

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
- 4PDT model

Note: Order socket separately

| QL Series | | | | | | | | |
|----------------------------|---------|---------------------|--------------|---------------|----------------|--------------------------|-------|---------------------|
| Part Number | Price | Drawing Link | Coil Voltage | Configuration | Contact Rating | Relay Socket Part Number | Price | Drawing Link |
| QL4N1-A220 | Retired | PDF | 220VAC | 4PDT | 10A | Retired | <---> | PDF |

QL Series Electromechanical Relays

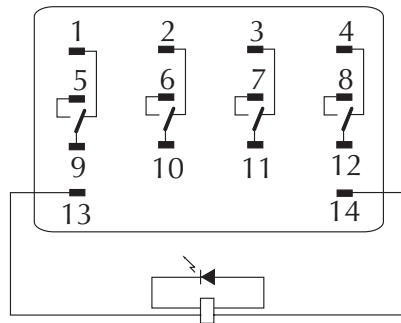
Specifications

| QL Series Specifications | |
|---|--|
| Part Number | <u>QL4N1-A220</u> |
| Contact Specifications | |
| Current Rating | 10A |
| Contact Type | 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 |
| Coil Input Voltage | 220/240VAC |
| Rated Current at 50Hz | 11.5/13.1 mA |
| Rated Current at 60Hz | 9.8/11.2 mA |
| Coil Resistance | 6.7 kΩ |
| 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

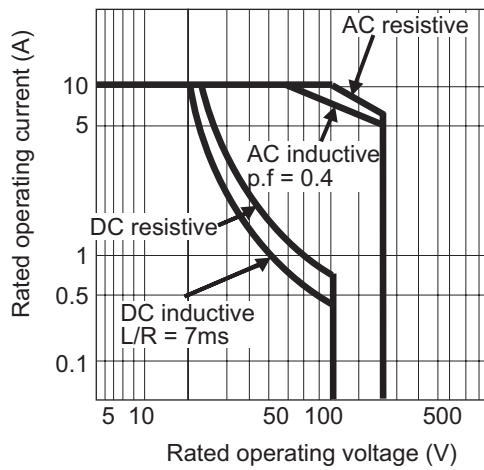
Wiring Diagrams

QL4N1-A220



Derating Curves

Max. Switching capacity



QL 4PDT