

# KODOS ES-701/30, KODOS ES-701/220 Controllers

## Manual

### Basic Item Information and Technical Data

**KODOS ES-701/30 and KODOS ES-701/220 controllers** (hereinafter referred to as controllers) (Fig. 1) are used to control video camera (its rotating unit, picture focusing and scaling (zooming) devices).

The **KODOS ES-701/30** controller is connected to devices powered from up to 30 V DC power supply.

The **KODOS ES-701/220** controller is connected to the devices powered from 220 V AC power supply.

In order to provide connection with a computer (PC) the controller is connected to the network controller (e.g. KODOS SK-ES, KODOS SK-232 etc).

**Table 1 – Performance Data**

Power supply voltage, <b>V</b>	9.5 ... 15.0
Consumption current (apart from external loads), <b>mA</b> , maximum	400*
Maximum allowed current at the rotating unit connection outputs, <b>A</b> : for ES-701/30 for ES-701/220	5 1
Maximum allowed current at video camera's ZOOM and FOCUS connection "+" outputs, <b>A</b>	0.6
Maximum allowed current at the video camera's ZOOM and FOCUS control outputs Outx, <b>A</b>	1
Maximum allowed consumption current at the outputs Vout, <b>mA</b>	150
Insulation resistance, <b>MΩ</b> ms, minimum: at the temperature of 20±3°C at the temperature from 5 to 55°C at the air humidity of 80 %	1 0.5 0.5
Operating environment: ambient temperature, °C relative humidity at 25 °C, %, maximum	+5...+35 80
Overall dimensions, <b>mm</b>	198x98x30
Weight, <b>g</b> , maximum	250
* Apart from consumption current of the video camera control devices	

## **Standard Equipment**

1	KODOS ES-701/30 (KODOS ES-701/220) controller	- 1 pc
2	Self-tapping Screw 3.5x25	- 4 pcs
3	Plastic Nailing Plug	- 4 pcs
4	Manual	- 1 copy
5	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 controller's hardware address is set by switching DIP-switches 1-6 located on the back side of the controller body to the relevant position.

3 The LEDs (Figure 1) are used to indicate the access controller of power supply (Power) and data exchange with the network controller (Reception, Transmission).

4 The warranty is void if the seal is broken.

5 Controller's KODOS ES-701/220 and KODOS ES-701/30 terminals marking and designation are produced in the tables 2 and 3.



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

**Figure 1 – Access controller (front)**

**Table 2 – Marking and assignment KODOS ES-701/30controller's terminals**

Terminal number	Marking	Assignment
1	«+Rx»	«+» network controller reception line
2	«-Rx»	«-» network controller reception line
3	«+Tx»	«+» network controller transmission line
4	«-Tx»	«-» network controller transmission line
5	«+12VIn»	«+» 12 V power supply
6	«-12VIn»	«- » 12 V power supply
7	«+VOut»	«+»terminal of the video camera auxiliary power supply *
8	«-VOut»	«-»terminal of the video camera auxiliary power supply *
9	«+»	«+12 V» output *
10	«Out1»	Reducing a focal distance (FOCUS-)
11	«+»	«+12 V» output *
12	«Out2»	Increasing a focal distance (FOCUS+)
13	«+»	«+12 V» output *
14	«Out3»	Zooming in a picture (ZOOM-)
15	«+»	«+12 V» output *
16	«Out4»	Zooming out a picture (ZOOM+)
17	«NC5»	not used
18	«C5»	~ 220 V
19	«NO5»	Camera left rotation driver output (LEFT)
20	«NC6»	not used
21	«C6»	~ 220 V
22	«NO6»	Camera right rotation driver output (RIGHT)
23	«NC7»	not used
24	«C7»	~ 220 V
25	«NO7»	Camera up rotation driver output (UP)
26	«NC8»	not used
27	«C8»	~ 220 V
28	«NO8»	Camera down rotation driver output (DOWN)

\* – 12 V voltage is supplied to the controller's terminals «+» and «Outx» to control ZOOM and FOCUS of the video camera. If the control system of the camera connected is designed for other voltage value, it should be preconditioned in the delivery order; and the voltage value required should be measured between the terminals «+VOut», «-VOut».

**Table 3 – Marking and assignment KODOS ES-701/220 controller's terminals**

Terminal number	Marking	Assignment
1	«+Rx»	«+» network controller reception line
2	«-Rx»	«-» network controller reception line
3	«+Tx»	«+» network controller transmission line
4	«-Tx»	«-» network controller transmission line
5	«+12VIn»	«+» 12 V power supply
6	«-12VIn»	«- » 12 V power supply
7	«+VOut»	«+»terminal of the video camera auxiliary power supply *
8	«-VOut»	«-»terminal of the video camera auxiliary power supply *
9	«+»	«+12 V» output *
10	«Out1»	Reducing a focal distance (FOCUS-)
11	«+»	«+12 V» output *
12	«Out2»	Increasing a focal distance (FOCUS+)
13	«+»	«+12 V» output *
14	«Out3»	Zooming in a picture (ZOOM-)
15	«+»	«+12 V» output *
16	«Out4»	Zooming out a picture (ZOOM+)
17	«NO5»	Normally opened relay K1 contact controlling the camera rotation to the left (LEFT)
18	«C5»	Commutated relay K1 contact
19	«NC5»	Normally closed relay K1 contact controlling the camera rotation to the left (LEFT)
20	«NO6»	Normally opened relay K2 contact controlling the camera rotation to the right (RIGHT)
21	«C6»	Commutated relay K2 contact
22	«NC6»	Normally closed relay K2 contact controlling the camera rotation to the right (RIGHT)
23	«NO7»	Normally opened relay K2 contact controlling the camera rotation to the up (UP)
24	«C7»	Commutated relay K3 contact
25	«NC7»	Normally closed relay K2 contact controlling the camera rotation to the up (UP)
26	«NO8»	Normally opened relay K4 contact controlling the camera rotation to the down (DOWN)
27	«C8»	Commutated relay K4 contact
28	«NC8»	Normally closed relay K4 contact controlling the camera rotation to the down (DOWN)

\* – 12 V voltage is supplied to the controller's terminals «+» and «Outx» to control ZOOM and FOCUS of the video camera. If the control system of the camera connected is designed for other voltage value, it should be preconditioned in the delivery order; and the voltage value required should be measured between the terminals «+VOut», «-VOut».