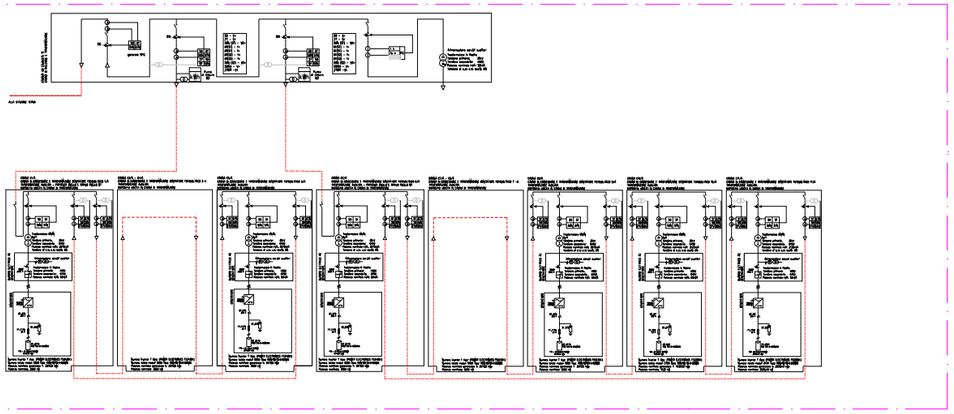
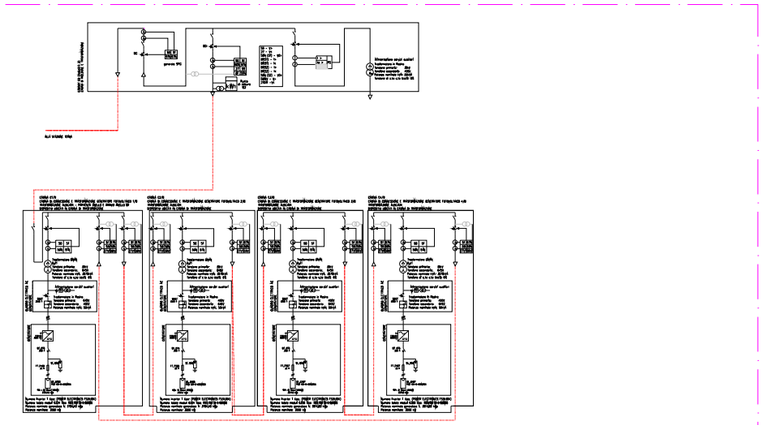
CONFIGURAZIONE CAMPO FOTOVOLTAICO

AUGUSTA Potenza NOMINALE DC CAMPO TRACKER 51,04 MW	
Totale stringhe 34 moduli	2.502
N. moduli	85.068
Potenza moduli fotovoltaici kW	51.040,80
Potenza inverter kW	50.880,00
Potenza in immissione kW	49.842,40

AUGUSTA 1



AUGUSTA 2



SCHEDA TECNICA INVERTER POWER ELECTRONIC FS2285K - FS3430K

POWER ELECTRONICS

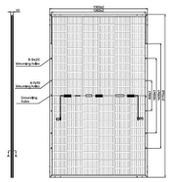
TECHNICAL CHARACTERISTICS — HEMK 645V

		FRAME 1	FRAME 2
REFERENCE		**FS2285K**	**FS3430K**
OUTPUT	AC Output Power(kVA/kW) @50°C [1]	2285	3430
	AC Output Power(kVA/kW) @40°C [1]	2365	3550
	Max. AC Output Current (A) @40°C	2117	3175
	Operating Grid Voltage(VAC) [2]	645V ±10%	
	Operating Grid Frequency(Hz)	50Hz/60Hz	
	Current Harmonic Distortion (THDI)	< 3% per IEEE519	
	Power Factor (cosine phi) [3]	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night	
INPUT	MPPt @full power (VDC) @35°C [4]	913V-1500V	
	MPPt @full power (VDC) @50°C [4]	913V-1311V	
	Maximum DC voltage	1500V	
	Number of PV inputs [5]	Up to 36	
	Number of Freemaq DC/DC inputs [6]	Up to 6	
	Max. DC continuous current (A) [5]	2645	3970
	Max. DC short circuit current (A) [5]	4000	6000
EFFICIENCY & AUXILIARY SUPPLY	Efficiency (Max) (η)	98.81%	98.87%
	Euroeta (η)	98.43%	98.60%
	Max. Power Consumption (KVA)	8	10
CABINET	Dimensions [WxDxH] (ft)	12 x 7 x 7	
	Dimensions [WxDxH] (m)	3.7 x 2.2 x 2.2	
	Weight (lb)	12125	12677
	Weight (kg)	5500	5750
	Type of ventilation	Forced air cooling	
ENVIRONMENT	Degree of protection	NEMA 3R - IP55	
	Permissible Ambient Temperature	-35°C to +60°C / >50°C Active Power derating	
	Relative Humidity	4% to 100% non condensing	
	Max. Altitude (above sea level)	2000m; >2000m power derating (Max. 4000m)	
	Noise level [8]	< 79 dBA	
CONTROL INTERFACE	Communication protocol	Modbus TCP	
	Plant Controller Communication	Optional	
	Keyed ON/OFF switch	Standard	
PROTECTIONS	Ground Fault Protection	GFDI and Isolation monitoring device	
	General AC Protection	Circuit Breaker	
	General DC Protection	Fuses	
	Overvoltage Protection	AC, DC Inverter and auxiliary supply type 2	
CERTIFICATIONS	Safety	UL1741, CSA 22.2 No.107.1-16, UL62109-1, IEC62109-1, IEC62109-2	
	Compliance	NEC 2017 / IEC	
	Utility interconnect	EEE 1547.1-2005 / UL1741SA-Feb. 2018 / IEC62116:2014	

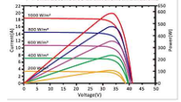
SCHEDA TECNICA MODULIFOTOVOLTAICI RISEN RSM 120-8-600BMDG

risen

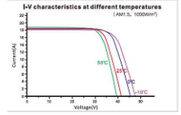
Dimensions of PV Module (unit: mm)



RSM120-8-590BMDG
I-V characteristics at different irradiations



I-V characteristics at different temperatures (AM1.5, 1000W/m²)



ELECTRICAL DATA (STC)

Model Number	RSM120-8-595BMDG	RSM120-8-595BMDG	RSM120-8-595BMDG	RSM120-8-595BMDG	RSM120-8-600BMDG
Rated Power in Watts-Pmax(Wp)	**580**	**585**	**590**	**595**	**600**
Open Circuit Voltage-Voc(V)	40.90	41.10	41.30	41.50	41.70
Short Circuit Current-Isc(A)	18.06	18.11	18.16	18.21	18.26
Maximum Power Voltage-Vmpp(V)	34.04	34.22	34.42	34.60	34.80
Maximum Power Current-Impp(A)	17.05	17.10	17.15	17.20	17.25
Module Efficiency (%) ★	20.5	20.7	20.8	21.0	21.2

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Bifacial factor: 70%±5 ★Module Efficiency (%): Round-off to the nearest number

Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax (Wp)	638	644	649	655	660
Open Circuit Voltage-Voc(V)	40.90	41.10	41.30	41.50	41.70
Short Circuit Current-Isc(A)	19.87	19.92	19.98	20.03	20.09
Maximum Power Voltage-Vmpp(V)	34.04	34.22	34.42	34.60	34.80
Maximum Power Current-Impp(A)	18.76	18.81	18.87	18.92	18.98

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

ELECTRICAL DATA (NMOT)

Model Number	RSM120-8-590BMDG	RSM120-8-595BMDG	RSM120-8-595BMDG	RSM120-8-595BMDG	RSM120-8-600BMDG
Maximum Power-Pmax (Wp)	439.5	443.1	447.0	450.7	454.6
Open Circuit Voltage-Voc (V)	38.04	38.22	38.41	38.60	38.78
Short Circuit Current-Isc (A)	14.81	14.85	14.89	14.93	14.97
Maximum Power Voltage-Vmpp (V)	31.59	31.76	31.94	32.11	32.29
Maximum Power Current-Impp (A)	13.91	13.95	13.99	14.04	14.08

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar cells	Monocrystalline
Cell configuration	120 cells (6×10+6×10)
Module dimensions	2172×1303×35mm
Weight	35kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	Tempered Glass
Frame	Anodized Aluminium Alloy type 6005-2T6, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm² (12AWG), Positive(+)350mm, Negative(-)350mm (Connector Included)
Connector	Risen Twinsel PV-SY02, IP68

TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	44°C±2°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.04%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	35A
Limiting Reverse Current	35A

CONFIGURAZIONE CAMPO FOTOVOLTAICO AREA A

AUGUSTA 1 Potenza NOMINALE DC CAMPO TRACKER 35.822,40 kW				
SOTTOCAMPI	1-9	10	11	
N. stringhe da 34 moduli	175	80	101	
N. moduli	5950	2720	3434	
Potenza moduli fotovoltaici	3570,0	1632,0	2060,4	
Potenza inverter	3550	2365	2365	
Potenza in immissione	3550	1632,0	2060,4	
Totale stringhe 34 moduli	1.756			
N. moduli	59.704			
Potenza moduli fotovoltaici	35.822,40			
Potenza inverter	36.680,00			
Potenza in immissione	35.642,40			

CONFIGURAZIONE CAMPO FOTOVOLTAICO AREA B

AUGUSTA 2 Potenza NOMINALE DC CAMPO TRACKER 15.218,4 kW				
SOTTOCAMPI	1-2	3-4		
N. stringhe da 34 moduli	186	187		
N. moduli	6324	6358		
Potenza moduli fotovoltaici	3794,4	3814,8		
Potenza inverter	3550	3550		
Potenza in immissione	3550	3550		
Totale stringhe 34 moduli	746			
N. moduli	25.364			
Potenza moduli fotovoltaici	15.218,40			
Potenza inverter	14.200,00			
Potenza in immissione	14.200,00			

REGIONE SICILIA

COMUNE DI CARLENTINI E MELLILI (SR)

Livello di progettazione/Level of design
Progetto Definitivo

Oggetto/Object
PROGETTO AUGUSTA
Realizzazione impianto agrovoltaico in area agricola nel Comune di CARLENTINI (SR) e MELLILI (SR)

Elaborato/Drawing
Schema elettrico unifilare

Formato/Size	*Scala/Scale* Varie	*Codice/code* MITEPUATAV022A0
A1 modificato	*Data/Date* 16/03/2022	
	Nome file/File name MITEPUATA022A0.pdf	
Revision 00	*Date* 16/03/2022	*Description* Prima emissione

Commessa/Project order
Progettazione Impianto Fotovoltaico

Redatto: Ing. Vincenzo Crucillà

DOTT. ING. Crucillà Vincenzo 1436

Committente/Customer
MEGARA SOLAR S.R.L.
Corso Buenos Aires 54 - Milano (MI)
P.IVA: 02052840895

Progettazione e sviluppo/Planning and development
ICS S.R.L.
Via Lorenzo Mascheroni, 5, 20123, Milano (MI)
+39(0) 0931 999730 - P.IVA: 00485050892

Project Manager: Ing. Raimondo Barone