/ MVPS 2660-S2-10 / MVPS 2800-S2-10 / MVPS 2930-S2-10 / MVPS 3060-S2-10

MV Power Station

2660-S2 / 2800-S2 / 2930-S2 / 3060-S2

Turnkey solution for PV and battery-storage power plants

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

Easy to use
- Turn-key solution
- Fully pre-assembled for easy setup and commissioning

Cost-effective
- Lower specific costs thanks to high power classes
- Minimal coordination required during planning and installation
- Low transport costs thanks to 20-foot platform

Flexible
- One design for the whole world
- Numerous options

With the power of the robust central inverters Sunny Central UP or Sunny Central Storage UP and the 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 PV and battery-storage power plants with 1500 V_{DC}, the integrated system solution is easy to transport and quick to assemble and commission. The MVPS and all components are type-tested. The MV Power Station combines rigorous plant safety with maximum energy yield and minimized deployment and operating risk.

MV POWER STATION
2660-S2 / 2800-S2 / 2930-S2 / 3060-S2

Technical data	MVPS 2660-S2	MVPS 2800-S2
Input (DC)		
Available inverters	1 x SC 2660 UP / 1 x SCS 2300 UP-XT	1 x SC 2800 UP / 1 x SCS 2400 UP-XT
Max. input voltage	1500 V	1500 V
Number of DC inputs	Depending on selected inverter	
Integrated zone monitoring	○	
Output (AC) on the medium-voltage side		
Nominal power at SC UP (from -25°C to +35°C / 40°C; optional 50°C)[1]	2667 kVA / 2400 kVA	2800 kVA / 2520 kVA
Charging power at SCS UP-XT (from -25°C to +25°C / 40°C; optional 50°C)[1]	2393 kVA / 2001 kVA	2513 kVA / 2101 kVA
Discharging power at SCS UP-XT (from -25°C at +25°C / 40°C; optional 50°C)[1]	2667 kVA / 2267 kVA	2800 kVA / 2380 kVA
Typical nominal AC voltages with a tolerance of +/-10%	10 kV to 35 kV	10 kV to 35 kV
AC power frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Transformer vector group Dy11 / YNd11 / YNy0	● / ○ / ○	● / ○ / ○
Transformer cooling method	KNAN[2]	KNAN[2]
Transformer standby power losses, industry standard / Eco design 1 / Eco design 2	● / ○ / ○	● / ○ / ○
Transformer short-circuit losses, industry standard / Eco design 1 / Eco design 2	● / ○ / ○	● / ○ / ○
Max. total harmonic distortion	< 3 %	
Reactive power feed-in (up to max. 60% of nominal power)	○	
Power factor at rated power / adjustable displacement power factor	1 / 0.8 overexcited to 0.8 underexcited	
Inverter efficiency		
Max. efficiency[3] / Europ. efficiency[3] / CEC efficiency[4]	98.7% / 98.6% / 98.5%	98.7% / 98.6% / 98.5%
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	●	
Arc fault resistance medium-voltage control room (according to IEC 62271-202)	IAC A 20 kA 1 s	
General data		
Dimensions (W / H / D)	6058 mm / 2896 mm / 2438 mm	
Weight	< 18 t	
Self-consumption (max. / partial load / average)[1]	< 8.1 kW / < 1.8 kW / < 2.0 kW	
Self-consumption (stand-by)[1]	< 370 W	
Ambient temperature -25°C to +45°C / -25°C to +55°C / -35°C to +55°C / -40°C to +45°C	● / ○ / ○ / ○	
Degree of protection according to IEC 60529	Control rooms IP23D, inverter electronics IP54	
Environment: standard/extreme	● / ○	
Maximum permissible value for relative humidity	95% (for 2 months/year)	
Max. operating altitude above MSL 1000 m / 2000 m	● / ○	
Inverter fresh air consumption	6500 m³/h	
Equipment		
DC connection	Lug	
AC connection	Outer-cone angle plug	
Tap changer for MV voltage transformer: without/with	● / ○	
Shield winding for MV transformer: without/with	● / ○	
Monitoring package	○	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○	
MV switchgear: without / 1 panel / 3 panels 2 cable panels with load-break switch, 1 transformer panel with circuit breaker, arc fault resistance IAC A FL 20 kA 1 s to IEC 62271-200	● / ○ / ○	
MV switchgear short-circuit current capability (20 kA 1 s / 20 kA 3 s / 25 kA 1 s)	● / ○ / ○	
Accessory for MV switchgear: without / auxiliary contacts / motor for transformer panel / cascade control / monitoring	● / ○ / ○ / ○ / ○	
Integrated oil spill containment: without/with	● / ○	
Industry standards (other industry standards: see inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1, CSC certificate	
Model type number	MVPS-2660-S2-10	MVPS-2800-S2-10

● Standard features ○ Optional features – Not available

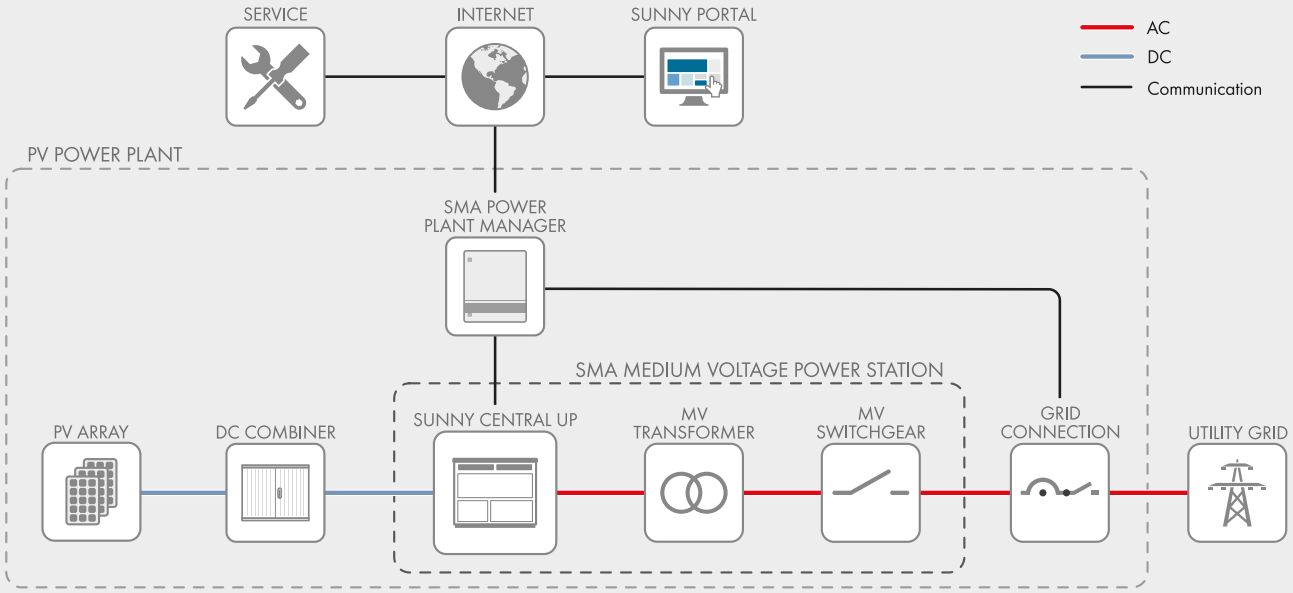
1) Data based on inverter Further details can be found in the inverter datasheet.
2) KNAN = ester with natural air cooling
3) Efficiency measured at inverter without internal power supply
4) Efficiency measured at inverter with internal power supply

Technical data	MVPS 2930-S2	MVPS 3060-S2
Input (DC)		
Available inverters	1 x SC 2930 UP / 1 x SCS 2530 UP-XT	1 x SC 3060 UP / 1 x SCS 2630 UP-XT
Max. input voltage	1500 V	1500 V
Number of DC inputs	Depending on selected inverter	
Integrated zone monitoring	○	
Output (AC) on the medium-voltage side		
Nominal power at SC UP (from -25 °C to +35 °C / 40 °C; optional 50 °C)[1]	2933 kVA / 2640 kVA	3067 kVA / 2760 kVA
Charging power at SCS UP-XT (from -25 °C to +25 °C / 40 °C; optional 50 °C)[1]	2633 kVA / 2201 kVA	2752 kVA / 2302 kVA
Discharging power at SCS UP-XT (from -25 °C at +25 °C / 40 °C; optional 50 °C)[1]	2933 kVA / 2493 kVA	3067 kVA / 2607 kVA
Typical nominal AC voltages with a tolerance of +/-10%	10 kV to 35 kV	10 kV to 35 kV
AC power frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Transformer vector group Dy11 / YNd11 / YNy0	● / ○ / ○	● / ○ / ○
Transformer cooling method	KNAN[2]	KNAN[2]
Transformer standby power losses, industry standard / Eco design 1 / Eco design 2	● / ○ / ○	● / ○ / ○
Transformer short-circuit losses, industry standard / Eco design 1 / Eco design 2	● / ○ / ○	● / ○ / ○
Max. total harmonic distortion	< 3 %	
Reactive power feed-in (up to max. 60% of nominal power)	○	
Power factor at rated power / adjustable displacement power factor	1 / 0.8 overexcited to 0.8 underexcited	
Inverter efficiency		
Max. efficiency[3] / Europ. efficiency[3] / CEC efficiency[4]	98.7% / 98.6% / 98.5%	98.7% / 98.6% / 98.5%
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	●	
Arc fault resistance medium-voltage control room (according to IEC 62271-202)	IAC A 20 kA 1 s	
General data		
Dimensions (W / H / D)	6058 mm / 2896 mm / 2438 mm	
Weight	< 18 t	
Self-consumption (max. / partial load / average)[1]	< 8.1 kW / < 1.8 kW / < 2.0 kW	
Self-consumption (stand-by)[1]	< 370 W	
Ambient temperature -25 °C to +45 °C / -25 °C to +55 °C / -35 °C to +55 °C / -40 °C to +45 °C	● / ○ / ○ / ○	
Degree of protection according to IEC 60529	Control rooms IP23D, inverter electronics IP54	
Environment: standard/extreme	● / ○	
Maximum permissible value for relative humidity	95% (for 2 months/year)	
Max. operating altitude above MSL 1000 m / 2000 m	● / ○	
Inverter fresh air consumption	6500 m³/h	
Equipment		
DC connection	Lug	
AC connection	Outer-cone angle plug	
Tap changer for MV voltage transformer: without/with	● / ○	
Shield winding for MV transformer: without/with	● / ○	
Monitoring package	○	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○	
MV switchgear: without / 1 panel / 3 panels 2 cable panels with load-break switch, 1 transformer panel with circuit breaker, arc fault resistance IAC A FL 20 kA 1 s to IEC 62271-200	● / ○ / ○	
MV switchgear short-circuit current capability (20 kA 1 s / 20 kA 3 s / 25 kA 1 s)	● / ○ / ○	
Accessory for MV switchgear: without / auxiliary contacts / motor for transformer panel / cascade control / monitoring	● / ○ / ○ / ○ / ○	
Integrated oil spill containment: without/with	● / ○	
Industry standards (other industry standards: see inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1, CSC certificate	
Model type number	MVPS-2930-S2-10	MVPS-3060-S2-10

● Standard features ○ Optional features – Not available

1) Data based on inverter Further details can be found in the inverter datasheet.
2) KNAN = ester with natural air cooling
3) Efficiency measured at inverter without internal power supply
4) Efficiency measured at inverter with internal power supply

Plant diagram with Sunny Central UP



Plant diagram with Sunny Central Storage UP