

SOLO 100/200/250 Series | 100/200/250 kW CENTRAL INVERTER

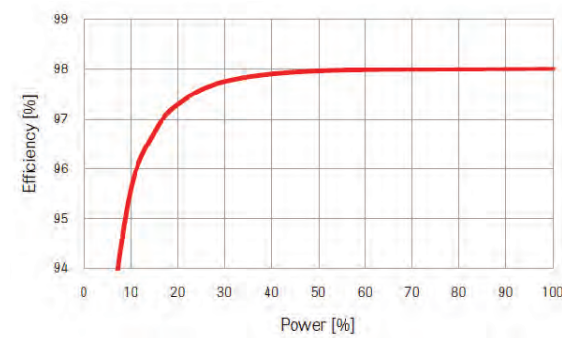


FEATURES

- Wide PV voltage operating range: 350V to 850V
- PV Inverter with highest efficiency: 98.0%
- Minimal heat dissipation in the installation room
- Extended temperature range: -25°C to +55°C
- High elevation up to 3500m above sea level
- Communication interface: EIA-485, Ethernet, SCADA (Modbus RTU and TCP/IP), GSM, PROFIBUS, or line modem
- Remote Diagnostics System (RDS) 24h/7d increases the availability of the system
- Customer tailored service and maintenance contract
- Additional grounding concepts possible on request
- 4-Step power limitation (commands by grid operator)
- Liquid cooled, small footprint, lightweight

EFFICIENCY

Efficiency of SOLO 250



Max Efficiency: 98.0%

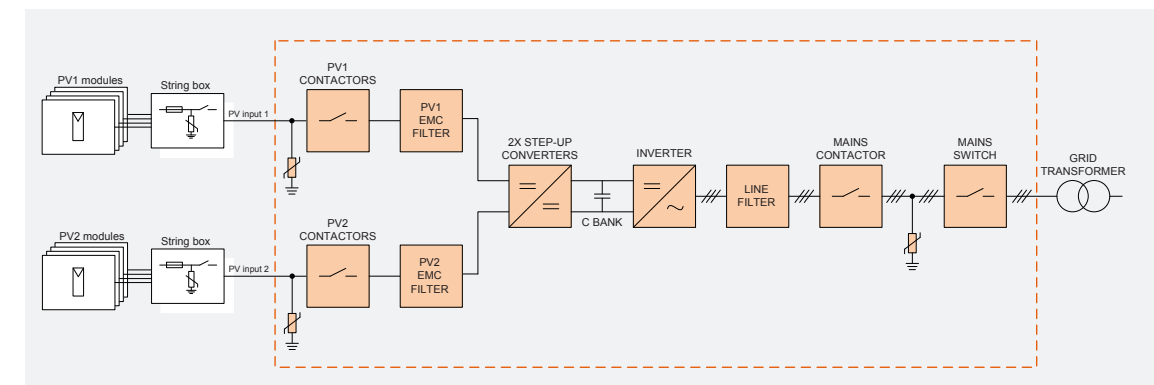
Note:

Maximum Power Point Tracking (MPPT): Up to three individual power point trackers (PPT) consist of step-up converters and permit optimized power point tracking of separate PV-fields over a wide voltage range (350V to 800V).

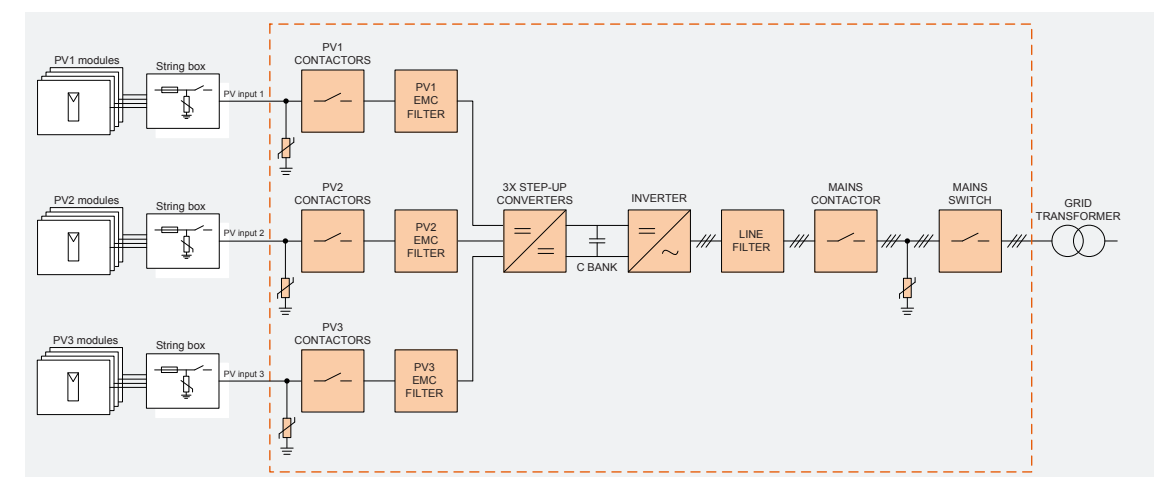
Available Versions

Indoor Types	AC-Nominal Power	# of MPP Trackers	# of Inputs	Max. DC-Current per Input	Max. DC Current
SOLO 100	100 kW	2	2	125 A	250A
SOLO 200	200 kW	3	3	170 A	510A
SOLO 250	250 kW	3	3	220 A	660A

SOLO 100



SOLO 200/250



Inverters

String Boxes

Solar Stations

Accessories

Warranty And Service

Transformers

Monitoring Systems

References

SOLO 100/200/250 Specs

100/200/250 kW
CENTRAL INVERTER

Type / Model	SOLO 100 / ISC-40-2x12	SOLO 200 / ISC-40-3x17	SOLO 250 / ISC-40-3x22	
Grid Data				
Nominal AC power (P_{AC})	100 kW	200 kW	250 kW	
Maximal AC power	110 kW	220 kW	275 kW	At ambient temperature $T_{amb} < 45\text{ }^{\circ}\text{C}$
AC operating voltage (U_{AC})	400 V			+10 % / -15 %
AC nominal current (I_{AC})	145 A	290 A	360 A	
Grid frequency (f_{AC})	50 Hz / 60 Hz			$\pm 10\%$
Grid structure	IT			
Surge protection	Yes			
Harmonic distortion (%THD I_{AC})	< 3 %			
Power factor ($\cos \phi$)	-0.9 to +0.9			0.9 capacitive to 0.9 ind Note: Detailed capability curve on request
Max Efficiency	98.0%			
Euro eta	97.7%			
Auxiliary power supply (Either external or generated internally)	230 V_{AC} , 50 / 60 Hz			+10 % / -15 % TN-S; surge protection type 2
Max. Auxiliary power consumption	5 W / 500 W	5 W / 650 W		At standby / At full power Note: Depending on the type of the string boxes used, they may have additional consumption.
Photovoltaic Data				
Nominal PV power (P_{PV})	102 kW	205 kW	255 kW	
Control strategy	MPPT			Maximum Power Point Tracking
Number of PV inputs	2	3	3	Each PV input has its own MPP tracker
Max. DC current on each PV input	125 A	170 A	220 A	Option: 350 to 850 V_{DC}
DC voltage range for MPPT	350 to 800 V_{DC}	350 to 800 V_{DC}	350 to 800 V_{DC}	Note: reduced maximal power below U_{MPP} 400V
Max. Permissible PV voltage (U_{PVmax})	880 V_{DC}		900 V_{DC}	On standby
Maximum PV voltage for operation start	850 V_{DC}		850 V_{DC}	
Voltage ripple U_{PP} (PV input)	< 3 %			
Surge protection (PV input)	Type 2			Monitored
Grounding (PV(-) US Only)	Floating			Option: connection to PV(-) input * (PV(-) US Only)
User Interface				
External emergency stop Input	24 V_{DC} ($\pm 10\%$), 20 mA, active high		Connect to dry contact: Open -> E-stop active, closed -> E-stop inactive	
Emergency stop Output	24 V, max. 1 A		Dry contact: Open -> E-stop active, closed -> E-stop inactive	
Transformer ready Input	24 V_{DC} ($\pm 10\%$), 20 mA, active high		Connect to dry contact: Open -> not ready, closed -> ready	
Transformer stand by Output	24 V, max. 1 A		Dry contact: Open -> stand by, closed -> Operation	
Inverter enable / disable Input	24 V_{DC} ($\pm 10\%$), 20 mA, active high		Connect to dry contact: Open -> disabled, closed -> enabled	
Communication inter-face	EIA-485, Ethernet			Others see under options
Data logger interface	Woodward Web Portal			

Type / Model	SOLO 100 / ISC-40-2x12	SOLO 200 / ISC-40-3x17	SOLO 250 / ISC-40-3x22	
Cabinet and Ambient Conditions				
Dimensions (W x D x H)	1040 x 645 x 1920 mm	1040 x 846 x 1920 mm		
Weight (m) approx.	400 kg	600 kg	650 kg	
Ambient temperature range (T_{amb})	-20 to +45 $^{\circ}\text{C}$			Option: -25 to +55 $^{\circ}\text{C}$
Humidity	15 to 95 %			Non condensing
Enclosure type according to EN 60529	IP54			
Maximum elevation above sea level	2000 m			Option: 3500 m (high altitude version)
Cooling	Liquid cooled			With external heat exchanger
Coolant concentration	-25 $^{\circ}\text{C}$			Water 55 %, ethylene-glycol 45 %
Static pressure of coolant (p)	2 bar (± 0.5 bar)			Above ambient, at 20 $^{\circ}\text{C}$
Heat Exchanger				
Dimensions (W x D x H)	390 x 355 x 400 mm	695 x 310 x 563 mm		
Weight (m)	10 kg	18 kg		
Air inlet temperature range (T_{inlet})	-20 to +45 $^{\circ}\text{C}$			Option: -25 to +55 $^{\circ}\text{C}$
Hose size (d)	15 mm / 25 mm			Inside diameter / Outside diameter
Max. Hose length (l)	10 m			Inverter to heat ex-changer
Max. Elevation above inverter level (h)	9 m			Heat exchanger top level – inverter bottom level
Standards				
CE conformity / EMC	Yes / EN 61000-6-2, EN 61000-6-4			
UL 1741	Yes			
Options				
Power limitation control / BDEW directives: grid monitoring (VDE-AR-N 4105) or low voltage ride through (LVRT), fault ride through (FRT) / Potential Equalization Device (PED) for PV- ground fault monitoring / Further on request				
Connecting PV(-) input to ground / Voltage range for MPPT 350 V_{DC} to 850 V_{DC} / High altitude version / Extended temperature range / Outdoor type				
Communication interface: SCADA (Modbus RTU and TCP/IP), GSM, PROFIBUS, or line modem				
Data logger: SolarLog, Meteocontrol, others on request				

SOLO 100

SOLO 200/250

