

QL Series Electromechanical Relay Selection Guide



QL 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
- ARC Barrier equipped
- Silver Cadmium Oxide contact
- High dielectric strength (1,800 VAC)
- High reliability and long life
- Ultra-high sensitivity with quick response time (25 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 available on 24 VDC models, which protects contacts and electronic components from back EMF
- UL recognized, CE certified, CSA approval pending
- DPDT and 4PDT models

Note: Order socket separately

QL Series								
Part Number	Price	Drawing Link	Coil Voltage	Configuration	Contact Rating	Relay Socket Part Number	Price	Drawing Link
QL2N1-A120	<----->	PDF	110/120VAC	2PDT	10A	Retired	<--->	PDF
QL4N1-A220	\$14.50	PDF	220VAC	4PDT	10A	Retired	<--->	PDF
QL4X1-D24	<----->	PDF	24VDC	4PDT	10A	Retired	<--->	PDF

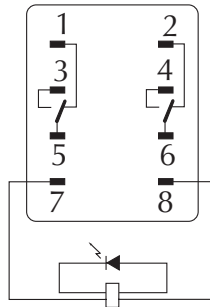
QL Series Electromechanical Relays Specifications

QL Series Specifications			
Part Numbers	QL2N1-A120	QL4N1-A220	QL4X1-D24
Contact Specifications			
Current Rating	10A		
Contact Type	DPDT	4PDT	
Terminal Type	Spade Plug-In Socket		
Rated Max. Resistive Load	10A @ 110VAC/ 10A @ 24VDC		
Rated Max. Inductive Load	7.5 A @ 110VAC/ 5A @ 24VDC		
Minimum Recommended Load	1mA @ 5VDC		
Max. Switching Cap. (Resistive Load)	1,100VAC/240W		
Max. Switching Cap. (Inductive Load)	825VAC/120W		
Max. Contact Rating	250VAC/125VDC		
Coil Specifications			
Options	LED Indicator		LED Indicator/Diode Protection
Coil Input Voltage	110/120VAC	220/240VAC	
Rated Current at 50Hz	9.9/10.8 mA	11.5/13.1 mA	69mA
Rated Current at 60Hz	8.4/9.2 mA	9.8/11.2 mA	69mA
Coil Resistance	4.43 kΩ	6.7 kΩ	350Ω
Power Consumption	Approx. 0.9 W to 1.1 W (at 60Hz)		
Dropout Voltage (% of rated voltage)	Min. 30%		
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	25ms max		
Release Time	25ms max		
Ambient Temperature	-25 to 70°C (-13 to 158°F)		
Ambient Humidity	45% to 85% Relative Humidity		
Contact Material	Silver Cadmium Oxide		
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 1.0 mm		
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)		

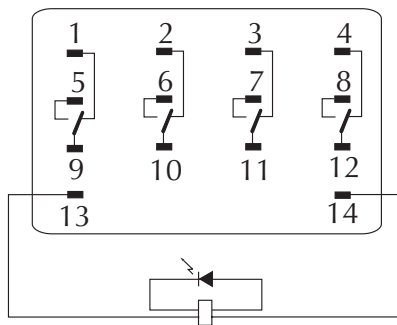
QL Series Wiring Diagrams and Derating Curves

Wiring Diagrams

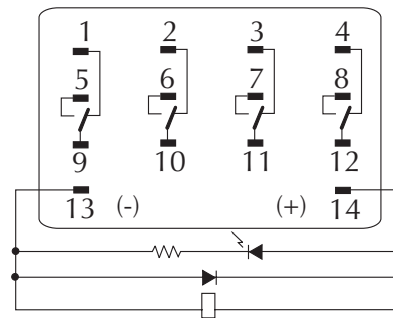
QL2N1-A120



QL4N1-A220

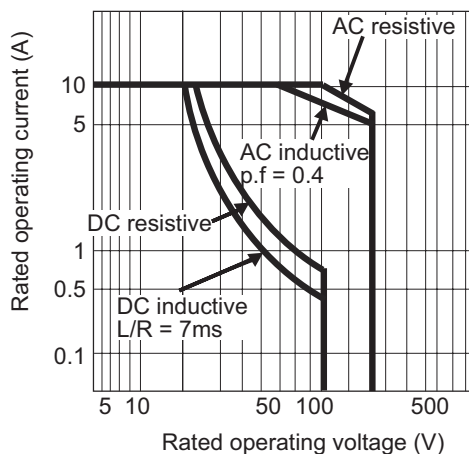


QL4X1-D24



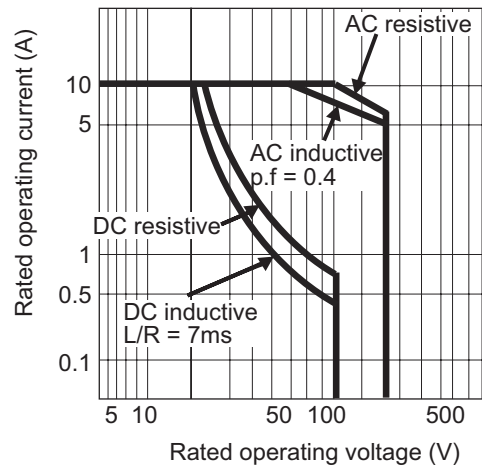
Derating Curves

Max. Switching capacity



QL 2PDT

Max. Switching capacity



QL 4PDT