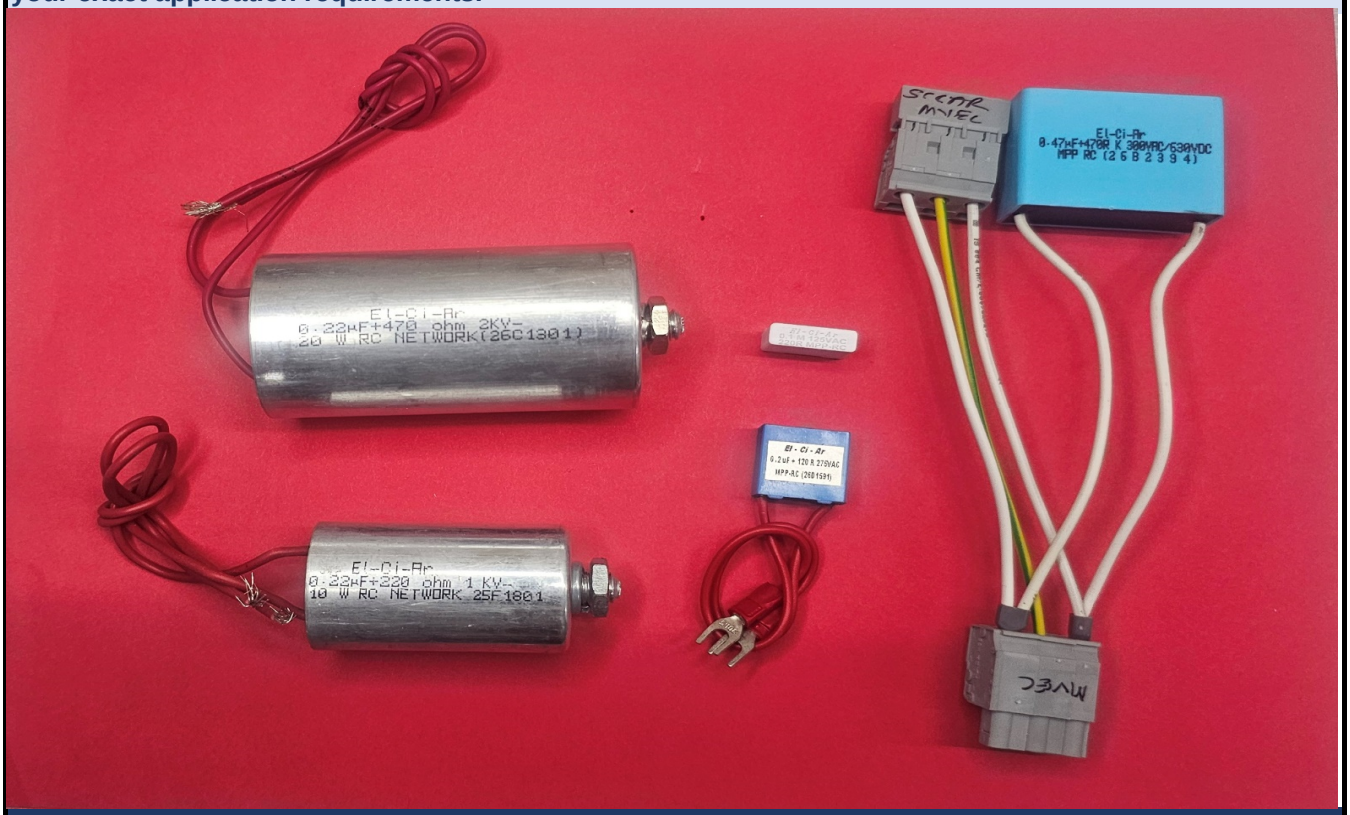
RC NETWORKS & SNUBBERS

El-Ci-Ar® MPP-RC & RC-11 Series

Neotroniks specializes in high-performance RC Networks designed for robust transient protection, arc suppression, and dv/dt limitation. We offer full engineering flexibility to adjust R/C parameters, alternative housing geometries, specialized power ratings, and high-vibration terminations to match your exact application requirements.



CONSTRUCTION OVERVIEW

MPP-RC Series (Plastic Box Type): A non-inductive metallised and plain polypropylene film combining with a high-power resistor series network , housed in a flame-retardant, resin-filled plastic box; radial tin-plated copper leads or custom insulated PVC wires.

RC-11 Series (Aluminium Can Type): A high-temperature, high-power film-foil capacitor (KT-22 polyester or FMD23 paper-polyester) integrated with a precision wire-wound resistor. The non-inductive element is oil-impregnated in an aluminium can, epoxy-encapsulated for moisture resistance, and fitted with an M8 mounting stud.

MAIN APPLICATIONS

- dv/dt limitation and overvoltage transient protection across Thyristors (SCR), Triacs, and Diodes.
- Spark quenching and contact arc suppression across mechanical switches, relays, and contactor interfaces.
- Snubber networks, power supply filtering, and protection in high-frequency industrial power electronics and motor control systems.

TECHNICAL COMPARISON MATRIX

Feature	MPP-RC Series (Plastic box Type)	RC-11 Series (Aluminium Can Type)
Primary Applications	PCB-level snubbing, low-power filtering, motor control	High-voltage industrial power electronics, heavy thyristor/SCR protection
Dielectric	Metallised Polypropylene Film + Plain Polypropylene Film	Film Foil with Polyester / Paper-Polyester Dielectric (KT-22/FMD23)
Encapsulation	Flame-retardant Plastic Box, Epoxy Resin Filled (UL94 V-0 for select models)	Sealed Aluminium Can, Epoxy Filled with M8 Bottom Stud Mounting
Temperature Range	-55°C to +85°C (High-temperature series up to +105°C available)	-25°C to +85°C

Capacitance Range	0.1 µF to 0.47 µF (Custom values on request)	0.1 µF to 0.47 µF (Custom values on request)
Capacitance Tolerance	±10% (Standard)	±10%, ±20% (Standard)
Resistor Range	10 Ω to 820 Ω	10 Ω to 820 Ω
Resistor Tolerance	±10% (Standard)	±10% (Standard)
Resistor Power Rating	0.5 W to 5 W (Standard) / Up to 10 W (Heavy-duty)	10 W to 20 W Effective
Rated Voltage	125 to 300 VAC / 250 to 630 VDC	350 to 700 VAC / 1000 to 2000 VDC
Voltage Proof (Terminals)	1.6 × U(NDC) for 2 seconds	2500 VDC / 5000 VDC for 2 seconds
Voltage Proof (Case)	— (not applicable, plastic housing)	2000 VDC / 4000 VDC for 2 seconds
Insulation Resistance	≥ 30 GΩ to 100 GΩ @ 100 VDC	≥ 25 GΩ @ 500 VDC
Flammability Rating	UL94 V-0 Compliant (select models)	—
Terminations	Radial Tin-Plated Copper Wires, PVC Wires with Pin Lugs, Double End-Sleeves, or Quick-Connect Male/Female Terminals	Flexible red PVC-insulated copper wires (23/36 gauge), standard 150 mm length.

PRODUCT RATINGS & OUTLINE DIMENSIONS (mm)

1. MPP-RC Series (Plastic Box Type — Radial Terminations)

Configuration (R+C)	Rated Voltage	Width (W)	Height (H)	Length (L)	Lead Pitch	Wire Ø / Spec	Termination Type
0.1 µF + 220 Ω (10%)	125 VAC / 250 VDC	5	13	18	15.2	0.6 mm	Tin-Coated Copper Wire
0.033 µF + 100 Ω (10%)	300 VAC / 1000 VDC	7	14	19	15	0.6 mm	Radial Tin-Plated Leads
0.47 µF + 470 Ω (10W)	300 VAC / 630 VDC	17	29	42	—	0.75 mm²	Custom PVC wires + Male/Female Terminals
0.47 µF + 680 Ω (10W)	300 VAC / 630 VDC	17	29	42	—	23/36 AWG	Custom PVC Insulated Wires

2. RC-11 Series (Aluminium Can Type — M8 Stud Chassis Mount)

Capacitance Value (C)	Resistance Value (Ω)	Can Ø (1000VDC/10W)	Can Length (1000VDC/10W)	Can Ø (2000VDC/20W)	Can Length (2000VDC/20W)
0.10 µF	10 Ω to 820 Ω	30 mm	40 mm	30 mm	53 mm
0.22 µF	10 Ω to 820 Ω	30 mm	53 mm	40 mm	78 mm
0.47 µF	10 Ω to 820 Ω	30 mm	65 mm	40 mm	78 mm

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