

MEDIUM VOLTAGE POWER STATION

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



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



Robust

- Complete station is UL1741 listed for higher safety and lower risk
- Station and all individual components type-tested for maximum reliability
- Optimally suited to extreme ambient conditions

Simple Integration

- Plug and play concept
- Completely pre-assembled for easy set-up and commissioning

Cost-Effective

- Fully integrated transformer and switchgear simplifies logistics
- Minimum O&M requirements create lowest cost of ownership

Flexible

- One product for all markets and applications
- Ideally suited for PV applications, PV plus storage (DC coupled) and storage applications (AC coupled)

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Turnkey solution for PV power plants

With the power of the new robust central inverters, the Sunny Central UP or Sunny Central Storage UP, and with perfectly integrated medium-voltage components, the new Medium Voltage Power Station (MVPS) offers even more power density in a turnkey solution available worldwide. The solution is the ideal choice for next-generation PV power plants operating at 1500 V DC. Delivered pre-configured on a 20-foot container-integrated skid, the solution is easy to transport and quick to commission. The UL1741-listed MVPS combines rigorous plant safety with maximum energy yield and minimized deployment and operating risk. The MVPS is DC-coupling ready for large-scale storage integration.

MEDIUM VOLTAGE POWER STATION

2660-S2-US / 2800-S2-US

Technical Data	MVPS 2660-S2-US	MVPS 2800-S2-US
Input (DC)		
Available inverters	1 x SC 2660 UP-US / 1 x SCS 2300 UP-XT-US	1 x SC 2800 UP-US / 1 x SCS 2400 UP-XT-US
Max. input voltage	1500 V	1500 V
Number of DC inputs	dependent on the selected inverter	
Integrated zone monitoring	○	
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Output (AC) on the medium-voltage side		
Rated power with SC UP-US (at -25°C to +35°C / 40°C optional 50°C) ¹⁾	2667 kVA / 2400 kVA	2800 kVA / 2520 kVA
Charging power with SCS UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	2390 kVA / 2000 kVA	2515 kVA / 2100 kVA
Discharging power with SCS UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	2665 kVA / 2270 kVA	2800 kVA / 2380 kVA
Typical nominal AC voltages	12 kV to 34.5 kV	
AC power frequency	50 Hz / 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)	○	
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited	
Inverter efficiency		
Max. efficiency ³⁾ / European efficiency ³⁾ / CEC weighted efficiency ⁴⁾	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	●	
Internal arc classification medium-voltage control room (according to IEC 62271-202)	IAC A 20 kA 1 s	
General Data		
Dimensions equal to 20-foot HC shipping container (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	
Degree of protection according to IEC 60529	Control rooms IP23D, inverter electronics IP54	
Environment: standard / harsh	● / ○	
Degree of protection according to IEC 60721-3-4 (4C1, 4S2 / 4C2, 4S4)	● / ○	
Maximum permissible value for relative humidity	95% (for 2 months/year)	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○	
Fresh air consumption of inverter	6500 m ³ /h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Tap changer for MV-transformer: without / with	● / ○	
Shield winding for MV-Transformer: without / with	● / ○	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○ / ○	
Medium-voltage switchgear: without / 3 feeders	● / ○	
2 cable feeders with load-break switch, 1 transformer feeder with circuit breaker, internal arc classification IAC A FL 20 kA 1 s according to IEC 62271-200	● / ○	
Short circuit rating medium voltage switchgear (25 kA 1s)	○	
Integrated oil containment: without / with	● / ○	
Industry standards (for other standards see the inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1 IEEE C37.100.1, IEEE C57.12, C37.20.9, UL 1741 listed, CSC Certificate, UL 347	
● Standard features ○ Optional features – Not available		
Type designation	MVPS-2060-S2-US	MVPS-2800-S2-US

1) Data based on inverter. Further details can be found in the data sheet of the inverter.

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

MEDIUM VOLTAGE POWER STATION

2930-S2-US / 3060-S2-US

Technical Data	MVPS 2930-S2-US	MVPS 3060-S2-US
Input (DC)		
Available inverters	1 x SC 2930 UP-US / 1 x SCS 2530 UP-XT-US	1 x SC 3060 UP-US / 1 x SCS 2630 UP-XT-US
Max. input voltage	1500 V	1500 V
Number of DC inputs	dependent on the selected inverter	
Integrated zone monitoring	○	
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Output (AC) on the medium-voltage side		
Rated power with SC UP-US (at -25°C to +35°C / 40°C optional 50°C) ¹⁾	2933 kVA / 2640 kVA	3067 kVA / 2760 kVA
Charging power with SCS UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	2635 kVA / 2200 kVA	2750 kVA / 2300 kVA
Discharging power with SCS UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	2930 kVA / 2495 kVA	3065 kVA / 2605 kVA
Typical nominal AC voltages	12 kV to 34.5 kV	
AC power frequency	50 Hz / 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)	○	
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited	
Inverter efficiency		
Max. efficiency ³⁾ / European efficiency ³⁾ / CEC weighted efficiency ⁴⁾	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	●	
Internal arc classification medium-voltage control room (according to IEC 62271-202)	IAC A 20 kA 1 s	
General Data		
Dimensions equal to 20-foot HC shipping container (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	
Degree of protection according to IEC 60529	Control rooms IP23D, inverter electronics IP54	
Environment: standard / harsh	● / ○	
Degree of protection according to IEC 60721-3-4 (4C1, 4S2 / 4C2, 4S4)	● / ○	
Maximum permissible value for relative humidity	95% (for 2 months/year)	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○	
Fresh air consumption of inverter	6500 m ³ /h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Tap changer for MV-transformer: without / with	● / ○	
Shield winding for MV-Transformer: without / with	● / ○	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○ / ○	
Medium-voltage switchgear: without / 3 feeders	● / ○	
2 cable feeders with load-break switch, 1 transformer feeder with circuit breaker, internal arc classification IAC A FL 20 kA 1 s according to IEC 62271-200	● / ○	
Short circuit rating medium voltage switchgear (25 kA 1s)	○	
Integrated oil containment: without / with	● / ○	
Industry standards (for other standards see the inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1 IEEE C37.100.1, IEEE C57.12, C37.20.9, UL 1741 listed, CSC Certificate, UL 347	
● Standard features ○ Optional features – Not available		
Type designation	MVPS-2930-S2-US	MVPS-3060-S2-US

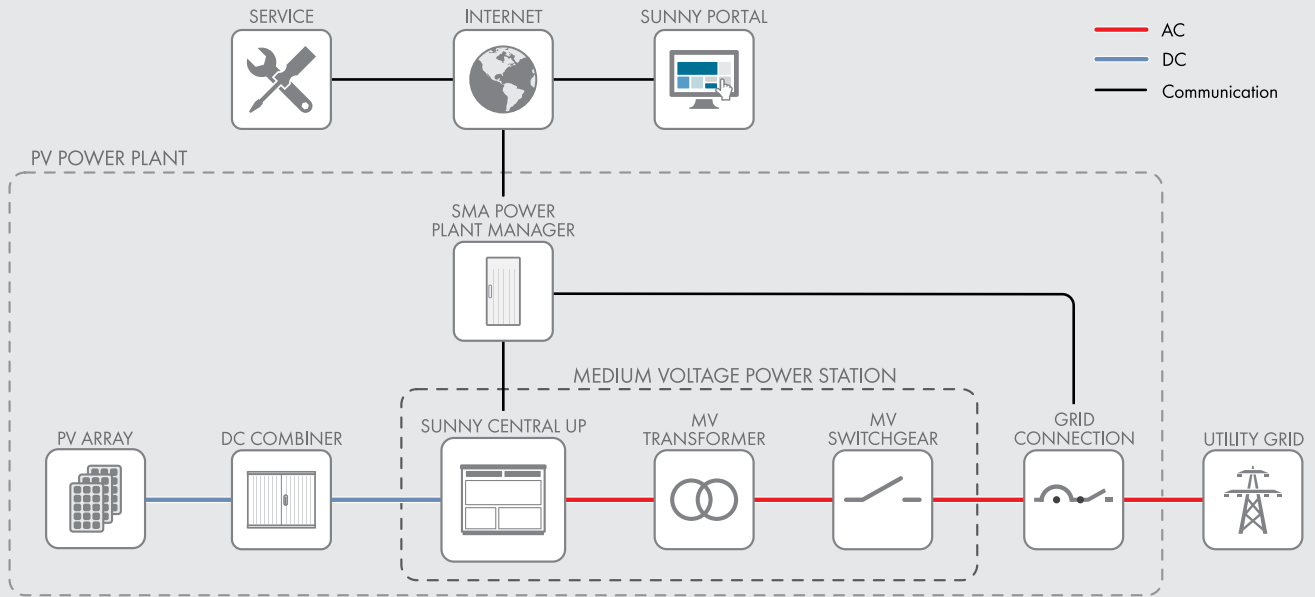
1) Data based on inverter. Further details can be found in the data sheet of the inverter.

2) KNAN = Natural ester fluid with natural air cooling

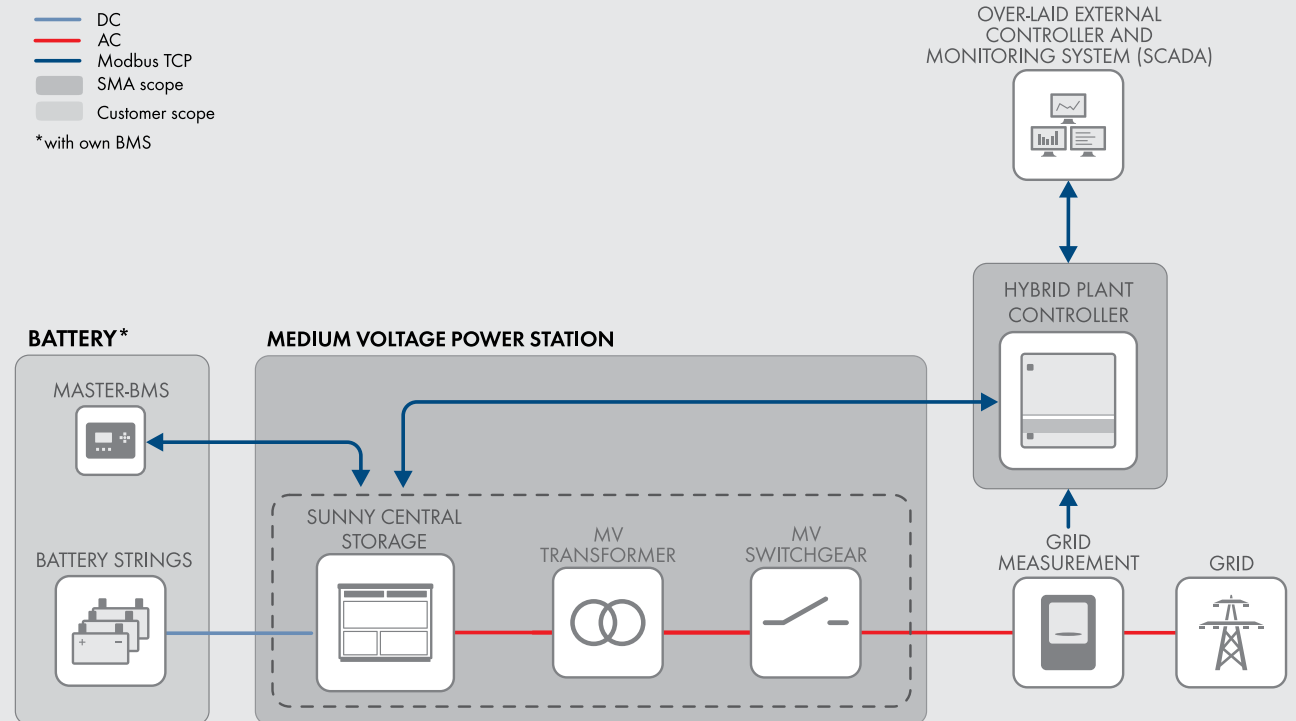
3) Efficiency measured at inverter without internal power supply

4) Efficiency measured at inverter with internal power supply

PV system diagram



Storage system diagram



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