

Fig.1 The RR3P module.

APPLICATION

The relay module used to work with controllers as an executive element, switching three-point controlled peripherals having a feedback signal U_x (0 - 10V).

DESCRIPTION

The RR3P and the RR3PT are two relays modules, changing the analog signal (0 - 10V) from the controller to the three-point, no-voltage output signals.

Circuits perform the function:

$$| U_s - U_x | \rightarrow 0$$

where: U_s - voltage set from the controller
 U_x - feedback voltage from the valve

The system aims to ensure that the voltage difference $U_s - U_x$ always been equal to 0V.
 When $U_s - U_x > 0$, the S1 contact is closing.
 Gdy $U_s - U_x < 0$, the S2 contact is closing.

The 0,1V hysteresis circuit prevents contacts from "flickering" in switching points. The RR3P has electromechanical relays with normally open contacts. The RR3PT has a MOSFET solid state relays. Auxiliary connectors 4 and 5 are shorted together and can be used to cross the line. LEDs indicate output states.

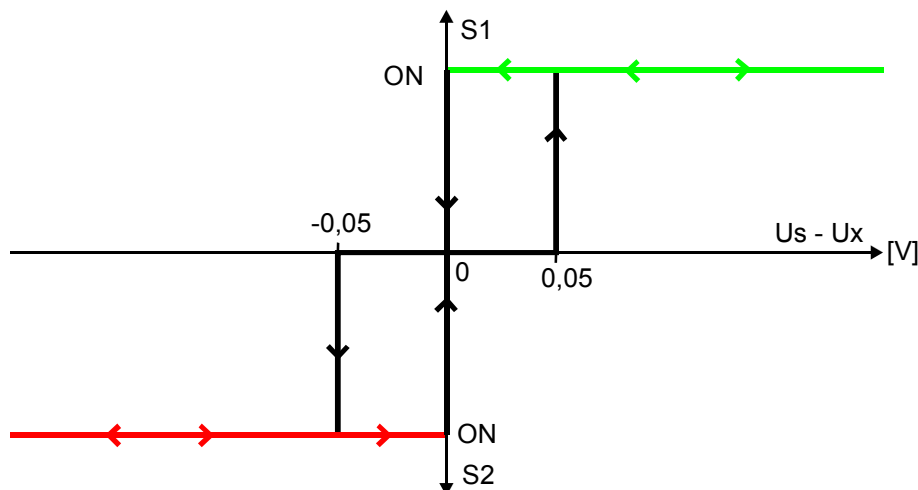


Fig.2 Switching diagram.

RR3P, RR3PT

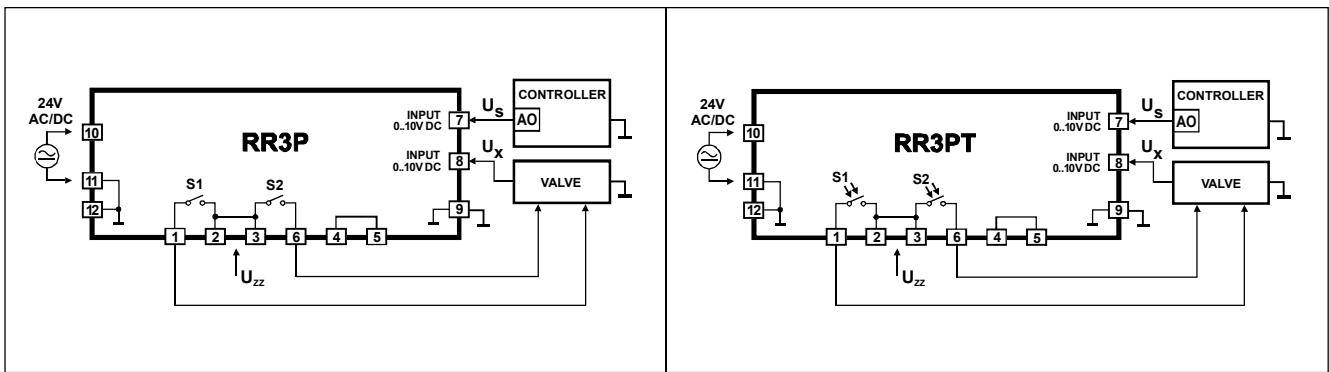


Fig.3 Connections of the RR3P and the RR3PT.
U_{zz} - valve supply voltage.

TECHNICAL DATA

Module name	RR3P	RR3PT
Power supply	24 V AC/DC ± 10%	
Max. current consumption	35 mA for 24 V AC / DC	22 mA for 24 V AC / DC
Input resistance	100kΩ	
Input voltage U _s , U _x	0 - 10V	
Sensitivity	10mV	
Hysteresis	100mV	
Type of relay	Electromechanical	Solid state MOSFET
Contact switching capacity alternating current cosφ=1 direct current	400V, 8A [2000VA] 32V, 8A	270V, 130mA 400V, 130mA
Contact resistance	100mΩ	30Ω
Protection class of the case	IP-40	
Compliance with EU standards	2004/108/EC	
Ambient temperature range	-10...+55°C	
Diameter of terminals	2,5 mm ²	
Protections	against reverse polarisation	
Mounting	DIN-35 rail	
Dimensions (L x W x H)	90mm x 17,5mm x 56mm	
Weight	95 g	90 g

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