

Short Circuit Current Levels in SolarEdge Three Phase Inverters for North America – Technical Note

This topic specifies the short-circuit currents and their duration, as required in UL1741 certification standard.

Version History

- Version 1.3, Nov 2023: Added SE110K and SE10K
- Version 1.2, Nov 2022: Changed name of the Technical Note from UL1741 Short-Circuit Currents in SolarEdge Three Phase Inverters to North America Short-Circuit Current Levels in SolarEdge Three Phase Inverters
- Version 1.1, Apr 2021: Updated values for SExxxKxxlxxxxxx

Short Circuit Current

This section lists the ratings of three phase inverters that can manage short circuit currents during power faults without any reactive currents occurring.

This table lists three phase inverters with Synergy technology part numbers: SExxxK-xxxxxBxxx¹.

Inverter Model @208 L-L	Inom (A)	Ip (A)	1 Cycle RMS (A)	3 Cycles RMS (A)	Duration (ms)
SE14.4K	40	92.4	38.4	39	150
SE43.2K	120	277.2	115.2	117	150

This table lists three phase inverters with Synergy technology part numbers: SExxxK-xxxxxBxxx¹.

Inverter Model @480 L-L	Inom (A)	Ip (A)	1 Cycle RMS (A)	3 Cycles RMS (A)	Duration (ms)
SE30K	36.25	54.45	35.7	36.3	150
SE33.3K	40	58.55	39.2	40	150
SE40K	48.25	71.1	46.4	47.7	150
SE66.6K	80	117.1	78.4	80	150
SE80K	96.5	142.2	92.8	95.4	150
SE100K	120	175.65	117.6	120	150

⁽¹⁾ Excluding PN: SExxxK-xxxxlBxxx

This table lists the parameters for three phase inverters with part numbers: SExxxK-xxxxIBxxx.

Inverter Model @480 L-L	Inom (A)	Ip (A)	1 Cycle RMS (A)	3 Cycles RMS (A)	Duration (ms)
SE30K	36.25	54.45	35.7	36.3	150
SE33.3K	40	58.55	39.2	40	150
SE40K	48.25	71.1	46.4	47.7	150
SE66.6K	80	117.1	78.4	80	150
SE80K	96.5	142.2	92.8	95.4	150
SE100K	120	175.65	117.6	120	150
SE110K	145	213.3	139.2	143.1	150
SE120K	145	213.3	139.2	143.1	150

This table lists the parameters for three phase inverters with Synergy technology part numbers: SExxxK-xxxxIBxxx.

Inverter Model @208 L-L	Inom (A)	Ip (A)	1 Cycle RMS (A)	3 Cycles RMS (A)	Duration (ms)
SE10K	27.8	58.55	39.2	40	150
SE14.4K	40	58.55	39.2	40	150
SE17.3K	48.25	71.1	46.4	47.7	150
SE43.2K	120	175.65	117.6	120	150
SE50K	139.5	206	145	141.5	150