

ER-Series Capacitors



NWL's ER-Series polypropylene DC link film capacitors offer a distinct alternative to small round cans, both film and electrolytic, with high capacitance density power in an economical standard package. The rectangular aluminum package with various mounting bracket options enables the capacitor to be operated in a variety of orientations. Component inventory, integration, and installation are streamlined as a result.

ER-Series capacitors are well suited for many inverter applications including:

- DC input / output filtering
- DC link
- AC harmonic filtering
- High energy storage pulse

Unique features of the ER-Series capacitor include:

- **Standard economic package** – With standard terminals and case construction, NWL created automated assembly to enhance production efficiency.
- **Unique stackable bracket design** – Welded metal brackets enable capacitors to be mounted and stacked on floor or wall vertically or horizontally. Three bracket versions are available.
- **Robust, rugged, and reliable construction** – ER-Series capacitors are used in numerous high reliability, mission-critical applications such as renewable energy inverters.
- **Inverter design flexibility** – Compact design and mounting options give designs more component layout alternatives.

ER-Series Capacitors Product Information and Specifications

Originally designed to replace electrolytic type capacitors, ER-Series capacitors are now widely used for DC link, AC harmonic filter, and energy storage, and pulse power applications. They provide a unique rectangular can approach utilizing the latest polypropylene film dielectric technologies of self healing electrodes and use UL 94V-0 thermosetting dry resin encapsulation.

General Specifications

Reference Standard	IEC 1071-1
Capacitance Tolerance	+/- 10
Voltages	DC rating continuous steady state condition DC pk pulse duty, < 20% reversal DC surge 1 minute 1 time per day AC RMS sinewave @ 60 Hz Test T-T @ 1.5 VDC, 10 seconds Test T-C @ 2.0Vpk dc + 1000 V, 10 seconds
Current / Temp Ratings	ripple RMS current @ 55°C ambient peak current @ 40°C ambient
VA	VAC RMS x Amps RMS max value
Inductance	20 – 90 nH
Operating Temperature	-40°C to +85°C
Encapsulation	UL 94V-0 thermosetting resin

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Electrical Ratings

Part #	uF	VDC	Vpk	VAC	Current	Current	Inductance
	+10% -5%	continuous	pulse	RMS @ 60Hz	RMS@ 55°C	peak	nH
ER1025-X*	3800	800	1000	60	90	10,000	33
ER1050-X*	3500	800	1000	110	145	12,500	40
ER1100-X*	2900	900	1125	135	150	10,000	30
ER1125-X*	2900	900	1125	85	90	8,500	33
ER1200-X*	2400	1100	1375	165	150	10,000	30
ER1225-X*	2400	1100	1375	100	90	8,500	33
ER1250-X*	1900	1200	1500	210	150	7,500	30
ER1275-X*	1900	1200	1500	125	90	6,500	33
ER1300-X*	1500	1300	1625	265	150	7,000	30
ER1325-X*	1500	1300	1625	160	90	6,000	30
ER1400-X*	1150	1500	1875	330	145	6,000	30
ER1425-X*	1150	1500	1875	210	90	5,500	30
ER1450-X*	800	1750	2150	350	120	5,000	30
ER1470-X*	650	1900	2375	350	120	5,000	30
ER1700-X*	525	2100	2625	480	140	7,000	30
ER1725-X*	525	2100	2625	350	80	4,000	30
ER1735-X*	360	2600	3250	480	130	5,000	30
ER1750-X*	250	3000	3750	660	120	5,000	30
ER1800-X*	100	3600	4500	725	120	5,500	33

The "X" suffix refers to the mounting bracket location and style. Four options available:

"N" – standard brackets mounted on the bottom for vertical position

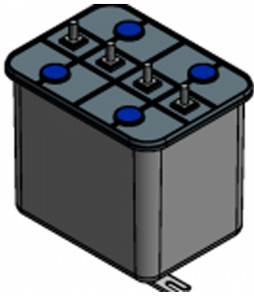
"W" – brackets mounted on the bottom and one side for vertical and horizontal

"L" – brackets mounted on the bottom and both sides for horizontal position

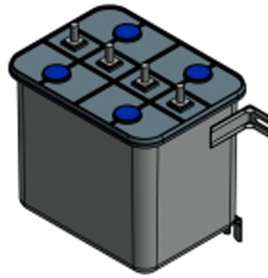
no suffix – No brackets

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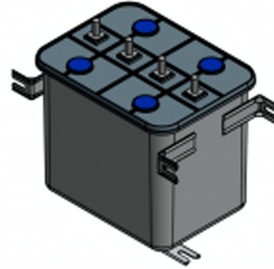
Bracket Mounting Options



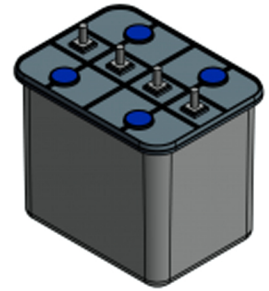
N – bottom mounting



W – bottom and side mounting



mounting L – bottom side and top mounting



No bracket

Additionally, these capacitors can be stacked together as part of a large energy storage, input/output filter, or pulse power bank. When used as part of a large bank, sufficient air flow between the individual capacitors is essential for effective heat transfer from the packages to the ambient environment, and the ER-Series design takes that into consideration with a gap that allows cooling air to flow between capacitors.