

# Schüco SMAU-1 Series

Monocrystalline Photovoltaic Module



## Highest quality PV module

The SMAU-1 series of Schüco PV modules are distinguished by monocrystalline solar cells with a cell efficiency of up to 16.8 % for high outputs per square metre of module area. The output tolerance of an SMAU-1 module is +3 / -3 %, only modules of the highest quality provide this level of reliability.

## Comprehensive warranty

Schüco SMAU-1 modules have a 5-year product warranty. In fact, the warranty on output values is considerably longer – after 25 years, the Schüco module will still provide at least 80 % of its rated output. Every SMAU-1 module is manufactured according to current quality standards.

## Optimized labeling

Prior to delivery, each SMAU-1 module is subject to a visual and electrical quality test. The performance data measured is indicated on the back of the module and on the packaging. Homogeneous module fields can be grouped together quickly and effectively during installation.

## High level of operational reliability

Schüco SMAU-1 modules have a connecting box on the back of the module that is fitted with three bypass diode bridges. This prevents individual solar cells from overheating (hot-spot effect) and ensures the reliable operation of the overall system from module field and inverter. The connecting box, solar cables and plug systems are of the highest quality and are also certified as individual components.

## Attractive and robust

The module frame made from torsion-proof, anodized aluminum meets the highest requirements in terms of stability and corrosion resistance. The aluminum frame was structurally optimized; the use of drainage holes inside the frame prevents possible damage due to frost.

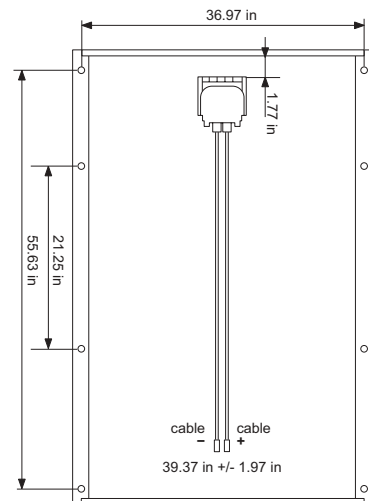
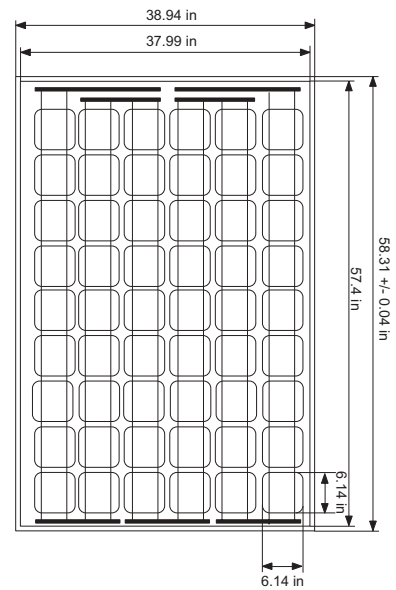
SMAU-1 modules can be installed with installation components from the Schüco SolarEZ Mounting System.

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# Technical Data

Photovoltaic Modules		
Product name	SPV 200 SMAU-1	SPV 210 SMAU-1
Schüco article number	232 935	232 936
Electrical specifications		
STC Rated output (P <sub>mpp</sub> )	200 W <sub>p</sub>	210 W <sub>p</sub>
PTC Rated output (P <sub>mpp</sub> )	178.4 W <sub>p</sub>	187.3 W <sub>p</sub>
Output tolerance STC (Δ P <sub>mpp</sub> )	-3 % / +3 %	-3 % / +3 %
Warranted power output STC (P <sub>mpp</sub> min)	200 W <sub>p</sub>	210 W <sub>p</sub>
Rated voltage (V <sub>mpp</sub> )*	25.38 V	26.30 V
Rated current (I <sub>mpp</sub> )*	7.89 A	7.98 A
Open circuit voltage (V <sub>oc</sub> )*	33.53 V	33.68 V
Short circuit current (I <sub>sc</sub> )*	8.24 A	8.35 A
Module efficiency	14.2 %	14.9 %
Temperature coefficient α (P <sub>mpp</sub> )	-0.50 % / K	-0.50 % / K
Temperature coefficient β (I <sub>sc</sub> )	+0.03 % / K	+0.03 % / K
Temperature coefficient χ (V <sub>oc</sub> )	-0.33 % / K	-0.33 % / K
Temperature coefficient δ (I <sub>mpp</sub> )	+0.03 % / K	+0.03 % / K
Temperature coefficient ε (V <sub>mpp</sub> )	-0.33 % / K	-0.33 % / K
Normal Operating Cell Temperature (NOCT)	109.4° F	109.4° F
Maximum system voltage USA NEC	600 V	600 V
Maximum system voltage SCII	600 V	600 V
Max. series fuse rating	15 A	15 A
Cell Technology		
Cell type	monocrystalline	monocrystalline
Number of cells / cell arrangement	54 / 6 × 9	54 / 6 × 9
Cell dimension	6"	6"
Mechanical specifications		
Outer dimensions	58.3 × 38.9 × 1.87 in	58.3 × 38.9 × 1.9 in
Frame technology (if applicable)	Aluminum frame, black	Aluminum frame, black
Compound	Glass / EVA / Backsheet	Glass / EVA / Backsheet
Weight (module only)	37.9 lbs	37.9 lbs
Junction Box IP rating	IP 65	IP 65
Cable length / diameter (if applicable)	40 in ± 2 in / 4 mm <sup>2</sup>	40 in ± 2 in / 4 mm <sup>2</sup>
Connector type	Tyco Solarlok	Tyco Solarlok
Qualification and warranties		
Product standard	UL 1703	UL 1703
Extended product warranty	5 years	5 years
Output warranty of 90% performance P <sub>mpp</sub> (STC)	12 years	12 years
Output warranty of 80% performance P <sub>mpp</sub> (STC)	25 years	25 years
Miscellaneous		
Packing unit	2 modules	2 modules
Weight of packing unit	88 lbs	88 lbs

\* Irradiance 1,000 W / m<sup>2</sup>, air mass index 1.5, cell temperature 25° C



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