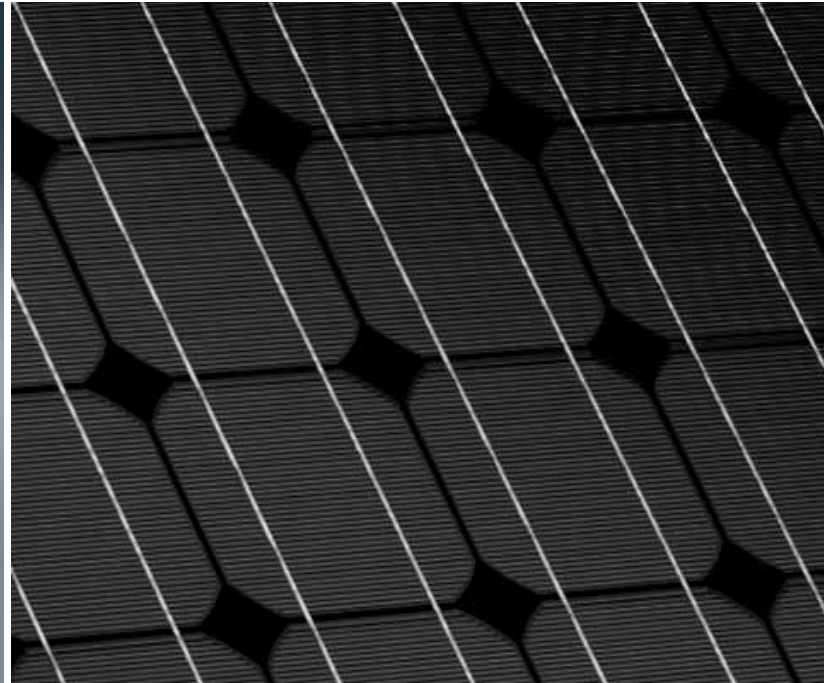


Schüco MPE Modules in the MS 05 Series

Technical information for performance classes 170 - 190 W_p



Highly efficient monocrystalline technology

Schüco MPE modules in the MS 05 series are distinguished by their exceptionally efficient monocrystalline cells. They have a sleek look that perfectly compliments dark asphalt shingle roofs.

Monocrystalline cell technology delivers unquestionably high performance and reliable longevity. A reduction in the use of fossil fuels and greenhouse gases is a given, but increased revenues can be realized by reductions in electric bills or the sale of electricity. The proven, well-established presence of monocrystalline cells in the solar realm ensures investment security and peace of mind.

Each MS 05 module is designed to withstand a wide variety of weather extremes and manufactured to Schüco's stringent set of quality standards. Performance data is measured prior to the module leaving the factory and labeled both on the backsheet and the module packaging for a more convenient installation process.

Key features

- Higher efficiencies means more power produced per square foot installed
- Proven monocrystalline technology translates into longevity and bankability
- Manufactured with high quality, robust materials
- Comprehensive warranty ensures investment security and reliable system operation*
- Schüco's racking systems are specially designed to accommodate Schüco modules, resulting in optimized PV package solutions

* In accordance with the warranty conditions of Schüco USA LLLP



Schüco MPE Modules in the MS 05 Series

Technical data

Photovoltaic modules					
Product name	MPE 170 MS 05	MPE 175 MS 05	MPE 180 MS 05	MPE 185 MS 05	MPE 190 MS 05
Schüco article number	232 558	232 559	232 560	232 561	232 590
Cell type	Mono				
Number of cells / cell arrangement	72 / 6 x 12				
Cell dimension	5" (127 mm)				
Module efficiency	13.3 %	13.7 %	14.1 %	14.5 %	14.9 %

Electrical specifications						
STC rated output (P_{mpp})	170	175	180	185	190	W_p
PTC rated output (P_{mpp})	153.3	158.0	162.6	167.1	172.0	
Output tolerance STC (ΔP_{mpp})	+5 / -0					%
Warranted power output STC ($P_{mpp min}$)	170	175	180	185	190	W_p
Rated voltage (U_{mpp})	35.9	36.1	36.3	36.5	36.7	V
Rated current (I_{mpp})	4.76	4.85	4.96	5.09	5.18	A
Open-circuit voltage (U_{oc})	44.2	44.4	44.6	44.8	45.0	V
Short circuit current (I_{sc})	5.18	5.26	5.35	5.47	5.56	A

Electrical specification parameters			
Temperature coefficient α (P_{mpp}) ¹⁾	-0.44	% / °C	
Temperature coefficient β (I_{sc}) ¹⁾	+0.03		
Temperature coefficient χ (U_{oc}) ¹⁾	-0.33		
Temperature coefficient δ (I_{mpp}) ¹⁾	+0.03		
Temperature coefficient ϵ (U_{mpp}) ¹⁾	-0.33		
Normal Operating Cell Temperature (NOCT) ²⁾	45 ± 2	°C	
	(113 ± 3.6)	(°F)	
Maximum system voltage USA NEC	600	V	
Maximum series fuse rating	10	A	

Mechanical specifications	
Frame technology	Aluminum frame, black
Compound	Glass / EVA / backsheet
Weight (module only)	33.1 lb (15 kg)
Junction box IP rating	IP 65
Cable type / diameter	Universal PV Wire / 4 mm ²
Cable length	35.4 ± 2 in (900 ± 50 mm)
Connector type	MC-T4 compatible

Qualification and warranties	
Product standard	UL 1703
Extended product warranty ³⁾	10 years
Output warranty of 90% performance P_{mpp} (STC) ³⁾	12 years
Output warranty of 80% performance P_{mpp} (STC) ³⁾	25 years

¹⁾ Irradiance 1,000 W/m², air mass index 1.5, cell temperature 25 °C (77 °F)

²⁾ Irradiance 800 W/m², wind speed 1 m/s, ambient temperature 20 °C (68 °F)

³⁾ In accordance with the warranty conditions of Schüco USA LLLP

Miscellaneous	
Packing unit	2 modules
Weight of packing unit	68.4 lb (33 kg)

