Product data sheet
Characteristics

RXM4AB2P7
miniature plug-in relay - Zelio RXM - 4 C/O - 230 V AC - 6 A - with LED

Main

Range of product	Zelio Relay
Series name	Miniature
Product or component type	Plug-in relay
Device short name	RXM
Contacts type and composition	4 C/O
Contacts operation	Standard
Control circuit voltage	230 V AC
[Ithe] conventional enclosed thermal current	6 A at <= 55 °C
Status LED	With
Control type	Pushbutton
Coil interference suppression	Without
Utilisation coefficient	20 %
Sale per indivisible quantity	10

Complementary

[Ui] rated insulation voltage	250 V conforming to IEC 300 V conforming to CSA 300 V conforming to UL
[Uimp] rated impulse withstand voltage	4 kV conforming to IEC 61000-4-5
Contacts material	Silver alloy (Ag/Ni)
[Ie] rated operational current	3 A (AC-1/DC-1) NC conforming to IEC 6 A (AC-1/DC-1) NO conforming to IEC 8 A (AC-1/DC-1) conforming to UL
Minimum switching current	10 mA
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	17 V
Resistive rated load	6 A at 250 V AC 6 A at 28 V DC
Maximum switching capacity	1500 VA, AC circuit 168 W, DC circuit
Minimum switching capacity	170 mW
Operating rate	<= 20 cyc/mn (under load) <= 300 cyc/mn (no-load)
Mechanical durability	10000000 cycles
Electrical durability	100000 cycles for resistive load
Average consumption in W	0.9 W, DC circuit
Average consumption in VA	1.2, AC circuit
Drop-out voltage threshold	>= 0.1 Uc (DC >= 0.15 Uc (AC
Operating time	20 ms between coil de-energisation and making of the Off-delay contact (AC/DC) 20 ms between coil energisation and making of the On-delay contact (AC/DC)
Average resistance	15000 Ohm, AC circuit at 20 °C +/- 15 %
Rated operational voltage limits	184...253 V AC
Protection category	RT I
Operating position	Any position
CAD overall width	21 mm

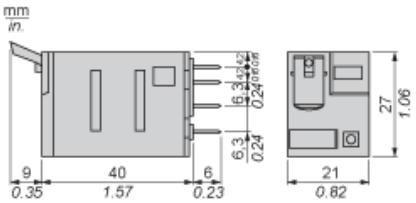
CAD overall height	27 mm
CAD overall depth	55 mm
Product weight	0.037 kg

Environment

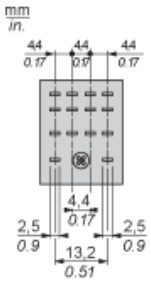
Dielectric strength	1500 V AC (between contacts) 1550 V AC (between coil and contact) 1550 V AC (between poles)
Product certifications	CSA UL
Standards	CSA C22-2 No 14 EN/IEC 61810-1 (iss. 2) UL 508
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-40...55 °C
Vibration resistance	3 gn (f = 10...150 Hz), amplitude +/- 1 mm (on opening) conforming to EN/IEC 60068-2-27 5 gn (f = 10...150 Hz), amplitude +/- 1 mm (on closing) conforming to EN/IEC 60068-2-27
IP degree of protection	IP40 conforming to EN/IEC 60529
Shock resistance	15 gn on closing conforming to EN/IEC 60068-2-27 15 gn on opening conforming to EN/IEC 60068-2-27
RoHS EUR status	Compliant
RoHS EUR conformity date	0801

Miniature Relay

Dimensions

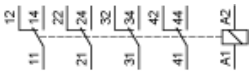


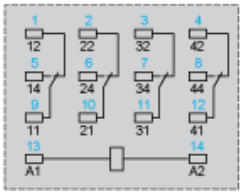
Pin Side View



Miniature Relay

Wiring Diagram





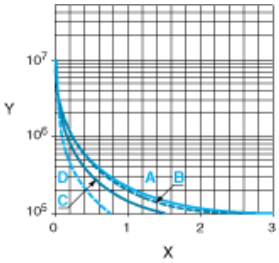
Symbols shown in blue correspond to Nema marking.

RXM Miniature Relays

Electrical Durability of Contacts

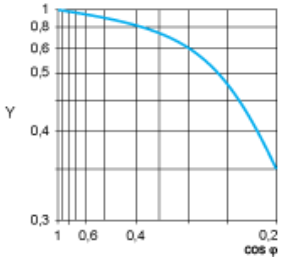
Durability (inductive load) = durability (resistive load) x reduction coefficient.

Resistive AC load



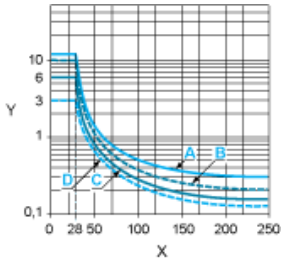
X Switching capacity (kVA)
Y Durability (Number of operating cycles)
A RXM2AB•••
B RXM3AB•••
C RXM4AB•••
D RXM4GB•••

Reduction coefficient for inductive AC load (depending on power factor cos ϕ)



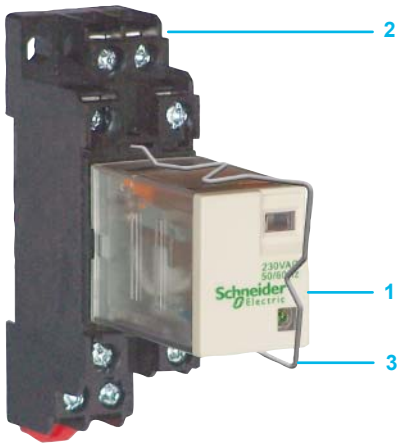
Y Reduction coefficient (A)

Maximum switching capacity on resistive DC load



X Voltage DC
Y Current DC
A RXM2AB•••
B RXM3AB•••
C RXM4AB•••
D RXM4GB•••

Electromechanical Zelio Relay
RXM Optimum miniature plug-in relays

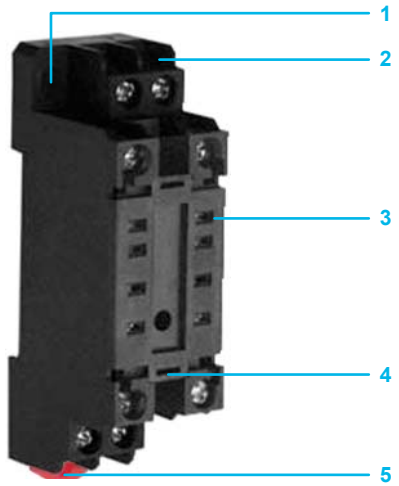


Presentation of the range

The RXM Optimum miniature relay range comprises:
1. 5 A relay with 2 C/O contacts or 3 A relays with 4 C/O contacts. The relays have the same dimensions.
2. Socket with mixed contact terminals.
3. Metal maintaining clamps (accessories).

Relay description

1. Area by which the product can be easily gripped.
2. Mechanical “relay status” indicator.
3. LED (depending on version) indicating the relay status.
4. Four notches for rail mounting adapter or panel mounting adapter with fixing lugs.
5. Eight or fourteen Faston type pins.



Socket description

1. Two fixing holes for panel mounting.
2. Connection by screw clamp terminals.
3. Eight or fourteen female contacts for the relay pins.
4. Two fixing holes for metal maintaining clamp.
5. Locating slot for mounting on DIN rail with fixing clip.

Electromechanical Zelio Relay
RXM Optimum miniature plug-in relays

General characteristics

Conforming to standards			CE, ROHS, IEC/EN 61810-1 (iss.2)
Product certifications			None
Ambient air temperature around the device	Storage	**°C**	- 40… + 85
	Operation	**°C**	- 40… + 55
Vibration resistance conforming to IEC/EN60068-2-6	Operating		3 gn (10...50 Hz)
	Not operating		6 gn (10...50 Hz)
Degree of protection conforming to IEC/EN 60529			IP 40
Shock resistance conforming to IEC/EN 60068-2-27	Opening		10 gn
	Closing		5 gn
Protection category			RT I
Mounting position			Any

Insulation characteristics

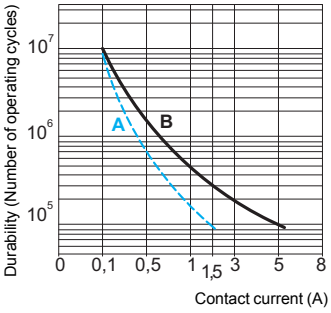
Rated insulation voltage (Ui)		**V**	250 (IEC)
Rated impulse withstand voltage (Uimp)		**kV**	3.6 (1.2/50 µs)
Dielectric strength (rms voltage)	Between coil and contact	∼ **V**	2000
	Between poles	∼ **V**	2000
	Between contacts	∼ **V**	1000

Contact characteristics

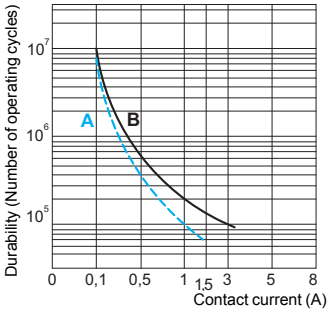
Relay type				**RXM 2LB●●●**	**RXM 4LB●●●**
Number and type of contacts				2 C/O	4 C/O
Contact materials				Silver Alloy	Silver Alloy
Conventional thermal current (Ith)	For ambient temperature ≤55 °C		**A**	5	3
Rated operational current in utilisation categories AC-1 and DC-1	Conforming to IEC	N/O		5	3
		N/C		2.5	1.5
Minimum switchable current			**mA**	10	
Switching voltage	Maximum		**V**	⎓/∼ 250	
	Minimum		**V**	17	
Rated load (resistive)			**A**	5 / 250 VAC	3 / 250 VAC
			A	5 / 28 VDC	3 / 28 VDC
Switching capacity	Maximum	∼	**VA**	1250	750
		⎓	**W**	140	84
	Minimum		**mW**	170	170
Maximum operating rate In operating cycles/hour	No-load			18 000	
	Under load			1200	
Utilisation coefficient				20 %	
Mechanical durability	In millions of operating cycles			10	
Electrical durability In millions of operating cycles	Resistive load			0.1	
	Inductive load			See curves below	

Electrical durability of contacts

For 2 poles relay



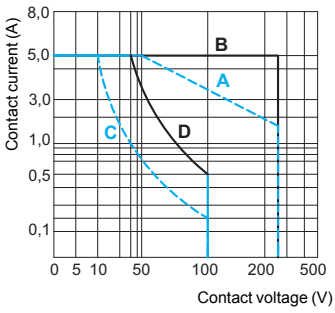
For 4 poles relay



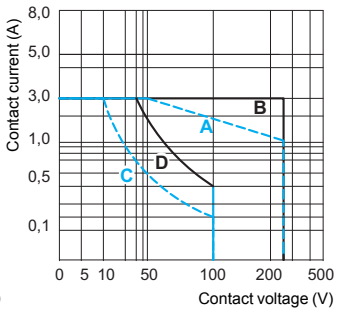
A Inductive load
B Resistive load

Maximum switching capacity

For 2 poles relay



For 4 poles relay



A Inductive load ∼
B Resistive load ∼
C Inductive load ⎓
D Resistive load ⎓

Durability (inductive load) = durability (resistive load) x reduction coefficient.

Coil characteristics

Average consumption		∼	**VA**	1.2						
		⎓	**W**	0,9						
Drop-out voltage threshold		∼		≥ 0.15 Uc						
		⎓		≥ 0.1 Uc						
Operating time (response time)	Between coil energisation and making of the On-delay contact	∼	**ms**	20						
		⎓	**ms**	20						
	Between coil de-energisation and making of the Off-delay contact	∼	**ms**	20						
		⎓	**ms**	20						
Control circuit voltage Uc			**V**	**12**	**24**	**36**	**48**	**110**	**120**	230
Relay control voltage codes				**JD**	**BD**	**CD**	**ED**	**FD**	**–**	–
DC supply	Average resistance at 20 °C ± 10%		**Ω**	160	630	1500	2600	11000	–	–
	Operating voltage limits	Min.	**V**	9.6	19.2	28.8	38.4	88	–	–
		Max.	**V**	13.2	26.4	39.6	52.8	121	–	–
Relay control voltage codes				**–**	**B7**	**–**	**–**	**–**	**F7**	**P7**
AC supply	Average resistance at 20 °C ± 15%		**Ω**	–	160	–	–	–	4500	15000
	Operating voltage limits	Min.	**V**	–	19.2	–	–	–	96	184
		Max.	**V**	–	26.4	–	–	–	132	253

Socket characteristics

Socket Type				**RXZ E1M2C**	**RXZ E1M4C**
Relay Type				**RXM 2●●●●●**	**RXM 2●●●●●, RXM 4●●●●●**
Contact terminal arrangement				Mixed	
Wire connection method				Screw clamp	
Width			**mm**	22.5	29
Product certifications				None	
Conformity to standards				CE, ROHS, IEC 61984	
Electrical Ratings					
Conventional Thermal Current (Ith)			**A**	7	
Nominal Voltage Rating			**V**	250 (IEC)	
Dielectric Strength					
Output to Adjacent Output Terminals			**Vrms**	2 500	
Output to Input Terminals			**Vrms**	2 500	

General Characteristics

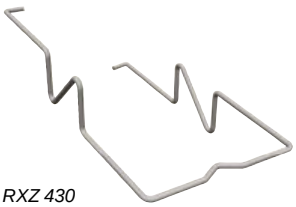
Temperature range		Operating	**°C**	- 40…+ 55	
		Storage	**°C**	- 55…+ 85	
Degree of protection	Conforming to IEC/EN 60529			IP 20	
Connection	Solid cable without cable end	1 conductor	**mm²**	0.5…1.5	
			AWG	20…16	
		2 conductors	**mm²**	0.5…1.5	
			AWG	20…16	
	Flexible cable with cable end	1 conductor	**mm²**	0.25…1	
			AWG	22…17	
		2 conductors	**mm²**	0.25…1	
			AWG	22…17	
Screw Size			**mm**	M3	
Maximum tightening torque			**Nm**	0.8 (M3 Screw)	
Mounting				35 mm DIN Rail / Panel	
DIN Rail locking method				Red Plastic Clip	
Terminal Marking				IEC, NEMA	
Relay fixing plastic clip compatible				No	No
Relay fixing metal clip compatible				Yes	Yes
Protection modules				No	No
Clip-In legend				No	No

Electromechanical Zelio Relay
RXM Optimum miniature plug-in relays

RXM ●LB●●●

RXZ E1M●C

RXZ 420



RXZ 430

References

Miniature relays without lockable test-button, with LED
(sold in lots of 10)

Control circuit voltage	Number and type of contacts - Thermal current (Ith) 2 C/O - 5 A		4 C/O - 3 A	
	Unit reference	Weight	Unit reference	Weight
V		kg		kg
⎓ 12	**RXM 2LB2JD**	0.033	**RXM 4LB2JD**	0.035
⎓ 24	**RXM 2LB2BD**	0.032	**RXM 4LB2BD**	0.034
⎓ 36	**RXM 2LB2CD**	0.034	**RXM 4LB2CD**	0.036
⎓ 48	**RXM 2LB2ED**	0.033	**RXM 4LB2ED**	0.035
⎓ 110	**RXM 2LB2FD**	0.031	**RXM 4LB2FD**	0.033
∿ 24	**RXM 2LB2B7**	0.033	**RXM 4LB2B7**	0.035
∿ 120	**RXM 2LB2F7**	0.032	**RXM 4LB2F7**	0.033
∿ 230	**RXM 2LB2P7**	0.031	**RXM 4LB2P7**	0.032

Miniature relays without lockable test-button, without LED
(sold in lots of 10)

Control circuit voltage	Number and type of contacts - Thermal current (Ith) 2 C/O - 5 A		4 C/O - 3 A	
	Unit reference	Weight	Unit reference	Weight
V		kg		kg
⎓ 12	**RXM 2LB1JD**	0.032	**RXM 4LB1JD**	0.034
⎓ 24	**RXM 2LB1BD**	0.032	**RXM 4LB1BD**	0.033
⎓ 48	**RXM 2LB1ED**	0.033	**RXM 4LB1ED**	0.034
∿ 24	**RXM 2LB1B7**	0.033	**RXM 4LB1B7**	0.034
∿ 120	**RXM 2LB1F7**	0.031	**RXM 4LB1F7**	0.033
∿ 230	**RXM 2LB1P7**	0.030	**RXM 4LB1P7**	0.032

Sockets
(sold in lots of 10)

Contact terminal arrangement	Connection	Relay type	Unit reference	Weight kg
Mixed	Screw clamp	RXM2	**RXZ E1M2C**	0.034
	Screw clamp	RXM2 RXM4	**RXZ E1M4C**	0.053

Accessories
(sold in lots of 10)

Description	For use with	Unit reference	Weight kg
Metal maintaining clamp	RXZ E1M2C	**RXZ 420**	0.001
	RXZ E1M4C	**RXZ 430**	0.001

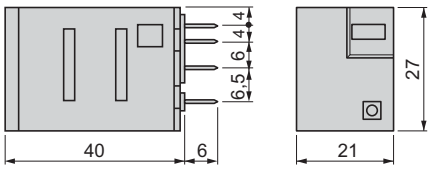
nota: If protection module needed, please used the RZE2● sockets with the associated protection module RXM0. You can find all the details in the RXM●AB range.

Dimensions

Miniature relays

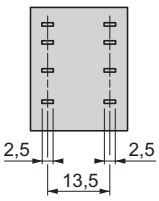
RXM ●●●●●●●●●●

Common view

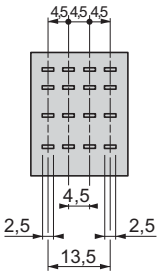


RXM 2●●●●●

Pin side view

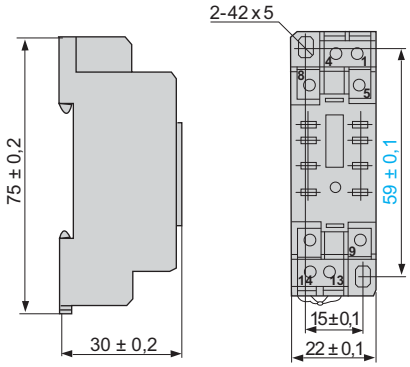


RXM 4●●●●●

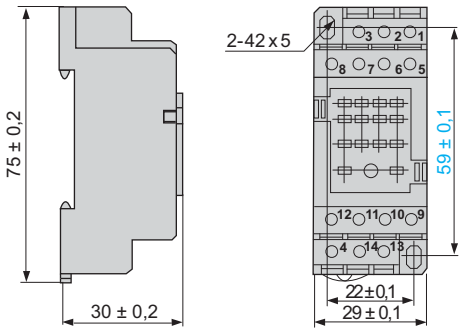


Sockets

RXZ E1M2C



RXZ E1M4C

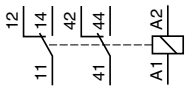


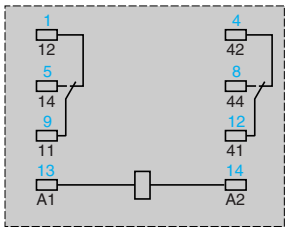
Electromechanical Zelio Relay
RXM Optimum miniature plug-in relays

Schemes

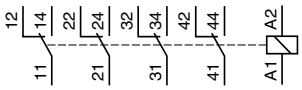
Miniature relays

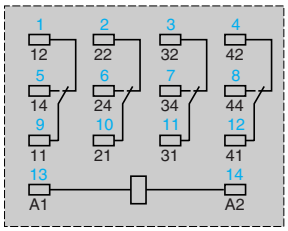
RXM 2●●●●●





RXM 4●●●●●





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