

SE-302 SOLAR ENGINE

FOR PAPI, WIND DIRECTION INDICATOR AND OTHER AIRFIELD LIGHTING EQUIPMENT



FEATURES

- Applicable For Different Airfield Lighting Equipment
- 20% More Energy Efficient Solar Panel
- All Consisting Parts Are User-Replaceable
- Adjustable Solar Engine Size

APPLICATION

S4GA Solar Engine is designed to power PAPI or other airfield lighting equipment. It consists of premium quality Q.ANTUM solar panel and VICTRON power bank.

1 POWER BANK

CAPACITY: 2640 W
Stores solar energy and powers airport infrastructure connected to Power Banks

2 SOLAR PANEL

CAPACITY: 640 W
Q CELL Solar panel collects solar energy 20% more effective than other solar panels



3

Airfield lighting equipment is connected to Power Bank and powered by solar energy



EXAMPLES OF S4GA SOLAR ENGINES



SOLAR PANEL



Q.ANTUM DUO TECHNOLOGY



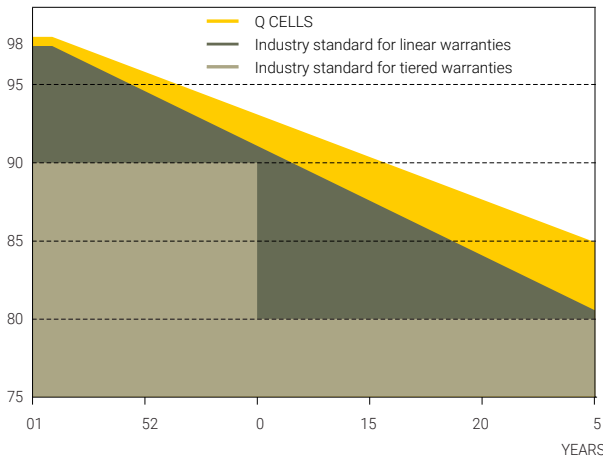
2 X Q.PEAK SOLAR PANELS
TOTAL POWER OUTPUT: 640 W



ALLUMINIUM FRAME



SUPPORTIVE FRANGIBLE LEGS



Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.9%.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology1, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



STATE OF THE ART MODULE TECHNOLOGY

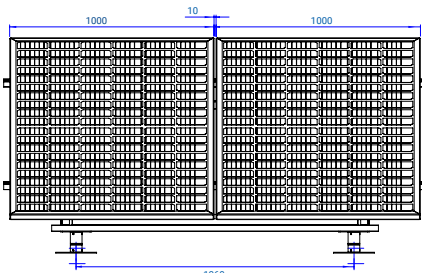
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

TECHNICAL SPECIFICATIONS

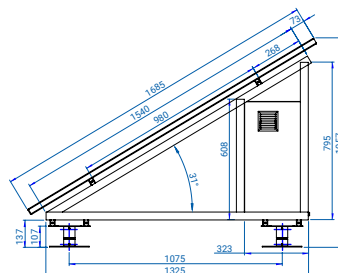
General	
	• 2 x Q.PEAK DUO-G5 solar panels
	• Front Cover: 3.2 mm thermally pre-stressed glass with antireflection technology
	• Back Cover: composite film
	• Frame: Black anodized aluminium
	• Cell: 6 x 20 monocrystalline Q.ANTUM solar half cells
	• Connector: Multi-Contact, MC4, IP65 and IP68
	• Dimensions: 1685 x 1000 x 32 mm
	• Weight: 18,7 kg

Electrical	
	• Total Engine Size : 640 W (2 x 320 W)
	• Nominal Power: 315-330 Wp
	• Maximum system voltage: 1000 V
Control & Monitoring	
	• Operating temperature: -40 to 85°C
	• Wind/Snow Load: 4000/5400 Pa
Certification	
	• VDE Quality Tested, IEC 61215 (Ed. 2); IEC 61730 (Ed. 1), Application class A
	• DIN EN 50380

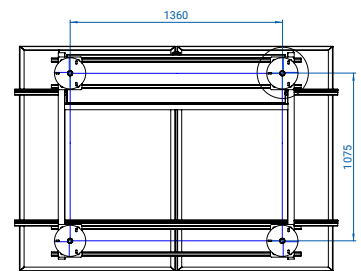
TECHNICAL DRAWING



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

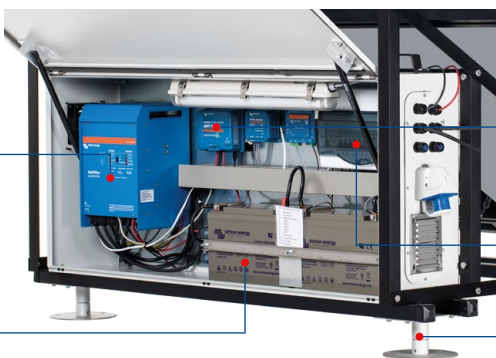
POWER BANK



**MULTIPLUS 24/300/70
INVERTER CHARGER**



**VICTRON ENERGY BATTERY
DEEP CYCLE**



**BLUESOLAR MPPT 100/30
CHARGE CONTROLLER**



**CONTROL AND SAFETY MODULE
(DIRECT CURRENT
ALTERNATE CURRENT)**

FRANGIBLE MOUNTING

INVERTER / CHARGER

General	
• MultiPlus 24/300/70 Inverter Charger	
• Power Control: yes	
• Transfer Switch (A): 16	
• Parallel and 3-phase operation: yes	
• Dimensions [HxWxL]: 375 x 214 x 110 mm	
• Weight: 10 kg	
Inverter	
• Input voltage range (V DC): 9,5 – 17 V, 19 – 33 V, 38 – 66 V	
• Output voltage: 230 VAC ± 2%	
• Frequency: 50 Hz ± 0,1%	
Charger	
• Input voltage range: 187-265 VAC	
• Input frequency: 45 – 65 Hz	
Environmental Conditions	
• Temperature Range: -40 to 85°C	
• Ingress Protection: IP21	
• Humidity: 95%	
Compliance	
• Safety: EN 60335-1, EN 60335-2-29	
• Emission, Immunity: EN 55014-1, EN 55014-2, EN 61000-3-3	
• Automotive Directive: 2004/104/EC	

BATTERY

General	
• Victron Energy Battery Deep Cycle	
• Lifespan: 750 cycles	
• Designed for 5 years	
• Air-transportable	
• User-replaceable	
• Dimensions [LxWxH]: 330 x 171 x 220 mm	
• Weight: 33 kg	
Electrical	
• Nominal Voltage: 12V	
• Nominal Capacity: 220 Ah	
• Total capacity: 2640 W (12V x 220Ah)	
Environmental Conditions	
• Temperature range: -40 to 85°C	

SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
1 x Power Bank	1460 mm x 860 mm x 600 mm	140 kg
2 x Solar Panels, 1 x Mounting Set for SE-302 Solar Engine	2310 mm x 1160 mm x 600 mm	100 kg

CHARGE CONTROLLER

General	
• BlueSolar Charge Controller MPPT 100/30	
• Dimensions [LxWxH]: 130 x 186 x 70 mm	
• Weight: 1,25 kg	
Electrical	
• Battery Voltage: 12/24V Auto Select	
• Rated charge current: 30 A	
• Nominal PV power, 12V 1a,b): 440 W	
• Nominal PV power, 24V 1a,b): 880 W	
• Max. PV short circuit current: 35 A	
• Maximum PV open circuit voltage: 100 V	
• Maximum efficiency: 98%	
• Protection: battery reverse polarity (fuse, not user accessible) PV reverse polarity / Output short circuit / Over Temperature	
Environmental Conditions	
• Temperature range: -30 to +60°C	
• Humidity: 95%, non-condensing	
Compliance	
• Safety: EN/IEC 62109-1 / UL 1741 / CSA C22.2	

ENCLOSURE

• NEMA protection class: NEMA 4
• IK Code: IK08
• Material: galvanized steel
• Dimensions (LxWxH): 600 x 1400 x 300 mm
• Ingress Protection: IP-65

TECHNICAL DRAWING

