ABB Network Partner

RXMD 1
Bistable relay

1MRK 508 017-BEN

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Data subject to change without notice

(SE 940749)

RXMD 1

Features

- Indication of activated coil
- High speed operation
- Contacts for medium duty operation
- Long mechanical life
- High resistance to shock and vibration
- Semi protected and dust-proof
- Low power consumption

Application

The RXMD 1 relays are intended for installations where high operating requirements exist on operating reliability, contact rating or else where normal relays of industrial type are not suitable.

The relays are especially suitable in protection and control circuits. They are also very suitable for use in high corrosive atmosphere or seismic areas.

Type RXMD 1 can be used as position-indication relay for circuit breakers and disconnecting switches or other applications not requiring heavy-duty contacts, or where a compact design is required to reduce panel space.

Design

The auxiliary relays in the COMBIFLEX system permit interchanging between various types of relays mainly because the coil terminals are connected to the same terminal on the plug-in base of the relay. Furthermore, relays having the same contact symbol can be interchanged without changing any connections.

Each relay consists mainly of a terminal plate with contact pins, a printed circuit board assembly with card-relays and a protective cover. The card-relays are high quality products to guarantee their intended function and a long mechanical life. The relays are intended to be mounted on a terminal base, which is available in different sizes, and they are fixed to the terminal base with two cross-head screws.

Ordering No., rated voltage, type designation and the symbol of the relay is printed on the front area of the protective cover.

The relays are provided with light emitting diodes (LEDs) for the indication of activated coils.

The relays operate within a range of 80-110% of the rated voltage. Permissible temperature range is given in the data table.

RXMD 1 is a bistable auxiliary relay with two windings. The contacts of the relay are of medium duty type. One of the windings is used to operate the contacts into one position, and the other winding resets the contacts to the first position. The relay can be continuous energized or pulse operated, which means that the contacts remain in their last position if the supply voltage drops. If one of the coils is energized and then the other coil is energized the relay will remain in the first position.

RXMD 1 has one LED which indicates for one of the two positions when the relay is continuously energized.

Technical data

Table 1:

Rated voltage U_r	24, 48, 110, 125, 220 V dc
Duty range in % of U_r	80-110%
Recovery time	250 ms (from voltage drop for one of the coils until the same coil is energized again or change over time when one of the coils drop-out)
Pick-up time, typical values make/break contact	4,0/4,0 ms
Bounce time, typical values make contact	 4,0 ms
Pick-up value in % of U_r	55-75%
Power consumption at U_r = 24 V dc 48 V dc 110 V dc 220 V dc	 1,1 W 1,2 W 1,4 W 1,4 W
Permitted ambient temperature operative range storage range	 -20°C to+55°C -40°C to+70°C
Degree of protection	IP 44 (acc. to IEC 529)

Table 2: Insulation tests

	Test values	Ref. standard
Dielectric test between coil and contacts, between contacts and between the relays across open contacts	 2,0 kV, 50 Hz, 1 min 1,0 kV, 50 Hz, 1 min	IEC 255-5
Impulse voltage test	5,0 kV, 1,2/50 µs, 0,5 J	IEC 255-5

Table 3: Mechanical tests

	Ref. standard
Vibration test	IEC 255-21-1, class II
Shock and bump test	IEC 255-21-2, class II
Seismic test	IEC 255-21-3, class II

Table 4: Contact data

Highest system voltage	250 V ac, dc
Break voltage	Max. 250 V ac, dc Min. 20 V ac, dc
Contact current * continuously for closed contact	Max 5 A*) Min 1,0 mA
Making and conducting capacity L/R>10 ms, 200 ms/1 s 4 s	 – 14 A
Breaking capacity 250 V ac, cosφ =1,0 250 V ac, cosφ =0,4 dc, L/R = 40 ms 24 V 48 V 110 V 220 V	 1500 VA 1200 VA 2,0 A 0,7 A 0,2 A 0,15 A

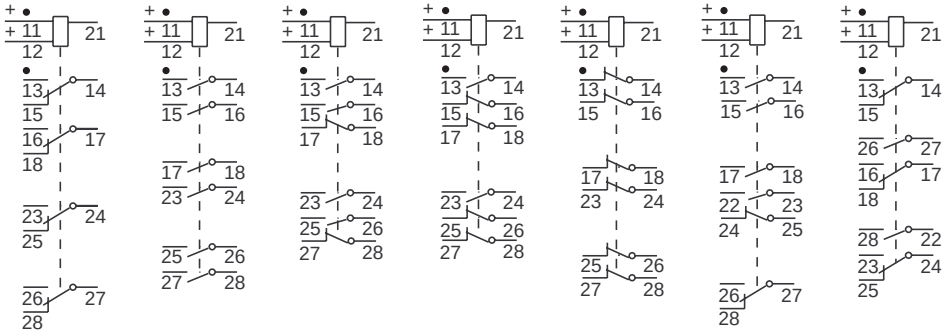
Table 5: Additional general data

Dimensions	2U, 6C

Diagrams

RXMD 1

1MRK 001 602- 603- 604- 605- 606- 607- 609- 610-



- When the winding terminal marked with a dot is positive, the contact moves to the position marked with a dot.

Ordering

Specify:

- Type
- Quantity
- Ordering No.

Type	Ordering No.	Rated voltage					Indication
		24 V dc	48 V dc	110 V dc	125 V dc	220 V dc	
RXMD 1	1MRK 001 602-	AD	AH	AN	AP	AS	yellow
	603-	AD	AH	AN	AP	AS	yellow
	604-	AD	AH	AN	AP	AS	yellow
	605-	AD	AH	AN	AP	AS	yellow
	606-	AD	AH	AN	AP	AS	yellow
	607-	AD	AH	AN	AP	AS	yellow
	609-	AD	AH	AN	AP	AS	yellow
	610-	AD	AH	AN	AP	AS	red

Other variants available on request

References

Connection and installation components in COMBIFLEX	1MRK 513 003-BEN
Relay mounting systems	1MRK 514 001-BEN