

## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR



**SGN-R2000AD (2000Wp-3kWe-440Ah)**

**SGN-R2500AD (2400Wp-3kWe-440Ah)**



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

### Technical Specifications

#### 1 PHASE AC INLET- Standard

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| 2(1X25A 1P)            | Plug-1 Network (Optional)                                  |
| 2(1X25A 1P)            | Plug-2 Generator (Optional)                                |
| 230/240VAC 6kA 1P+N+PE | Surge Protection Switch                                    |
| 2(1X25A 1P)            | Moulded Case Circuit Breaker -bypass                       |
| 2(1X25A 1P)            | Moulded Case Circuit Breaker -1 Network (Optional)         |
| 2(1X25A 1P)            | Moulded Case Circuit Breaker -2 Generator (Optional)       |
| 2(1X25A 1P)            | Automatic Transfer Power Contactor -1 Network (Optional)   |
| 2(1X25A 1P)            | Automatic Transfer Power Contactor -1 Generator (Optional) |

#### 1 PHASE AC OUTLET- Standard

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| 2(1X25A 1P)         | Plug-1 bypass                                             |
| 2(1X25A 1P)         | Plug-1 Current Supply                                     |
| 2(1X25A 1P)         | Plug-1 Current Supply (Optional)                          |
| 230/240 6kA 1P+N+PE | Surge Protection Switch                                   |
| 2(1X25A 1P)         | Moulded Case Circuit Breaker -bypass                      |
| 2(1X25A 1P)         | Moulded Case Circuit Breaker -1 Current Supply (Optional) |
| 2(1X25A 1P)         | Moulded Case Circuit Breaker -2 Current Supply (Optional) |

#### 1 PHASE SOLAR INVERTER (230/240 VAC 1P 50/60Hz - 24VDC/48VDC) -(Available)

|                                     |                                                 |
|-------------------------------------|-------------------------------------------------|
| Continuous Working (Load Condition) | <b>3kWe</b>                                     |
| Instant Peak Resistance             | <b>6kWe</b>                                     |
| 2(1X25A +/- 1P)                     | AC Moulded Case Circuit Breaker                 |
| Amps @ 230VAC                       | 25A                                             |
| 2(1X100A +/- 1P)                    | Intranet Remote Monitoring Module (Optional)    |
|                                     | Battery Charge Controller (Available-including) |

#### SOLAR TYPE BATTERY - (Available)

|                       |                                 |
|-----------------------|---------------------------------|
| Amp @ 12VDC Solar gel | Pieces 110Ah=12Vdc 440Ah / C10  |
| 4(1X50A +/- 2x2P)     | DC Moulded Case Circuit Breaker |

#### PHOTOVOLTAIC SOLAR PANEL (330/400Wp) - (Available)

|                         |                                             |
|-------------------------|---------------------------------------------|
| Total input (kiloWatt)  | <b>2/2,4kWp</b> PP/MP – with MC4 Connection |
| 120/150VDC 6kA +/- PE   | Surge Protection Switch                     |
| 2(1X25A +/- 1P)         | DC Moulded Case Circuit Breaker             |
| 4mm2 0.6/1Kv LSFOH PV-1 | Solar Power Cable                           |

#### TRANSPORTATION DIMENSION

#### INSTALLATION DIMENSION- (Optional)

|               |                        |
|---------------|------------------------|
| Height        | 1.600mm                |
| Length T.Bady | 2.500mm                |
| Width T.Bady  | 1.875mm                |
| Weight T.Bady | 420kg Battery Excluded |



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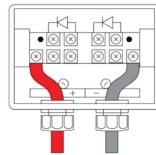
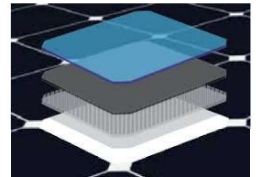
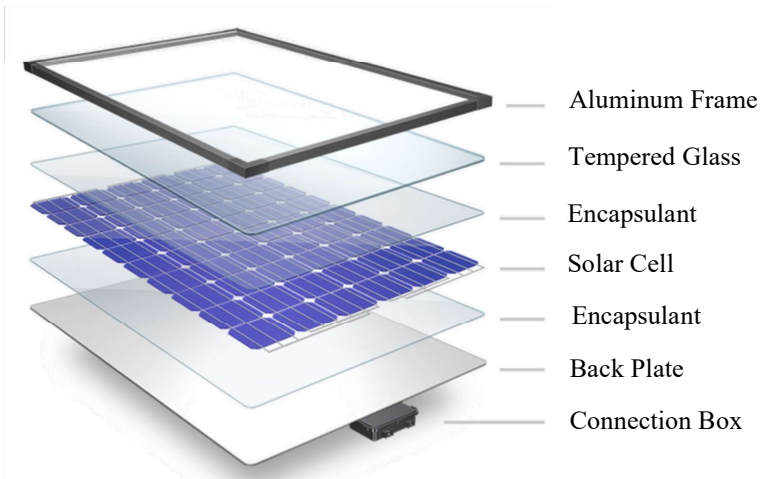


### Product capacity:

- 1 Piece 9.000btu split unit (summer)
  - 1 Piece 750W electric panel radiator (winter)
  - 3 LED indoor & outdoor lighting fixtures
  - 1 Piece 300W refrigerator
  - 2 x 300W electronic device (Computer & TV)
- with socket outlet in feeding capacity



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR



Item 1: Production detail of photovoltaic solar panel

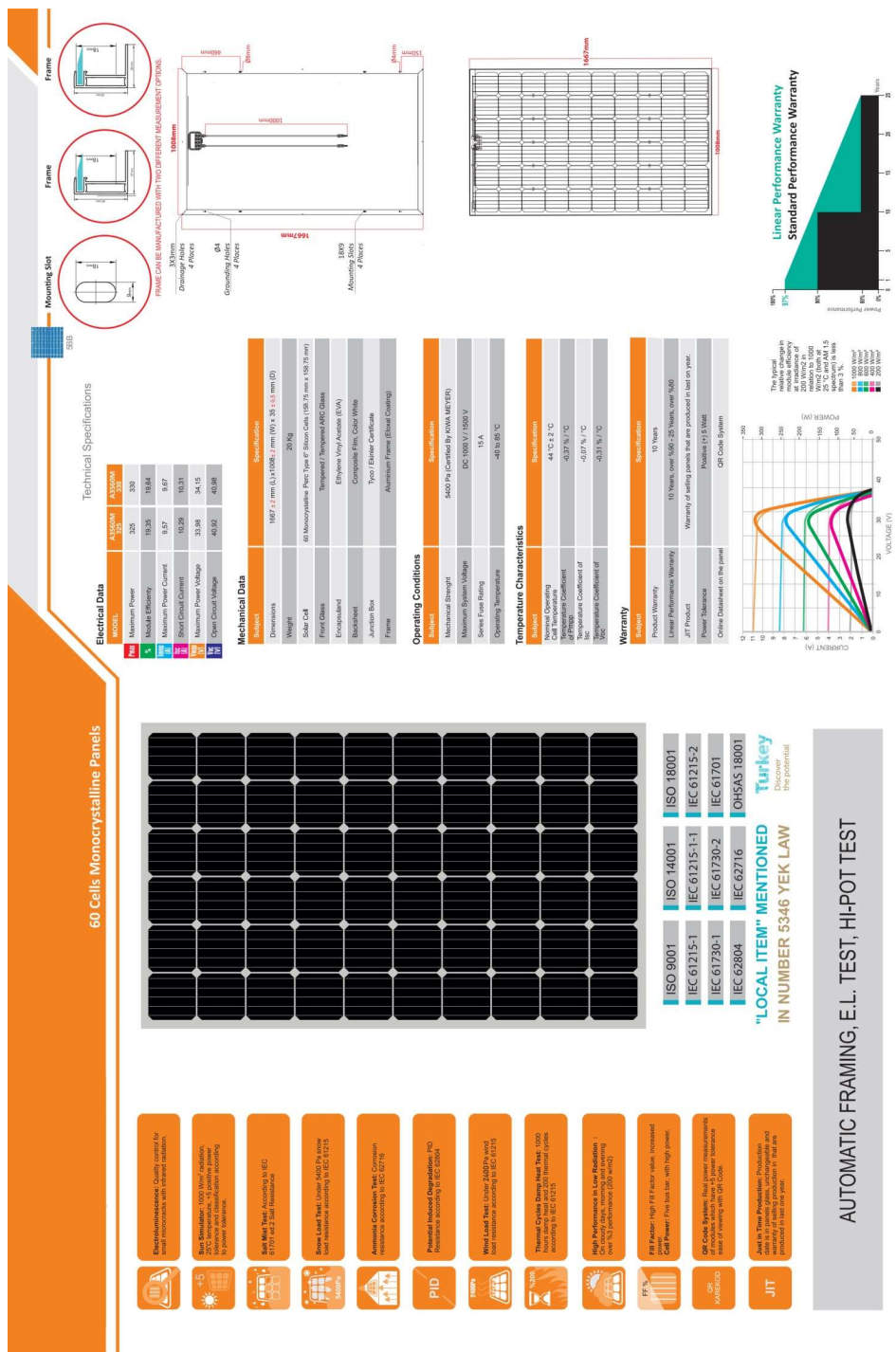


## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR



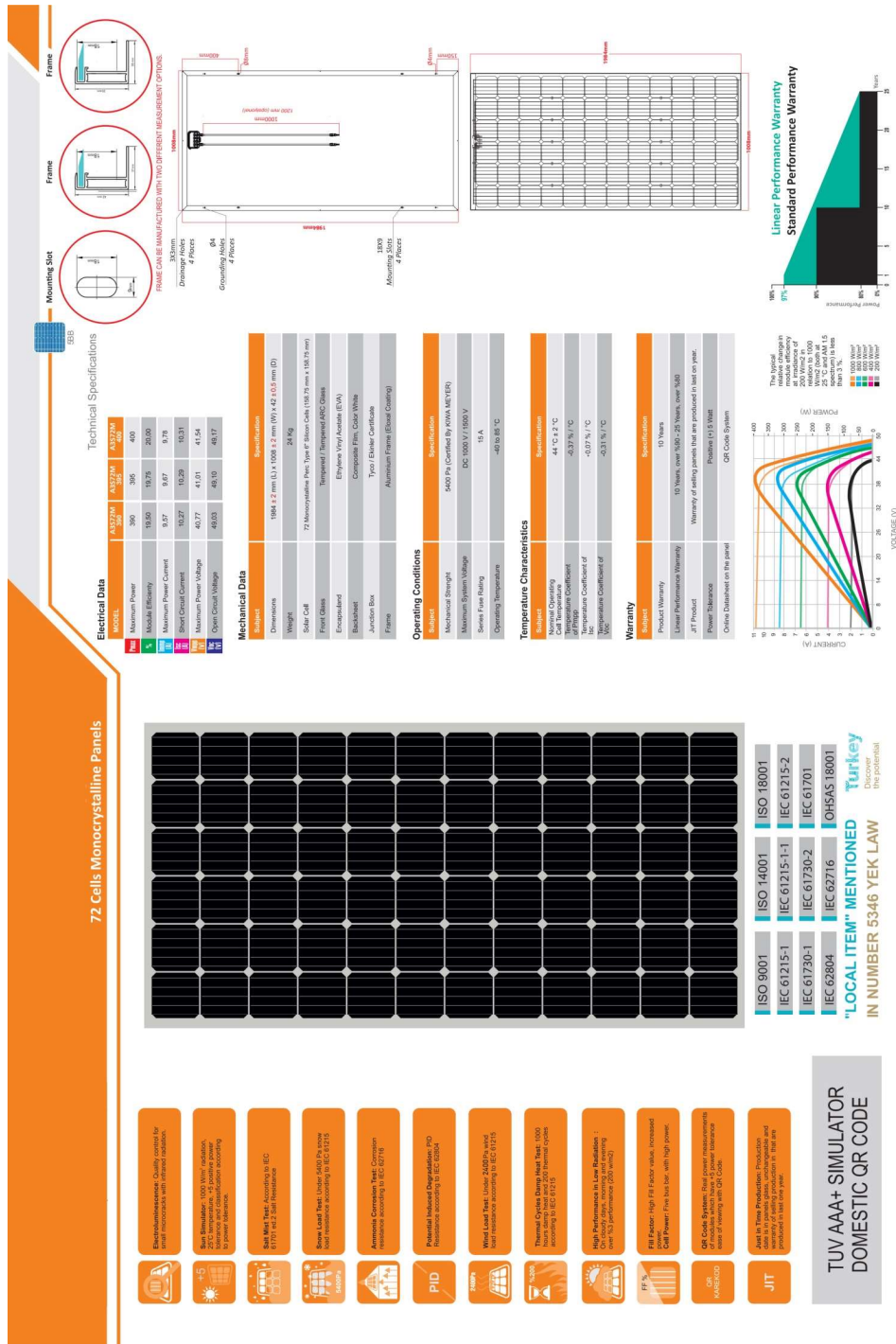
## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

### Product details



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

## Product details



**Item 3: Photovoltaic solar panel detail used for SGN-R2500AD**



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

### Product details

**SB BATTERY**

**VRLA GEL RECHARGEABLE BATTERY FOR SOLAR ENERGY**  
**SPG110-12 R 12V110Ah**

FOR HIGH RATE USE



#### Specification

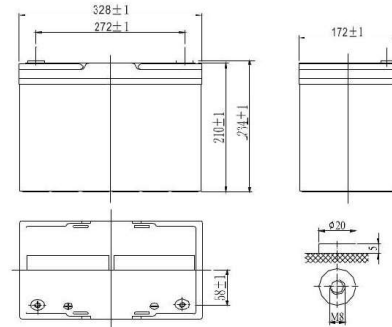
|                                                    |            |
|----------------------------------------------------|------------|
| Nominal Voltage                                    | 12V        |
| Number of cell                                     | 6          |
| Design Life                                        | 10 years   |
| Nominal Capacity 77°F(25°C)                        |            |
| 20 hour rate(5.5A, 10.5V)                          | 110Ah      |
| 10 hour rate(10.5A, 10.5V)                         | 105Ah      |
| 5 hour rate(19.0A, 10.5V)                          | 95.0Ah     |
| 1 hour rate(72.6A, 9.6V)                           | 72.6Ah     |
| Internal Resistance                                |            |
| Fully Charged battery 77°F(25°C)                   | 4.3mOhms   |
| Self-Discharge                                     |            |
| 3% of capacity declined per month at 20°C(average) |            |
| Operating Temperature Range                        |            |
| Discharge                                          | -30~60°C   |
| Charge                                             | -20~60°C   |
| Storage                                            | -30~60°C   |
| Max. Discharge Current 77°F(25°C)                  | 950A(5s)   |
| Short Circuit Current                              | 1875A      |
| Charge Methods: Constant Voltage Charge 77°F(25°C) |            |
| Cycle use                                          | 14.4-14.7V |
| Maximum charging current                           | 30A        |
| Temperature compensation                           | -30mV/°C   |
| Standby use                                        | 13.6-13.8V |
| Temperature compensation                           | -20mV/°C   |

#### General Features

- Silica gel technology for longer cycle life and better performance at cold ambient temperatures.
- Special sheet separator and colloidal or foamed silica.
- Deep discharge cycle increased by 50% as compared with the AGM battery.
- High reliability and quality.
- Excellent recovery from deep discharge.
- Living up prevailing standards.

#### Dimensions and Weight

|                          |             |
|--------------------------|-------------|
| Length(mm / inch)        | 328/12.91   |
| Width(mm / inch)         | 172/6.77    |
| Height(mm / inch)        | 234/9.22    |
| Total Height(mm / inch)  | 239/9.42    |
| Approx. Weight(Kg / lbs) | 37.0 / 81.4 |
| Standard Terminal        | I           |



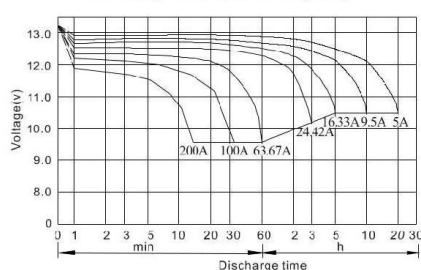
#### Discharge Constant Current (Amperes at 77°F25°C)

| End Point<br>Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V                   | 350  | 240   | 175   | 105   | 72.6 | 30.2 | 19.8 | 11.0 | 5.80 |
| 1.65V                   | 315  | 219   | 170   | 102   | 72.5 | 29.9 | 19.4 | 10.8 | 5.70 |
| 1.70V                   | 299  | 211   | 164   | 100   | 72.3 | 29.8 | 19.2 | 10.7 | 5.65 |
| 1.75V                   | 266  | 195   | 155   | 98.0  | 71.5 | 29.7 | 19.0 | 10.5 | 5.50 |
| 1.80V                   | 240  | 181   | 148   | 95.0  | 70.6 | 29.6 | 18.6 | 10.3 | 5.40 |

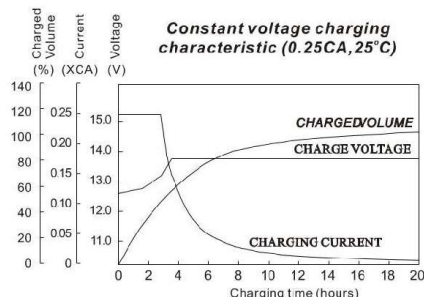
#### Discharge Constant Power (Watts at 77°F25°C)

| End Point<br>Volts/Cell | 5min | 10min | 15min | 30min | 1h  | 3h   | 5h   | 10h  |
|-------------------------|------|-------|-------|-------|-----|------|------|------|
| 1.60V                   | 577  | 398   | 310   | 198   | 130 | 52.4 | 36.5 | 21.2 |
| 1.65V                   | 547  | 393   | 307   | 194   | 125 | 52.3 | 36.4 | 20.9 |
| 1.70V                   | 511  | 383   | 302   | 189   | 122 | 52.2 | 36.3 | 20.7 |
| 1.75V                   | 476  | 358   | 284   | 184   | 121 | 51.6 | 36.1 | 20.4 |
| 1.80V                   | 427  | 333   | 267   | 179   | 119 | 50.9 | 35.5 | 20.0 |

Discharge characteristic (25°C)



Constant voltage charging characteristic (0.25CA, 25°C)



Item 4: Gel Battery detail used for SGN-R2000AD & SGN-R2500AD



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

### Product details

#### Phoenix Inverters Smart

1600 VA – 5000 VA

[www.victronenergy.com](http://www.victronenergy.com)



Phoenix Inverter  
Smart 12/3000



#### Bluetooth built-in: fully configurable with a tablet or smartphone

- Low battery voltage alarm
- Low battery voltage cut-off and restart levels
- Dynamic cut-off: load dependent cut-off level
- Output voltage: 210 - 245V
- Frequency: 50 Hz or 60 Hz
- ECO mode on/off and ECO mode sense level
- Alarm relay

#### Monitoring:

- In- and output voltage, load and alarms

#### VE.Direct communication port

The VE.Direct port can be connected to a computer (VE.Direct to USB interface cable needed) to configure and monitor the same parameters.

#### Proven reliability

The full bridge plus toroidal transformer topology has proven its reliability over many years. The inverters are short circuit proof and protected against overheating, whether due to overload or high ambient temperature.

#### High start-up power

Needed to start loads such as power converters for LED lamps, halogen lamps or electric tools.

#### ECO mode

When in ECO mode, the inverter will switch to standby when the load decreases below a preset value. Once in standby the inverter will switch on for a short period every 2,5 seconds (adjustable).

If the load exceeds the preset level, the inverter will remain on.

#### Remote on/off

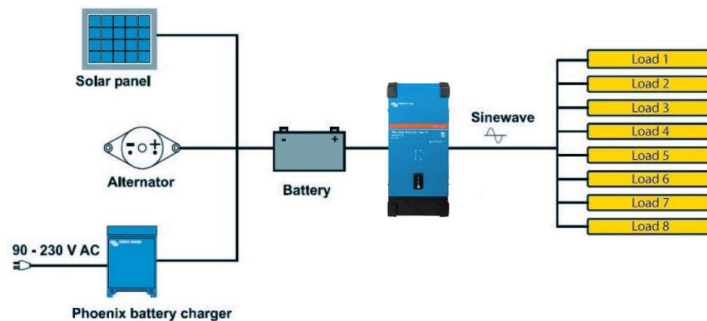
A remote on/off switch or relay contact can be connected to a two pole connector. Alternatively, the H terminal (left) of the two pole connector can be switched to battery plus, or the L terminal (right) of the two pole connector can be switched to battery minus (or the chassis of a vehicle, for example).

#### LED diagnosis

Please see manual for a description.

#### To transfer the load to another AC source: the automatic transfer switch

For our low power inverters we recommend our Filax Automatic Transfer Switch. The Filax features a very short switchover time (less than 20 milliseconds) so that computers and other electronic equipment will continue to operate without disruption. Alternatively use a MultiPlus with built-in transfer switch.



## MODULAR PORTABLE ON THE TRAILER SOLAR GENERATOR

### Certificates

**YERLİ MALİ BELGESİ**

Belgenin Veriliş Tarihi : 07.12.2021 Belgenin Geçerlilik Tarihi : 07.12.2022 Belge No : 2021106287809  
Üretici Ünvanı: AKİŞ SİSTEM ELEKTRİK ELEKTRONİK PANO BİLGİ İŞLEM SANAYİ İTHALAT VE İHRACAT LIMITED ŞİRKETİ  
İşyeri Adresi: ÇEKİRDEKSİZ MEVKİİ POLATLI OSB 202.CAD. NO:24 POLATLI/ANKARA  
Üreticinin Vergi Kimlik No: 0280055194 TC Kimlik No: MERSİS No : 0028005519400015  
Telefon: 3123955901 E-posta: akissistem@akissistem.com  
Faks: 3123955215 Web Adresi: www.akissistem.com  
Ticaret Sicil No: 4778 Üye Sicil No: 4662  
Ürün Adı: GÜNEŞ ENERJİSİ İLE ÇALIŞAN JENERATÖR  
Ürün Kodu (PRODCOM/GTIP): 27.12.10.30.00  
Teknik Özellikleri(Marka Adı, Modeli, Seri Numarası, Cinsi):  
Kapasite Raporunun Tarih :08.04.2021 No : 13848 Geçerlilik Süresi :08.04.2023  
Sanayi Sicil Belgesinin Tarih :26.09.2013 No : \$43980  
Yerli Katkı Oranı : % 94  
Ürünün Teknolojik Düzeyi (düşük/orta-düşük/orta-yüksek/yüksek)(Eurostat) : orta-yüksek

**CERTIFICATE**  
**AKİŞ SİSTEM**  
AKİŞ SİSTEM ELEKTRİK ELEKTRONİK PANO BİLGİ İŞLEM  
SANAYİ İTHALAT VE İHRACAT LIMITED ŞİRKETİ  
ÇEKİRDEKSİZ OSB MAHALLESİ 202. CADDE NO: 24 POLATLI ANKARA  
**ISO 9001:2015**  
PRODUCTION AND SALES OF DEVICES SPECIFIC TO THE SWITCHING AND PROTECTION OF ELECTRICAL  
CIRCUITS AND CONTROL AND DISTRIBUTION OF ELECTRICITY ( LOW AND MEDIUM VOLTAGE  
SWITCHGEARS, PANELS OF PREFABRICATED TRANSFORMER DISTRIBUTION CENTERS, METERING BOARDS,  
SCADA AUTOMATION PANELS, ELECTRICAL SWITCHGEAR MATERIALS), PROJECT DESIGN AND  
INSTALLATION OF SOLAR POWER PLANTS, DESIGN AND PRODUCTION OF PORTABLE AND FOLDABLE SOLAR  
POWER SYSTEMS  
This certificate is valid for 3 years on condition that surveillance audits are carried out before the period of each year in accordance with the accreditation rules. With this  
certificate, the holder of the certificate has been audited at the address mentioned above by TRB Certification Body in accordance with the condition and requirements  
of the license contract and it has been registered that the company satisfies the conditions of the standard. This certificate is valid as long as the certificate holder  
follows TRB certification rules and the certificate is seen as valid on [www.trb.com.de](http://www.trb.com.de) web site certificate inquiry section.  
Certification Number : DE-QC-1741  
Date of Issue : 09.10.2020  
Expiry Date : 08.10.2022  
Certification Period : 3 Years (2, Year)  
Printing Number : 01  
General Manager  
Plannenstr. 17, D-88677 Markdorf-Deutschland  
Telefon: 0049-7544-746023 Fax: 0049-7544-746029 web: [www.trb.com.de](http://www.trb.com.de) E-mail: [info@trb.com.de](mailto:info@trb.com.de)  
IAF  
DAKKS  
Deutsche  
Akkreditierungsstelle  
D-2M-19486-01-00

**MARKA TESCİL BELGESİ**  
Marka No : 2015 63941 - Ticaret  
T.C.  
TÜRK PATENT ENSTİTÜSÜ  
SOGEN  
SOLAR SYSTEMS  
Marka Sahibi : AKİŞ SİSTEM ELEKTRİK ELEKTRONİK PANO  
BİLGİ İŞLEM SANAYİ İTHALAT VE İHRACAT  
LIMITED ŞİRKETİ

**TURK PATENT**  
TÜRK PATENT VE MARKA KURUMU  
**TASARIM TESCİL BELGESİ**  
No: 2017 04826  
Tasarım Sahibi  
AKİŞ SİSTEM ELEKTRİK ELEKTRONİK PANO BİLGİ İŞLEM  
SANAYİ İTHALAT VE İHRACAT LIMITED ŞİRKETİ  
Bu tasarım, 6769 sayılı Sınai Mülkiyet Kanunu kapsamında 20/07/2017  
tarihinden itibaren 5 yıl süreyle korunmak üzere tescil edilmiş ve bu  
belge 05/01/2018 tarihinde düzenlenmiştir.  
Prof. Dr. Habip ASAN  
Başkan

