

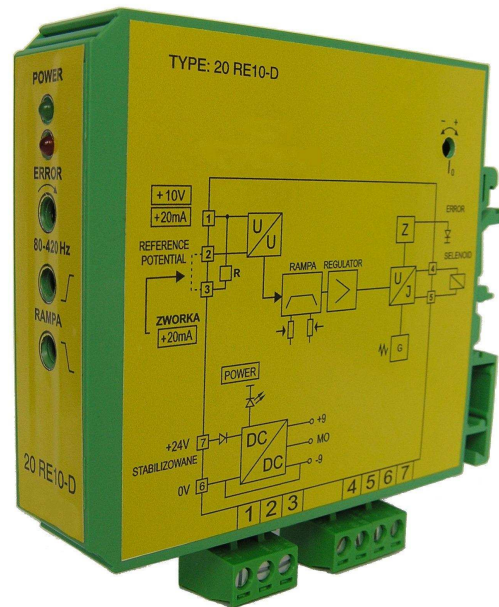
APPLICATION

Controllable current amplifier type **20RE10D** is used to control an operation of proportional pressure control valves type **WZPPE** and **WZRPE**.

It can be also used to control an operation of other valves with proportional solenoids with corresponding parameters.

The controller is characterized by:

- high stability of output current
- voltage or current controlled differential input (non-potential)
- independent linear regulation of ramp time
- regulated bias current frequency
- housing mounted on 35 [mm] rail with accordance to EN 60715.



DESCRIPTION OF OPERATION

The controller is a stable current generator controlled via terminals 1 and 2 with voltage 0-10 [V] or with current 0-20 [mA] (with terminals 2 and 3 shorted). The circuit is supplied with stabilized constant voltage 24 [V] connected into terminals 7 (+24V) and 6 (0V) – power supply is indicated by green LED on the frontal plate (POWER). The controller is equipped with electronic protection

The controller has an ability to regulate rising and falling of the output current by means of potentiometers on the frontal plate designated as RAMPA. It also has an ability to change the frequency of bias current by means of the potentiometer on the frontal plate. Factory setting of minimum output

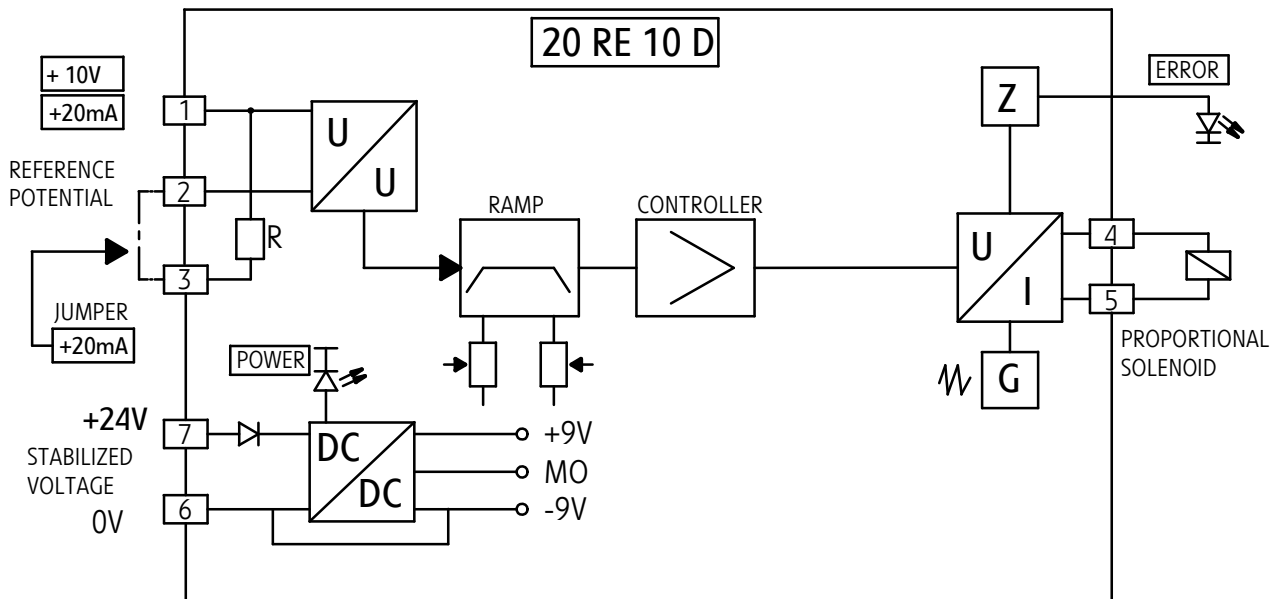
with failure signaling – red LED on the frontal plate (ERROR). The protection functions when:

- control system is damaged
- input control voltage is too high
- circuit of solenoid is broken
- resistance of solenoid is too high

The proportional valve type WZPPE or WZRPE must be connected to terminals 4 and 5.

current is 10% (80 mA). This parameter may be regulated by means of potentiometer 8 on the lateral plate (see *OVERALL DIMENSIONS* drawing). Maximum output current is always 720 [mA] greater than minimum current.

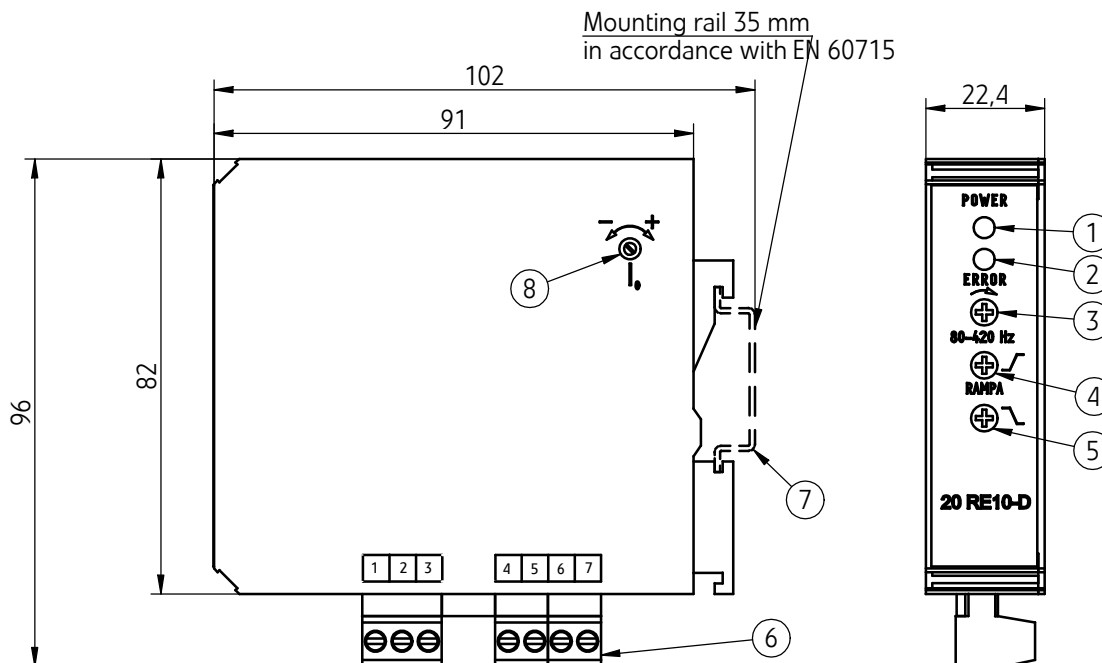
BLOCK DIAGRAM



TECHNICAL DATA

Supply voltage	24 [V] stabilized
Control voltage or current	0-10 [V] or 0-20 [mA] (terminals 2 and 3 shorted)
Ramp time (rising, falling)	0-5 seconds
Minimum output current	80 [mA] at set value of zero
Maximum output current	800 [mA] at set value of maximum
Frequency of bias current	80-420 [Hz]
Housing insulation	IP 20 (EN 60529)
Permissible operating temperature	0 - 50 [°C]
Mounting method	Rail 35x7.5x1 [mm] (EN 60715)
Dimensions (L x H x W)	102 x 96 x 22,4 [mm]
Weight	0,11 [kg]

OVERALL DIMENSIONS



1	Green LED power supply (POWER)
2	Red LED failure (ERROR)
3	Potentiometer for regulation of frequency of bias current
4	Regulation of current rising
5	Regulation of current falling
6	Connection terminals (see table below)
7	Mounting rail 35 mm in accordance with EN 65715
8	Regulation of minimum current (I_0)

CONNECTION OF TERMINALS

TERMINAL	DESCRIPTION
1	Control voltage +10 V or current +20 mA
2	Reference potential
3	Jumper with terminal 2 when controlled by current
4	Proportional solenoid
5	
6	Supply voltage 0 V stabilized
7	Supply voltage +24 V stabilized

HOW TO ORDER

The amplifier should be ordered according to the below coding.

20RE10D	*
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Further requirements in clear text (to be agreed with the manufacturer e. g. adapted for low temperature)
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ASSEMBLY AND APPLICATION REQUIREMENTS

Wiring and regulation may be done when disconnected from the power supply.

Distance from radio devices should be greater than 1m.

Control signal cable should be shielded.

Cables of solenoid to mustn't be laid down together with signal cables.

Current amplifier **20RE10D** must be wired to proportional solenoid and control terminals in accordance with block diagram.

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