

Zelio Control - Monitoring & Control Relays

1-phase current control relays
RM22JA and RM35JA



RM22JA21MR



RM22JA31MR



RM35JA32MR



RM35JA32MT

References

Function	Rated supply voltage	Measurement range	Time delay	Output	Reference	Weight
	V					kg/lb
■ Overcurrent without memory	24...240 ~	4 mA...1 A ~	No	2 CO 8 A	RM22JA21MR	0.110/ 0.242
■ Overcurrent with/without memory	24...240 ~	4 mA...1 A ~	Off delay (0.1...30 s)	2 CO 8 A	RM22JA31MR	0.110/ 0.242
■ Undercurrent with/without memory						
■ Overcurrent and undercurrent (window mode) with/without memory	24...240 ~	150 mA...15 A ~	Off delay (0.1...30 s)	2 CO 8 A	RM35JA32MR	0.120/ 0.264
	380...415 ~	150 mA...15 A ~	Off delay (0.1...30 s)	2 CO 8 A	RM35JA32MT	0.120/ 0.264



RM35JA3-MW

Presentation

Multifunction current control relays RM35JA3-MW monitor both AC and DC currents.

Functions	RM35JA31MW	RM35JA32MW
Overcurrent (with/without memory)		
Undercurrent (with/without memory)		
Range controlled	2 ... 500 mA	0.15... 15 A

- Function performed
- Function not performed

These control relays allow:

- Automatic AC or DC recognition
- Measurement ranges from 2 mA to 15 A
- Selection between overcurrent and undercurrent
- Measurement as a true rms value
- Selectable memory function
- Clip-on mounting on a 35 mm rail

They feature:

- A sealable cover to help protect the settings
- A control status indicator LED

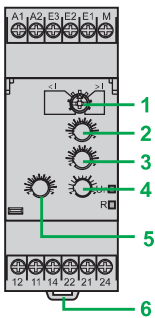
Applications

- Excitation control of DC machines
- Control of the load state of motors and generators
- Control of current drawn by a 3-phase motor
- Monitoring of heating or lighting circuits
- Control of pump draining (undercurrent)
- Control of overtorque (crushers)
- Monitoring of electromagnetic brakes or clutches

Description

RM35JA31MW, RM35JA32MW

- 1 Configuration: selection of operating mode $<I / >I$, (with or without memory)
Memory - No Memory
- 2 Current threshold setting potentiometer **I%**
- 3 Hysteresis adjustment potentiometer **Hysteresis**
- 4 Time delay adjustment potentiometer **Tt**
- 5 Starting inhibition time delay adjustment potentiometer **Ti**
- 6 Spring for clip-on mounting on 35 mm / 1.38 in. rail



RM35JA31MW, RM35JA32MW

Un Green LED: indicates that supply to the product is on
R Yellow LED: indicates relay output status

Operating principle

Control relays RM35JA3-MW are designed to:

- monitor \sim or --- currents
- automatically recognize the form of --- or \sim (50 or 60 Hz) signal
- directly monitor up to 15 A (above this value a current transformer can be connected)
- signal detected faults by means of LEDs

Function Diagram

- Power supply off
- Power supply on
- Output 11-14, 21-24 open
- Output 11-14, 21-24 closed

Operating principle (continued)

RM35 JA31MW/JA32MW

The operating mode is selected by a switch:

- Undercurrent, with or without memory
- Overcurrent, with or without memory

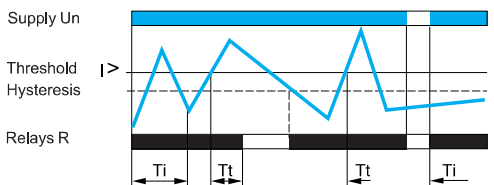
The position of the switch and the operating mode is read by the product on energization:

- If the switch is set to an unacceptable position, the product detects a fault, the output relay stays open and the LEDs flash to indicate the position error.
- If the switch position is changed while the device is operating, all the LEDs flash, but the product continues to operate normally with the function selected at the time of energization preceding the change of position.
- If the configuration switch is returned to the original position selected prior to the last energization, the LEDs return to their normal state.

The undercurrent or overcurrent threshold value is set by a potentiometer graduated as a percentage of the scale value of I to be monitored. The hysteresis is adjusted by a potentiometer graduated from 5...50% of the threshold setting and the value must not exceed the limit values of the measuring range.

Overcurrent without memory

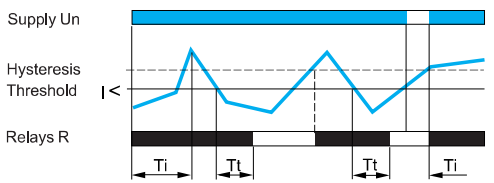
- Overcurrent detection $>I$, without memory



If the current controlled exceeds the threshold setting for a time greater than that set on the front panel (0.3...30 s), the output relay opens and the LED goes off. As soon as the current drops below the value of the threshold setting minus the hysteresis, the relay instantly closes.

Undercurrent without memory

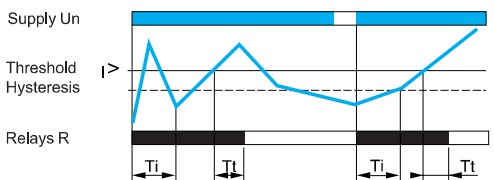
- Undercurrent detection $<I$, without memory



If the current controlled falls below the threshold setting for a time greater than that set on the front panel (0.3...30 s), the output relay opens and the LED goes off. As soon as the voltage rises above the value of the threshold setting plus the hysteresis, the relay instantly closes.

Overcurrent/Undercurrent with memory

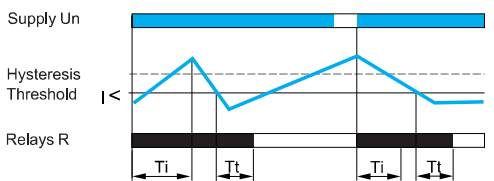
- Overcurrent detection $>I$, with memory



If "Memory" mode is selected, the relay opens when crossing of the threshold is detected and then stays in that position. The power needs to be switched off to reset the product.

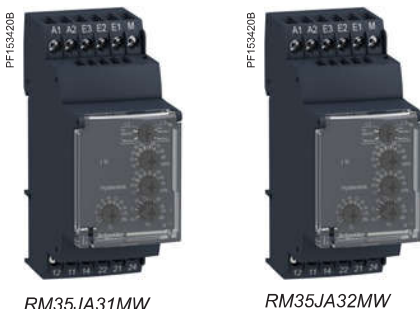
On energization, an inhibition time delay (1...20 s) makes it possible to inhibit current peaks (or troughs) on start-up of equipment.

- Undercurrent detection $<I$, with memory



Note: T_i : starting inhibition time (adjustable on front panel)
 T_t : time delay after crossing of the threshold (adjustable on front panel)

References



Function	Range controlled	Supply	Output	Reference	Weight
		V			kg/lb
■ Overcurrent or undercurrent	2...500 mA	24...240 ~	2 CO 5 A	RM35JA31MW	0.130/ 0.286
	0.15...15 A	24...240 ~	2 CO 5 A	RM35JA32MW	0.130/ 0.286