

# Technical Note – SolarEdge Power Optimizer Inter-Compatibility

## Version History

- Version 17 (Feb 2023) – Updated S-Series Inter-compatibility table and editorial updates.
- Version 16 (Feb 2023) – Updated compatibility for Commercial S-Series Power Optimizers.
- Version 15 (Nov 2022) – updated compatibility of OP250LV and OP300LV, with P401.
- Version 14 (Aug 2022) – updated compatibility options and compatibility definitions.
- Version 13 (July 2022) – clarified compatibility options.
- Version 12 (Jun 2022) – updates for commercial Power Optimizer compatibility, P1101 and P860/P960.
- Version 11 (May 2022) – added note about SolarEdge Sense Connect; added note about a retrofit installation or an RMA replacement.

This technical note specifies the inter-compatibility between S-Series and P-Series SolarEdge Power Optimizers. It also specifies the inter-compatibility of P-Series Power Optimizers with previous series of Power Optimizers (PBxxx and OPxxx) and S-Series Service Part Numbers (Sxxx-R).



### 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 2 and 3.
- For the purposes of this document, a single PV string refers to Power Optimizers that are connected between them using output cables to form a string.

## Guidelines for Replacing Power Optimizers

When replacing a Power Optimizer, make sure that it is compatible with the other Power Optimizers in the string by following these guidelines:

### General

- Installing different series and models of Power Optimizers in the same installation is allowed if they are installed in separate PV strings. However, Power Optimizers that are inter-compatible may be installed in the same PV string.
- When replacing a Power Optimizer always verify with the SolarEdge Designer that the power, current and voltage specifications of the PV module are compatible with the replacement Power Optimizer specifications. Ensure that the module Voc (at minimum ambient temperature) does not exceed the replacement Power Optimizer's maximum input voltage. Use the [SolarEdge Designer](#) to quickly validate electrical compatibility. Refer to the Power Optimizer datasheet for details.

### P-Series and S-Series Compatibility

In existing installations, avoid installing P-Series and S-Series Power Optimizers in the same PV string.

If this is unavoidable, the following combinations are possible:

- Any P-Series Power Optimizer that is compatible with the P401 Power Optimizer is also compatible with the S440 and S500 Power Optimizers.
- Any P-Series Power Optimizer that is compatible with the P505 Power Optimizer is also compatible with the S500B Power Optimizer.
- Any P-Series Power Optimizer that is compatible with the P950 Power Optimizer is also compatible with the S1000 Power Optimizer.

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

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

**S-Series Power Optimizer Inter-Compatibility Tables**

Residential		S440	S500	S500B	S650B
S-Series	S440	✓	✓		
	S500		✓		
	S500B			✓	✓
P-Series	P400	✓			
	P500	✓	✓		
	P401	✓	✓		
	P404/P485/P505			✓	✓
	P601			✓	✓

**Table 2a**

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

**Table 2b**



**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](#).
- SolarEdge SenseConnect technology will not function if P-Series and S-Series Power Optimizers are installed in the same PV string.

Table 3: P-Series Power Optimizer Inter-Compatibility

		P300	P320	P340	P350	P370	P370T	P375	P395	P400	P401	P404	P405	P485	P500	P505	P600	P601	P605	P650	P700	P701	P730	P800p **	P801	P850 ***	P860	P950	P960	P1100	P1101			
P-Series	P300	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓																			
	P320	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓																			
	P340	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓																			
	P350	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓																			
	P370	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓																			
	P370T						✓																											
	P375	✓	✓	✓	✓	✓		✓	✓	✓	✓					✓																		
	P395	✓	✓	✓	✓	✓		✓	✓		✓					✓																		
	P400	✓	✓	✓	✓	✓		✓			✓	✓				✓																		
	P401	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓				✓																		
	P404												✓	✓	✓		✓		✓															
	P405 **												✓	✓	✓		✓		✓															
	P485												✓	✓	✓		✓		✓															
	P500	✓	✓	✓	✓	✓			✓	✓	✓	✓				✓																		
	P505												✓	✓	✓		✓		✓															
	P600																	✓			✓	✓	✓	✓		✓								
	P601												✓	✓	✓		✓		✓															
	P605																			✓														
	P650																	✓			✓	✓	✓	✓		✓								
	P700																	✓			✓	✓	✓	✓		✓								
	P701																	✓			✓	✓	✓	✓		✓								
	P730																	✓			✓	✓	✓	✓		✓								
	P800p **																								✓		✓		✓			✓		
	P801																	✓			✓	✓	✓	✓		✓								
	P850 ***																								✓		✓		✓			✓		
	P860 *																											✓		✓		✓		✓
	P950																								✓		✓		✓			✓		
	P960 *																											✓		✓		✓		✓
	P1100																								✓		✓		✓			✓		
	P1101 *																											✓		✓		✓		✓

		P300	P320	P340	P350	P370	P370T	P375	P395	P400	P401	P404	P405	P485	P500	P505	P600	P601	P605	P650	P700	P701	P730	P800p **	P801	P850 ***	P860	P950	P960	P1100	P1101		
OP-Series	OP250-LV		✓	✓	✓	✓		✓		✓					✓																		
	OP300-LV		✓	✓	✓	✓		✓		✓					✓																		
	OP300-MV		✓	✓	✓	✓		✓		✓					✓																		
	OP350-LV		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
	OP350-MV		✓	✓	✓	✓		✓		✓					✓																		
	OP400-MV		✓	✓	✓	✓		✓		✓					✓																		
	OP400-EV		✓	✓	✓	✓		✓		✓					✓																		
	OP480		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
	OP500-IV														✓																		
	OP600-96																	✓			✓	✓	✓	✓		✓							
PB-	PB250-AOB		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
	PB350-AOB		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
	PB350-TFI		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
Module Embedde	OP250-LV		✓	✓	✓	✓		✓	✓	✓	✓				✓																		
	PB250-CSI		✓	✓	✓	✓		✓	✓	✓																							
	OPJ300-LV		✓	✓	✓	✓		✓	✓	✓	✓				✓																		

**Remarks:**

\* The P860 and P960 can be replaced by the P1101. Note that the P1101 cannot be replaced by the P860/P960.

\*\* For P405, P485 and P800p, the same replacement options apply for both the single and dual input versions.

\*\*\* P850 replaced P800s. They can be used interchangeably and can be connected in the same string.

M series Power Optimizers M2640 and M1600 cannot be used interchangeably and cannot be connected to any other Power Optimizer in the same string.