

Zelio® Control Measurement Relays

RM4JA Current Measurement Relays

SPECIFICATIONS

Power Supply Circuit Specifications

Type of Relay		RM4JA01			RM4JA31 and RM4JA32			
Rated Supply Voltage (Un)	Vac 50/60 Hz	24	110–130	220–240	24–240	110–130	220–240	380–415
	Vdc	–	–	–	24–240	–	–	–
Average Consumption at Un	VA (Vac)	2	1.9–3.3	2.7–3.5	1.5–3.3	1.9–3.3	2.7–3.4	2.7–3
	W (Vdc)	–	–	–	1.2	–	–	–

Output Relay and Operating Specifications

Type of Relay		RM4JA01	RM4JA31 and RM4JA32
Number of C/O Contacts	SPDT 	1	2
Output Relay State		Energized when: current measured > threshold setting	Energized when: current measured > threshold setting (">" function) current measured < threshold setting ("<" function)
Switching Threshold Setting Accuracy		As a percentage of the full scale value: ±5%	
Switching Threshold Drift		≤ 0.06% per °C, depending on the permissible ambient temperature	
		≤ 0.5%, within the supply voltage range (0.85–1.1 Un)	
Hysteresis (adjustable)		5–30% of the current threshold setting	
Time Delay Setting Accuracy		As a percentage of the full scale value: ±10%	
Time Delay Drift		≤ 0.07% per °C, depending on temperature	
		≤ 0.5%, within the supply voltage range (0.85–1.1 Un)	
Measuring Cycle		≤ 80 ms	

Measuring Input Specifications

Internal Input Resistance and Permissible Overload Depending on the Current Measurement Ranges

Type of Relay	RM4JA01 and RM4JA31			RM4JA32		
Measurement Range 50–60 Hz Vac/Vdc	3–30 mA	10–100 mA	0.1–1 A	0.3–1.5	1–5 A	3–15 A
Internal Input Resistance Ri	33 Ω	10 Ω	1 Ω	0.06 Ω	0.02 Ω	0.006 Ω
Permissible Continuous Overload	0.05 A	0.15 A	1.5 A	2 A	7 A	20 A
Permissible Non-Repetitive Overload for t ≤ 3 s	0.2 A	0.5 A	5 A	10 A	15 A	100 A



RM4JA01

SELECTION

Current Measurement Relays: Overcurrent Detection

Time Delay	Current to be Measured Depending on Connection Vac or Vdc	Width in. (mm)	Output Relay	Supply Voltage 50/60 Hz	Catalog Number	Weight lb (kg)
None	3–30 mA 10–100 mA 0.1–1 A	0.87 in. (22.5 mm)	1 C/O–SPDT 	24 Vac	RM4JA01B	0.38 (0.172)
				110–130 Vac	RM4JA01F	0.38 (0.172)
				220–240 Vac	RM4JA01M	0.38 (0.172)

Current Measurement Relays: Overcurrent or Undercurrent Detection

Adjustable Time Delay	Current to be Measured Depending on Connection Vac or Vdc	Width in. (mm)	Output Relay	Supply Voltage 50/60 Hz	Catalog Number	Weight lb (kg)
0.05–30 s	3–30 mA 10–100 mA 0.1–1 A	0.87 in. (22.5 mm)	2 C/O–DPDT 	24–240 Vac/Vdc	RM4JA31MW	0.38 (0.172)
				110–130 Vac	RM4JA31F	0.38 (0.172)
				220–240 Vac	RM4JA31M	0.38 (0.172)
				380–415 Vac	RM4JA31Q	0.38 (0.172)
	0.3–1.5 A 1–5 A 3–15 A	1.77 in. (45 mm)	2 C/O–DPDT 	24–240 Vac/Vdc	RM4JA32MW	0.45 (0.204)
				110–130 Vac	RM4JA32F	0.45 (0.204)
				220–240 Vac	RM4JA32M	0.45 (0.204)
				380–415 Vac	RM4JA32Q	0.45 (0.204)



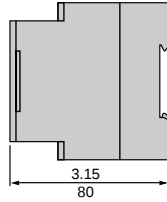
RM4JA32

For additional application data, refer to page 2.

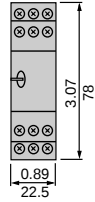
Zelio® Control Measurement Relays RM4JA Current Measurement Relays

DIMENSIONS (approximate)

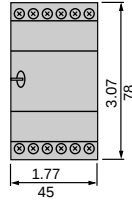
RM4JA
(common side view)



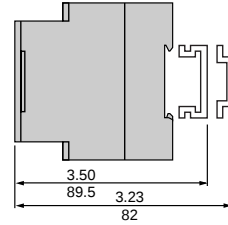
RM4JA01



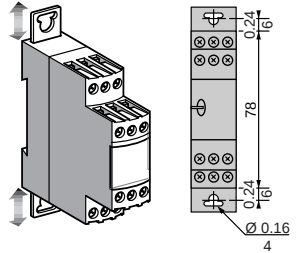
RM4JA32



Rail Mounting



Direct Mounting

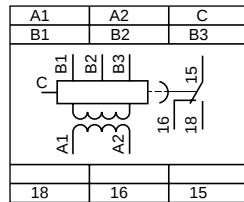


Dual Dimensions = $\frac{\text{in}}{\text{mm}}$

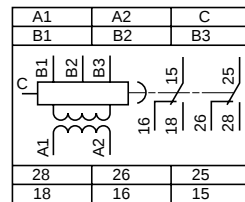
WIRING

Terminal Blocks

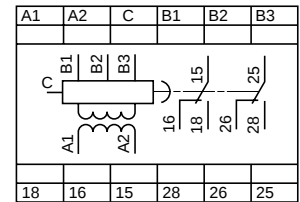
RM4JA01



RM4JA31



RM4JA32



Connection and current values to be measured, depending on type of **RM4JA**

RM4JA01 and RM4JA31

A1-A2 Supply voltage
B1, B2, B3, C Currents to be measured
(see table to right)

B1-C	3-30 mA
B2-C	10-100 mA
B3-C	0.1-1 A

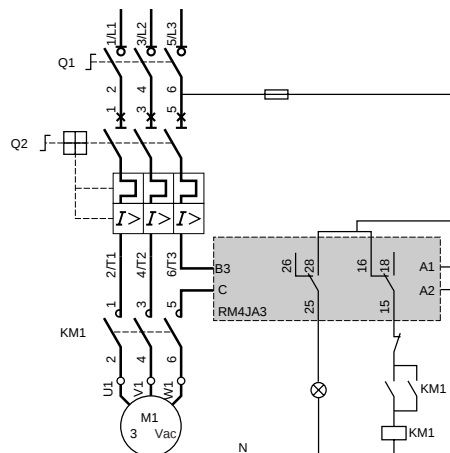
RM4JA32

B1-C	0.3-1.5 A
B2-C	1-5 A
B3-C	3-15 A

Application Diagrams

Example: Detection of a blockage on a crusher (overcurrent function)

Current measured ≤ 15 A



Current measured > 15 A

