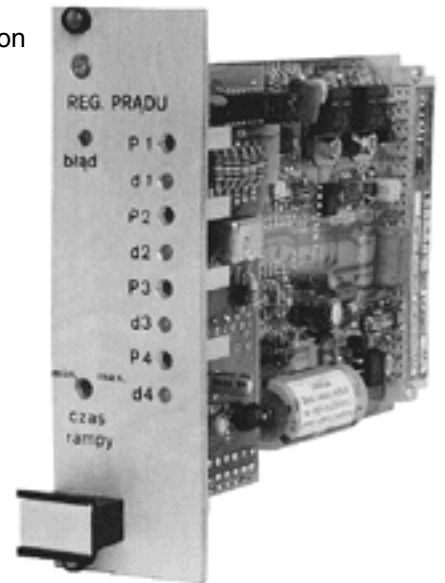


### APPLICATION

Controllable current amplifier type 30RE20 serves to control 2- and 3-position proportional hydraulic directional valves type USAB-6 without position sensor. Amplifier type 32RE20 serves to control 2- and 3-position proportional hydraulic directional valves type USAB 10 without position sensor.

#### Main characteristics:

- output current control
- adjustment of pulse rise and decay time
- system for quick transition through zero
- board construction to Eurocard
- joint type 811064 at output
- optional control in the whole range of operation:
  - from internal programmer
  - by external voltage +/- 9V toward mass
  - by external voltage +/- 10V non-potential



### DESCRIPTION OF OPERATION

**d1 ÷ d4** - signaling of set value feeding

**d5** - error signalling

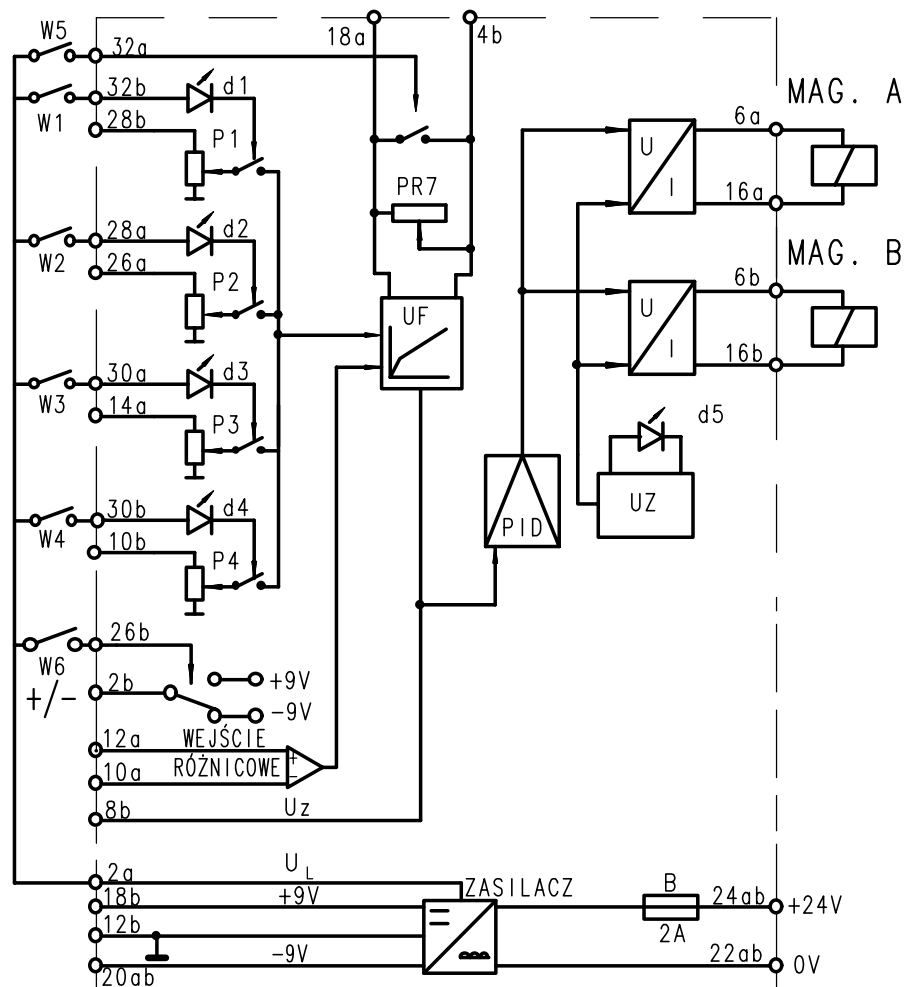
**P1 ÷ P4** - adjustment of programmable set values

**PR7** - adjustment of pulse rise out decay time 0,05-5s

**W1 ÷ W4** - unstable switches of set value

**W5** - stable switch of pulse rise and decay time

**W6** - stable switch for switching direction



## DESCRIPTION OF OPERATION

Controllable current amplifier type **30RE20 (32RE20)** must be supplied with the voltage **24V** full waved rectified to contacts: pole **/+ /** to contact **24ab**; **/0 /** to contact **22ab**. From supply voltage via constant-voltage regulator stabilized voltage **+/- 9V** at contacts: **18b (+9V)** ; **12b (0V)** ; **20ab (-9V)** is achieved. Please, take care that measurement "0" (contact **12b**) is higher by **9V** than supply voltage "0" (contact **22ab**).

The electronic keys with unstable switches **W1÷ W4** must be used to program set value. They should be correlative that is when one key is switched on then the rest keys are automatically switched off. The specified values are set by means of potentiometers **P1÷P4**, whereas switching on the key is signalized by a specified light **d1÷ d4** on the front plate.

The set value can also be sent by matching amplifier from non-potential inputs **10a** and **12a** with voltage **0 ÷ ±10V**.

In order to program the rise and decay time of the set value at step control. The potentiometer **PR7** is applied.

It is possible to break this adjustment by means of the switch **W5**.

An additional change - over switch can be connected to terminals **18a** and **4b**, or the contacts of a transmitter permitting a ramp shorting independently of the switch **W5**. In case of need to set times of the ramp beyond the plate, an additional potentiometer can be connected to terminals **18a** and **4b (PR7 set at maximum)**.

The switch **W6** changes the polarization of voltage **9V** at the terminal **2b**. The two switches **W5** and **W6** must be independent of each other and stable.

As required, after connecting, voltage with changing polarization from the terminal **2b** or voltage with constant polarization from the terminals **18b (+9V)** or **20ab (-9V)** can be used to supply potentiometers **P1 ÷ P4**.

When connecting care should be taken, that current-carrying capacity of terminals: **2b**; **18b**; **20ab** cannot exceed **10mA**.

Negative control voltage operates the solenoid connected to contacts **6a** and **16a** and positive control voltage operates the solenoid connected to contacts **6b** and **16b**.

Controllable current amplifier type **30RE20 (32RE20)** should be connected to directional valves and control switches in accordance with block diagram. Lines to directional valves should not be connected together with lines of control signals. The amplifier can be connected only dead. To measure the set value a meter can be connected to contacts: **12b** - measurement "0"; **8b** - set value.

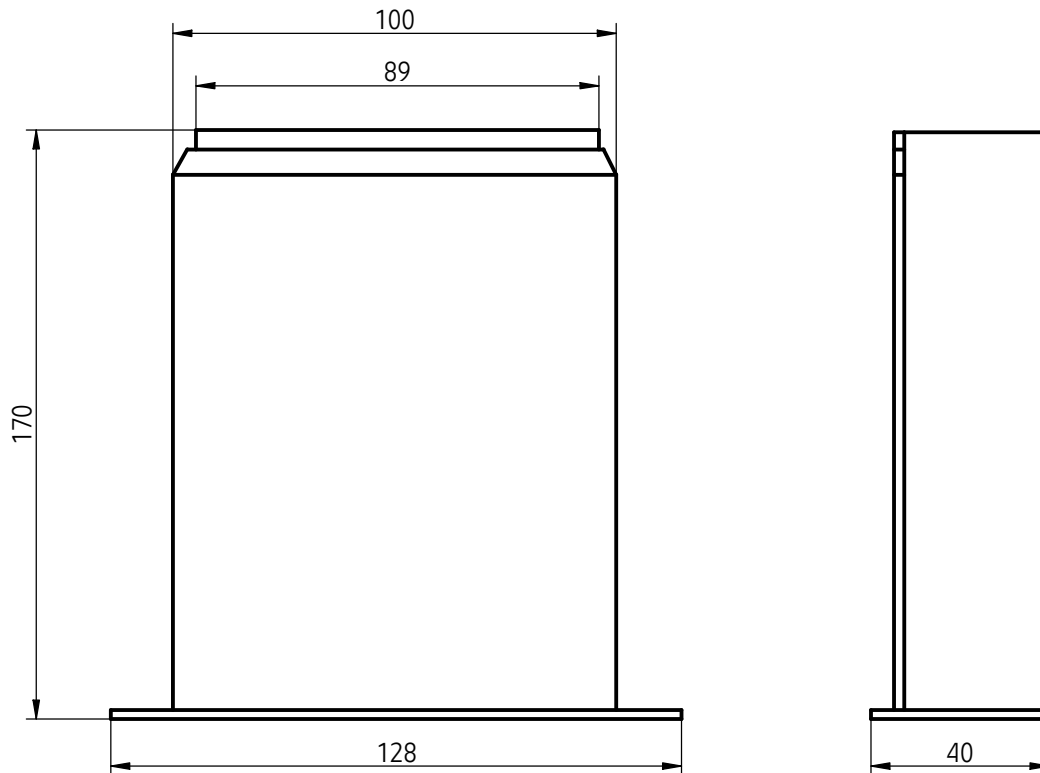
Hydraulic directional valve type **USAB 6 (USAB 10)** has one or two proportional solenoids which should be connected as follows:

- solenoid **A** to terminals: **6a**; **16a**
- solenoid **B** to terminals: **6b**; **16b**

## TECHNICAL DATA

Supply voltage (full waved rectified/unstabilized)	<b>24 V +/-10%</b>	
Power	30RE20	35VA
	32RE20	45VA
Max output current	30RE20	1,6 A
	32RE20	2,2 A
Control voltage	<b>0 up to +/-10 V</b>	
Solenoid connecting (cable length)	1,5mm <sup>2</sup> up to 40m	
	2,5mm <sup>2</sup> up to 60m	
Operating temperature	0 - 50 °C	
Temperature error	0,05 % / °C	
Hysteresis	1,5 %	
Weight	0,3 kg	

## OVERALL DIMENSIONS



## HOW TO ORDER

			*
<b>Amplifier type</b> for directional valve type <b>USAB6 = 30RE20</b> for directional valve type <b>USAB10 = 32RE20</b>			
<b>Version</b> with plug type <b>811064 = W</b>			
<b>Series number</b> (10 -19) - installation and connection dimensions unchanged <b>series 10 = 10</b>			
Additional requirements in clear text (to be agreed with the manufacturer)			

### NOTES:

The amplifier should be ordered according to the above coding.  
 Coding example: 30RE20 W 10

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