

Ripple Choke Filters

RC SERIES

**ENSURE YOUR UPS
BATTERIES ARE OPERATING
WITHIN RIPPLE TOLERANCES**



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RC Series

Ripple Current

Ripple current can wreak havoc on UPS battery systems, lowering the confidence that the UPS will operate in emergency situations. As your UPS ages an induced kickback AC ripple current and voltage may appear on the DC bus between the battery system and the UPS. This may be a result of the deterioration over time of the capacitors and other components in your UPS.

Battery manufacturers suggest that excessive AC ripple current on the DC bus can adversely affect the life and performance of the batteries. The general rule in the industry and stated by several battery manufacturers is the AC ripple current on the DC bus should not exceed 5% of the AMP-Hour rating of the batteries. Example: AC ripple current for a 250 AMP-HOUR rated battery should not exceed 12.5 AMPS.



The Solution

AMETEK Solidstate Controls' new Ripple Choke Filters are designed to help reduce the AC ripple current kickback that exists in Battery Chargers, Inverters, and Uninterruptible Power Systems (UPS). Now your batteries last longer, sensitive electronics are spared the deterioration that can happen when excessive ripple current is present, and extraneous damaging electrical noise is greatly reduced.

Tables

Part Number Reference					
UPS Size	Choke Size	Bus Voltage	RC Part #	Cabinet Dimensions	Weight
5 kVA	50 A	120 VDC	80-129989-90	26" (h) x 24" (w) x 20" (d)	60 lbs
	50 A	240 VDC	80-132290-90	26" (h) x 24" (w) x 20" (d)	60 lbs
7.5 kVA	50 A	240 VDC	80-132290-90	26" (h) x 24" (w) x 20" (d)	60 lbs
	100 A	120 VDC	80-129988-90	26" (h) x 24" (w) x 20" (d)	70 lbs
10 kVA	50 A	240 VDC	80-132290-90	26" (h) x 24" (w) x 20" (d)	60 lbs
	100 A	120 VDC	80-129988-90	26" (h) x 24" (w) x 20" (d)	70 lbs
15 kVA	100 A	240 VDC	80-132289-90	26" (h) x 24" (w) x 20" (d)	70 lbs
	200 A	120 VDC	80-129987-90	26" (h) x 24" (w) x 20" (d)	100 lbs
20 kVA	100 A	240 VDC	80-132289-90	26" (h) x 24" (w) x 20" (d)	70 lbs
	200 A	120 VDC	80-129987-90	26" (h) x 24" (w) x 20" (d)	100 lbs
30 kVA	200 A	240 VDC	80-132288-90	26" (h) x 24" (w) x 20" (d)	100 lbs
	300 A	120 VDC	80-129986-90	26" (h) x 24" (w) x 20" (d)	125 lbs
40 kVA	200 A	240 VDC	80-132288-90	26" (h) x 24" (w) x 20" (d)	100 lbs
	400 A	120 VDC	80-129985-90	26" (h) x 24" (w) x 20" (d)	325 lbs
50 kVA	300 A	240 VDC	80-132287-90	26" (h) x 24" (w) x 20" (d)	125 lbs
	500 A	120 VDC	80-129984-90	26" (h) x 24" (w) x 20" (d)	325 lbs

AMETEK recommends regularly scheduled preventative maintenance and specifically the 10 year PM (PM10) which will replace the DC capacitors and mitigate the AC ripple. If the replacement of DC capacitors service does not reduce the AC ripple current to the desired level, then an RC Series AC Ripple Current Filter should be installed to further reduce AC ripple.

Notes:

- The size of the AC Ripple Filter is determined based on your UPS Size and DC bus voltage configuration. Refer to the table to select the part number for the desired AC Ripple Filter.
- The AC Ripple Filter comes standard with a disconnect breaker. As an Option, the filter can be supplied without a breaker.
- The AMETEK Solidstate Controls AC Ripple Filter is designed as a floor mount installation
- Installation, wiring, and conduit sized and installed by customer within 50' of the Battery System and 50' of the Inverter.