Technical Note – SolarEdge Commercial Power Optimizer Inter-Compatibility

Version History

- Version 1.0, June 2023 - Initial release

This technical note specifies the inter-compatibility between different models of Commercial S-Series and P-Series SolarEdge Power Optimizers. It also specifies the inter-compatibility of P-Series Commercial Power Optimizers with previous series of Commercial Power Optimizers (PBxxx and OPxxx), S-Series and future Service Part Numbers (Rxxx).

For Inter-Compatibility of Residential Power Optimizers Visit: Technical Note – SolarEdge Residential Power Optimizer Inter-Compatibility

> **NOTES**
> - Inter-compatibility refers to the ability to use different Power Optimizer types in the same PV string.
> - All Power Optimizers that are installed within the same PV string must be inter-compatible with each other as specified in the inter-compatibility Tables 1 and 2.
> - A single PV string refers to Power Optimizers that are connected using their output cables to form a string.

Guidelines for Replacing Power Optimizers

When replacing a Power Optimizer, ensure that it is compatible with the other Power Optimizers in the string. Use the following general guidelines:

- You can include different series and models of Power Optimizers in the same installation if you install them in separate PV strings. Inter-compatible Power Optimizers may be installed in the same PV string.
- When replacing a Power Optimizer always use SolarEdge Designer to verify that the power, current and voltage specifications of the PV module(s) are compatible with the replacement Power Optimizer. Ensure that the PV module(s) Voc (at minimum ambient temperature) does not exceed the replacement Power Optimizer's maximum input voltage. Refer to the Power Optimizer datasheet for details.

P-Series and S-Series Compatibility

In existing installations, installing P-Series and S-Series Power Optimizers in the same PV string is only possible based on their inter-compatibility as specified in Table 1. S-Series Power Optimizers that are compatible with P-Series Power Optimizers as per Table 1 are also inter-compatible with the inter-compatible P-Series Power Optimizers specified in Table 2.

When replacing P-Series Power Optimizers with S-Series Power Optimizers, verify that the inverter firmware version is updated as follows:

- For inverters with LCDs the minimum required version is 3.2537.
- For SetApp enabled inverters the minimum required version is 4.8.xx.

The following tables summarize Power Optimizer series and models that may be used in the same PV string during initial site installation or when a Power Optimizer is being replaced. Where a cell contains a check mark, the relevant Power Optimizers may be installed in the same string.

S-Series Commercial Power Optimizer Inter-Compatibility

Commercial		S1000	S1200	S1201
S-Series	S1000	✔		
	S1200		✔	
	S1201			✔
P-Series	P850/950	✔		
	P860/P960/P1100/P1101	Not inter-Compatible with S-Series		

Table 1

NOTES

- Support for all phased-out P-Series Power Optimizer models by SolarEdge support centers will continue with a compatible replacement while supplies last, followed by replacement with compatible Service Part numbers from the S-Series.
- In the case of a retrofit installation or RMA replacement, you may need to mix P-series and S-series in the same string. This requires an extension cable. See Using Extension and Adapter cables with Power Optimizers.
- In systems where both S-Series and P-Series Power Optimizers are connected to the same Inverter unit, the Sense Connect feature is enabled only in the S-series connectors. For the Sense Connect inverter compatibility table refer to https://knowledge-center.solaredge.com/sites/kc/files/se-sense-connect-application-note.pdf

P-Series Commercial Power Optimizer Inter-Compatibility

	P600	P605	P650	P700	P701	P730	P750	P800p	P801	P850	P860	P950	P960	P1100	P1101
P600	✓		✓	✓	✓	✓			✓						
P605		✓													
P650	✓		✓	✓	✓	✓			✓						
P700	✓		✓	✓	✓	✓			✓						
P701	✓		✓	✓	✓	✓			✓						
P730	✓		✓	✓	✓	✓			✓						
P750							✓								
P800p								✓		✓		✓		✓	
P801	✓		✓	✓	✓	✓			✓						
P850								✓		✓		✓		✓	
P860											✓		✓		✓
P950								✓		✓		✓		✓	
P960											✓		✓		✓
P1100								✓		✓		✓		✓	
P1101											✓		✓		✓

Table 2

NOTES

- Older Commercial Power Optimizers ("OPxxx") are compatible with equivalent-power Residential Power Optimizer Models as Specified in: Technical Note – SolarEdge Residential Power Optimizer Inter-Compatibility
- P860 and P960 can be replaced by P1101. Note that the P1101 cannot be replaced by the P860/P960.
- The same replacement options apply for both the single and dual input versions of the P800p. When replacing the P800p Dual input Power Optimizer with an inter-compatible single input model, install an approved DC Branch splitter cable. Refer to Application Note: Connecting SolarEdge Power Optimizers to Multiple PV Modules.
- P850 replaced P800s. They can be used interchangeably and can be connected in the same string.
- M1600 series Power Optimizers cannot be used interchangeably and cannot be connected to any other Power Optimizer in the same string.
- Commercial Power Optimizers with Part Numbers of the form PxxxH (e.g P801H) are inter-compatible only with other PxxxH Power Optimizers according to the rules for equivalent power Power Optimizer models Pxxx –in Table 2.