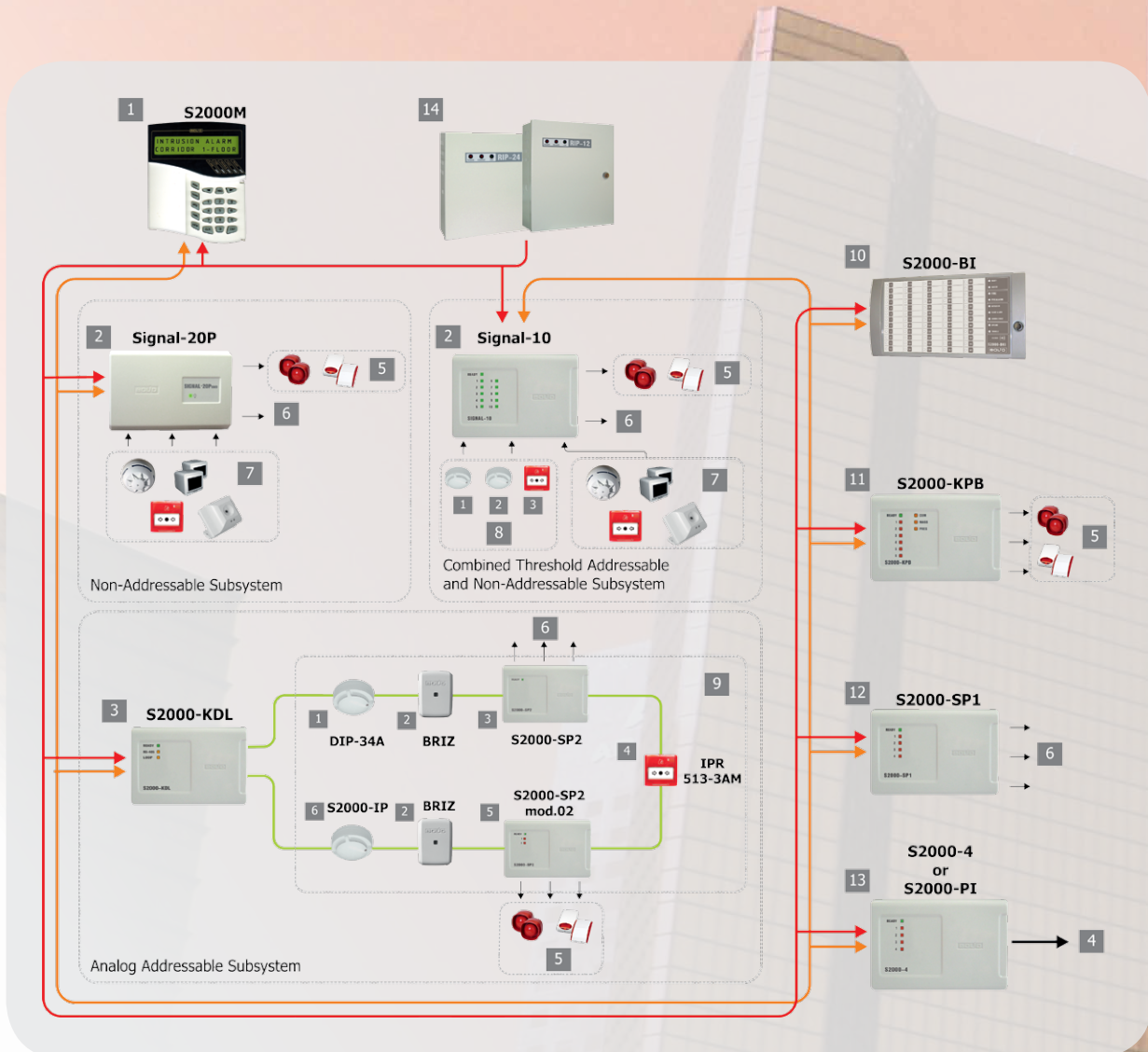
- Monitors one access point for entry and exit or two access points for exit
- Different operation modes:
 - One Entrance/Exit Door
 - Turnstile
 - Swing-Beam Barrier
 - Two Sluice Doors
 - Two Entrance Doors
- Two reader inputs to connect readers with Touch Memory or Wiegand output interface
- Two relay outputs to control lock devices
- Five Anti-Passback Modes: Hard, Soft, Timed, Zonal, Global
- Programmable Time Schedules: up to 100 per a single controller
- Programmable Access Groups: up to 100 per a single controller
- Memory capacity: 32768 Proximity card or iButton codes
- Event Log capacity: 32768 events
- In-built non-volatile clock and calendar
- Two- or Three-Person Access rules applicable
- Parameters programmable for specific conditions are the operation mode, the output interface of the readers, the lock device's control algorithm, time schedules, kinds of sound alarms etc
- Input voltage: 10 V to 15V



S2000-BIO ACCESS F4/F8 / BIOMETRIC ACCESS CONTROLLERS

- Multi-factor authentication provides two forms of verification by presenting any two credentials (fingerprints, proximity cards, or passwords) according to AND/OR rule in order to prove user identity and allow access to the system
- LCD display
- Memory capacity: 2200 fingerprint templates
- Event Log capacity: 50000 entries
- Input voltage: 10.8 V to 13.2V

FIRE ALARM SYSTEMS



Distributed Modular Fire Alarm Panel

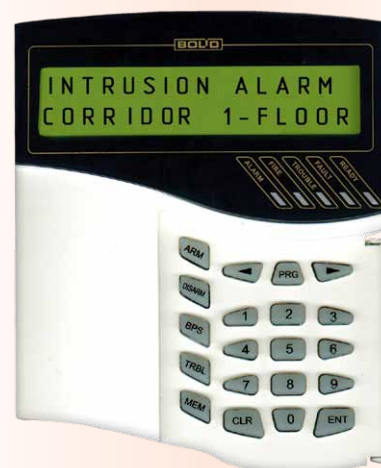
- | | |
|---|--|
| 1. Control Console | 9.4 Manual Call Point |
| 2. Fire Loop Module | 9.5 Executive Relay Module |
| 3. Fire Analog Addressable Module | 9.6 Analog Addressable Fixed Temperature and Rate-of-Rise Detector |
| 4. Fire Protection System | 10. Indicator Module |
| 5. Device Relay Outputs | 11. Executive Module |
| 6. Alarm Transferring | 12. Relay Module |
| 7. Non-Addressable Detectors | 13. Input and Output Module |
| 8. Threshold Addressable Detectors | 14. Power Supplies |
| 8.1 Smoke Detector | |
| 8.2 Fixed Temperature and Rate-of-Rise Detector | |
| 8.3 Manual Call Point | |
| 9. Addressable Devices | |
| 9.1 Analog Addressable Smoke Detector | |
| 9.2 Short Circuit Isolator | |
| 9.3 Relay Module | |
- RS-485
— Addressable Polling Loop
— Power

All modules composing the Fire Alarm Control Panel are joined together by the information RS-485 interface bus. The number and types of modules are selected depending on the requirement for the fire alarm system. The modules are able to operate two-wire or four-wire fire detectors manufactured by the Bolid Company.

PANEL COMPONENTS

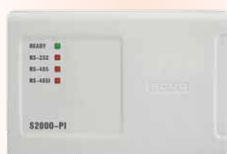
A distributed modular panel:

- Can include up to 127 addressable modules
- Features a rational distribution of the modules over the premises
- Supports up to 512 zones
- Supports up to 256 outputs
- Supports up to 512 zone groups



S2000M / CONTROL CONSOLE

- Centralized control of addressable modules
- Receiving messages from modules via RS-485 interface bus
- Connectable to a printer to print events
- Button keypad
- Security passwords



S2000-PI / INPUT AND OUTPUT DEVICE

- Designed to join various systems
- Connectable to the fire alarm panel via the RS-485 port
- Output interface: RS-485
- Input voltage: 10 V to 28 V



S2000-4 / INPUT AND OUTPUT DEVICE

- Connectable to fire alarm panel via RS-485 interface port
- Four monitored inputs
- Two dry contact outputs and two monitored outputs
- Input voltage: 10 V to 28 V



S2000-BI / INDICATOR MODULE

- Networked under S2000M Control Console
- Input voltage: 10.2 V to 28.0 V
- Indicates the statuses of the 60 protection zones
- Indicates system events using 8 LEDs



S2000-KPB / EXECUTIVE MODULE

- Networked under S2000M Control Console
- Six executive outputs
- Maximum commuting current: 2 A
- Commuting output voltage from module's power supply
- Maximum circuit failure monitoring current: 1.5 mA
- Input voltage: 12 V to 24 V
- Monitoring executive device circuits for open/short circuit failures
- Blocking executive device actuation in case of module's breakdown
- Tamper switch



S2000-SP1 / EXECUTIVE RELAY MODULE

- Networked under S2000M Control Console
- 4 dry contact outputs
- Input voltage: 10 V to 28 V



SIGNAL-20P / ALARM LOOP MODULE

- Networked under S2000M Control Console
- 20 alarm loops
- Alarm Loop Types: Smoke, Combined Smoke and Heat, Heat, Fire Addressable
- Can be controlled from the control console or a keypad
- Five outputs including three dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10.2 V to 28 V

SIGNAL-10 / ALARM LOOP MODULE

- Networked under S2000M Control Console
- Ten alarm loops
- Alarm Loop Types: Smoke, Combined Smoke and Heat, Heat, Fire Addressable
- Controlled either from S2000M Control Console or a keypad
- Four outputs including two dry contact outputs and two outputs monitored for open/short circuit failures
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10.2 V to 28 V



Addressable Detectors

DIP-34PA / ADDRESSABLE SMOKE DETECTOR



- Operated by Signal-10 Alarm Loop Module
- Up to ten addressable detectors per a single alarm loop
- Dust monitoring
- Monitors the current smoke content
- Light indication of status
- Sensitivity range: air optical density 0.05 – 0.2 dB/m
- Max. activation time after reaching threshold optical density: 10 seconds
- Consumed current: 400 microamperes max

S2000-IP-PA / ADDRESSABLE FIXED TEMPERATURE AND RATE-OF-RISE DETECTOR



- Operated by Signal-10 Alarm Loop Module
- Up to ten addressable detectors per a single alarm loop
- Light indication of status
- Consumed current: 400 microamperes max

IPR 513-3PAM / RESETTABLE ADDRESSABLE MANUAL CALL POINT



- Operated by Signal-10 Alarm Loop Module
- Equipped with protective glass against accidental actuation
- Consumed current: 500 microamperes max

S2000-KDL / ANALOG ADDRESSABLE LOOP MODULE

- Networked under S2000M Control Console
- Two addressable alarm loops or one polling loop monitored for open and short circuit failures
- Provides connecting 1 to 127 addressable devices
- Controlled either from S2000M Control Console or a keypad
- Tamper switch
- Two power inputs (primary and backup power supplies)
- Input voltage: 10 V to 28 V



Addressable Devices



DIP-34A / ANALOG ADDRESSABLE SMOKE DETECTOR

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Pre-programmable Day and Night smoke thresholds
- Monitors the current smoke content
- Pre-Alarm signal
- Dust monitoring
- Up to 127 detectors can be connected to the polling loop
- Sensitivity range: air optical density 0.05 – 0.2 dB/m
- Max. activation time after reaching threshold optical density: 10 seconds
- Consumed current: 500 microamperes max



S2000-IP / ANALOG ADDRESSABLE FIXED TEMPERATURE AND RATE-OF-RISE DETECTOR

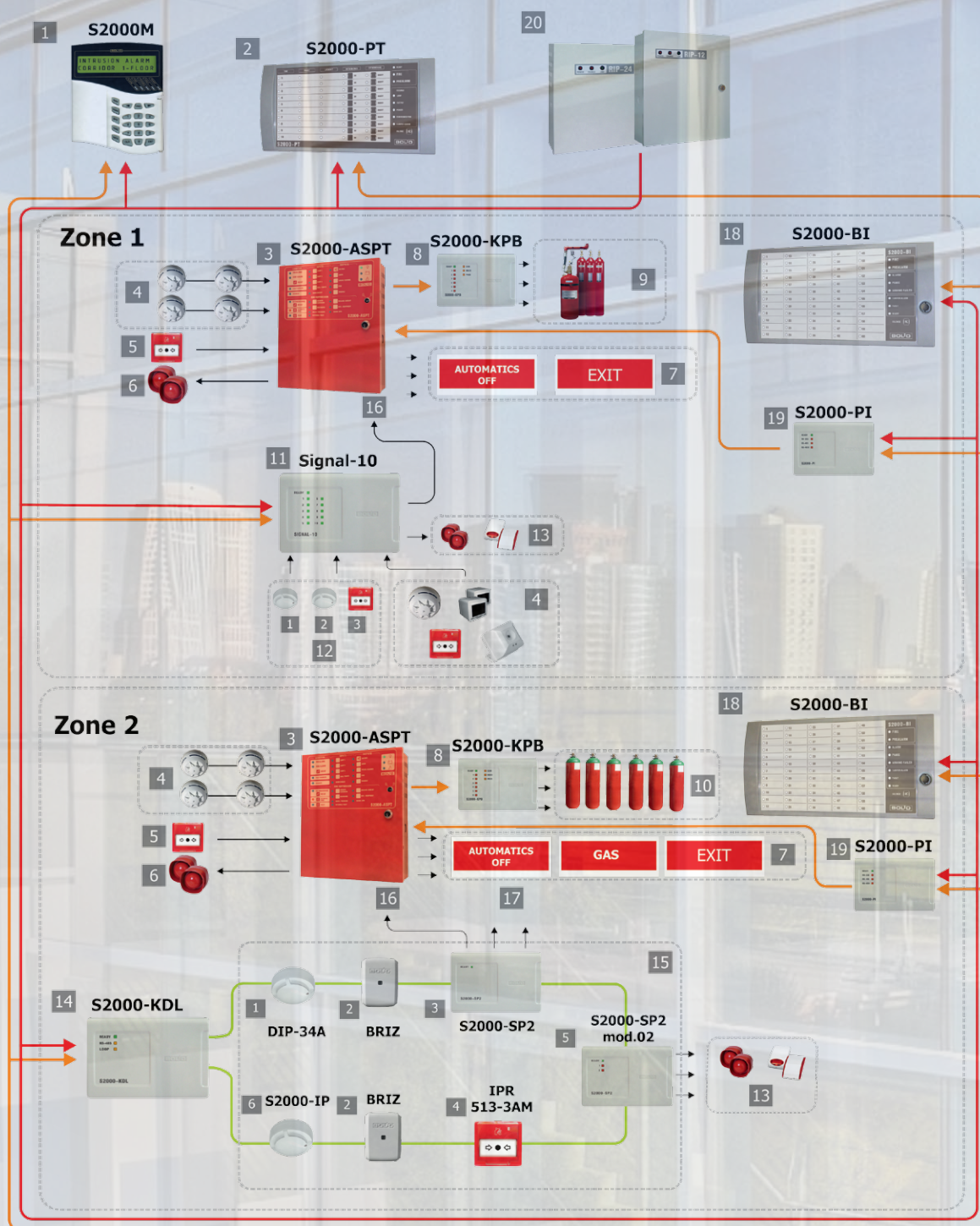
- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Not only detects temperature changes, but also the rate at which the temperature grows
- Processes temperature readings using pre-history
- Can transmit temperature readings to the control console
- Up to 127 detectors can be connected to the polling loop
- Light indication of status
- Consumed current: 500 microamperes max



IPR513-3AM / RESETTABLE ADDRESSABLE MANUAL CALL POINT

- Operated by S2000-KDL Analog Addressable Alarm Loop Module
- Powered via the multiplex addressable polling loop
- Equipped with protective glass against accidental actuation
- The call point has no glass to replace after operation and can be easily reset to its normal operation conditions using the special key
- Read polling loop voltage at the point of its location
- Consumed current: 500 microamperes max

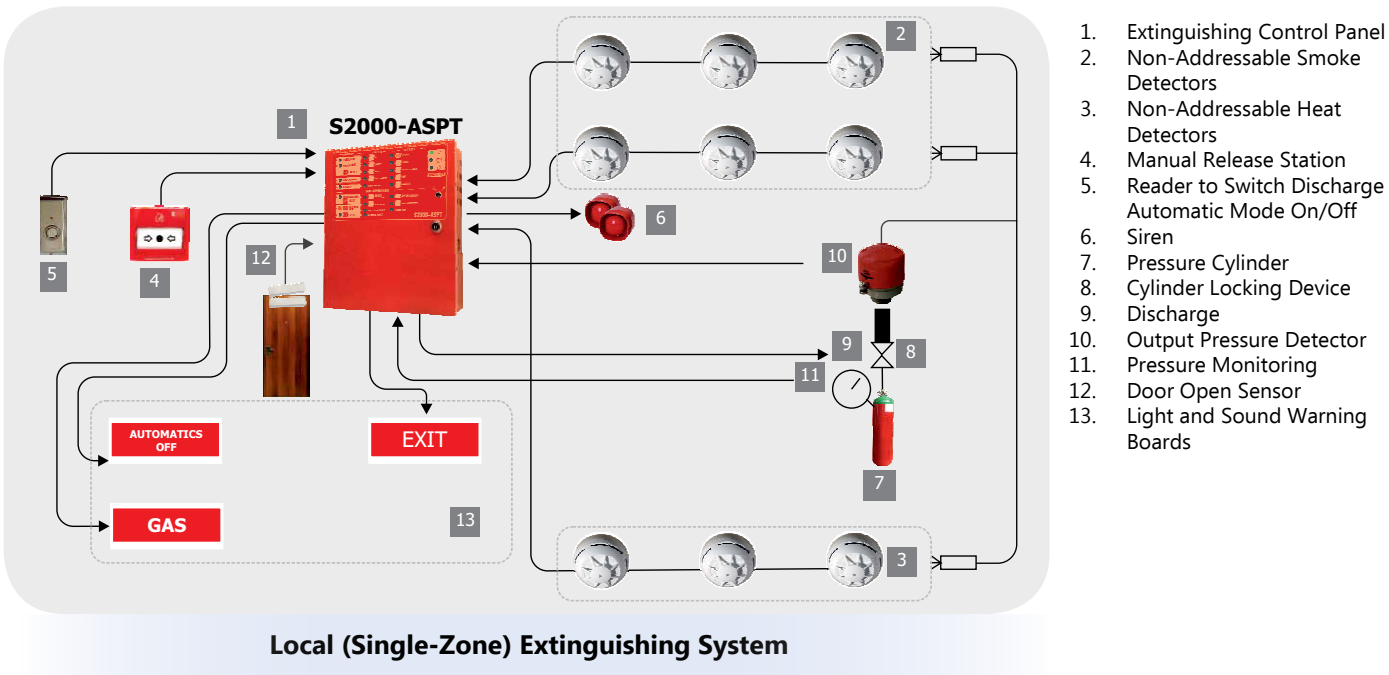
FIRE SUPPRESSION SYSTEMS



Multi-Zone Extinguishing System

- | | | |
|---|--|---|
| 1. Control Console | 12.1 Smoke Detector | 15.6 Analog Addressable Fixed Temperature and Rate-of-Rise Detector |
| 2. Extinguishing Control and Indicator Module | 12.2 Fixed Temperature and Rate-of-Rise Detector | 16. Remote Discharge Command |
| 3. Extinguishing Control Unit | 12.3 Manual Call Point | 17. Alarm Transferring |
| 4. Non-Addressable Fire Detectors | 13. Light and Sound Alarms | 18. Indicator Module |
| 5. Manual Release Station | 14. Analog Addressable Loop Module | 19. Input and Output Module |
| 6. Siren | 15. Addressable Devices | 20. Power Supplies |
| 7. Light and Sound Warning Boards | 15.1 Analog Addressable Smoke Detector | |
| 8. Executive Module | 15.2 Short Circuit Isolator | |
| 9. Dry Chemical Modules | 15.3 Relay Module | |
| 10. Gaseous Cylinders | 15.4 Manual Call Point | |
| 11. Fire Loop Module | 15.5 Executive Relay Module | |
| 12. Threshold Addressable Detectors | | |

Multi-Zone Extinguishing System. All modules integrated in the fire alarm control panel are combined together by the RS-485 information interface bus. The number and types of modules are selected depending on the requirements the fire suppression system should meet. The modules are able to operate two-wire or four-wire fire detectors manufactured by the Bolid Company. Such system can control up to 32 different discharge zones.



Local Extinguishing System. In this case, S2000-ASPT Fire Alarm and Extinguishing Control Panel monitors fire detectors, controls annunciators, monitors gaseous cylinders for troubles, and releases extinguishing agent. Door Open Sensor provides blocking discharge in case of having detected entry to or exit from the premises. The reader provides enabling and disabling the automatic mode of actuation the fixed extinguishing system, while the manual release station allows releasing extinguishing agent remotely

SYSTEM COMPONENTS

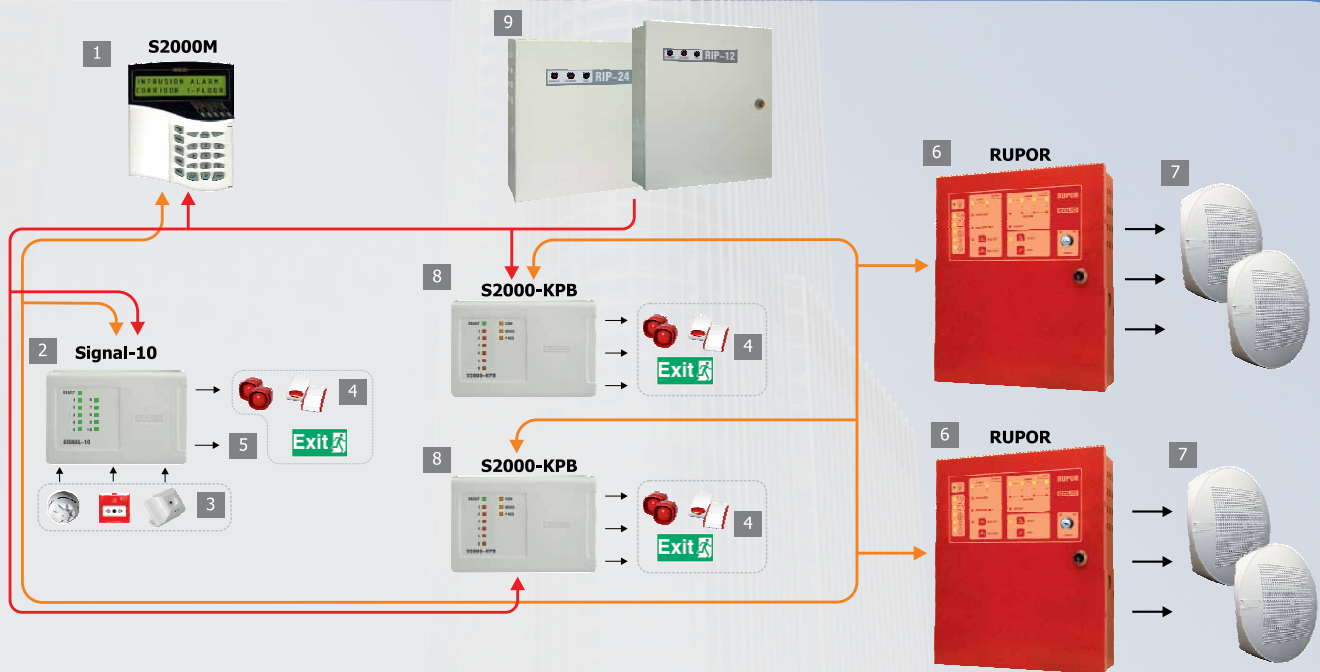
[illegible]

-
- The image shows a red fire alarm control panel, model S2000-ASPT. The panel features several sections for monitoring and control:
- CONDITION**: Includes buttons for PRE-ALARM, FIRE ALARM, RESET, TROUBLE BELLING, and SILENCE.
 - INPUTS**: Includes buttons for LOOP 1, LOOP 2, LOOP 3, CALL POINTS, DASH CIRCUIT, and FIRE SUPPRESSION.
 - OUTPUTS**: Includes buttons for RELEASE, SILENCE, VISUAL ALARMS, FIRE, and TROUBLE.
 - EXTINGUISHERS**: Includes buttons for EXTINGUISHERS, RESET, BATTERY POWER, and TEST.
 - RELAY/PROCESSOR**: Includes buttons for RELAY/PROCESSOR, EXTERNAL LINK, RELEASE CIRCUIT, AUX. EQUIPMENT, and S2000-ASP.
- The panel also has a digital display showing '80.0' and a large red emergency button with a bell icon.

- [illegible]

info@bolid.ru 25

VOICE ANNOUNCEMENT SYSTEMS



Voice Announcement Systems Integrated with the Fire Alarm Control Panel

- | | |
|------------------------------------|---------------------|
| 1. Control Console | 7. Speakers |
| 2. Alarm Loop Module | 8. Executive Module |
| 3. Fire Detectors | 9. Power Supplies |
| 4. Light and Sound Annunciators | |
| 5. Alarm Transferring | |
| 6. Voice Announcement Control Unit | |
- RS-485
— Power

Voice Announcement Systems are built using Rupor Voice Announcement Control Unit which plays pre-recorded voice messages on actions to ensure occupant evacuation in case of fire and other emergencies. Audible annunciations are actuated by S2000-KPB Executive Modules.

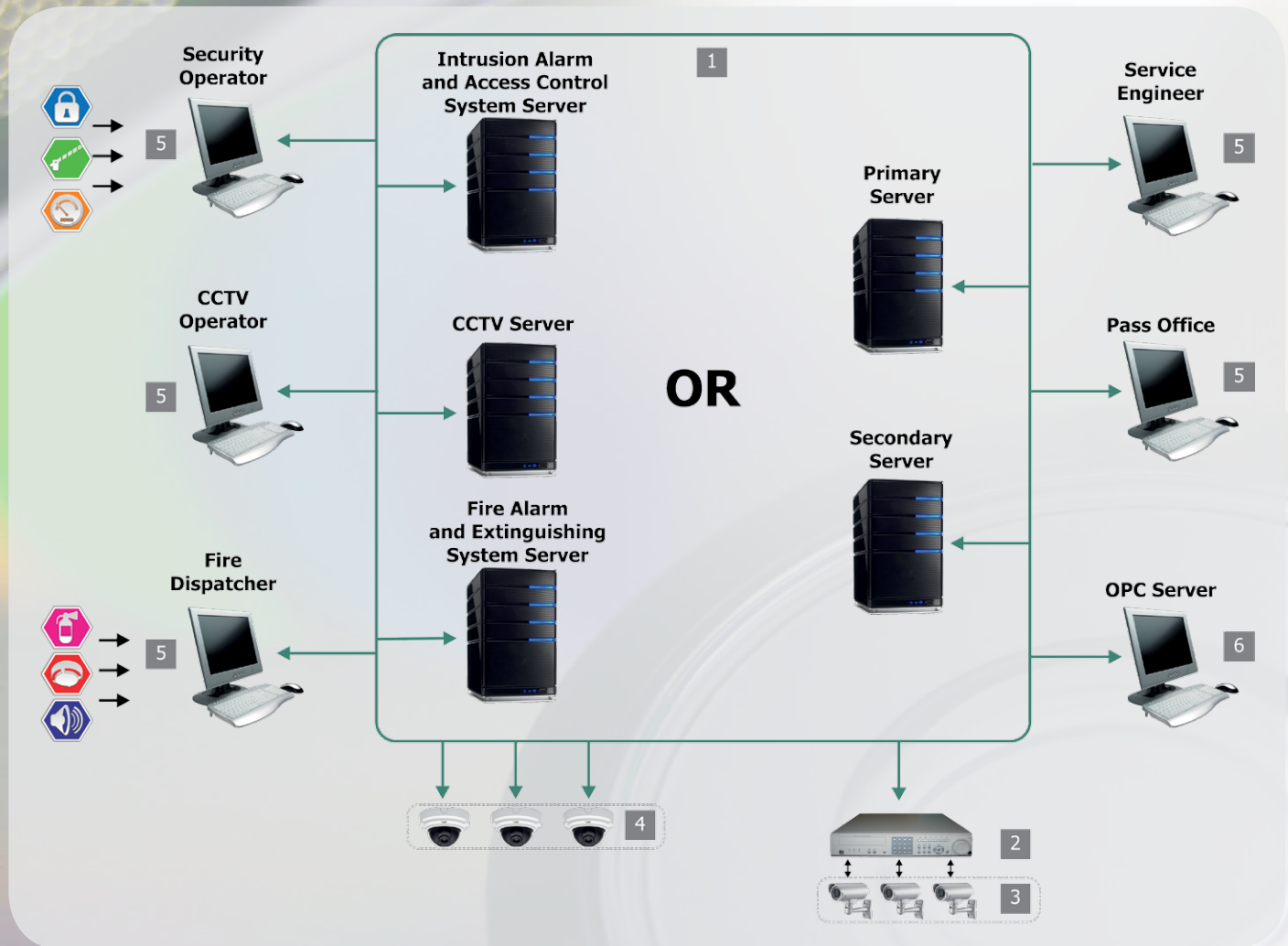


RUPOR / VOICE ANNOUNCEMENT CONTROL UNIT

- The total length of one or several voice messages: at least 340 s
- The number of sound fragments: up to 255
- Frequency response: 50 Hz to 8000 Hz
- The number of announcement channels: two in parallel
- Amplifier output power for a single channel: 15 W
- Speaker resistance: 4 Ohm min
- Speaker connection wire resistance: 20 Ohm max
- Four alarm loop inputs with relay signal monitoring
- RS-485 communication port
- Primary input voltage: 220 V ac / 50 Hz
- Backup input voltage: 12 V

Other modules are described in the Section "Fire Alarm Systems"

SECURITY MANAGEMENT SYSTEMS



System Components

- | | |
|--|----------------------------|
| 1. System Servers | Intrusion Alarm System |
| 2. Digital Video Recorder | Fire Alarm System |
| 3. Analog Cameras | Fire Suppression System |
| 4. Digital Cameras | Voice Announcement System |
| 5. System Workplaces | Access Control System |
| 6. Communication with External Systems | Building Automation System |
| — Ethernet | |

Orion Pro software suite provides organizing specialized workplaces which help the security system to operate easily and effectively. Client-server software architecture allows you to create an integrated security system with a really necessary number of workplaces located only there where they are required.

Functions of the workplaces are:

Security Operator PC:

- Receiving messages from the Security System and Access Control System
- Logging events
- Displaying maps
- Displaying protection zones
- Displaying access zones
- Arming/disarming security zones
- Remote control of access points
- Receiving images from cameras in alarm

CCTV Operator PC:

- Monitoring video from cameras
- Remote control of video cameras
- Operation with the archive of video recorders and servers

Service Engineer PC:

- Adding and deleting data about the equipment to and from Database
- Analyzing trouble messages
- Maintenance
- Generating various reports

Fire Dispatcher PC:

- Receiving messages from the Fire Alarm and Extinguishing System and the Voice Announcement System
- Logging events
- Displaying maps
- Controlling statuses of zones
- Remote enabling/disabling the automatic discharge mode

OPC Server:

- Transmitting statuses of zones of the Security System, Fire Alarm and Extinguishing System, and Access Control System
- Controlling SCADA system objects

Pass Office PC:







- Collecting user's personal data
- Adding, deleting, and editing information in the Access Control System Database
- Programming, issuance, and cancellation of contactless credentials

Following are the supported network cameras and digital video recorders:

3S: cameras: N1072; N3072; N9071;

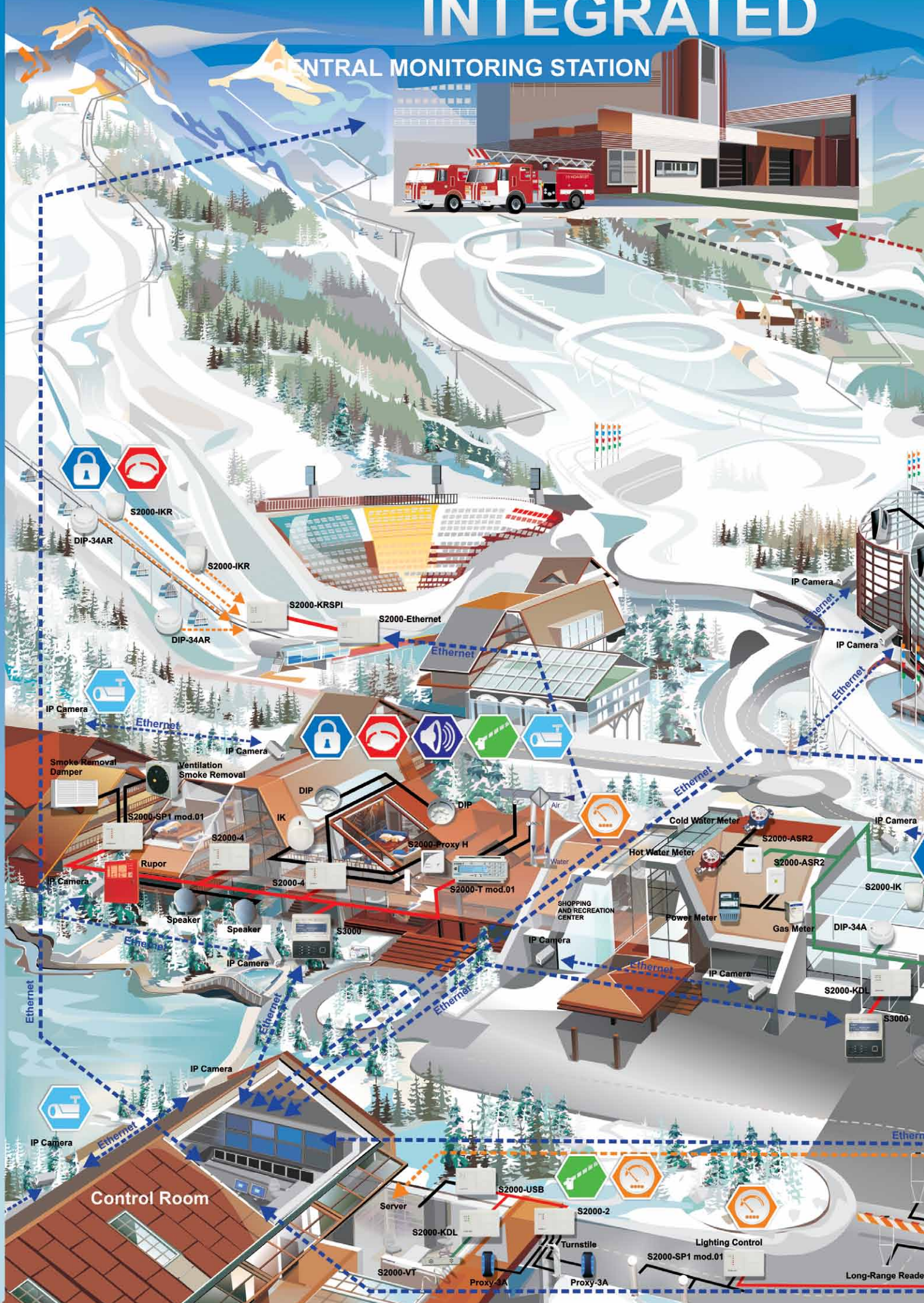
- Acti: cameras: D32; E46; E86; KCM3911;
- Arecont Vision: cameras: AV3130;
- Aviosys: cameras: 9060AK; 9070; videoencoders: 9100B;
- Axis: cameras: 212 PTZ, 214 PTZ, M1013, M1014, M1054, M1103, M1104, M1113, M1114, M3004-V, M3005-V, M3006-V, M3007-P, M3007-PV, M3014, M3113-R, M3114-R, M3203, M3204, M5013, M5013-V, M5014, M5014-V, P1353, P1354, P3301, P3301-V, P3304, P3304-V, P3346, P3346-V, P3346-VE, P3353, P3354, P3363-VE, P3364-LV, P3364-LVE, P3364-V, P3364-VE, P3367, P3367-V, P3367-VE, P3384-V, P3384-VE, P5512, P5532, Q1755, Q1755-E, Q1921, Q6032-E, Q6035, Q6035-E; videoencoders: M7010, M7014, P7210, P7214, P7224, Q7401, Q7404, Q7406, Q7411, Q7414, Q7424
- Beward: cameras: B1062, B1062DX, B1062, B85-2-IP2, B85-5-IP2, B85-7-IP2, BD133, BD2570, BD3170, BD3270, BD3370, BD3570, BD4330, BD4330, BD4330DM, BD4330DV, BD4330DVH, BD4330H, BD4330RV, BD4330RVH, BD4330RVZX, BD4370, BD4370D, BD75-5, N1000, N1250, N13102, N13201, N35110, N37210, N500, N630; videoencoders: B1001P, B1014
- Brickcom: cameras: PZ-040E;
- D-Link: cameras: DCS-3112;
- EverFocus: cameras: EAN3220; EDN3260; EHN3260; EPN4220i, EZN3260;
- Evidence: cameras: Apix-10ZBox M1; Apix-Box M1; Apix-Bullet M1; Apix-Bullet M2; Apix-Bullet M2 Lite; Apix-Dome E2; Apix-Dome E2 Led; Apix-VDome M2 Lite;
- Jassun: cameras: JSI-C200IR; JSI-D200IR; JSI-DPV200IR; JSI-DV200IR; JSI-XV200IR; JSI-XV300IR;
- JVC: cameras: VN-H157WPU; VN-H237U; VN-H257U; VN-H37U; VN-H57U; VN-T16U; VN-T216U; VN-T216VPRU; VN-V686BU;
- Panasonic: cameras: WV-NP502; WV-SC384; WV-SC386; WV-SF135; WV-SF332; WV-SF336; WV-SP105; WV-SP306; WV-SW152; WV-SW155; WV-SW316; WV-SW316L;
- Samsung: cameras: SNB-1001; SNB-3000; SNB-3002; SNB-5000; SNB-7000; SNB-7001; SND-5011; SND-5061; SND-7011; SND-7061; SNO-6084R; SNO-7082R; SNP-3371H; SNP-5200; SNP-6200; SNP-6200H; SNP-6200RH;
- Sony: cameras: SNC-DH210T; SNC-EB520; SNC-ER585;
- Trendnet: cameras: TV-IP252P;
- Vivotek: cameras: FD8136; IP7160; IP8133; IP8330; IP8331; IP8332; MD7560;
- ONVIF
- Avigilon: cameras: Avigilon 2.0-H3-B1, Avigilon 2.0-H3M-DO1;
- Bosch: cameras: NBC-255-P; NBC-265-P; NDC-284-PT; NDN-932V03-IP; videoencoders: VIP-X16XF-E, VIP-X1XF
- Hikvision: cameras: DS-2CD2032-I, DS-2CD2112-I, DS-2CD2632F-IS, DS-2CD854FWD-E, DS-2CD7153-E, DS-2CD833F-E, DS-2CD863PF-E;

POWER SUPPLIES

		12V Power Supplies			24V Power Supplies		
							
SPECIFICATIONS		RIP-12 mod.02P	RIP-12 mod.04P	RIP-12 mod.06	RIP-24 mod.01P	RIP-24 mod.02P	RIP-24 mod.06
Mains Voltage, V		187...242	150...250	150...250	187...242	187...242	150...250
Output Voltage, V	When powered by mains	13,6±0,6	13,6±0,6	13,6±0,6	27,2±0,6	27,2±0,6	27,2±0,6
	When powered by battery	10...13,6	9,5...13,2	10...13,6	20...27	20...27	20...27
Rated Output Current, A		2	2	6	3	1	4
Maximum Output Current, A (2 min)		3	2,5	8	4	1,5	5
Maximum Consumed Power, VA		110	60	225	170	100	225
Current Consumed from the battery, mA, no more than		40	30	90	30	40	70
Overvoltage Protection		+	+	+	+	+	+
Battery Capacity, Ah		7	7	2x40 or 2x26	2x7	2x7	2x40 or 2x26
Sounder		+	+	+	+	+	+
Sound Disable Option		+	+	+	+	+	+
Indicators		3	4	5	3	3	5
Tamper Switch		+	+	+	+	+	+
Number of Relay Outputs		3 (solid state relays)					
Maximum Commuting Voltage and Current		80 V, 50mA					
Operating Temperatures		- 10°C to + 40°C					
Relative Humidity		Up to 90% at +25 °C					
Lifetime		10 years					
Enclosure		Metal IP30	Plastic IP30	Metal IP30	Metal IP30	Metal IP30	Metal IP30
Overall Dimensions (mm)		255x310x95	255x310x90	450x400x210	450x400x210	450x400x210	450x400x210
Max Weight (without batteries), kg		2,5	2,5	7	2,5	2,5	7
Mounting		Wall mounted					

INTEGRATED

CENTRAL MONITORING STATION



SECURITY SYSTEMS

SECURITY MANAGEMENT CENTER



4 Pionerskaya Str., Korolev 141070
Moscow Region, Russia
Tel./fax: +7 495 755-7155
E-mail: info@bolid.ru

This product uses photos made by Flickr users mcclanahoochie (pages 2, 6, 24), Five-two (page 1), Bosc d'Anjou (page 27), David Boyle in DC (page 26)



Bolid Company

4 Pionerskaya Str., Korolev,
Moscow Region 141070, Russia
Tel./fax: +7 (495) 775-71-55
E-mail: info@bolid.ru
bolid.com