

Compatibility of Three-Phase Inverters and Commercial Power Optimizers in North America - Technical Note

Revision History

Version 1.0, August 2024: Initial version

Overview

SolarEdge is releasing a new series of high-power DC optimizers that deliver higher output currents than existing models with the introduction of a corresponding series of inverters to support this increased current, designed without fuses on the DC input. These new optimizers and inverters are compatible only with each other and are not interchangeable with devices from previous generations.

The following table displays new optimizers with a maximum output current level of 24A, compared to previous generations of optimizers with a maximum output of 18A:

Optimizer Model	P860, P960, P1100/1	S1200/1	C651U, C652U
Maximum DC Output Current	18A	18A	24A

System compatibility

The following tables display previous inverter models and domestic content inverters:

Previous Inverter Models

Inverters				Optimizers	
Type	Input type	Inverter PN	Models	P860/P960 P1100/1 S1200/1	C651/2
Three Phase Inverter	Multi DC Input (fused)	SExxK-USxxlxxZ4	SE10KUS SE17.3KUS SE30KUS SE40KUS	COMPATIBLE	NOT COMPATIBLE
Three Phase Inverter with Synergy Manager	Multi DC Input (fuse-less)	SExxK-USxxlxxZ4	SE50KUS SE80KUS SE100KUS		
	1DC Input (fuse-less)	SExxK-USxxlxxW4	SE110KUS SE120KUS		

Domestic Content Inverter Models

Inverters				Optimizers	
Type	Input Type	Inverter PN	Models	P860/P960 P1100/1 S1200/1	C651/2
Three Phase Inverter	Multi DC Input (fuse-less)	xSE-SIN-USxxlxxSx	SE10KUS SE17.3KUS SE30KUS SE40KUS	NOT COMPATIBLE	COMPATIBLE
Three Phase Inverter with Synergy Manager	Multi DC Input (fuse-less)	xSE-DBL-USxxlxxSx xSE-TRI-USxxlxxSx	SE50KUS SE80KUS SE100KUS		
	1DC Input (fuse-less)	xSE-DBL-USxxlxxWx xSE-TRI-USxxlxxWx	SE110KUS SE120KUS		

Summary

C651U and C652U optimizers are exclusively compatible with fuse-less inverters that have one of the following part number structures: xSE-SIN-USxxlxxSx, xSE-DBL-USxxlxxSx, xSE-DBL-USxxlxxWx, xSE-TRI-USxxlxxSx or xSE-TRI-USxxlxxWx.