


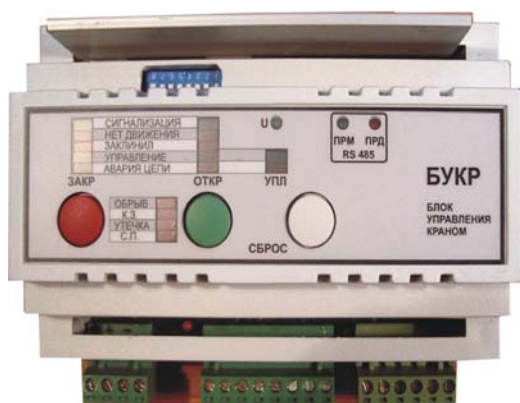


### 3.09. MEANS OF CONTROL, DATA TRANSMISSION AND MANAGEMENT OF ELECTRIC EQUIPMENT OF INDUSTRIAL FACILITIES

#### 3.09.1. Modules of digital signal input

 <p><b>Module UCD1-64M</b> contains 64 mutually isolated channels for the input of discrete signals with a voltage of 15 ... 27 V, and input current - no more than 8 mA. The controller has LEDs indicating the logical state of each input.</p>	<p><b>Module UCD01-16</b> contains 16 mutually isolated channels for the output of discrete signals with output voltage of 40 V and current of up to 100 mA. The controller has LEDs indicating the logical state of each output.</p>
<p><b>Module UCA10-16</b> contains 16 differential channels of +10 V voltage input with an <math>\pm 0.05\%</math> error. Total signal transformation time of all 16 channels is 120 ms, and the frequency band of the input filter is 25 Hz.</p> 	<p><b>Module UCA2-8</b> contains 8 channels of spark-safe circuits for converting analog signals of current and voltage of <math>\pm 5V</math> with an <math>\pm 0,1\%</math> error. Controller provides sensors with power supply of 5 mA. Calibration and connection type are set individually in each channel. Conversion time is 80 ms/channel, and the frequency band of the input filter is 25 Hz.</p> 

#### 3.09.2. Control Module BUKR 220/110 (БУКР 220/110)



It is intended to control the rearrangement of gas valves equipped with electric air-powered drive of ЗПУУ-2, ЗПУУ-4, БУЗП-5 and other types.

The module includes:

- 3 channels for the output of discrete signals with the output voltage of 220/110 V and current of up to 0,5 A;
- 2 channels for the input of discrete signals about the state of crane;
- diagnostics of electric chains of the crane for an open circuit, short circuit and current loop to earth.

The management of BUKR 220/110 operation is performed by using K8485 interface, by additional physical lines and by means of buttons and indicators on the top panel of the controller.

Power supply - from a DC voltage source 220 (-33 +44) V.

### 3.09.3. Telemechanic Complex RTU

It is intended for a dispatch control and management of geographically distributed objects.

Communication channels: RS232, RS485, V23, DNP3, radio channels; dedicated departmental telephone communication channels; cable two- and four-wire communication channels.

Category of information transmission probability: first (according to GOST 26.205-88 (ГОСТ 26.205-88)).

Information capacity of control and indicating equipment (CIE) (quantity):

- telecontrol of two-position objects (TC) – 0...64;
- remote signaling of two-position objects (RS) – 6...70;
- telemetry of current values (TM), integral (TMI) - 8; 16; 24;
- teleregulation (TR) - 0; 1; 4;
- retransmission (RT) – 0; 1.

