

Schüco MPE modules in the PS 05 series

Technical information on the output categories 190 to 210 W_p



PV module of the highest quality

Schüco MPE modules in the PS 05 series are distinguished by polycrystalline solar cells with high cell efficiency. Maximum outputs are achieved in this way. The output tolerance of +5/-0 % guarantees the best quality and ensures increased output thanks to the guaranteed rated output.

Comprehensive guarantee

The modules have an extended 5-year product guarantee. In fact, the guarantee on performance values is considerably longer – after 25 years, a Schüco MPE module in the PS 05 series will still provide at least 80 % of its rated output. Every module is manufactured according to current quality standards.

Optimised labelling

Prior to delivery, every module is subjected 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

Schüco MPE modules in the PS 05 series have a connecting box on the reverse of the module that is fitted with three bypass diode bridges. This prevents individual solar cells from overheating (hot-spot effect). This ensures the reliable operation of the whole system, from module fields to inverters. The connecting box, solar cables and plug systems are of the highest

quality and are also certified as individual components.

New retaining clip concept

The innovative retaining clip groove in the frame ensures an optimised interlock, thereby reducing the load on the retaining clip.

Attractive and robust

The module frame made from torsion-proof, anodised aluminium meets the highest standards in terms of stability and corrosion resistance. Two cross struts in the frame on the reverse increase the load-bearing capacity of the module. Schüco MPE modules in the PS 05 series can be installed with components from the Schüco PV Light mounting system.

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Schüco MPE modules in the PS 05 series

Key electrical data	Module output categories				
Performance data (except NOCT) under Standard Test Conditions (STC) ¹⁾ :	MPE 190 PS 05	MPE 195 PS 05	MPE 200 PS 05	MPE 205 PS 05	MPE 210 PS 05
Rated output (P_{mpp})	190 W _p	195 W _p	200 W _p	205 W _p	210 W _p
Output tolerance (ΔP_{mpp})	+5 %/-0 %	+5 %/-0 %	+5 %/-0 %	+5 %/-0 %	+5 %/-0 %
Guaranteed minimum output ($P_{mpp\ min}$)	190 W _p	195 W _p	200 W _p	205 W _p	210 W _p
Rated voltage (U_{mpp})	26.70 V	26.80 V	26.90 V	27.00 V	27.10 V
Rated current (I_{mpp})	7.12 A	7.28 A	7.44 A	7.60 A	7.75 A
Open-circuit voltage (U_{oc})	32.60 V	32.70 V	32.80 V	32.90 V	33.00 V
Short circuit current (I_{sc})	7.98 A	8.06 A	8.24 A	8.35 A	8.48 A
Cell efficiency	14.5 %	14.8 %	15.2 %	15.6 %	16.0 %
Module efficiency	12.7 %	13.1 %	13.4 %	13.7 %	14.0 %
Temperature coefficient α (P_{mpp})	-0.4 %/°C	-0.4 %/°C	-0.4 %/°C	-0.4 %/°C	-0.4 %/°C
Temperature coefficient β (I_{sc})	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C
Temperature coefficient χ (U_{oc})	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C
Temperature coefficient δ (I_{mpp})	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C	+0.04 %/°C
Temperature coefficient ϵ (U_{mpp})	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C	-0.38 %/°C
Normal Operating Cell Temperature (NOCT) ²⁾	45 °C (± 3 °C)	45 °C (± 3 °C)	45 °C (± 3 °C)	45 °C (± 3 °C)	45 °C (± 3 °C)
Max. permissible system voltage	1000 V	1000 V	1000 V	1000 V	1000 V
Number of cells	54 (6 x 9)	54 (6 x 9)	54 (6 x 9)	54 (6 x 9)	54 (6 x 9)
Cell size	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm

¹⁾ Intensity of solar radiation 1000 W/m², air mass 1.5, cell temperature 25 °C. Photovoltaic modules show electrical performance degradation over time. This occurs after commissioning, initially on a decreasing scale, then later in a linear progression.

²⁾ Intensity of solar radiation 800 W/m², ambient temperature 20 °C, Wind speed 1 m/s

Key mechanical data	
Outer dimensions (L x W x H)	1495 x 1.001 x 42 mm
Design of aluminium frame	Silver anodised (similar to RAL 7035)
Front glass	Toughened safety glass (TSG)
Weight	18 kg
Connection system / cross section of solar cable	Schüco / 4 mm ² (MC-T4 compatible)
Lengths: positive cable / negative cable	100 cm \pm 5 cm / 100 cm \pm 5 cm

Qualification and guarantees	
Electrical classification	Protection class II
Product standard	IEC 61215, EN 61730
Tested snow and wind loads	Up to 3.6 kN/m ²
Extended product guarantee	5 years
Output guarantee to 90 % $P_{mpp\ min}$	12 years
Output guarantee to 80 % $P_{mpp\ min}$	25 years

Other	PS 05-1 series ³⁾	PS 05-2 series ³⁾
Weight of packing unit	38 kg	38 kg
Schüco mounting system	PV Light	PV Light
Schüco retaining clips	Type 43	Type 43
Art. No. Schüco MPE 190 PS 05	257 823	257 828
Art. No. Schüco MPE 195 PS 05	257 824	257 829
Art. No. Schüco MPE 200 PS 05	257 825	257 830
Art. No. Schüco MPE 205 PS 05	257 826	257 831
Art. No. Schüco MPE 210 PS 05	257 827	257 832
Packing unit	2 modules	2 modules

³⁾ The colour of cells may vary between Schüco MPE modules in the PS 05-1 series and the PS 05-2 series.

Subject to change

Performance	
190 bis 210 W _p	► Maximum outputs with a compact module surface area
Positive output tolerance	► Rated output is achieved or exceeded
Design and production	
Optimised labelling	► Individual output data on module and packaging
Innovative retaining clip groove	► Streamlined look and optimised interlock
Anodised aluminium frame	► Meets highest standards in terms of stability and corrosion resistance
Bypass diodes	► Reliable prevention of "hot-spot effect"
Highest Schüco quality	
Manufactured to current quality standards	► Output data tested and results listed for each module
Extended product warranty and output guarantee	► Investment security and reliable system operation
Cross struts and reinforced frame provide increased load-bearing capacity for wind and snow	► Can be used in snow load zone III up to approx. 650 m above sea level