

## Rapid Shutdown, Module-Level Optimization & Monitoring Compatibility List

Solis inverters can be ordered with various integrated signal transmitters. The transmitter sends a signal to the module-level rapid shutdown (MLRSD) receivers located in the PV array. A switch on the inverter disables the integrated transmitter when engaged, eliminating the heartbeat signal and initiating rapid shutdown of the PV array.

- Integrated SunSpec-certified RSD transmitter options allow for NEC 690.12 2020 compliance<sup>1</sup>
- An external rapid shutdown initiation switch can be connected<sup>2</sup>
- Module-level optimization & module-level monitoring are optional features
- The inverter can be ordered with no signal transmitter as well<sup>3</sup>



### PVRSS-Certified Compatible MLRSD Components

Solis Model -SKU Addition when ordering	APSmart Receiver Model -APST	Tigo Energy Receiver Model -RSS	Tigo Energy Receiver Model -CCA*	NEP Receiver Model <sup>4</sup> -NEPT
<b>S6-EH1P(3.8-11.4)K-H-US (HV Hybrid)</b>	RSD-S-PLC-B; RSD-S-PLC-A; RSD-D; RSD-D-15; RSD-D-20	TS4-A-F; TS4-A-2F	TS4-A-O	PVG-1, PVG-2, PVG-3 Please note Transmitter is not integrated
<b>Solis-1P(3.6-10)K-4G-US</b>	RSD-S-PLC-B; RSD-S-PLC-A; RSD-D; RSD-D-15; RSD-D-20	TS4-A-F; TS4-A-2F	TS4-A-O	PVG-1, PVG-2, PVG-3 Please note Transmitter is not integrated
<b>S6-GC(25-60)K-US; S6-GC30K-LV-US</b>	RSD-S-PLC-B; RSD-S-PLC-A; RSD-D; RSD-D-15; RSD-D-20	TS4-A-F; TS4-A-2F	TS4-A-O Transmitter is not integrated	PVG-1, PVG-2, PVG-3 Please note Transmitter is integrated
<b>S5-GC(75-125)K-US; S5-GC60K-LV-US</b>	RSD-S-PLC-B; RSD-S-PLC-A; RSD-D; RSD-D-15; RSD-D-20	TS4-A-F; TS4-A-2F	TS4-A-O Transmitter is not integrated	PVG-1, PVG-2, PVG-3 Please note Transmitter is integrated
<b>S6-EH3P(30-60)K-NV-YD-H-US</b>	RSD-D-20; RSD-S-PLC-A	TS4-A-F; TS4-A-2F	TS4-A-O Transmitter is not integrated	X

\*Please note the Tigo CCA transmitter comes integrated into the inverter but the Tigo TAP must be purchased separately

Transmitters and receivers installed must be of the same brand and cannot be mix and matched. Receivers should be purchased separately. Installing components not on this list can potentially void the inverter warranty. Solis is not responsible for the quality of RSD component's warranties.

1. Please contact [ussales@solisinverters.com](mailto:ussales@solisinverters.com) for datasheets and exact ordering guides on how to properly order transmitter integrated products.
2. The inverter has ports for an external switch to be connected. These ports are in series with the switch on the inverter wire box. Please see the manual for more details.
3. In ordering the inverter one must specify a particular suffix on the end of the inverter model number to get an inverter that has the factory-integrated transmitters. RSD receivers are sold separately. Please work with your distributor for procurement.
4. NEP standard receivers are 15A (20A models are also available upon request). For commercial inverters, the NEP transmitter is available factory-integrated however the FOMware Datalogger is also required for module-level monitoring.



## Rapid Shutdown, Module-Level Optimization & Monitoring Capability Chart

MLRSD Brand	Model Number	Number of PV Module Inputs	Rapid Shutdown	Module-Level Monitoring	Module-Level Optimization
<b>APSmart (-APST)</b>	RSD-S-PLC-B	1	✓	X	X
	RSD-S-PLC-A	1	✓	X	X
	RSD-D	2	✓	X	X
	RSD-D-15	2	✓	X	X
	RSD-D-20	2	✓	X	X
<b>Tigo Energy (-RSS)</b>	TS4-A-F	1	✓	X	X
	TS4-A-2F	2	✓	X	X
<b>Tigo Energy (-CCA)</b>	TS4-A-O*	1	✓	✓	✓
<b>NEP (-NEPT)</b> External transmitter sold separately unless with our commercial products.	PVG-1	1	✓	✓	X
	PVG-2	2	✓	✓	X
	PVG-3	3	✓	✓	X

## UL3741 Rapid Shutdown Listings for Products

UL 3741 enables residential and commercial installations to reduce components using a string isolation device (for residential) or installing inverters at the array-level in the case of commercial installations. Reducing components reduces redundancy and complexity, speeding the installation by making it simpler for the installer to execute a compliant system. Solis has partnered with many racking companies to list our solution to be compliant and make it easier to keep costs and complexity to a minimum.



## Residential

Solis Models	Racking Manufacturer	Racking Product	String Isolation Device	Certificate/Addendum
S6-EH1P(3.8-11.4)K-H-US-APST Solis-1P(3.6-10)K-4G-US-APST	Ironridge	XR Flush Mount System; AIRE Flush Mount System	Midnite Solar MNSSR-600S	Visit Manufacturer's Website for Addendum; Solis also has a helpful implementation guide <a href="#">here</a> .
	Ecofasten	ClickFit System; Rockit System		
	Pegasus	SKPRail System		
	Unirac	SOLARMOUNT NXT UMPUNT SM NXT Tilt		
Solis-1P(3.6-10)K-4G-US-APST	Chiko Solar	CK-AR System		

## Commercial

Solis Models	Racking Manufacturer	Racking Product	String Isolation Device	Certificate/Addendum
S6-GC(25-60)K-US S6-GC30K-LV-US S5-GC(75-125)K-US S5-GC60K-LV-US	Ironridge	BX System	Not required, inverter should be installed at the array level.	<a href="#">Addendum Link</a> ; <a href="#">Tech Bulletin</a>
	TerraGen	TGR, TGT, TGP systems		<a href="#">Addendum Link</a> ; <a href="#">Certificate Link</a>
	Schletter	FixGrid Pro		<a href="#">Addendum Link</a>
	Panelclaw	clawFR/clawFR Plus		Addendum <a href="#">Link</a> ; <a href="#">Certificate Link</a>
	Aerocompact	CompactFlat		Addendum <a href="#">Link</a> ; <a href="#">Certificate Link</a>
	Unirac (25-60K)	RM5		Addendum <a href="#">Link</a>
	Sollega	FastRack		Addendum <a href="#">Link</a> ; <a href="#">Certificate Link</a>
	Sunmodo	SunModo PV Rack Mounting System; NanoRack PV Mounting System		<a href="#">Addendum Link</a>
	KB Racking	AeroGrid; EkonoRack 2.0		<a href="#">Website Link</a>



## Battery Compatibility List for S6-EH1P(3.8-11.4)K-H-US

Solis inverters operate on an open ecosystem, meaning we want to ensure consumers have choices when it comes to partnerships today and as they continue to scale their systems down the road. We are fortunate to partner with many industry leaders to ensure compatibility and functionality for seamless storage systems.

The below table applies to S6-EH1P(3.8-11.4)K-H-US residential products.

Battery Brand	Model	Min. Capacity	Max. Capacity	Max. Parallel	Interoperability Test	UL9540 Ed. 2 Certification
Fortress Power	Avalon HV	14.7kWh (3 modules)	29.4kWh (6 modules)	< 2	Complete	Complete
BYD	Premium HVL	12 kWh (3 modules)	32 kWh (8 modules)	$\leq 2$	Complete	Complete
Dyness	Dyness Tower	7.10 kWh (1 rack)	42.6 kWh (6 modules)	$\leq 4$	Complete	Complete
Pylontech	Force H1	10.65 kWh (3 modules)	24.85 kWh (7 modules)		Complete	Complete
Soluna	15K Pack HV	6 kWh (1 rack)	6kWh (1 rack)	$\leq 10$	Complete	Complete
		10kWh (1 rack)	10kWh (1 rack)			
		15 kWh (1 rack)	15kWh (1 rack)			
LG Energy Solutions Gen 3	RESU Prime 10H	10 kWh (1 rack)	10kWh (1 rack)	$\leq 2$	Complete	Complete
	RESU Prime 16H	16 kWh (1 rack)	16 kWh (1 rack)	$\leq 2$	Complete	Complete
LG Energy Solutions Gen 4	Enblock S10	10.6 kWh (1 rack)	10.6 kWh (1 rack)	$\leq 2$	Complete	Complete
	Enblock S14	14.1 kWh (1 rack)	14.1 kWh (1 rack)	$\leq 2$	Complete	Complete
	Enblock S17	17.7 kWh (1 rack)	17.7 kWh (1 rack)	$\leq 2$	Complete	Complete
HomeGrid	HV Stack'D Series	14.4 kWh (3 modules)	33.6 kWh (8 modules)	$\leq 15$	Complete	Complete
Goldenmate	Apollo-HV	6 kWh (2 modules)		$\leq 7$	Complete	Complete
Pytes	HV48100	26 kWh (5 modules)	35.84 kWh (13 modules)	$\leq 3$	Complete	Complete
EndurEnergy	ESP-5K-HL	15 kWh (3 modules)	35 kWh (16 modules)	$\leq 8$	Complete	Pending

Battery capacity installed must be of the same brand and cannot be mix and matched. The generator must have dry contact inputs to be compatible. When the generator is active, the PV will be disabled. Please consult with the battery supplier for additional details on combiner box options and paralleling multiple batteries to a single inverter. Solis will not be responsible to wrong battery design configurations. Interoperability matching must first be completed by Solis and the battery supplier before the inverter and battery can be compatible. Solis is actively working on interoperability, please contact [ussales@solisinverters.com](mailto:ussales@solisinverters.com) for more details. The batteries and battery components are all sold separately. Please contact your local Solis distributor for assistance with procurement. Installing batteries that are not on this list will void the inverter warranty. Solis is not responsible for the quality or the warranty of the battery.



## Battery Compatibility List for S6-EH3P(30-60)K-NV-YD-H-US (commercial high voltage hybrid)

Solis inverters operate on an open ecosystem, meaning we want to ensure consumers have choices when it comes to partnerships today and as they continue to scale their systems down the road. We are fortunate to partner with many industry leaders to ensure compatibility and functionality for seamless storage systems.

The below table applies to S6-EH3P(30-60)K-NV-YD-H-US residential products.



Battery Brand	Model	Min. Capacity	Max. Capacity	Max. Parallel	Interoperability Test	UL9540 Listing*	Link to Datasheet
Discover Energy Solutions	AES 210HV	209 kWh	418kWh	NA	Complete	DC ESS Ed.3 Complete	<a href="#">Link</a>
Lithion	Gridbox 3 (GB 3)	90kWh	211kWh	Up to 8	In Process	DC ESS Ed. 3 October	<a href="#">Link</a>
Novele	N0025-x	15kWh	25kWh	1	Complete	DC ESS Ed. 3 Complete	
Pylontech	M1C System (Indoor Rack: PowerCube-M1C/ Outdoor Cabinet: A100-HY)	66.3kWh	99.46kWh	Up to 6	Complete	DC ESS Ed. 3 Complete	<a href="#">Link</a>
	M5 System (Indoor Rack: PowerCube-M5/ Outdoor Cabinet: A300-HY)	125.44kWh	313.6 kWh	Up to 2	Complete	DC ESS Ed. 3 Complete	<a href="#">Link</a>
Pytes	HV48100 SE	66.56kWh	76.8kWh	Up to 2	Complete	DC ESS Ed. 3 Mid September	<a href="#">Link</a>
Renon Power	R-EC060LCB01-US	10.24kWh	30.72kWh	Up to 15	In Process	Edition 2; End of October	<a href="#">Link</a>
Soluna	10K Pack HV	10kWh	10kWh	Up to 10	Complete	DC ESS Ed. 3; October	<a href="#">Link</a>
	15K Pack HV	15kWh	15kWh	Up to 10	Complete	DC ESS Ed. 3; October	<a href="#">Link</a>
	Power Cell	60kWh	150kWh	Up to 25	Complete	DC ESS Ed. 3; October	<a href="#">Link</a>

\*The 3<sup>rd</sup> Edition of UL9540 updated the listing standard and, as long as the accompanying inverter is UL1741, requires no new testing or certification. This is a new edition and may not be accepted in different regions. It is best to check with the AHJ in which you are installing to ensure the accompanying listing is valid and accepted. Edition 2 is the standard system-level certification.

Battery capacity installed must be of the same brand and cannot be mix and matched.



## Virtual Power Plant (VPP) Programs

Solis works with organizations (known as aggregators) Flip and Derapi in order to enable commercial and residential customers to seamlessly integrate with active programs with their state or utility. Depending on the program, end users can incur savings and cash incentives for participating and advancing their solar ROI. See below a summary active VPP programs that are supported when using a Solis inverters. Please note, this is not an exhaustive list as VPPs continue to grow in the US and Puerto Rico.

State	Program	Program Details	Aggregator	Program Link	Solis Enrollment Link
California	Demand Side Grid Support (DSGS)	DSGS (Demand Side Grid Support) is a program operated by the California Energy Commission (CEC) that pays battery owners for discharging energy during grid emergencies. It helps stabilize the power grid while offering financial rewards. DSGS operates from May 1 - October 31.	Derapi	<a href="https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program">https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program</a>	<a href="https://solis-vpp.derapi.com/">https://solis-vpp.derapi.com/</a>
Puerto Rico	LUMA	“Customer Battery Energy Sharing” (CBES). The CBES is a next-generation pilot program designed to leverage customer battery storage systems to increase the supply of energy available to the electricity grid during peak demand periods, to improve day-to-day service reliability and minimize the impact of load shedding.	Flip	<a href="https://lumapr.com/battery-demand-response/?lang=en">https://lumapr.com/battery-demand-response/?lang=en</a>	<a href="https://solisvpp.com/">https://solisvpp.com/</a>



## Zero Export Power Control

Export power control is continuing to be a requirement of some utilities in US and Canada. Solis hybrid inverters include energy meters and CTs in the box with the inverters. Export power control can be done without the need of any additional equipment. Grid-tied only inverters do require the purchase and installation of additional components as outlined below.

Product	Compatible Export SKU	What is included in the Kit	Support Documents
S6-EH1P(3.8-11.4)K-H-US	NA	Energy meters & CTs included already and can manage zero export.	<a href="#">S6 HV Hybrid Manual</a> EPM Manual
Solis-1P(3.6-10)K-4G-US Single Unit (Not Paralleled)	AGF-AE-D/200(2PIN)	Acrel AGF-AE-D/200 energy meter; Split-core CTs x2; 2-pin connector	<a href="#">1P 3.6-5K Manual</a> <a href="#">1P 6-10K Manual</a> EPM Manual
Solis-1P(3.6-10)K-4G-US Multiple Units Paralleled	EPM3-PRO+SP200+WIF	EPM3-5G-PRO; Acrel AGF-AE-D/200 meter; Split-core CTs x2; 2-pin connector x2; 4-pin connector x5	<a href="#">1P 3.6-5K Manual</a> <a href="#">1P 6-10K Manual</a> EPM Manual
S6-GC(25-60)K-US, S5-GC(75-125)K-US, S6-GC30K-LV-US, S5-GC60K-LV-US	EPM3-5G-PRO Note: CTs must be purchased separately (Acrel AKH-0.66K)	EPM3-5G-PRO; Acrel ADL 3000 energy meter; 2-pin connector x2; 4-pin connector x5	<a href="#">S6-GC(25-60)K-US Manual</a> <a href="#">S5-GC(75-125)K-US Manual</a> <a href="#">S6-GC30K-LV-US Manual</a> <a href="#">S5-GC60K-LV-US Manual</a> EPM Manual
Solis-(125-255)K-EHV-5G-US-PLUS, S6-GU(250-350)K-EHV-US	FOMware SE-A3 or SE-A4	Kits come with everything needed including gateway and CTs	FOMware SE-A3 Manual FOMware SE-A4 Manual