Basic Item Information and Technical Data

KODOS ES-304 controller (hereinafter referred to as controller) is used to control the System users' access to the guarded territory through the controlled door, and to control the executive devices (locks, door latches, horns). The controller is used as a component of the KODOS access control systems and allows the alarms to be set on and off guard in batches not only in the centralized mode (PC-controlled), but also in the autonomous mode.

The main functions executed in the course of operation are as follows:

a) storing and processing information acquired from the readers;

b) issuing control signals to the executive devices;

c) receiving/transmitting data through the KODOS SK-E or KODOS CK-232 network controller communication line;

d) monitoring the control loop status.

Table 1 – Performance Data

Power supply voltage, ***V***	9.5 … 15.0
Consumption current (apart from external loads), ***mA,*** maximum	350
Nonvolatile memory: maximum number of users maximum number of events	 10000 7000
Number of doors under control	1
Lock opening pulse duration, ***s***	1...30
Characteristics of sensor connection inputs: number of inputs the burglar loop length, ***m***, maximum loop resistance when closed, ***Ohm***, maximum	 8 150 150
Characteristics of the executive devices connection outputs: number of control outputs commutation voltage, ***V***, maximum commutation amperage, ***A***, maximum	 8 30* 1*
Characteristics of the reader communication line: number of the readers connected, length of the reader connection cable, ***m***, maximum	 2 50
Characteristics of the network controller communication line: communication line length, ***m***, maximum input resistance of the receiver, ***kOhm*** sign-inverse signals amplitude, ***V***	 2000 120 24
Operating environment: ambient temperature, °C relative humidity at 25 °C, %**,** maximum	 +5…+35 80
Overall dimensions, ***mm***	210 x 160 x 80
Weight, ***g,*** maximum	600
* – if commutation voltage is 12 V the current may reach 1.5 A. Pulse devices with current of up to 4 A must operate for 2 seconds maximum.	

Standard Equipment

1	KODOS ES-304 access controller	– 1	pc
2	MJ-0-6 jumper	– 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".

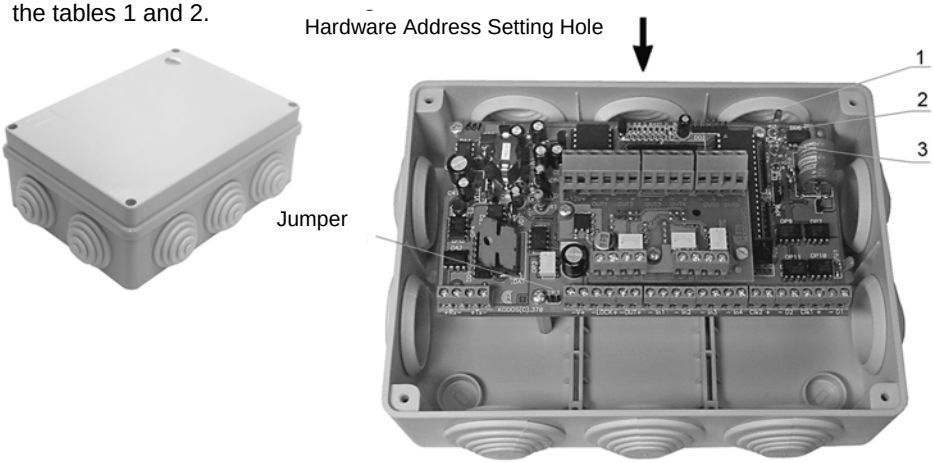
2 The hardware address of the controller is set by switching DIP-switches located on the back side of the controller bottom board. The DIP-switch unit can be accessed through the hole in the body closed by a rubber plug (Figure 1).

3 The setting of the controller's control outputs for operating the direct or inverse type executive devices (if necessary) can be made by switching the switch jumper to the relevant position (Figure 1).

4 The LEDs (Figure 1) are used to indicate the access controller power supply (Power) and data exchange with the network controller (Reception, Transmission). The LEDs can be viewed only with the device cover open.

5 The warranty is void if the seal is broken.

6 Controller's bottom and top board terminals assignment are produced in the tables 1 and 2.



1 – LED Power; 2 – LED Transmission; 3 – LED Reception

Figure 1 – Access controller (front) and View of the Controller with Body Cover Removed

Table 2 – Marking and assignment KODOS ES-304 controller's bottom board terminals

Terminals	Assignment
«+Rx»	«+» network controller reception line
«–Rx»	«–» network controller reception line
«+Tx»	«+» network controller transmission line
«–Tx»	«–» network controller transmission line
«–V»	«–» controller power supply
«+V»	«+» controller power supply
«–LOCK»	«–» lock (executive device №8)
«+LOCK»	«+» lock (executive device №8)
«–OUT»	«–» sound alarm (executive device №7)
«+OUT»	«+» sound alarm (executive device №7)
«–»	«–» hermetic contact (sensor №1)
«In1»	«+» hermetic contact (sensor №1)
«–»	«–» system setting on guard button (sensor №2)
«In2»	«+» system setting on guard button (sensor №2)
«–»	«–» sensor №3
«In3»	«+» sensor №3
«–»	«–» sensor №4
«In4»	«+» sensor №4
«Clk2»	signal of the CLK reader "Entrance"
«+»	«+» terminal of the reader "Entrance" power supply
«–»	«–» terminal of the reader "Entrance" power supply
«D2»	signal of the DATA reader "Entrance"
«Clk1»	signal of the CLK reader "Exit"
«+»	«+» terminal of the reader "Exit" power supply
«–»	«–» terminal of the reader "Exit" power supply
«D1»	signal of the DATA reader "Exit"

Table 3 – Marking and assignment KODOS ES-304 controller's top board terminals

Terminals	Assignment
«-12V»	«–» controller power supply
«+12V»	«+» controller power supply
«-OUT1»	«–» executive device №1
«+OUT1»	«+» executive device №1
«-OUT2»	«–» executive device №2
«+OUT2»	«+» executive device №2
«-OUT3»	«–» executive device №3
«+OUT3»	«+» executive device №3
«-OUT4»	«–» executive device №4
«+OUT4»	«+» executive device №4
«-OUT5»*	«–» executive device №5
«+OUT5»*	«+» executive device №5
«-OUT6»	«–» executive device №6
«+OUT6»	«+» executive device №6
«-In5»	«–» terminal of the sensor №5
«+In5»	«+» terminal of the sensor №5
«-In6»	«–» terminal of the sensor №6
«+In6»	«+» terminal of the sensor №6
«-In7»	«–» terminal of the sensor №7
«+In7»	«+» terminal of the sensor №7
«-In8»	«–» terminal of the sensor №8
«+In8»	«+» terminal of the sensor №8
* – «OUT5» control output can be used for connecting the supplementary indicator only	