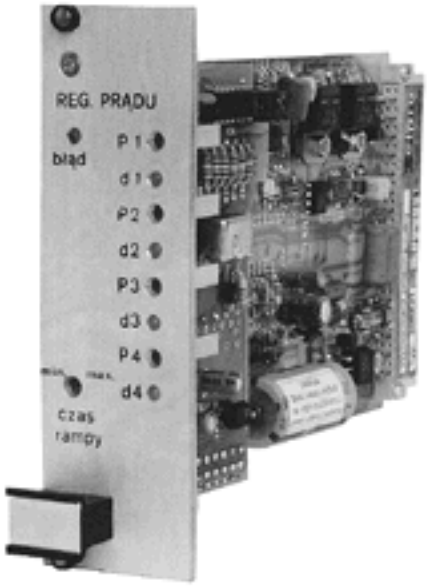
Adjustable current amplifier type 30RE11, 32RE11

WK 495 772
04.1999r.

Controllable current amplifier type 30RE11 serves to control 2-position proportional hydraulic directional valves type USEB 6 with position sensor. Amplifier type 32RE11 serves to control 2-position proportional directional valves type USEB10 with position sensor.



Main characteristics:
- output current control
- high stability of output current due to feedback loop at end stapes
- adjustment of pulse rise and decay time
- system for quick transition through zero
- generator 2,5 kHz and demodulator at supply of offset sensor
- board construction to Eurocard
- joint type 864011 at output
- optimal control in the whole range of operation
  - from internal programmer
  - by external voltage +/- 9V towards mass
  - by external voltage +/- 10 V non-potential

DESCRIPTION OF OPERATION

d1 ÷ d4 - signaling of set value feeding

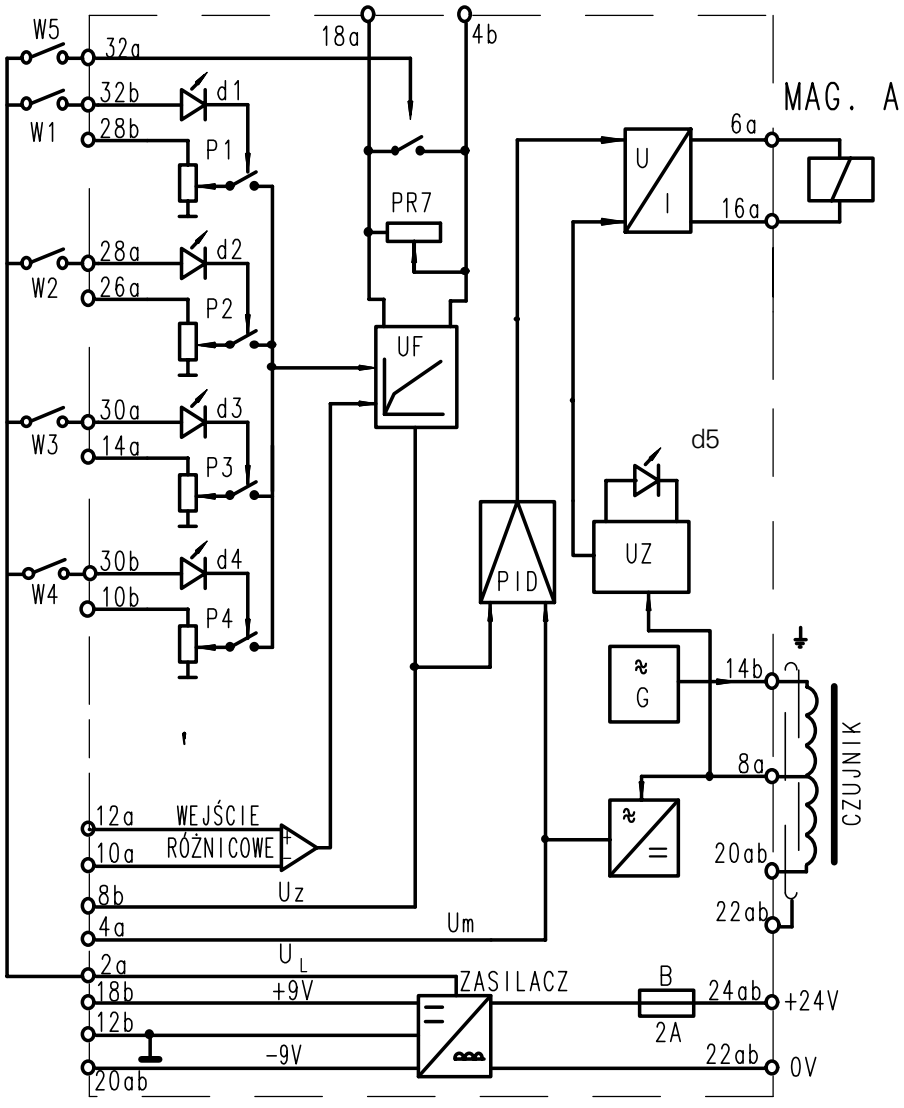
d5 - signaling of break in supply of offset detector

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

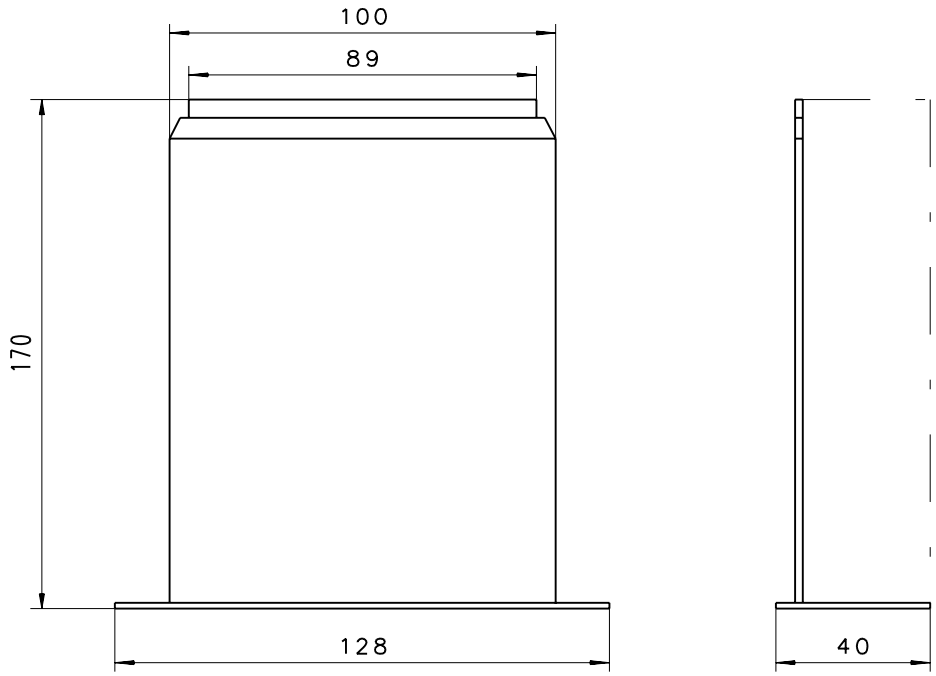


Controllable current amplifier 30RE11 (32RE11) should be supplied with 24V current to terminals: positive end to contact 24 ab, 0 to contact 22 ab. From supply voltage via constant-voltage regulator stabilized voltage +/- 9V/ 18b- +9V; 12b- 0V; 20ab- -9V.
Please, take care that measurement “0” (contact 12b) is higher by 9V that supply voltage “0” (contact 22 ab).
Electronic keys switched on by the unstable switches W1÷W4 are used to program set value. When one of keys is switched on, corresponding diode d1÷d4 lights and other keys are out of operation. Set values are adjusted by means of the potentiometers P1÷P4. 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 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 contacts of a transmitter permitting a ramp shorting independently of the switch W5.
In case of need to set the times of the ramp beyond the plate, an additional potentiometer can be connected to terminals 18a and 4b (PR 7, set at maximum).
When connecting care should be taken, that the current - carrying capacity of terminals 18b; 20ab can not exceed 10 mA. The amplifier has also a system for error signaling, which controls voltage from the offset detector and in case of break interlocks the end stages. At the same time the diode 5 lights. The controllable current amplifier 30RE11 (32RE11) should be connected to directional values and control switches in accordance with block diagram. Lines to the directional valves should not be conducted together with lines of the control signals. The amplifier can be connected only dead. To measure the set and real values a meter can be connected to contacts 12b - measurement “0”, 8b - set value and 4a - real value correspondingly. Hydraulic directional valve is equipped with proportional solenoid, which should be connected to terminals 6a, 16a. The inductive position sensor has three marked terminals. Terminal 1 should be linked to 8a; terminal 2 to 20ab and terminal 3 (ground mark) to 14b. Each connection should be done by means of 3-conductor cable with a shield connected to 22ab.

TECHNICAL DATA

Supply	= 24V +/-10%
Power	35VA 30RE11 45VA 32RE11
Max output current	1,6A 30RE11 2,2VA 32RE11
Control voltage	0 ÷ +10V
Generator frequency	2,5kHz
Sensor connecting (cable lenght)	max 30m at 100pF/m
Solenoid connecting	1,5mm^2 up to 40m
	2,5mm^2 up to 60m
Operating temperature	273 - 318K
Temperature error	0,05%/ ^{0}C
Hysteresis	1,5%
Weight	0,3kg

OVERALL DIMENSIONS



HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.

—W—10—B5 *

Amplifier type
For directional valve USEB 6 = 30RE11
For directional valve USEB 10 = 32RE11

Version
With plug type 811 = W

Series number:
10 = 10
(10 - 19) - Installation and connection dimensionsunchanged

Adjustable time of ramp
up to 5s = B5

Additional requirements in clear text (to be agreed with the manufacturer)

Coding example : 30RE11-W-10-B5

NOTES:

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