

# RSR-72

## Static automatic re-start relay for motors

### OVERVIEW

Whenever there is a sudden lack of voltage, or when a voltage drop below the contactors coil retaining value occurs in the electrical installations, it will result in a shutdown off all motors.

The manual operations for re-starting require necessarily a loss of working time and it may also cause possible connection mistakes with a consequent damage to the manufacturing process, and a repetition of the whole re-start process, at least, when motors must start according to a functional sequence.

Our company, based on the ground of such experience, has designed and manufactured the RSR-72 type static relay. Its working principle is to give an automatic and controlled restart to single motors, when the supply voltage drops under the retaining values for a pre-set time (memory time adjustable from 0.4 ÷ 60 sec.).

In fact, at the voltage restoring (in the range of memory time) to its rated value, the RSR-72 relay starts counting the time and, after "start delay" (adjustable from 0.4 to 999 sec. on request) it sends the closing impulse to the control switch of the motor without any operator's assistance.

Of course, selecting the "start delay" of the single motors, the chosen sequence is automatically established in a very short time without any possibility of wrong operations.

The RSR-72 relay is completely composed of electronic components with the exception of the final relay.

All components are of high quality industrial type.

Main circuits are:

- Supply circuit
- Circuit for energised contractor's survey and memory activation separated by photo-coupler.
- Circuit for surveying a motor stop by PA pushbutton (stop) and quick memory shutdown separated by photo-coupler.
- The circuit for final relay closing and circuit control are managed by microprocessor.
- An important feature of this relay is the mounting system in protection mounting application, by using an undecal socket.

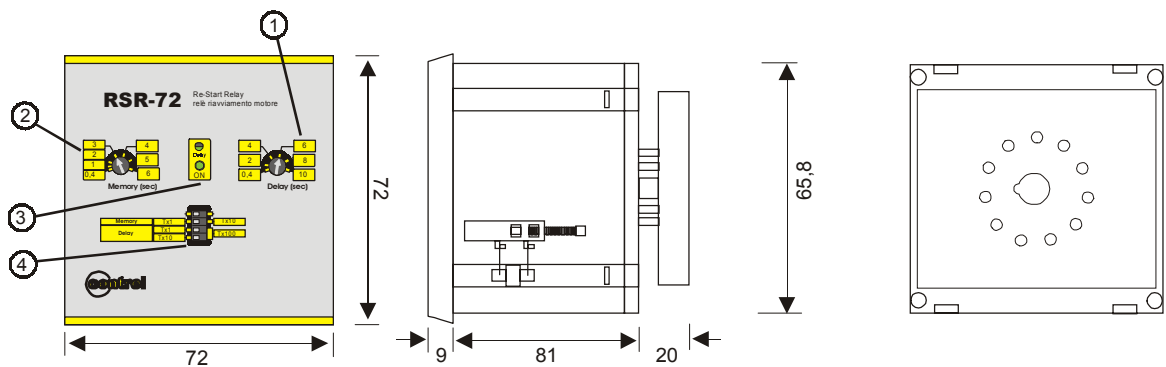
### CHARACTERISTICS

Auxiliary supply voltage (same of switch coil)	115-230Vac or 110Vdc
Frequency	50 ÷ 60 Hz or dc
Maximum consumption	3 VA
Memory time (adjustable)	0,4 ÷ 60 sec
Restart delay (adjustable R contact closing)	0,4 ÷ 999 sec.
Dimensions	72x72mm, with a depth of 110mm including socket
Working temperature (storage)	-10 ÷ +60 ° C ( -40 ÷ +85 °C)
Humidity	95 %
Mounting	Flush-mounting or internally mounted
Tropicalization	On request

## OPERATION

- 1) By pressing the PM push-button (start) the contactor is energized and self-retained by its auxiliary contact; the motor starts, the "R" contact is open and the memory circuit inside the R.S.R. relay is activated
- 2) In case of a temporary lack of voltage:
  - a) If voltage is off for a longer time period than the "memory time", on its recovery the relevant system is out of service; the switch is de-energized and the "R" contact is open.
  - b) If voltage recovery occurs within the time prefixed by the memory, elapsed the pre-set delay time, the "R" contact switches on and the motor automatically re-starts.
- 3) By pressing the "PA" push-button (stop) the contactor-switch is de-energised, the motor stops and the memory circuit, inside the R.S.R. relay, is deactivated; the "R" contact is open and the motor doesn't automatically restart.
- 4) After the operation, as per item 3), in case of a lack and recovery of the supply voltage, the motor doesn't automatically restart.
- 5) In case of pressing of the "PA" push-button (stop), during the count of re-start time (operation of item 2b), the memory is deactivated, the "R" contact does not close and the motor doesn't automatically restart.
- 6) Each "NO" contact, placed directly in serie to "PA" push-button, carries out the same function of "PA" push-button
- 7) Each "NO" contact, placed directly in parallel to "PM" push-button, carries out the same function of "PM" push-button

## DIMENSIONS



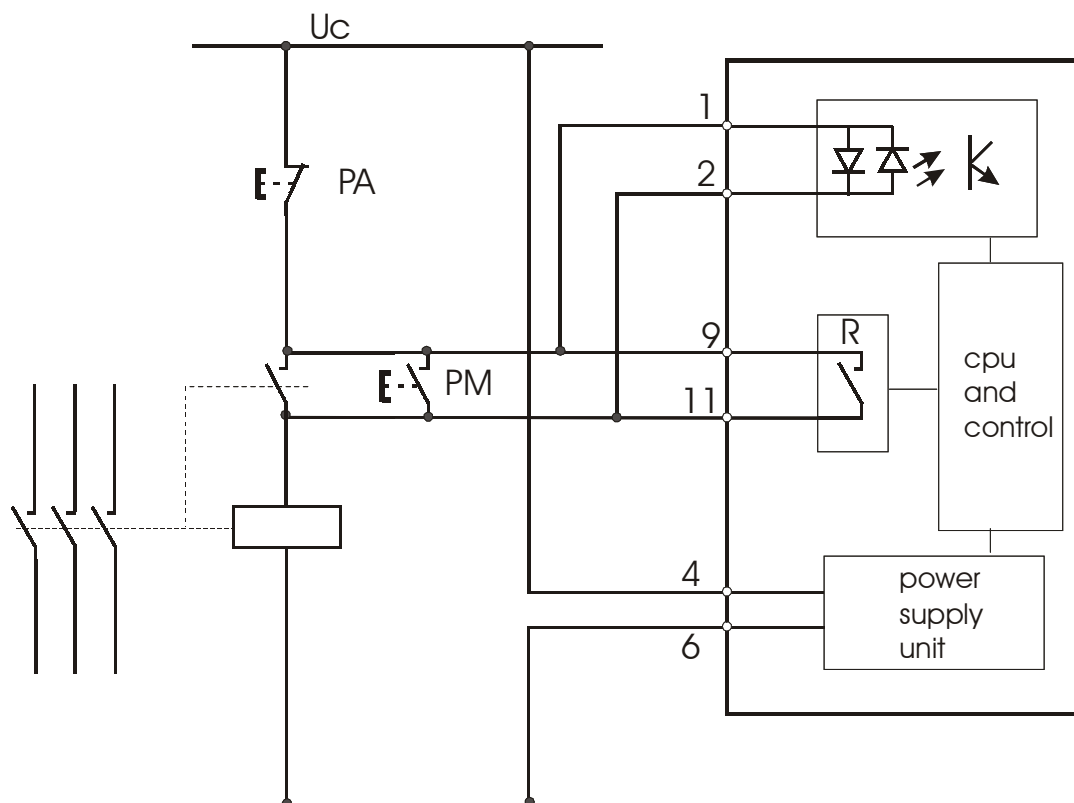
- 1) Delay adjustment trimmer
- 2) Memory adjustment trimmer
- 3) Voltage supply green led/ blinking for delay counter
- 4) Dipswitch for time delay multiplier

Panel drill

Panel flush mounting  
According with DIN 43700

# WIRING DIAGRAM

R.S.R. static relay for motors automatic re-start



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