

MV POWER PLATFORM 1.0 / 1.25 / 1.44 / 1.5 / 1.6 MW with SUNNY CENTRAL CP-US

Exh. SFS-LS-5d



Economical

- Outdoor equipment doesn't require HVAC additions, even in desert environments
- Reduced balance of system costs with 1000 VDC, UL 1741 listed inverters

Efficient

- Highest efficiency in its class
- Full nominal power at ambient temperatures up to 50 °C
- 10% additional power for continuous operation at ambient temperatures up to 25 °C

Flexible

- Available as open, shaded or enclosed structure
- Options including DC disconnects, transformer fluid containment, and -40 °C low temperature deployment

Reliable

- Powerful grid management functions, including LVRT and Frequency Ride Through
- Rigorous environmental testing

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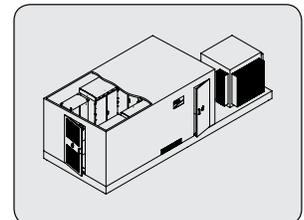
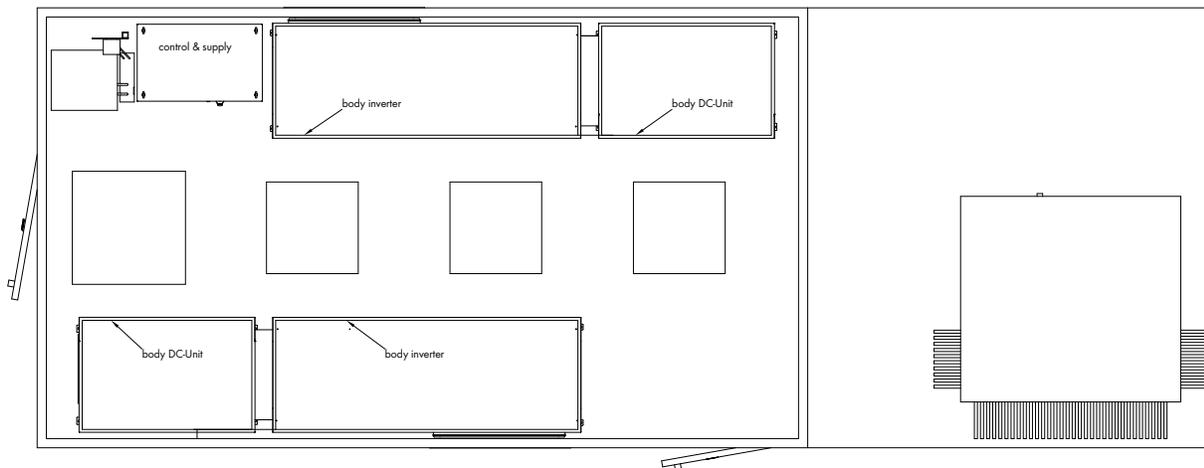
Modular utility-scale power platform

Ensure your project's success and increase your return on investment with SMA's Medium-Voltage Power Platform featuring 1,000 VDC, UL listed Sunny Central inverters. These turnkey 1.0 to 1.6 megawatt solutions include two Sunny Central inverters, a harmonized medium-voltage step-up transformer, optional DC disconnects, integrated AC disconnects, and low voltage auxiliary services for local loads. SMA's MV Power Platform minimizes project risks through convenient plug-and-play installation, a Seismic Zone D compliant design, best in class efficiency, and more than 30 years experience in the world's largest PV plants.

Technical data	SAMPLE CONFIGURATIONS		
	MVPP 1.0 MW	MVPP 1.5 MW	MVPP 1.6 MW
	1000 V DC	1000 V DC	1000 V DC
Platform design			
Open including Disconnect Units			
Width / Height / Depth	29' / 8'9" / 12'	29' / 8'9" / 12'	29' / 8'9" / 12'
Weight (lb)	<39,000	<39,000	<39,000
Open excluding Disconnect Units			
Width / Height / Depth	24' / 8'9" / 12'	24' / 8'9" / 12'	24' / 8'9" / 12'
Weight (lb)	<34,000	<34,000	<34,000
Canopy including Disconnect Units			
Width / Height / Depth (roof)	31' / 10'6" / 14'	31' / 10'6" / 14'	31' / 10'6" / 14'
Weight (lb)	<42,000	<42,000	<42,000
Canopy excluding Disconnect Units			
Width / Height / Depth (roof)	26' / 10'6" / 14'	26' / 10'6" / 14'	26' / 10'6" / 14'
Weight (lb)	<37,000	<37,000	<37,000
Enclosure including Disconnect Units			
Width / Height / Depth	32' / 10'6" / 12'	32' / 10'6" / 12'	32' / 10'6" / 12'
Weight (lb)	<48,000	<48,000	<48,000
Enclosure excluding Disconnect Units			
Width / Height / Depth	27' / 10'6" / 12'	27' / 10'6" / 12'	27' / 10'6" / 12'
Weight (lb)	<43,000	<43,000	<43,000
<ul style="list-style-type: none"> ● Standard features ○ Optional features – Not available 			
Type designation	MV-1000CP-US	MV-1500CP-US	MV-1600CP-US

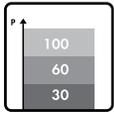
- a) @ 1.00 $U_{AC,com}$ and $\cos \phi = 1$
- b) Standard: 1000 V DC, optional 1100 V DC with a start-up < 1000 V DC
- c) Not including platform auxiliary service loads
- d) Pier height 3 ft max.
- e) Suitable to -13 °F ... +140 °F, has to include buffer module

ENCLOSED CONFIGURATION



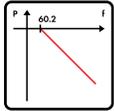
SMART GRID MANAGEMENT INCLUDED

SMA inverters in the MV Power Platform can fulfill the following grid management specifications with:



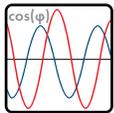
Power limitation peak shaving / grid safety management

In order to avoid short-term grid overload, the grid operator presets a nominal active power value which the inverter will implement within 60 seconds. The nominal value is transmitted to the inverters via a ripple control receiver in combination with the SMA Power Reducer Box. Typical limit values are 100, 60, 30, or 0 percent of the nominal power.



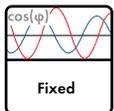
Frequency-dependent control of active power

Starting at a defined grid frequency, the inverter will automatically reduce the fed-in active power along a preset characteristic curve, which stabilizes grid frequency.



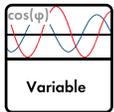
Grid support through reactive power

In order to keep the grid voltage constant, SMA inverters supply leading or lagging reactive power to the grid. For this, there are three options:



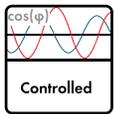
a) Fixed presetting of the reactive power by the grid operator

The grid operator presets a fixed reactive power value or a fixed phase shift between $\cos(\varphi)$ $_{\text{leading}} = 0.9$ and $\cos(\varphi)_{\text{lagging}} = 0.9$.



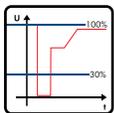
b) Dynamic presetting of the reactive power by the grid operator

The grid operator presets a dynamic phase shift - any value between $\cos(\varphi)_{\text{leading}} = 0.9$ and $\cos(\varphi)_{\text{lagging}} = 0.9$. It is transmitted either through a communication unit or via a standardized current signal ($I = 4 \dots 20$ mA) in accordance with IEC.



c) Control of the reactive power through a characteristic curve

Either the reactive power or the phase shift is controlled by a pre-defined characteristic curve - depending on the fed-in active power or grid voltage.



LVRT (Low Voltage Ride-Through)

Until now, PV systems have had to disconnect from the grid immediately even during short grid voltage losses. Using the monitored dynamic grid support, SMA inverters can feed in immediately after short-term voltage losses—as long as the nominal voltage exceeds fixed values.

