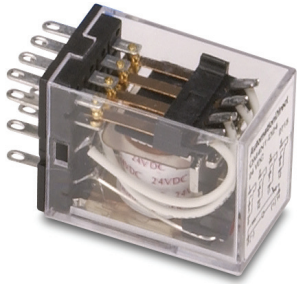


QM Series Electromechanical Relays Selection Guide



QM series relays are general purpose relays designed for a wide range of applications, from power to sequence controls in various factory machines and control panels. They are ideal for electric control panels requiring stable and reliable relays.

Features

- Small package design
- DPDT has a fine silver contact with 5A capability
- 4PDT has a gold-plated silver contact with 3A capability
- High dielectric strength (1,800 VAC)
- High reliability and long life
- Ultra-high sensitivity with quick response time (20 ms max.)
- High vibration and shock resistance
- LED indicator on all models, so you can easily see if relay is working properly without using a voltmeter
- Diode protection on some 24 VDC models protects contacts and electronic components from back EMF
- UL recognized, CE certified, CSA certified (218218)

Note: Order socket separately

QM Series								
Part Number	Price	Drawing Link	Coil Voltage	Configuration	Contact Rating	Relay Socket Part Number	Price	Drawing Link
QM2N1-A120	\$5.25	PDF	110/120VAC	2PDT	5A	SQM08D	\$4.00	PDF
QM2N1-A220	\$5.25	PDF	220VAC	2PDT	5A	SQM08D	\$4.00	PDF
QM4N1-A220	\$9.50	PDF		4PDT	3A	<i>Retired</i>	-	-
QM2N1-D24	\$5.25	PDF	24VDC	2PDT	5A	SQM08D	\$4.00	PDF
QM4N1-D24	\$5.25	PDF		4PDT	3A	<i>Retired</i>	-	-

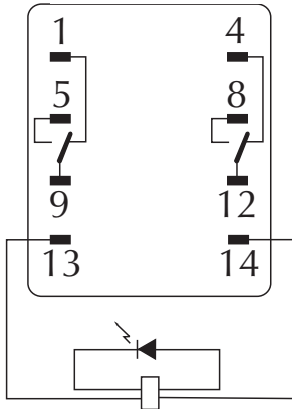
QM Series Electromechanical Relays Specifications

QM Series Specifications Table					
Part Numbers	QM2N1-A120	QM2N1-A220	QM4N1-A220	QM2N1-D24	QM4N1-D24
Contact Specifications					
Current Rating	5A		3A	5A	3A
Contact Type	DPDT		4PDT	DPDT	4PDT
Terminal Type	Spade plug-in socket				
Rated Max. Resistive Load	5A @ 220VAC/ 5A @ 24VDC		3A @ 220VAC/ 3A @ 24VDC	5A @ 220VAC/ 5A @ 24VDC	3A @ 24VDC
Rated Max. Inductive Load	2A @ 220VAC/ 2A @ 24VDC		1.5 A @ 220VAC/ 0.8 A @ 24VDC	2A @ 220VAC/ 2A @ 24VDC	1.5A @ 220VAC/ 0.8 A @ 24VDC
Minimum Recommended Load	1mA @ 1VDC				
Max. Switching Cap. (Resistive Load)	1,100VA/120W		660VA/72W	1,100VA/120W	660VA/72W
Max. Switching Cap. (Inductive Load)	440VA/48W		176VA/36W	440VA/48W	176VA/36W
Max. Contact Rating	250VAC/125VDC			250VAC/125VDC	
Coil Specifications					
Options	LED Indicator			LED Indicator	
Coil Input Voltage	110/120 VAC	220/240 VAC	220/240 VAC	24VDC	
Rated Current at 50Hz	9.9 /10.8 mA	6.2/6.8 mA	6.2/6.8 mA	36.9 mA	
Rated Current at 60Hz	8.4/ 9.2 mA	5.3/5.8 mA	5.3/5.8 mA		
Coil Resistance	4.43 kΩ	12.95 kΩ	12.95 kΩ	650Ω	
Power Consumption	Approx. 0.9 W to 1.1 W (at 60Hz)			Approx. 0.9 W	
Dropout Voltage (% of rated voltage)	Min. 30%			Min. 10%	
Pick-Up Voltage (Must operate voltage)	Max. 80% of the rated coil voltage				
Max. Voltage (Max. continuous voltage)	110% of the rated coil voltage				
Min. Operating Voltage	80% of the rated coil voltage				
General Specifications					
Service Life	Mechanical: AC: Min. 50 million operations; DC: Min. 100 million operations (at operating frequency of 18,000 operations/hour) Electrical: DPDT: Min. 500k operations; 4PDT: Min. 200k operations (at operating frequency of 1,800 operations/hour)				
Operate Time	20ms max				
Release Time	20ms max				
Ambient Temperature	-25 to 75° C (-13 to 167° F)				
Ambient Humidity	45% RH to 85% RH				
Contact Material	Fine Silver	Gold-plated Silver	Fine Silver	Gold-plated Silver	
Contact Resistance	50mΩ max				
Operating Frequency	Mechanical: 18,000 operations/hour; Electrical: 1,800 operations/hour				
Vibration Resistance	10Hz to 55Hz at double amplitude of 1.0mm				
Shock Resistance	1,000m/s ² (approx. 100G)				
Weight	35g (1.24oz.)				
Agency Approvals and Standards	UL Recognized (#E222847), CE Certified (9667186-9811), CSA Certified (218218)				

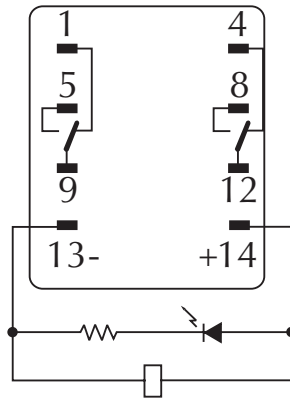
QM Series Wiring Diagrams and Derating Curves

Wiring diagrams

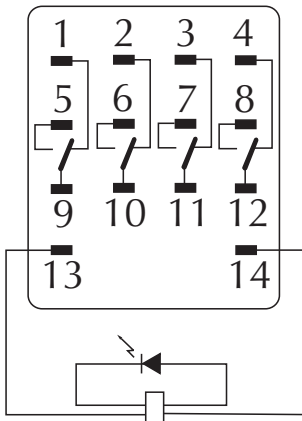
QM2N1-A120
QM2N1-A220



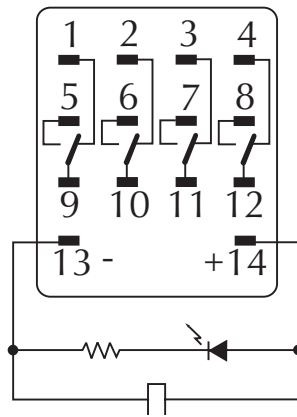
QM2N1-D24



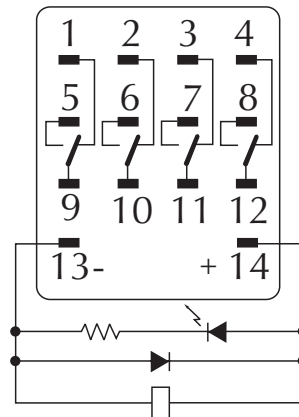
QM4N1-A220



QM4N1-D24

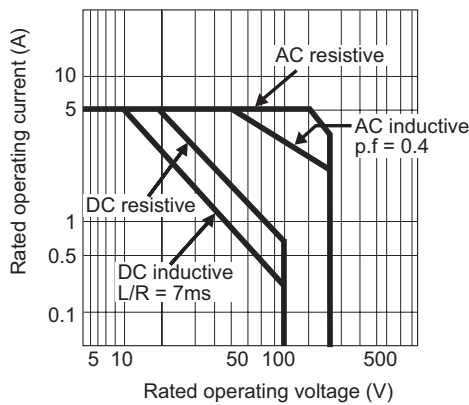


QM4X1-D24



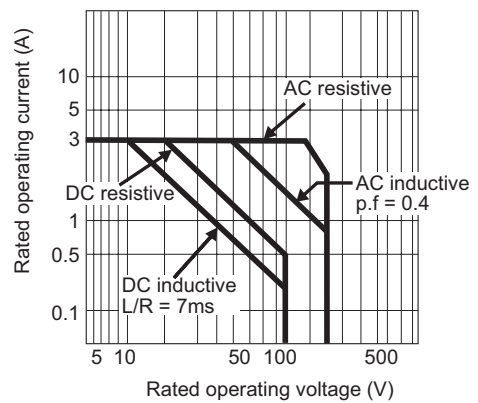
Derating curves

Max. Switching capacity



DPDT

Max. Switching capacity



4PDT

Sockets for QL/QM Series Relays



SQM08D

Sockets for QM Series Relays			
Part Number	Price	Description	Drawing Link
<u>SQM08D</u>	\$4.00	AutomationDirect relay socket, 35mm DIN rail or panel mount. For use with QM2 series relays.	PDF

Holding Clips

Holding clips for the QL2, QL4, QM2 and QM4 series relays can be removed by pushing the side of the inserting hole with a sharp object.

Note: Order sockets separately; holding clips are included with sockets.

Insert holding clip into the slots provided on the socket.

