MV POWER STATION FOR AUSTRALIA
2500-S-AU / 2750-S-AU / 3000-S-AU

MVPS 2500-S-AU-10 / MVPS 2750-S-AU-10 / MVPS 3000-S-AU-10

Robust
- Complete system and all individual components type-tested
- Optimally suited to extreme ambient conditions

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

Cost-Effective
- Easy planning and installation
- Low transport costs due to 20-foot skid

Flexible
- Numerous options
- Compatible with MVPS 5000-S-AU / MVPS 5500-S-AU / MVPS 6000-S-AU

MV POWER STATION 2500-S-AU / 2750-S-AU / 3000-S-AU

Turnkey Solution for PV Power Plants in Australia

With the power of the new robust central inverters, the Sunny Central or Sunny Central Storage, and with perfectly adapted medium-voltage components, the new MV Power Station offers even more power density as a turnkey solution dedicated for Australia. The solution is the ideal choice for new generation PV power plants operating at 1500 V_{DC}. Delivered pre-configured on a 20-foot skid, the 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.

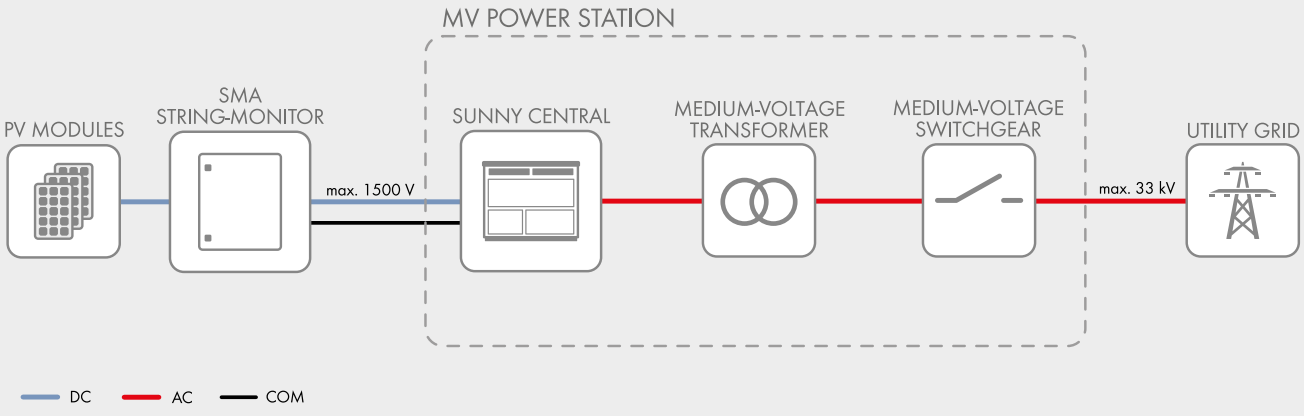
MV POWER STATION
2500-S-AU / 2750-S-AU / 3000-S-AU

Technical Data	MV Power Station 2500-S-AU	MV Power Station 2750-S-AU
Input (DC)		
Available inverters	1 x SC 2500-EV or 1 x SCS 2500-EV	1 x SC 2750-EV or 1 x SCS 2750-EV
Max. input voltage	1500 V	1500 V
Max. input current	3200 A	3200 A
Number of DC inputs	24 double pole fused (32 single pole fused)	
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		
Standard power at 1000 m and cos φ = 1 (at 35 °C / at 50 °C / at 55 °C)[1]	2500 kVA / 2250 kVA / 0 kVA	2750 kVA / 2500 kVA / 0 kVA
Typical nominal AC voltages	11 kV, 22 kV, 33 kV	11 kV, 22 kV, 33 kV
AC power frequency	50 Hz	50 Hz
Transformer vector group Dy11	●	●
Transformer cooling methods ONAN[2]	●	●
Max. output current at 33 kV	44 A	49 A
Transformer no-load losses at 33 kV	2 kW	2.2 kW
Transformer short-circuit losses at 33 kV	21.5 kW	22.5 kW
Max. total harmonic distortion	< 3%	< 3%
Reactive power feed-in	○ up to 60% of AC power	
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited	
Inverter efficiency		
Max. efficiency[3]	98.6%	98.7%
European efficiency[3]	98.3%	98.6%
CEC weighted efficiency[4]	98.0%	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 AS 62271-202)	IAC A 20 kA 1 s	
General Data		
Dimensions of the 20-foot skid (W / H / D)[5]	6058 mm / 3010 mm / 2438 mm	
Weight	< 16 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	Switchgear compartment IP23D, inverter electronics IP65	
Environment: standard / harsh	● / ○	
Degree of protection according to IEC 60721-3-4 (4C1, 4S2 / 4C2, 4S2)	● / ○	
Maximum permissible value for relative humidity	15% to 95%	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○ (earlier temperature-dependent de-rating)	
Fresh air consumption of inverter and transformer	6500 m³/h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Skid enclosure color	RAL 7033 / N42	
Low voltage transformer 30 kVA	●	
Medium-voltage switchgear 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 AS 62271-200	●	
Accessories for medium-voltage switchgear: without / auxiliary contacts / remote control	● / ○ / ○	
Oil containment	●	
Industry standards (for other standards see the inverter datasheet)	AS 62271-202, AS 62271-200, AS 60076, AS 3000, AS 2067, AS 1170	
● Standard features ○ Optional features – Not available		
Type designation	MVPS-2500-S-AU-10	MVPS-2750-S-AU-10

1) Data based on inverter
2) ONAN = Mineral oil with natural air cooling
3) Efficiency measured at inverter without internal power supply
4) Efficiency measured at inverter with internal power supply
5) Transport dimensions

Technical Data	MV Power Station 3000-S-AU
Input (DC)	
Available inverters	1 x SC 3000-EV or 1 x SCS 3000-EV
Max. input voltage	1500 V
Max. input current	3200 A
Number of DC inputs	24 double pole fused (32 single pole fused)
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	
Standard power at 1000 m and cos φ = 1 (at 35 °C / at 50 °C / at 55 °C)[1]	3000 kVA / 2700 kVA / 0 kVA
Typical nominal AC voltages	11 kV, 22 kV, 33 kV
AC power frequency	50 Hz
Transformer vector group Dy11	●
Transformer cooling methods ONAN[2]	●
Max. output current at 33 kV	53 A
Transformer no-load losses at 33 kV	2.35 kW
Transformer short-circuit losses at 33 kV	25 kW
Max. total harmonic distortion	< 3%
Reactive power feed-in	○ up to 60% of AC power
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited
Inverter efficiency	
Max. efficiency[3]	98.8%
European efficiency[3]	98.6%
CEC weighted efficiency[4]	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 AS 62271-202)	IAC A 20 kA 1 s
General Data	
Dimensions of the 20-foot skid (W / H / D)[5]	6058 mm / 3010 mm / 2438 mm
Weight	< 16 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	Switchgear compartment IP23D, inverter electronics IP65
Environment: standard / harsh	● / ○
Degree of protection according to IEC 60721-3-4 (4C1, 4S2 / 4C2, 4S2)	● / ○
Maximum permissible value for relative humidity	15% to 95%
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○ (earlier temperature-dependent de-rating)
Fresh air consumption of inverter and transformer	6500 m³/h
Features	
DC terminal	Terminal lug
AC connection	Outer-cone angle plug
Skid enclosure color	RAL 7033 / N42
Low voltage transformer 30 kVA	●
Medium-voltage switchgear 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 AS 62271-200	●
Accessories for medium-voltage switchgear: without / auxiliary contacts / remote control	● / ○ / ○
Oil containment	●
Industry standards (for other standards see the inverter datasheet)	AS 62271-202, AS 62271-200, AS 60076, AS 3000, AS 2067, AS 1170
● Standard features ○ Optional features – Not available	
Type designation	MVPS-3000-S-AU-10

System diagram with Sunny Central



System diagram with Sunny Central Storage