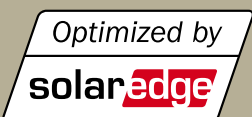


# SOLON SOLfixx<sup>+</sup>

*The Power-Optimized Solution for Flat Roofs.*



- › Innovative flat roof system with integrated power optimizer for use on partially shaded roof areas
- › Increased output by up to 25 %
- › Module level MPP tracking
- › Integrated monitoring on module, string and system level
- › Ensured system safety through system shut down capabilities in case of fire
- › Compliant with directive VDE-AR-E 2100-712





## SOLON SOLfixx<sup>+</sup>

# Greater Output on Partially Shaded Flat Roofs.

SOLON SOLfixx+ is the ideal solution for partially shaded roof areas. The innovative flat roof system now features an integrated power optimizer. This enables individual MPP tracking for each module, resulting in an up to 25% greater output.

### SOLON SOLfixx.

The SOLON SOLfixx photovoltaic system has been specially designed for membrane and bitumen roofs and can be installed extremely quickly and easily – without the need for roof penetration. The frameless crystalline SOLON modules are installed on the plastic substructure at an angle of 10°. This means that the distance between the modules is small, thereby ensuring a high area output. At just 13.1 kg/m<sup>2</sup> (SOLON SOLfixx with power optimizer), the system can even be installed on roofs with a low load-bearing reserve.

### Power optimizer.

The power optimizer is at the heart of SOLON SOLfixx+. It replaces the traditional junction box and is also responsible for determining the individual, maximum power point (MPP) of each individual module. This means that a shaded module no longer affects the output of the entire module string. Thanks to this function, partially shaded roof areas – for example, due to a skylight, chimney or lightning conductor – are now suitable for the installation and economical operation of a solar power system. For system owners, this means up to 25% greater output. The power optimizer also enables different string lengths to be connected to a power inverter, thereby allowing for a flexible system design.

### SolarEdge power inverters.

Various power inverter models are available, ranging from 2,2 kWp to 17 kWp (8–50 modules/string). Constant input voltage allows for maximum efficiency of up to 98%. Integrated SafeDC™ technology is a special feature. This function allows the DC voltage to be reduced to a safe level during installation and maintenance, preventing electric shocks and electric arcs. The system automatically shuts down in the event of a fire, ensuring maximum safety for installers and system owners.

### Monitoring.

Web-based monitoring increases the reliability of the solar power system through constant output surveillance. System data is gathered using an integrated communication unit then transferred to a server. This means that data on each module, each string, and even the entire system, can be accessed from anywhere in the world via a password-protected area. Automated warning messages draw attention to errors accurately and at an early stage, which means that any irregularities are identified before they affect the solar system. This ensures productive system performance on a permanent basis.

*The monitoring terms and conditions are available at [www.solon.com/global/solraise](http://www.solon.com/global/solraise).*

*SolarEdge and SafeDC™ are trademarks of SolarEdge Technologies, Ltd. in Israel, the United States and other countries.*

# SOLON SOLfixx<sup>+</sup>

## SOLON Black 280/17 PLUS (monocrystalline)



### Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m<sup>2</sup>, (25 ± 2)°C, AM 1.5 in accordance to EN 60904-3

Generator output	$P_{max}$	320 Wp <sup>1)</sup>	315 Wp	310 Wp	305 Wp	300 Wp	295 Wp
Module efficiency		16.16 %	15.91 %	15.66 %	15.40 %	15.15 %	14.90 %
Max. Module efficiency of the Power Optimizer		99.5 %	99.5 %	99.5 %	99.5 %	99.5 %	99.5 %
Rated voltage <sup>2)</sup>	$V_{mpp}$	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V
Rated current <sup>2)</sup>	$I_{mpp}$	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A
Open circuit current	$V_{OC}$	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc
Maximum system voltage, predetermined from the inverter single phase/three phase		500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V

Measuring tolerance for  $P_{max}$ : ± 3%

Reduction of module efficiency from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: < 4%

### Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m<sup>2</sup>, NOCT, AM 1.5

Power rating	$P_{max}$	229 Wp	226 Wp	222 Wp	219 Wp	215 Wp	212 Wp
Rated voltage <sup>2)</sup>	$V_{mpp}$	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V
Rated current <sup>2)</sup>	$I_{mpp}$	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A
Open circuit voltage	$V_{OC}$	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc

### Thermal data

Tc of power		–0.43%/K
NOCT (according to IEC 61215)		48°C ± 2°C

Measuring tolerance for all final data: ± 10% (except  $P_{max}$  (STC) and NOCT)

## SOLON Blue 270/17 PLUS (polycrystalline)



### Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m<sup>2</sup>, (25 ± 2)°C, AM 1.5 in accordance to EN 60904-3

Generator output	$P_{max}$	305 Wp <sup>1)</sup>	300 Wp	295 Wp	290 Wp	285 Wp	280 Wp
Module efficiency		15.40 %	15.15 %	14.90 %	14.65 %	14.39 %	14.14 %
Max. Module efficiency of the Power Optimizer		99.5 %	99.5 %	99.5 %	99.5 %	99.5 %	99.5 %
Rated voltage <sup>2)</sup>	$V_{mpp}$	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V
Rated current <sup>2)</sup>	$I_{mpp}$	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A
Open circuit current	$V_{OC}$	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc
Maximum system voltage, predetermined from the inverter single phase/three phase		500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V	500 V/950 V

Measuring tolerance for  $P_{max}$ : ± 3%

Reduction of module efficiency from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: < 5%

### Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m<sup>2</sup>, NOCT, AM 1.5

Power rating	$P_{max}$	222 Wp	218 Wp	215 Wp	211 Wp	207 Wp	204 Wp
Rated voltage <sup>2)</sup>	$V_{mpp}$	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V	5–60 V
Rated current <sup>2)</sup>	$I_{mpp}$	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A	0–15 A
Open circuit voltage	$V_{OC}$	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc	1 Vdc

### Thermal data

Tc of power		–0.41%/K
NOCT (according to IEC 61215)		46°C ± 2°C

Measuring tolerance for all final data: ± 10% (except  $P_{max}$  (STC) and NOCT)

Inverter	single phase <sup>3)</sup>	three phase <sup>3)</sup>
Dimensions (B x W x H)	540 x 315 x 191 mm	540 x 315 x 260 mm
Weight	23 kg	32 kg
Max. efficiency	97.6 %	98 %
Operating temperature range	–20°C to +50°C	–20°C to +60°C

<sup>1)</sup> Available in limited amounts upon request.

<sup>2)</sup> Depending on system configuration.

<sup>3)</sup> For further technical data please refer to the manufacturer's inverter datasheet.



# SOLON SOLfixx<sup>+</sup>

SOLON Black 280/17 PLUS and SOLON Blue 270/17 PLUS.

## MODULE

### Mechanical specifications

Dimensions (H x W x D)	1,973 x 993 x 5.3 mm
Weight	24.4 kg
Junction box (max. efficiency of the Power Optimizer)	SolarEdge Power Optimizer (99.5 %) with 3 bypass diodes (IP65)
Cable	Solar cable, length 1,000 mm <sup>4)</sup> , 6 mm <sup>2</sup> , prefabricated with MC4-combinable plug (IP67)
Application class	Application class A (according to IEC 61730)
Front glass	Transparent toughened safety glass, 4 mm, DIN 12150-1
Solar cells	72 cells, mono- or polycrystalline Si 6.2" (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Composite film
Frame	Frameless
Backrails	6 backrails reinforced with glassfibre PA (290 x 50 x 38 mm)

### Permissible operating conditions

Temperature range	-40 °C to +85 °C
Maximum surface load capacity	Tested up to 2,400 Pa according to IEC 61215
Resistance against hail	Maximum diameter of 25 mm with impact speed of 83 km/h

## OTHER COMPONENTS

### Substructure

Dimensions (H x W x D)	2,100 x 1,430 x 253 mm
Weight	Lightweight system – just 5.1 kg/m <sup>2</sup>
Material	Polypropylen, UV and weather resistant
Material thickness	2.5 to 4 mm
Module level inclination	10°
Cable channel / Maintenance walkway	Integrated in substructure (UV protection)

## SYSTEM

### Specifications

System weight	13.1 kg/m <sup>2</sup>
Output per area	Up to 100 W/m <sup>2</sup>
Suction	Up to 1.3 kN/m <sup>2</sup>
Windload/snowload	Up to 1.8 kN/m <sup>2</sup>
Windload/snowload (snow wedge made of XPS)	Up to 5.4 kN/m <sup>2</sup>

### Guarantees and certifications

Product guarantee module	10 years <sup>1)</sup>
Product substructure	Up to 25 years <sup>2)</sup>
Product guarantee inverter	12 years <sup>3)</sup>
Product guarantee power optimizer	25 years <sup>3)</sup>
Performance guarantee module	Guaranteed output of 95 % for 5 years, 90 % for 10 years, 87 % for 15 years, 83 % for 20 years and 80 % for 25 years <sup>1)</sup>
Approvals and certificates module	IEC 61215 Edition II, IEC 61730 (incl. Safety Class II), IEC 68-2-52 (Salt mist resistance), MCS
EMC / Safety	IEC 61000-6-2; IEC 61000-6-3; IEC 62103, IEC 62109

This datasheet complies with the requirements of EN 50380:2003. Subject to modifications.

Electrical data without guarantee. SOLON is certified to ISO 9001, ISO 14001 and OHSAS 18001.

<sup>1)</sup> According to SOLON Product and Performance Guarantee.

<sup>2)</sup> According to SOLON SOLfixx Product and Performance Guarantee. Guarantee extension up to 15, 20, 25 years possible.

<sup>3)</sup> According to the SolarEdge Limited Product Warranty.

## Drawing

