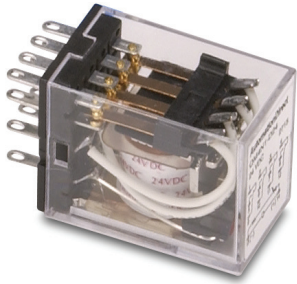


# QM Series Electromechanical Relays Selection Guide



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
<a href="#">QM2N1-A120</a>	<----->	<a href="#">PDF</a>	110/120VAC	2PDT	5A	<b>Retired</b>	-	-
<a href="#">QM2N1-A220</a>	\$5.25	<a href="#">PDF</a>	220VAC	2PDT	5A	<b>Retired</b>	-	-
<a href="#">QM4N1-A220</a>	\$9.50	<a href="#">PDF</a>		4PDT	3A	<b>Retired</b>	-	-
<a href="#">QM2N1-D24</a>	\$5.25	<a href="#">PDF</a>	24VDC	2PDT	5A	<b>Retired</b>	-	-

# QM Series Electromechanical Relays

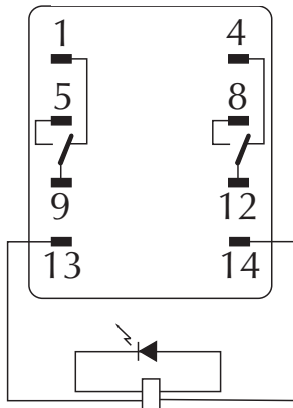
## Specifications

QM Series Specifications Table				
Part Numbers	QM2N1-A120	QM2N1-A220	QM4N1-A220	QM2N1-D24
<b>Contact Specifications</b>				
Current Rating	5A		3A	5A
Contact Type	DPDT		4PDT	DPDT
Terminal Type	Spade plug-in socket			
Rated Max. Resistive Load	5A @ 220VAC/ 5A @ 24VDC		3A @ 220VAC/ 3A @ 24VDC	5A @ 220VAC/ 5A @ 24VDC
Rated Max. Inductive Load	2A @ 220VAC/ 2A @ 24VDC		1.5 A @ 220VAC/ 0.8 A @ 24VDC	2A @ 220VAC/ 2A @ 24VDC
Minimum Recommended Load	1mA @ 1VDC			
Max. Switching Cap. (Resistive Load)	1,100VA/120W		660VA/72W	1,100VA/120W
Max. Switching Cap. (Inductive Load)	440VA/48W		176VA/36W	440VA/48W
Max. Contact Rating	250VAC/125VDC			250VAC/125VDC
<b>Coil Specifications</b>				
Options	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 k $\Omega$	12.95 k $\Omega$	12.95 k $\Omega$	650 $\Omega$
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			
<b>General Specifications</b>				
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
Contact Resistance	50m $\Omega$ 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 <sup>2</sup> (approx. 100G)			
Weight g (oz)	35 (1.24)			
Agency Approvals and Standards	UL Recognized (#E222847), CE Certified (9667186-9811), CSA Certified (218218)			

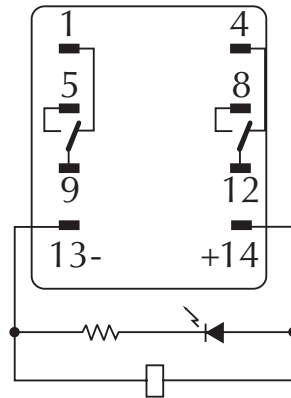
# QM Series Wiring Diagrams and Derating Curves

## Wiring diagrams

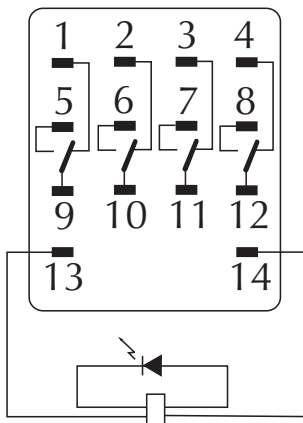
QM2N1-A120  
QM2N1-A220



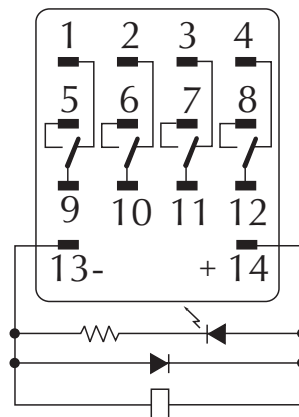
QM2N1-D24



QM4N1-A220

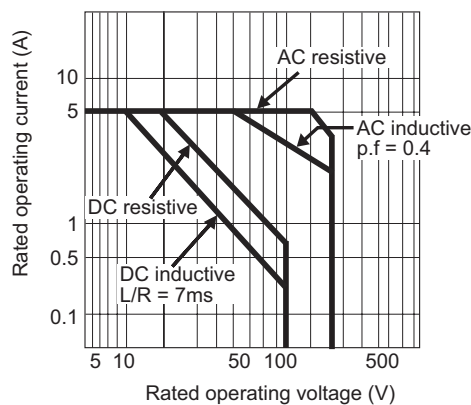


QM4X1-D24



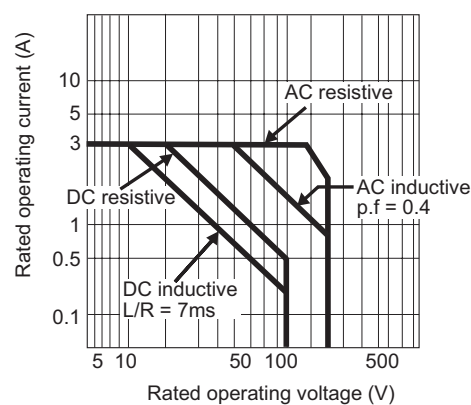
## Derating curves

Max. Switching capacity



DPDT

Max. Switching capacity



4PDT