

# Schüco S SPU-4 Series

Polycrystalline Photovoltaic Modules



## **PV module of the highest quality**

The S SPU-4 series of Schüco PV modules are distinguished by multicrystalline solar cells with a high cell efficiency. Each module is flash-tested and the flash results are stated both on the module as well as the outside of the packaging for more effective string sizing.

## **A Performance Guaranteed**

Schüco S SPU-4 modules have a 5-year extended parts and labor warranty. In fact, the guarantee on output values is considerably longer – after 12 years of operation, the Schüco module is guaranteed to deliver a minimum of 90% of its rated output and even after 25 years the output is guaranteed

to be at least 80%.

## **Optimized labelling**

Prior to delivery, each S SPU-4 module is subject to a visual and electrical quality test. The output 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**

Two connecting boxes with a total of three bypass diode bridges on the reverse of the module prevent individual solar cells from overheating (hot-spot effect). This ensures the reliable operation of the whole system from module fields to inverters.

## **Environmental protection**

The use of lead-free solder in the manufacture of S SPU-4 modules results in a saving of 1.8 oz of lead per module, which makes a considerable contribution to environmental protection.

## **Attractive and robust**

The black module frame made from torsion-proof, anodized aluminium meets the highest standards in terms of stability and corrosion resistance. A cross bar in the frame on the reverse increases the load-bearing capacity of the module. S SPU-4 modules can be installed with installation components from the Schüco SolarEZ mounting systems.

**SCHÜCO**

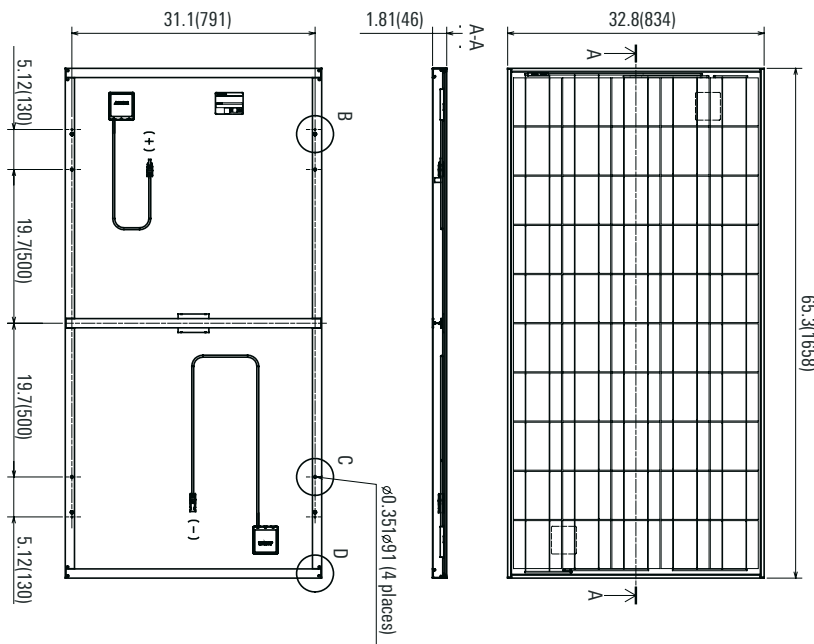
# Technical Data

Electrical specifications	Module output classes			
Article Number	232 923	232 924	256 695	256 186
Power output under standard test conditions (STC)*	S 165 SPU-4	S 170 SPU-4	S 175 SPU-4	S 180 SPU-4
Rated power ( $P_{mpp}$ )	165 W	170 W	175 W	180 W
Effective output tolerance ( $\Delta P_{mpp}$ )	+5 % / -5 %	+5 % / -5 %	+5 % / -5 %	+5 % / -5 %
Guaranteed minimum output ( $P_{mpp\ min.}$ )	156,75 W	161,5 W	166,25 W	171 W
Rated voltage ( $U_{mpp}$ )	23,4 V	23,7 V	23,9 V	24,2 V
Rated current ( $I_{mpp}$ )	7,06 A	7,19 A	7,32 A	7,45 A
Open circuit voltage ( $U_{oc}$ )	29,7 V	29,9 V	30,2 V	30,4 V
Short circuit current ( $I_{sc}$ )	7,73 A	7,83 A	7,93 A	8,03 A
Module efficiency	11,90 %	12,30 %	12,70 %	13,00 %
Normal Operating Cell Temperature (NOCT)**	46,2 °C	46,25 °C	46,25 °C	46,25 °C
Maximum system voltage permitted	600 V	600 V	600 V	600 V

\* Irradiance 1.000 W/m<sup>2</sup>,  
Air Mass 1,5, Cell  
temperature 77°F

\*\* Irradiance 800 W/m<sup>2</sup>,  
ambient temperature  
68 °F, wind speed 0.68 mph

## Drawings and Dimensions



Mechanical Specifications	
Outer dimensions	65.28 x 32.83 x 1.81 in.
Design of aluminium	frame black anodized
Front glass	Tempered safety glass
Weight	37.5 lbs (17 kg)
Connecting system	Multi Contact Type 4 compatible
Diameter of solar cable	0.01 in. (4 mm <sup>2</sup> )
Length of positive/negative cable	31.5 in./49.2 in. ± 1.97 in.

Certifications & Warranties	
Electrical Classification	Safety Class II
Product Certification	UL 1703, CEC
Extended Product Warranty	5 years
Performance Warranty (90% of $P_{mpp\ min.}$ )	12 years
Performance Guarantee (80% of $P_{mpp\ min.}$ )	25 years

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