

# IPS Network Security System Concentrator

The IPS concentrators operate within the PALLADION Central Security Management System (CSMS) as field peripheral devices. These concentrators communicate with the PALLADION system servers over LAN/WAN. The use of two independent channels of communication (wired links and GPRS/radio links) and data encryption enables building a reliable and secure system for managing the security of facilities distributed over the entire country or even globally. This solution allows for ensuring the appropriate level of security for very sensitive information transmitted within the CSMS system, even when the security management system uses existing, secured transmission networks within the institution or corporation. The IPS concentrators can also be used as elements for building top-class, local security systems for large industrial or military complexes, or airports. These concentrators operate with the ULISSES Integrated Security System.

As a standard, the IPS concentrator is equipped with an Ethernet communication port and an industrial GPRS modem used for communication with the supervisory system. The following IO facilities are available for integration with local security systems: 24 universal two-state inputs, 2 analogue inputs, and 3 RS232C serial communication ports. These ports can be configured depending on the type of systems being connected: Intrusion and hold-up system control panels, Access Control System controllers, etc. The base equipment of the IPS controller also includes 8 relays, freely configurable from the level of the supervisory system. The IPS\_CA module for a 13-line I&HS control panel constitutes an additional equipment of the IPS concentrator. The concentrator is ready for the procedures of centralised management of encryption keys by the PALLADION/ULISSES system.



As a standard, the concentrator provides full functional interoperability with the Integra and Galaxy families of control panels from SATEL. It also acts as the concentrator for a group of the KP-2BS controllers within the Access Control System. After being supplemented with the IPS\_RS serial port module, the IPS concentrator can additionally monitor a fire alarm system control panel, using the Telsap 2000 or PMC 400 protocols.

The IPS concentrator can be configured locally, using the IPSView utility program, or remotely, from an application at the CSMS system level. Protection against unauthorised access to the IPS concentrator is ensured at four levels:

- encryption of data exchanged with the server of the system;
- source IP address control (does not apply to the service program);
- control at the level of the IPS controller system number (does not apply to the service program);
- 8 characters long access password.

All data transmitted between the IPS concentrator and the server are encrypted using the DES encryption algorithm. In the special version of the concentrator, data are encrypted using the AES algorithm with 128 bits long encryption key. The concentrator is equipped with a Real Time Clock with battery backup. The server provides time synchronisation between itself and each of the IPS concentrators connected.

## Basic technical specifications

|   |   |
|---|---|
| Network protocol.....   | IP ver.4.0  |
| Communication links to the PALLADION system server:                 |   |
| primary link .....  | Ethernet 10BaseT or RS-232/PPP                                    |
| backup link .....   | GSM (GPRS service) or VHF/UHF radio link (special execution) data |
| encryption .....  | session: DES or AES (special execution) / session key: 3DES       |
| encryption key length .....   | 56 bits (DES)/128 bits (AES)/3 x 56 bits (3DES)                   |
| Main board:   |   |
| Inputs:   |   |
| dwustanowe .....  | 24 inputs with optical isolation                                  |
| analogue, general purpose .....                                     | 2 inputs 0...10 V   |
| Outputs:  |   |
| two-state .....   | 8 NC/NO relay outputs 1 Amax/30 VDCmax                            |
| power supply for external sensors .....                             | 2 outputs 12 VDC/140 mAmax  |
| power supply for internal modules .....                             | 2 outputs 12 VDC/200 mAmax  |
| Communication links with field devices and systems:                 |   |
| I&HS .....  | 1 x RS-232  |
| UPS monitoring .....  | 1 x RS-232  |
| ACS and I&HS control panel / KP2U controller bus / radio link ..... | 1 x RS-232 / 1 x RS-485   |
| service .....   | 1 x RS-232  |

### IPS\_CA I&HS control panel module:

|   |   |
|---|---|
| Inputs:   |   |
| parametric .....                                    | 13 2EOL lines with configurable NC/NO operating logic |
| two-state, dedicated .....                          | Arming/Unarming key switch of I&HS                    |
| Outputs:  |   |
| warning device control outputs .....                | 3 outputs 12 VDC/1 Amax                               |
| power supply for sensors .....                      | 5 outputs 12 VDC/200 mAmax                            |
| Communication links with field devices and systems: |   |
| I&HS state display system .....                     | Clock&Data  |

### IPS\_RS serial port module:

|   |  |
|---|--|
| Communication links with field devices and systems: |  |
| FAS system .....                                    | 1 x RS-232 / RS-485  |
| general purpose serial ports .....                  | 2 x RS-232 + 1 x RS-232 / 1 x RS-485                                       |
| Power supply:                                       |  |
| primary .....                                       | mains electricity ~230 V/50 Hz   |
| backup .....  | battery 12 V <sub>DC</sub> /7.5...22 Ahmax                                 |
| Current consumption (mean):                         |  |
| IPS concentrator .....                              | 140 mA@12 V <sub>DC</sub>  |
| IPS concentrator + IPS_CA module .....              | 170mA@12V <sub>DC</sub>  |
| IPS concentrator + IPS_CA module + console .....    | 280 mA@12 V <sub>DC</sub> (cons. off)/350 mA@12 V <sub>DC</sub> (cons. on) |
| IPS concentrator + IPS_RS module .....              | 165 mA@12 V <sub>DC</sub>  |
| Operating temperature range .....                   | 0°C...+45°C  |
| Enclosure dimensions [L x W x H]:                   |  |
| IPS concentrator .....                              | 313 x 270 x 90 [mm]  |
| IPS concentrator + IPS_CA module .....              | 398 x 320 x 100 [mm]   |