

# KODOS SK-232 network controller

## Manual

### Basic Item Information and Technical Data

KODOS SK-232 network controller (hereinafter referred to as network controller) is used as a component of the access control system (ACS) and provides the KODOS-ES series access controllers (hereinafter referred to as access controllers, AC) connection to a computer (PC) via COM-port (using RS-232 interface). It converts the signals from the KODOS specialized exchange protocol used by the access controllers into the RS-232 protocol PC exchange signals and back.

To improve data exchange noise immunity in both directions, the network controller provides galvanic isolation of the communication lines between the PC and the access controllers.

The events taking place in the ACS are not recorded in the network controller; they are only processed and transmitted to the PC.

In the course of operation the network controller provides data exchange between the access controller (group of access controllers) and PC:

a) transferring control commands from the PC to the access controllers (e.g., changes in the burglar loops status and users, changes in time zones, intervals, schedules, etc.);

b) sending system event messages from the access controllers to the PC (e.g., on user trespasses, attempts of unauthorized trespass, etc.).

**Table 1 – Performance Data**

|                                                                                                       |                |
|-------------------------------------------------------------------------------------------------------|----------------|
| External 12 V-rated power supply voltage, <b>V</b> , in a range                                       | 9.5...15.0     |
| Consumption current from 12 V DC source, <b>mA</b> , maximum                                          | 300*           |
| Number of the access controllers communication lines, <b>pcs.</b>                                     | 1              |
| Type of the access controllers connected                                                              | KODOS-ES       |
| Communication line length, <b>m</b> , maximum                                                         | 2000           |
| Number of the access controllers connected, <b>pcs.</b> , maximum                                     | 250            |
| Type of the access controllers communication line                                                     | four-wire      |
| Amplitude of sign-inverse signals in the access controllers communication line, <b>V</b> , in a range | 23 – 25        |
| Resistance of the access controllers communication line, <b>kOhm</b> , maximum                        | 0.1            |
| Capacitance of the access controllers communication line, <b>μF</b> , maximum                         | 0.1            |
| PC communication protocol                                                                             | RS-232         |
| Distance from the network controller to PC, <b>m</b> , maximum                                        | 10             |
| Operating environment:<br>ambient temperature, °C<br>relative humidity at 25 °C, %, maximum           | +5...+35<br>80 |
| Overall dimensions, <b>mm</b>                                                                         | 136x100x27     |
| Weight, <b>g</b> , maximum                                                                            | 115            |

\* – This is the maximum value of mean consumption current which should be taken into account when calculating total system consumption current. In case of the access controller communication line short circuit a short-term (up to 1 s) increase in consumption current up to 1 A is possible.

## Standard Equipment

|   |                                                    |          |
|---|----------------------------------------------------|----------|
| 1 | KODOS SK-232 network controller                    | - 1 pc   |
| 2 | Cable for PC communication via COM-port (3.035.08) | - 1 pc   |
| 3 | Self-tapping Screw 3.5x25                          | - 4 pcs  |
| 4 | Plastic Nailing Plug                               | - 4 pcs  |
| 5 | Manual                                             | - 1 copy |
| 6 | Package                                            | - 1 pc   |

## Notes on Operation

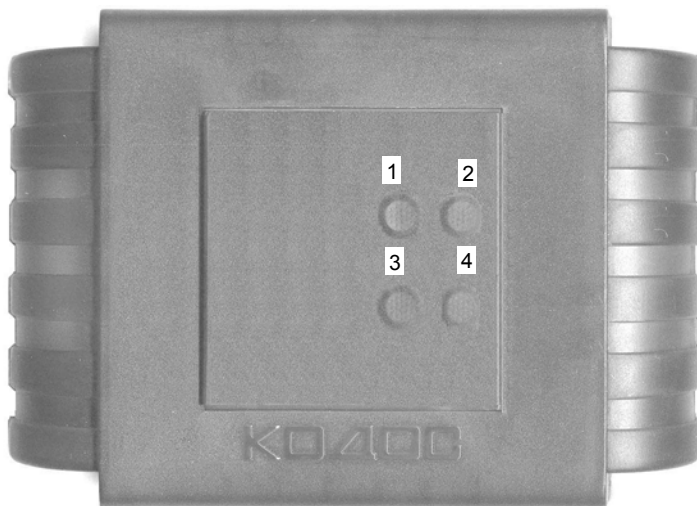
1 Assembly, installation, and maintenance of the controller should be carried out in accordance with the document "KODOS ES series controller-based access control system. Installation Guide".

2 LEDs (Fig. 1) indicate the following:

- network controller power supply or short circuit (Power Supply/SC) ;
- data exchange (Transmission and Reception) with access controllers;
- operation in Remote Restart mode (Restart).

3 The warranty is void if the seal is broken.

4 Network controller terminals marking and assigning are produced in the tables 2, 3 and 4.



1 – LED Restart; 2 – LED Power Supply/SC; 3 – LED Reception; 4 – LED Transmission

**Figure 1 – Address Unit (front)**

**Table 2 – Marking and designation KODOS CK-232 network controller's terminals**

| Terminals | Assignment                                                                            |
|-----------|---------------------------------------------------------------------------------------|
| «-12V»    | «+» terminal of the network controller power supply                                   |
| «+12V»    | «-» terminal of the network controller power supply                                   |
| «Gnd»     | «- » terminal of a computer                                                           |
| «Rxd»     | data transmission line through RS-232 interface from the network controller to the PC |
| «Txd»     | data reception line through RS-232 interface from the network controller from the PC  |
| «Rts»     | “Switching on the remote restart” signal reception line of the network controller     |
| «-Rx»     | «- » data reception line of the network controller from the AC                        |
| «+Rx»     | «+» data reception line of the network controller from the AC                         |
| «-Tx»     | «- » data transmission line of the network controller to the AC                       |
| «+Tx»     | «+» data transmission line of the network controller to the AC                        |

**Table 3 – Correspondence of the network controller's terminals and access controllers KODOS ES series**

| Network Controller | Access controller |
|--------------------|-------------------|
| «+Rx»              | «+Tx»             |
| «-Rx»              | «-Tx»             |
| «+Tx»              | «+Rx»             |
| «-Tx»              | «-Rx»             |

**Table 4 – Correspondence of the network controller's terminals to the wires marking and DB-9 terminal contacts of the computer connection cable**

| Terminal marking | Cable wires marking on the label | DB-9 connector contacts |
|------------------|----------------------------------|-------------------------|
| «Gnd»            | «GND»                            | 5                       |
| «Rxd»            | «RxD»                            | 2                       |
| «Txd»            | «TxD»                            | 3                       |
| «Rts»            | «RTS»                            | 7                       |