preliminary

MV Power Station

5860-S4-US / 6120-S4-US

Turnkey solution for battery-storage power plants

Robust
- Station and all individual components type-tested
- Galvanized base frame for extreme ambient conditions

Simple Integration
- Turn-key solution
- Completely pre-assembled for easy set-up and commissioning

Cost-Effective
- Lower specific costs thanks to high power classes
- Minimal coordination required during planning and installation
- Low transport costs thanks to 40-foot platform

Flexible
- One design for the whole world
- Numerous options

Combining the power of the robust Sunny Central Storage UP-S with perfectly matched medium-voltage components, the MV Power Station offers high power density and is a turnkey solution available worldwide.

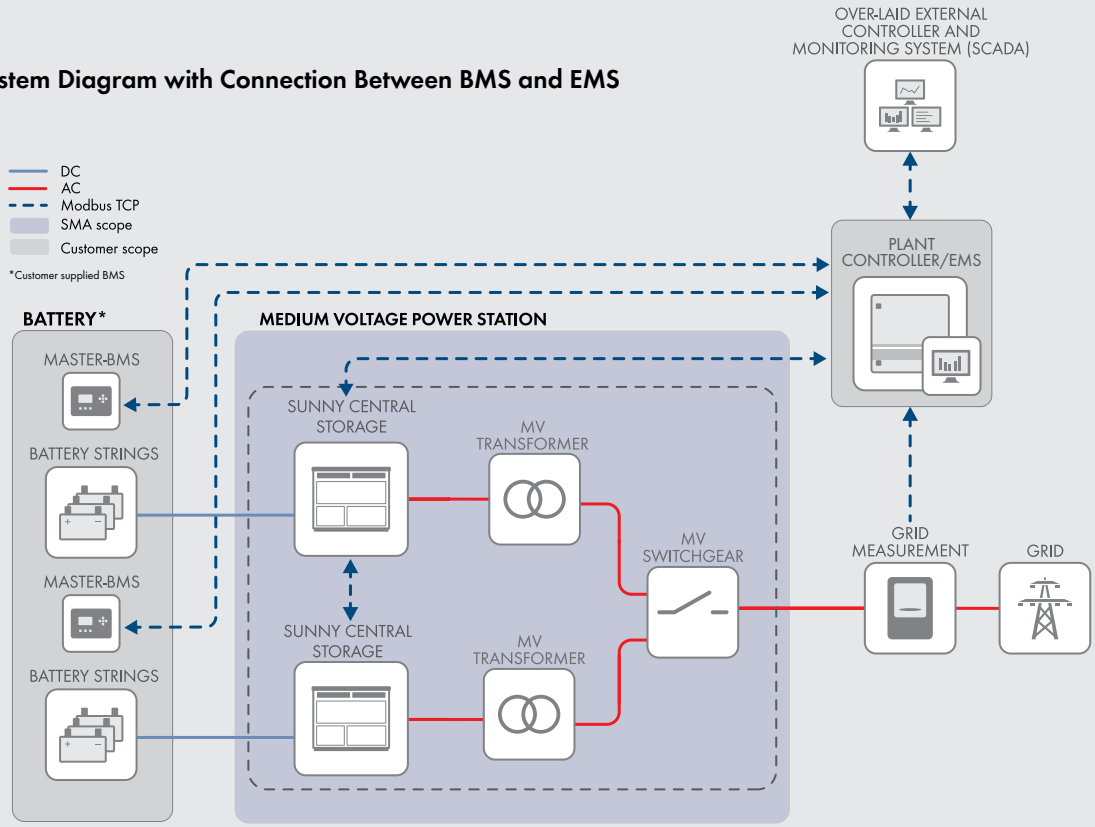
Ideal for use in the new generation of battery-storage power plants with 1500 VDC, the integrated system solution is easy to transport, quick to assemble, and simple to commission. The MV Power Station and all components are type tested. The MV Power Station combines rigorous plant safety with maximum energy yield and minimized deployment and operational risk.

MEDIUM VOLTAGE POWER STATION 5860-S4-US / 6120-S4-US

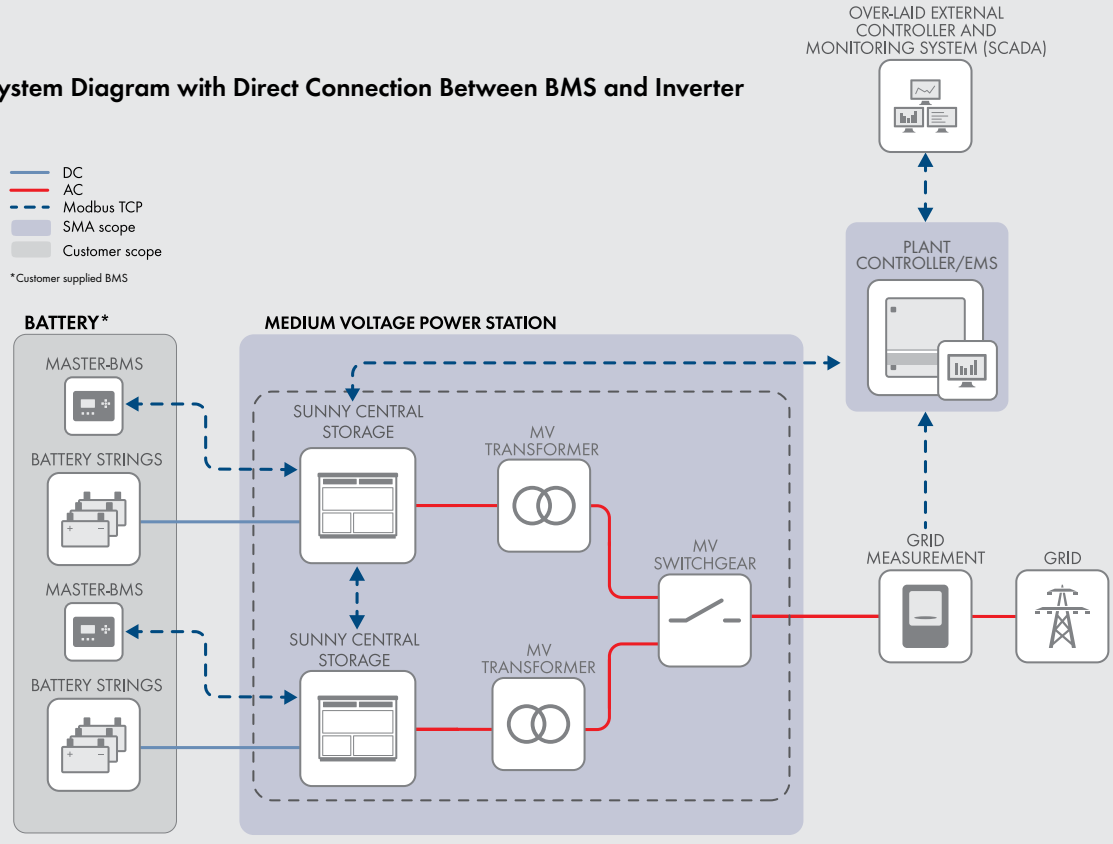
Technical Data	MVPS 5860-S4-US	MVPS 6120-S4-US
Input (DC)		
Available inverters	2 x SCS 2530 UP-XT-US 2 x SCS 2930 UP-S-US	2 x SCS 2630 UP-XT-US 2 x SCS 3060 UP-S-US
Max. input voltage	1500 V	1500 V
Number of DC inputs	dependent on the selected inverter	
Integrated zone monitoring	○	
Output (AC) on the medium-voltage side		
Charging power with SCS UP-XT-US (at -25°C to + 25°C / 40°C optional 50°C)[1]	5266 kVA / 4402 kVA	5504 kVA / 4604 kVA
Discharging power with SCS UP-XT-US (at -25°C to + 25°C / 40°C optional 50°C)[1]	5866 kVA / 4986 kVA	6134 kVA / 5214 kVA
Rated power with SCS-UP-S-US (at -25°C to +35°C / 40°C optional 50°C)[1]	5866 kVA / 5280 kVA	6134 kVA / 5520 kVA
Typical nominal AC voltages	34.5 kV	
AC power frequency	60 Hz	
Transformer vector group Dy11 / YNd11 / YNy0	● / ○ / ○	
Transformer cooling methods	KNAN[2]	
Transformer efficiency: Standard / Eco Design 1 / Eco Design 2	● / ○ / ○	
Max. total harmonic distortion	< 3%	
Reactive power feed-in (up to 60% of nominal power)	○	
Inverter efficiency		
Max. efficiency[3] / European efficiency[3] / CEC weighted efficiency[4] of SCS UP-XT-US	98.7% / 98.6% / 98.5%	
Max. efficiency of SCS UP-S-US[3]	99.2%	
Protective devices		
Input-side disconnection point	DC load-break switch	
Output-side disconnection point	Medium-voltage vacuum circuit breaker	
DC overvoltage protection	Surge arrester type I	
Galvanic isolation	●	
Internal arc classification medium-voltage control room (according to IEC 62271-202)	IAC A 25 kA 1 s	
General data		
Dimensions equal to 40-foot HC shipping container (W / H / D)	12192 mm / 2896 mm / 2438 mm	
Weight	< 32 t	
Self-consumption (max. / partial load / average)[1]	< 16.2 kW / < 3.6 kW / < 4.0 kW	
Self-consumption (stand-by)[1]	< 740 W	
Environment: standard / harsh / harsh+ MVT	● / ○ / ○	
Maximum permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month per year) / 0% to 95%	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○	
Fresh air consumption of inverter	13000 m³/h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 2 x 30 / 2 x 60 / 2 x120 kVA	● / ○ / ○ / ○	
Fuses for external transformers: without / 2 x 180 kVA	● / ○	
Medium-voltage switchgear: without / 3 panels 2 cable feeders with load-break switch, 1 transformer feeder with circuit breaker, internal arc classification IAC A FL 25 kA 1s	● / ○	
Short circuit rating medium voltage switchgear (20 kA 1 s / 20 kA 3 s / 25 kA 1 s)	● / ○ / ○	
Integrated oil containment: without / with	● / ○	
Industry standards (for other standards see the inverter datasheet)[5]	IEEE 1547-2018, IEEE C57.12.00, IEEE C57.12.36, IEEE C57.154, IEEE C37.20.7, IEEE C37.20.9, UL 1741, CSC	
● Standard features ○ Optional features – Not available Last revised 10/2025		
Type designation	MVPS-5860-S4-US	MVPS-6120-S4-US

1) Data based on inverter. Further details can be found in the data sheet of the inverter. Cold weather -37° is an option.
2) KNAN = Natural ester fluid with natural air cooling
3) Efficiency measured at inverter without internal power supply
4) Efficiency measured at inverter with internal power supply
5) Main standards, for others please contact SMA; for inverter standards refer to inverter datasheet

Storage System Diagram with Connection Between BMS and EMS



Storage System Diagram with Direct Connection Between BMS and Inverter



Toll Free +1 888 4 SMA USA
www.SMA-America.com

SMA America, LLC