

SOLON SOLraise.

The Power-Optimized Photovoltaic Solution for Maximum System Safety.



- Increased output by up to 25 %
- Module level MPP tracking
- Even available for use on roof spaces that have partial shaded areas
- Integrated monitoring on module, string and system level
- Ensured system safety through system shut down capabilities
- Positive sorting of power classes (0 to +4.99 Wp)
- SOLON solar insurance for rooftop installations included ¹⁾

Optimized by

solaredge

SOLON 



SOLON SOLraise.

*Every Module Has the Capability
to Perform at its Best.*

How can you increase the total output of a photovoltaic system by up to 25 %? With smart innovations: SOLON SOLraise is the newly developed photovoltaic system specifically designed to overcome challenging roof spaces that are subject to partial-shading.

The SOLON SOLraise system consists of:

- › SOLON modules with integrated power-optimization boxes from SolarEdge
- › An inverter from SolarEdge
- › A performance monitoring system embedded into each power-optimized box

All of the components used adhere to SOLON's stringent quality standards, resulting in exceptional system safety and stable output that will last for decades.



More Precision. More Output.

SOLON SOLraise offers a superior level of module efficiency for maximum performance on challenging roof spaces that are prone to partial shading. The embedded power-optimized box maximizes energy output by continuously tracking the Maximum Power Point (MPP) of each module. Individual module MPP Tracking maximizes energy production from modules exposed to partial shading from chimneys, dormers and poles. Minimum heat buildup contributes to consistently high performance. Collectively, the SOLON SOLraise can maximize system performance by up to 25%.

Web-Monitoring Enhances the Total System Performance.

Another advantage of SOLON SOLraise: the actual performance of each module is available for monitoring 24 hours a day. No additional hardware or wiring is required for the web-monitoring. The monitoring sensors are built directly into the SOLON SOLraise PowerOptimizer. Accurate performance data from each module is measured and accessible through a secure web monitoring portal. For a permanent, optimal system performance. The terms and conditions are available at www.solon.com/global/solraise.

Unparalleled Safety at Any Given Moment: SafeDC™.

During the system installation process, the module output voltage remains at a fixed voltage of 1V. Regardless of the situation, whether it is an emergency or a simple system maintenance upkeep: the system can be shut down at any time. In the case of a fire emergency the entire system shuts down automatically. Whatever happens: SOLON SOLraises protection features ensure the system's safety at all times. With SafeDC™, you are always on the safe side.

System Reliability is the Key.

Because MPP Tracking is handled by the PowerOptimizer separately for each module by the PowerOptimizer, the inverter is only responsible for DC to AC conversion, resulting in a less complicated, more reliable solar inverter. Thanks to its low complexity, it works free from interference. The fixed string voltage ensures operation at the highest efficiency at a maximum of 98% – regardless of string length and temperature.

SOLON SOLraise

SOLON Blue 230/07 PLUS

Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m², (25 ± 2)°C, AM 1,5 in accordance to EN 60904-3

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|---|------------------|--------|--------|--------|--------|--------|--------|
| Generator output | P _{STC} | 250 Wp | 245 Wp | 240 Wp | 235 Wp | 230 Wp | 225 Wp |
| Module efficiency | | 15.24% | 14.94% | 14.63% | 14.33% | 14.02% | 13.72% |
| Max. Module efficiency of the PowerOptimizer | | 99.5% | 99.5% | 99.5% | 99.5% | 99.5% | 99.5% |
| Rated voltage *) | V _{mpp} | 5–60 V | 5–60 V | 5–60 V | 5–60 V | 5–60 V | 5–60 V |
| Rated current *) | 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 | | 950 V | 950 V | 950 V | 950 V | 950 V | 950 V |

Measuring tolerance for P_{STC}: ±3%

Reduction of module efficiency from 1,000 W/m² to 200 W/m²: < 5%

Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m², NOCT, AM 1,5

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|----------------------|------------------|--------|--------|--------|--------|--------|--------|
| Capacity rating | P _{max} | 182 Wp | 178 Wp | 175 Wp | 171 Wp | 167 Wp | 164 Wp |
| Rated voltage *) | V _{mpp} | 5–60 V | 5–60 V | 5–60 V | 5–60 V | 5–60 V | 5–60 V |
| Rated current *) | 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)

Mechanical specifications

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|--|---|
| Dimensions (H x W x D) | 1,640 x 1,000 x 42 mm |
| Weight | 24 kg |
| Junction box (Max. efficiency of the PowerOptimizer) | SolarEdge PowerOptimizer (98.6%) |
| Cable | Solar cable, length 1,000 mm, 6 mm ² , prefabricated with MC4 plug |
| Application class | Application class A at IEC 61730 |
| Front glass | 4 mm White ESG glass |
| Solar cells | 60 cells, polycrystalline Si 6.2" (156 x 156 mm) |
| Cell encapsulation | EVA (Ethylene Vinyl Acetate) |
| Back side | Composite film |
| Frame | Anodized aluminum frame with twin-wall profile and drainage holes |

Permissible operating conditions

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|-------------------------------|--|
| Temperature range | –40°C to +85°C |
| Maximum surface load capacity | Tested up to 5,400 Pa according to IEC 61215 (advanced test) |
| Resistance against hail | Maximum diameter of 25 mm with impact speed of 83 km/h |

Monitoring

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|-----------------------|---|
| Monitoring, web-based | Module-level, string-level, system-wide |
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Guarantees and certifications

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|----------------------------|---|
| Module product guarantee | 10 years ³⁾ |
| Inverter product guarantee | 12 years ⁴⁾ |
| Performance guarantee | Guaranteed output of 95% for 5 years, 90% for 10 years, 87% for 15 years, 83% for 20 years and 80% for 25 years ³⁾ |
| Approvals and certificates | IEC 61215 Edition II, IEC 61730 (incl. Safety Class II), IEC 62716 (Ammonia Resistance) |
| EMC | IEC 61000-6-2; IEC 61000-6-3; IEC 62103 |

Single phase inverter⁵⁾

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|-----------------------------|--------------------|
| Dimensions (B x W x H) | 540 x 315 x 191 mm |
| Weight | 23 kg |
| Max. efficiency | 97.6% |
| Operating temperature range | –20°C to +50°C |

Three phase inverter⁵⁾

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|-----------------------------|--------------------|
| Dimensions (B x W x H) | 540 x 315 x 260 mm |
| Weight | 32 kg |
| Max. efficiency | 98% |
| Operating temperature range | –20°C to +60°C |

^{*)} Dependent on system configuration.

