

# PROGETTO DELLA CENTRALE SOLARE

## "Energia del Panaro"

da 83,2 MWp - Finale Emilia (MO)

# D15

## PROGETTO DEFINITIVO

## SCHEDA TECNICA INVERTER



### Proponente

**ENGIE FINALE EMILIA S.r.l.**

Via Chiese, 72, 20126 Milano MI

*Visalli*  
*Alessandro*



### Progetto dell'inserimento paesaggistico e mitigazione

*Coordinamento alla progettazione:* Dott. Agr. Fabrizio Cembalo Sambiasi,  
Arch. Alessandro Visalli, Arch. Riccardo Festa

*Progettisti:* Arch. Paola Ferraioli, Arch. Anna Manzo

*Collaboratori:* Dott. Carmine Perna, Dott. Agr. Giuseppe Maria Massa,  
Dott. Agr. Francesco Palombo, Dott. Agr. Vincenzo Meola  
Urb. Patrizia Ruggiero, Arch. Ilaria Garzillo, Marco Chezzi



**AEDES GROUP**  
ENGINEERING

### Progettazione elettrica e civile

*Progettisti:* Ing. Rolando Roberto, Ing. Giselle Roberto

*Collaboratori:* Ing. Giuseppe Fava, Ing. Filippo Angarano,  
Ing. Karim Ait Hamd, Ing. Marco Balzano,  
Ing. Simone Bonacini



**MARE  
RINNOVABILI**

### Progettazione mandorleto superintensivo

*Progettisti:* Dott. Agr. Fabrizio Cembalo Sambiasi, Dott. Agr. Giuseppe Maria Massa,  
Dott. Agr. Francesco Palombo

### Consulenza geologica

Geol. Gaetano Ciccarelli

### Consulenza archeologica

GeA Archeologia Preventiva

### Consulenza agronomica

iGreen System, Imola



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rev	descrizione	formato	elaborazione	controllo	approvazione
00	Prima consegna				
01					
02					
03					
04					
05					
06					
07					

# SG350HX

Multi-MPPT String Inverter for 1500 Vdc System



## HIGH YIELD

- Up to 16 MPPTs with max. efficiency 99%
- 20A per string, compatible with 500Wp+ module
- Data exchange with tracker system, improving yield



## LOW COST

- Q at night function, save investment
- Power line communication (PLC)
- Smart IV Curve diagnosis, active O&M



## GRID SUPPORT

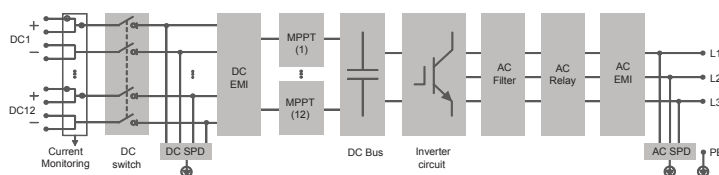
- $SCR \geq 1.15$  stable operation in extremely weak grid
- Reactive power response time <30ms
- Compliant with global grid code



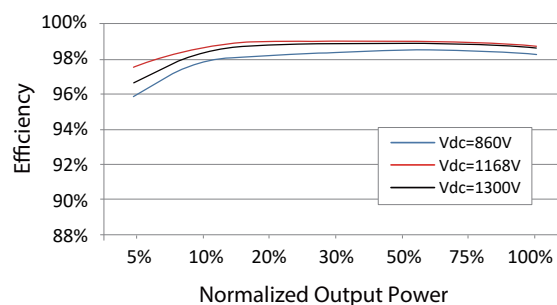
## PROVEN SAFETY

- 2 strings per MPPT, no fear of string reverse connection
- Integrated DC switch, automatically cut off the fault
- 24h real-time AC and DC insulation monitoring

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



Type designation	SG350HX
<b>Input (DC)</b>	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	500 V / 550 V
Nominal PV input voltage	1080 V
MPP voltage range	500 V – 1500 V
No. of independent MPP inputs	12 (optional: 16)
Max. number of input connector per MPPT	2
Max. PV input current	12 * 40 A (Optional: 16 * 30 A)
Max. DC short-circuit current per MPPT	60 A
<b>Output (AC)</b>	
AC output power	352 kVA @ 30°C / 320 kVA @40 °C / 295 kVA @50°C
Max. AC output current	254 A
Nominal AC voltage	3 / PE, 800 V
AC voltage range	640 – 920V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3
<b>Efficiency</b>	
Max. efficiency / European efficiency	99.02 % / 98.8 %
<b>Protection</b>	
DC reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch / AC switch	Yes / No
PV string current monitoring	Yes
Q at night function	Yes
Anti-PID and PID recovery function	Optional
Surge protection	DC Type II / AC Type II
<b>General Data</b>	
Dimensions (W*H*D)	1136 * 870 * 361 mm
Weight*	≤116 kg
Isolation method	Transformerless
Degree of protection	IP66
Power consumption at night	< 6 W
Operating ambient temperature range	-30 to 60°C
Allowable relative humidity range	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Communication	RS485 / PLC
DC connection type	MC4-Evo2 (Max. 6 mm <sup>2</sup> , optional 10mm <sup>2</sup> )
AC connection type	Support OT/DT terminal (Max. 400 mm <sup>2</sup> )
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, EN 50549-1/2, UNE 206007-1:2013, P.O.12.3, UTE C15-712-1:2013
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control, Q-U control, P-f control

\*Due to the multi-supplier for some key components, the actual weight may have a ±8% deviation, please refer to the actually delivered product.