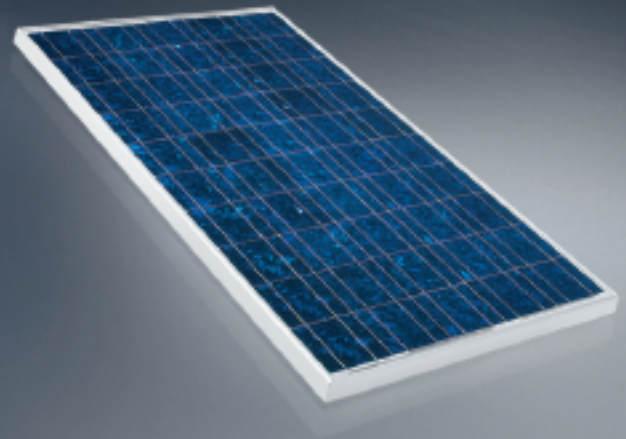


# Schüco S 165-SPU

Photovoltaic Module



This 165-SPU module is designed to provide optimum performance over many years of operation.

## Features

- Standard dimensions (62.2 x 31.5 inches)
- 100% lead-free solder
- Durable, torsion-proof, anodized, corrosion-free aluminum frame
- Tempered safety glass and weatherproof backing film for complete weather protection
- Bypass diodes prevent overheating (hot-spot effect)
- Fast and easy installation with Schüco's SolarEZ mounting system

## Electrical Specifications

Performance data (except NOCT) under standard test conditions STC\*:

- Rated output ( $P_{mpp}$ ): 165 W
- Output tolerance ( $\Delta P_{mpp}$ ): +5% /-5%
- Guaranteed minimum output ( $P_{mpp\ min}$ ): 156.75 W
- PTC rated output: 147.9
- Nominal voltage ( $U_{mpp}$ ): 24.2 V
- Nominal current ( $I_{mpp}$ ): 6.83 A
- Open circuit voltage ( $U_{oc}$ ): 30.4 V
- Short circuit current ( $I_{sc}$ ): 7.36 A
- Module efficiency: 13.1%
- Temperature coefficient  $\alpha$  ( $P_{mpp}$ ):  $-0.478\%/^{\circ}C$
- Temperature coefficient  $\beta$  ( $I_{sc}$ ):  $+0.057\%/^{\circ}C$

- Temperature coefficient  $\chi$  ( $U_{oc}$ ):  $-0.346\%/^{\circ}C$

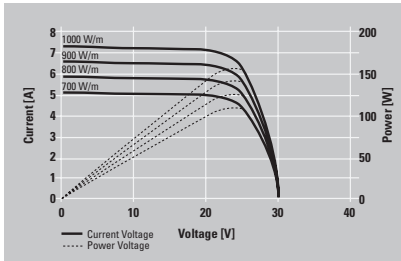
- Temperature coefficient  $\delta$  ( $I_{mpp}$ ):  $-0.057\%/^{\circ}C$
- Temperature coefficient  $\epsilon$  ( $U_{mpp}$ ):  $-0.346\%/^{\circ}C$
- Normal Operating Cell Temperature (NOCT\*\*): 46.2°C
- Maximum permissible system voltage (in accordance with UL & NEC): 600 V

\* STC: Intensity of solar irradiance 1000 W/m<sup>2</sup>, air mass (AM) 1.5, cell temperature 77°F (25°C)

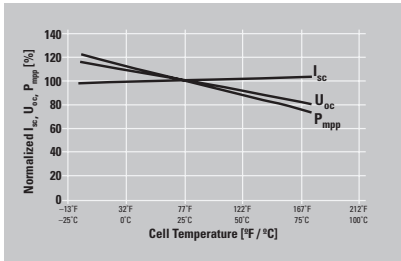
\*\* NOCT: Intensity of solar irradiance 800 W/m<sup>2</sup>, ambient air temperature 68°F (20°C), wind speed 2.24 mph (1 m/s)

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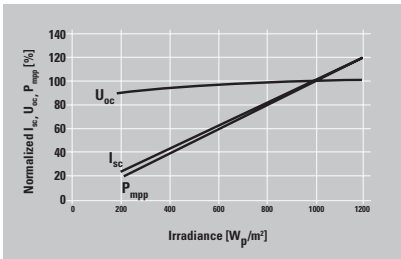
# Technical Data



Electrical Performance



Temperature Dependence of  $I_{sc}$ ,  $U_{oc}$  &  $P_{mpp}$



Irradiance Dependence of  $I_{sc}$ ,  $U_{oc}$  &  $P_{mpp}$

## Mechanical Specifications

### Outer dimensions:

62.2 x 31.5 in. (1580 x 800 mm)

### Height of aluminum frame:

1.81 in. (46 mm)

### Design of aluminum frame:

Silver anodized (similar to RAL 7035)

### Front glass: Tempered safety glass

Weight: 34.17 lbs (15.5 kg)

### Height of plug-in box:

0.45 in. (11.5 mm)

### Connecting system: Multi Contact Type 3

### Diameter of solar cable:

0.01 in. (4 mm<sup>2</sup>)

### Length of positive cable:

49.2 in. (125 cm) ± 1.97 in. (5 cm)

### Length of negative cable:

31.5 in. (80 cm) ± 1.97 in. (5 cm)

## Certifications & Guarantees

**Suitability / Approval:** UL 1703, IEC 61215 (DIN EN 61215)

**Electrical classification:** Safety Class II

## Testing Resistances

**Salt water spray test:** DIN 50021

**Condensation test:** DIN 50017

**Product guarantee:** 5 years

**Performance guarantee**

(90% of  $P_{mpp \min}$ ): 12 years

**Performance guarantee**

(80% of  $P_{mpp \min}$ ): 25 years

## Miscellaneous

**Schüco article number**

**S 165-SPU:** 232 740

**Packing unit:** 2 modules

**Weight of packing unit:**

70.55 lbs (32 kg)

**Schüco installation system:**

SolarEZ

Specifications subject to change without notice

Schüco USA L.P.

www.schuco-usa.com