

# SOLO 500

## Central PV Inverter 500 kW

Datasheet 50614 (Rev. A1)

Type / Model	SOLO 500 / ISC-33-114	
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### Grid Data

Nominal AC power ( $P_{AC}$ )	500 kW	
Maximum AC power	550 kW	At ambient temperature $T_{amb} < 45\text{ °C}$
AC operating voltage ( $U_{AC}$ )	330 V	+10 % / -15 %
AC nominal current ( $I_{AC}$ )	875 A	
Grid frequency ( $f_{AC}$ )	50 Hz	$\pm 10\%$ , Option: 60 Hz
Grid structure	IT	
Surge protection	Yes	
Harmonic distortion (%THD $I_{AC}$ )	< 3 %	
Power factor ( $\cos \phi$ )	-0.9 ... +0.9	0.9 capacitive ... 0.9 inductive Note: P-Q capability curve available on request
Max. efficiency	98.2 %	
Euro eta	97.8 %	
Auxiliary power supply (either external or generated internally)	3x400 V <sub>AC</sub> 50 Hz	+10 % / -15 %; TN-S; surge protection type 2 Option: 60 Hz
Max. auxiliary power consumption	5 W / 1400 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 ( $P_{PV}$ )	508 kW	
Control strategy	MPPT	Maximum Power Point Tracking
Number of PV inputs	3	All PV inputs have one common MPP tracker
Max. DC current on each PV input	380 A	
DC voltage range for MPPT	550 ... 1100 V <sub>DC</sub>	
Max. permissible PV voltage ( $U_{PVmax}$ )	1200 V <sub>DC</sub>	
Maximum PV voltage for operation start	1200 V <sub>DC</sub>	
Voltage ripple $U_{PP}$ (PV input)	< 3 %	
Surge protection (PV input)	Type 2	Monitored
Grounding (PV input)	Floating	Option: connection to PV(-) or PV(+) input

### User Interface

External emergency stop Input	24 V <sub>DC</sub> ( $\pm 10\%$ ), 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 <sub>DC</sub> ( $\pm 10\%$ ), 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 start / stop Input	24 V <sub>DC</sub> ( $\pm 10\%$ ), 20 mA, active high	Connect to dry contact: Open -> stop, closed -> start
Communication interface	EIA-485, Ethernet	Others see under options
Data logger interface	ELECTROINVENT Web Portal	Others see under options

### 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) – connecting PV(-) or PV(+) input to ground (earth fault monitoring and earth current measurement) / AC operating voltage $U_{AC} = 300\text{ V}$
Communication: SCADA (Modbus RTU (EIA-485) and Modbus TCP/IP), GSM or Ethernet
Data logger: SolarLog, Meteocontrol, others on request

**Cabinet and Ambient Conditions**

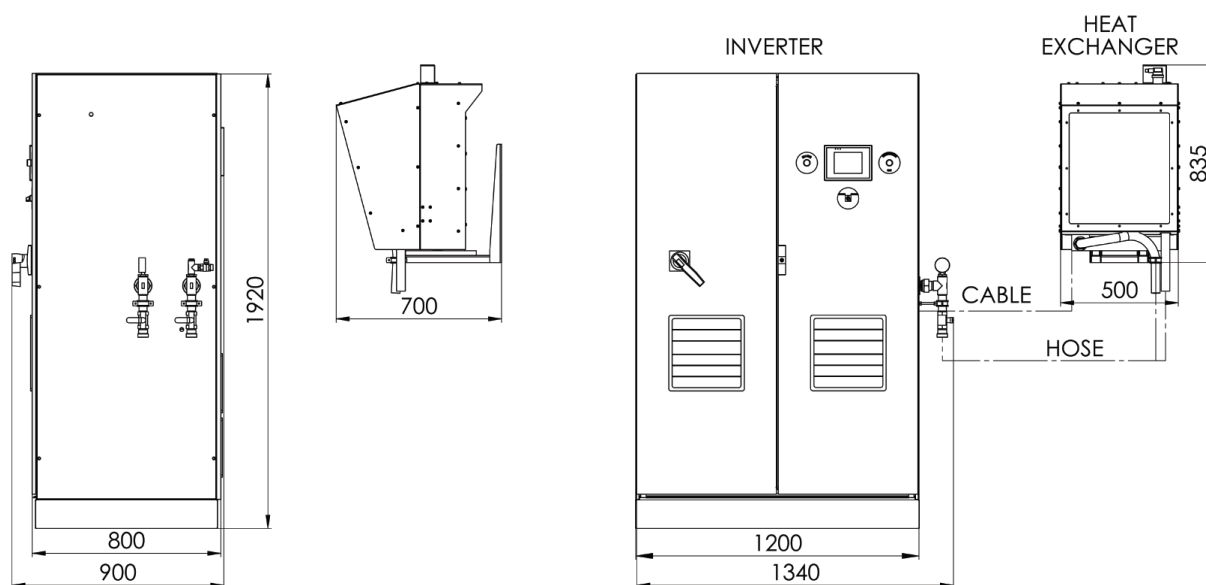
Dimensions (W x D x H)	1340 x 900 x 1920mm	
Weight (m) approx.	1350 kg	
Ambient temperature range (T <sub>amb</sub> )	-20 ... +45 °C	
Humidity	15 ... 95 %	Non condensing
Enclosure type according to EN 60529	IP54	
Maximum elevation above sea level	2000 m	
Cooling	Liquid cooled	With external heat exchanger
Coolant concentration	-25 °C	water 55 %, ethylene-glycol 45 %
Static pressure of coolant (p)	2 bar (±0.5 bar)	Above ambient pressure, at 20 °C

**Heat Exchanger**

Dimensions (W x D x H)	500 x 700 x 835mm	
Weight (m)	51 kg	
Air inlet temperature range (T <sub>hex</sub> )	-20 ... +45 °C	
Hose size (d)	25 mm / 37 mm	Inside diameter / Outside diameter
Hose length (l)	10 m	Inverter to heat exchanger
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
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Subject to change, June 2013

**Ordering Information**

For technical or commercial information please contact the ELECTROINVENT sales office.

**Sales**

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