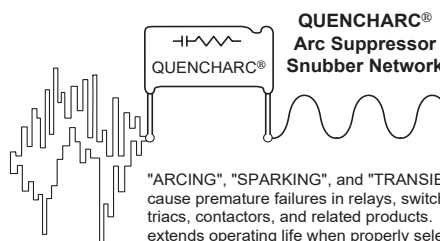
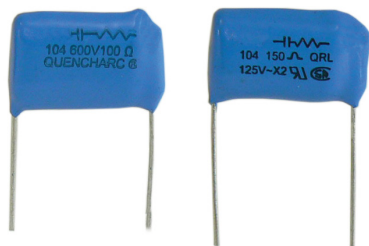


# Type Q/QRL (Quencharc®) Arc Suppressor/Snubber Network

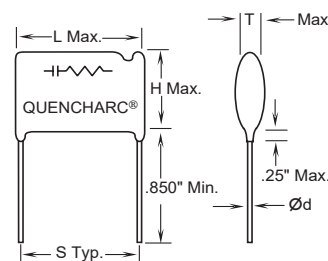
## Radial Metallized Polyester RC Network for Transient Suppression



### Highlights

- ◆ Noise and arc suppression
- ◆ RC Snubber Network
- ◆ Relay contact protection
- ◆ Noise reduction on controllers and drives
- ◆ EMI/RFI reduction
- ◆ dv/dt suppression
- ◆ Type QRL - UL/CSA version
- ◆ Coated with flame retardant epoxy
- ◆ Halogen-free (date codes 1807 and after)

### Outline Dimensions



### Specifications

- Capacitance Range:** 0.10  $\mu$ F, 0.25  $\mu$ F, 0.50  $\mu$ F, 1.0  $\mu$ F
  - Voltage Range:** 200 Vdc/125 Vac, 60 Hz thru 1600 Vdc/660 Vac, 60 Hz
  - Capacitance Tolerance:**  $\pm$ 20%
  - Resistor Tolerance:**  $\pm$ 10%
  - Resistor Values:** 22, 39, 47, 100, 150, 220, 330, 680 ohms
  - Operating Temperature Range :** -55 °C to +85 °C at full rated voltage
  - Construction:** Metallized polyester in series with a carbon composition resistor<sup>1</sup>
  - Dielectric Withstand Voltage:** 1.6 x DC rated voltage @ +25 °C
  - DC Life Test:** 125% of rated voltage for a period of 500 hours at 85 °C with capacitance change  $\leq$ 5% and DF  $\leq$  original limits
  - Long Term Stability:** The capacitance shall not change more than 2% when stored at ambient temperature and humidity for a period of two years or less.
- RoHS Compliant

### Ratings

Catalog Part Number	Cap ( $\mu$ F)	Resistor Ohms Watts	Dimensions in Inches						Dimensions in Millimeters					
			L Max	T Max	H Max	S Typ.	$\varnothing_d$ Typ.	$\varnothing_r$ Typ.	L Max	T Max	H Max	S Typ.	$\varnothing_d$ Typ.	$\varnothing_r$ Typ.
<b>200 Vdc / 125Vac</b>														
504M02QA22	0.5	22 1/2	1.08	0.37	0.64	0.82	0.032	0.025	27.4	9.4	16.3	20.8	0.8	0.635
504M02QA47	0.5	47 1/2	1.08	0.37	0.64	0.82	0.032	0.025	27.4	9.4	16.3	20.8	0.8	0.635
504M02QA100	0.5	100 1/2	1.08	0.37	0.64	0.82	0.032	0.025	27.4	9.4	16.3	20.8	0.8	0.635
504M02QA220	0.5	220 1/2	1.08	0.37	0.64	0.82	0.032	0.025	27.4	9.4	16.3	20.8	0.8	0.635
105M02QB22	1.0	22 1/2	1.45	0.39	0.66	1.20	0.032	0.025	36.8	9.9	16.7	30.5	0.8	0.635
105M02QB47	1.0	47 1/2	1.45	0.39	0.66	1.20	0.032	0.025	36.8	9.9	16.7	30.5	0.8	0.635
<b>600 Vdc / 250Vac</b>														
104M06QC22	0.1	22 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635
104M06QC47	0.1	47 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635
104M06QC100	0.1	100 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635
104M06QC150	0.1	150 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635
104M06QC220	0.1	220 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635
104M06QC330	0.1	330 1/2	1.08	0.39	0.66	0.82	0.032	0.025	27.4	9.9	16.7	20.8	0.8	0.635

Type QRL: UL File No. E33628, CSA File No. LR32208

# Type Q/QRL (Quencharc®) Arc Suppressor/Snubber Network

## Ratings

Catalog Part Number	Cap (µF)	Resistor Ohms Watts		Dimensions in Inches						Dimensions in Millimeters					
				L	T	H	S	Ød <sub>c</sub>	Ød <sub>r</sub>	L	T	H	S	Ød <sub>c</sub>	Ød <sub>r</sub>
				Max	Max	Max	Typ.	Typ.	Typ.	Max	Max	Max	Typ.	Typ.	Typ.
<b>600 Vdc / 250Vac</b>															
254M06QD22	0.25	22	1/2	1.45	0.42	0.75	1.20	0.032	0.025	36.8	10.6	19.0	30.5	0.8	0.635
254M06QD47	0.25	47	1/2	1.45	0.42	0.75	1.20	0.032	0.025	36.8	10.6	19.0	30.5	0.8	0.635
254M06QD100	0.25	100	1/2	1.45	0.42	0.75	1.20	0.032	0.025	36.8	10.6	19.0	30.5	0.8	0.635
254M06QD150	0.25	150	1/2	1.45	0.42	0.75	1.20	0.032	0.025	36.8	10.6	19.0	30.5	0.8	0.635
504M06QE22	0.5	22	1/2	1.45	0.59	0.92	1.20	0.032	0.025	36.8	15.0	23.4	30.5	0.8	0.635
504M06QE47	0.5	47	1/2	1.45	0.59	0.92	1.20	0.032	0.025	36.8	15.0	23.4	30.5	0.8	0.635
504M06QE100	0.5	100	1/2	1.45	0.59	0.92	1.20	0.032	0.025	36.8	15.0	23.4	30.5	0.8	0.635
504M06QE150	0.5	150	1/2	1.45	0.59	0.92	1.20	0.032	0.025	36.8	15.0	23.4	30.5	0.8	0.635
<b>1200 Vdc / 480Vac</b>															
104M48QH39	0.1	39	2	1.60	0.64	1.04	1.29	0.032	0.032	40.6	16.3	26.4	32.7	0.8	0.8
<b>1600 Vdc / 660Vac</b>															
104M66QV39	0.1	39	2	2.18	0.54	1	1.8	0.032	0.032	55.3	13.7	25.4	45.7	0.8	0.8
<b>UL/CSA Recognized Across-the-Line Application    Type QRL 125VAC    Type QRL complies with UL1414/CSA-C22.2 No. 1</b>															
104MACQRL150	0.1	150	1/2	1.08	0.44	0.66	0.82	0.032	0.025	27.4	11.18	16.7	20.8	0.8	0.635
104MACQRL680	0.1	680	1/2	1.08	0.44	0.66	0.82	0.032	0.025	27.4	11.18	16.7	20.8	0.8	0.635

Type QRL: UL File No. E33628, CSA File No. LR32208

<sup>1</sup> Two watt resistor is wire wound

Shaded items are stocked parts

**Notice and Disclaimer:** All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.