PONAR wadowice	Controllable current amplifier type 20RE10E	WK 420 820 09.2010

APPLICATION

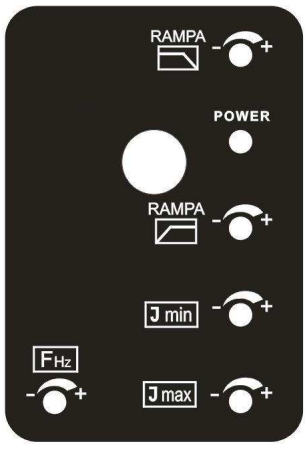
Controllable current amplifier type **20RE10E** is used to control an operation of proportional solenoids.

Controller is characterized by:

- high stability of output current
- ability to control output current
- ability to control initial current I_{min}
- independent linear regulation of ramp time
- regulated bias current frequency
- housing in the form of plug-in connector mounted on the valve

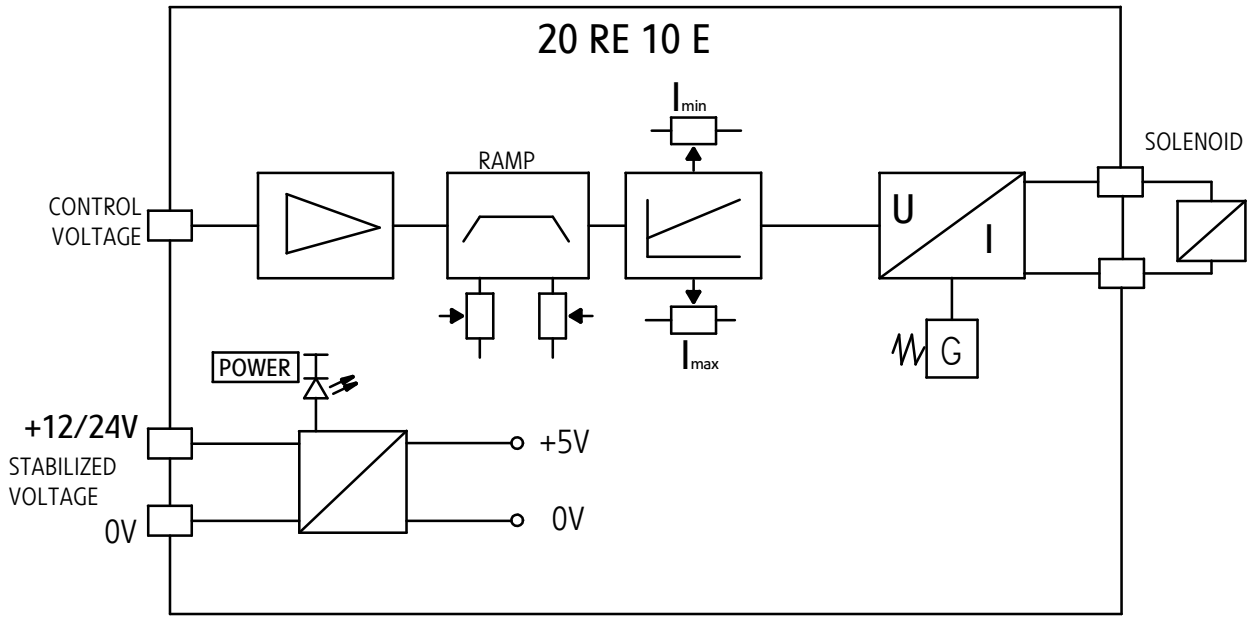
The circuit is supplied with **stabilized constant voltage 12 to 24 [V]**. The controller is a stable current generator with controllable output current in range of 0 to 2,5A. Correct operation is dependent on parameters of a valve and proper set up of the controller.

DESCRIPTION OF OPERATION

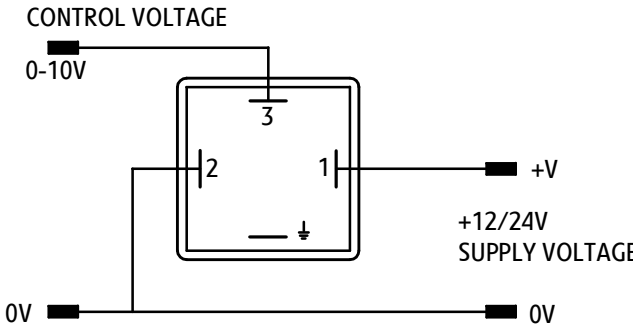


The controller is initially set up by factory. To make any adjustment you should know the resistance of solenoid (the value is placed on the data plate of a solenoid). The resistance can be measured by means of electric meter, the value is usually between several and about twenty ohm. The set up and measure of current is done by measuring voltage between metering points (after removing the cover). The value of the current is calculated in accordance with Ohm's law. Regulation is done with particular potentiometers. The current I_{min} must be adjusted at set value of zero. The current I_{max} must be adjusted at set value of maximum. Ramp potentiometers serve to regulate the time of rising and falling of the output current in range of 0 to 5 seconds. The LED indicates power supply of the controller. The controller has an ability to change the frequency of bias current with potentiometer marked F_{Hz}.

BLOCK DIAGRAM



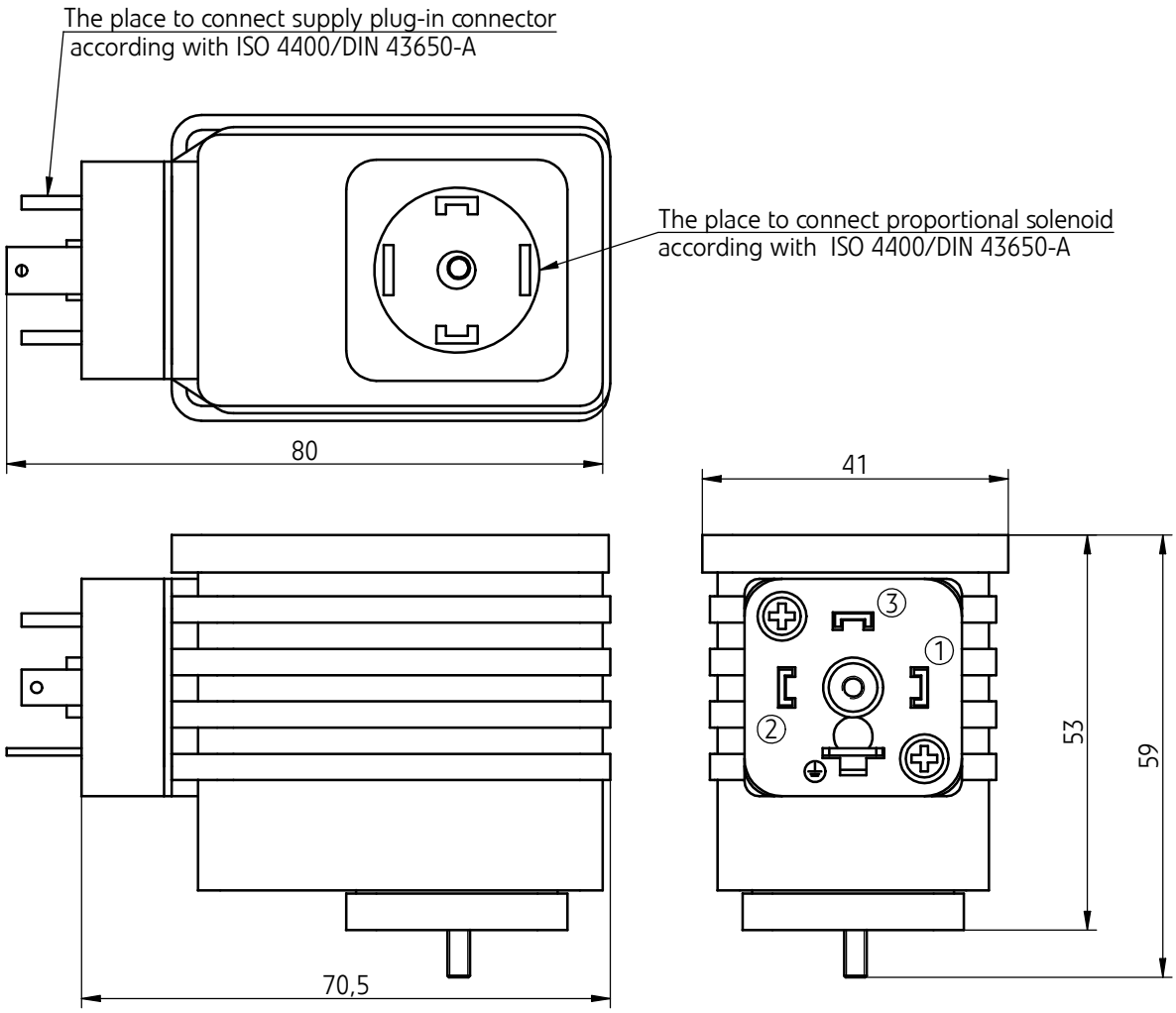
CONNECTION OF TERMINALS



TECHNICAL DATA

Supply voltage	12 do 24 [V] **stabilized**
Control voltage	0-10 [V]
Ramp time (rising, falling)	0-5 seconds
Minimum output current (Imin)	0 to 600 [mA]
Maximum output current (Imax)	up to 2,5 [A]
Frequency of bias current (FHz)	100 - 420 [Hz]
Resistance of solenoid	3 - 24 [Ohm]
Housing insulation	IP 65 (EN 60529)
Permissible operating temperature	0-50 [°C]
Dimensions (L x H x W)	80 x 53 x 41 [mm]
Weight	0,09 [kg]

OVERALL DIMENSIONS

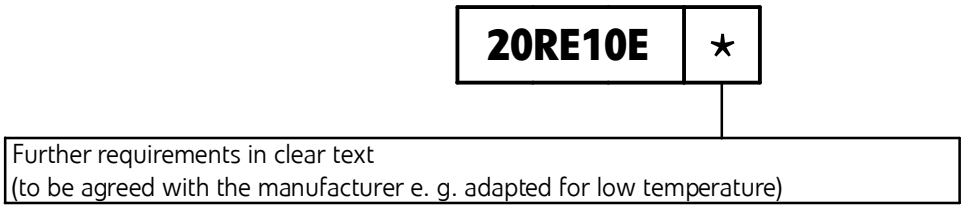


ASSEMBLY AND APPLICATION REQUIREMENTS

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.
Current amplifier **20RE10E** must be wired in accordance with block diagram.

HOW TO ORDER

The amplifier should be ordered according to the below coding.



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