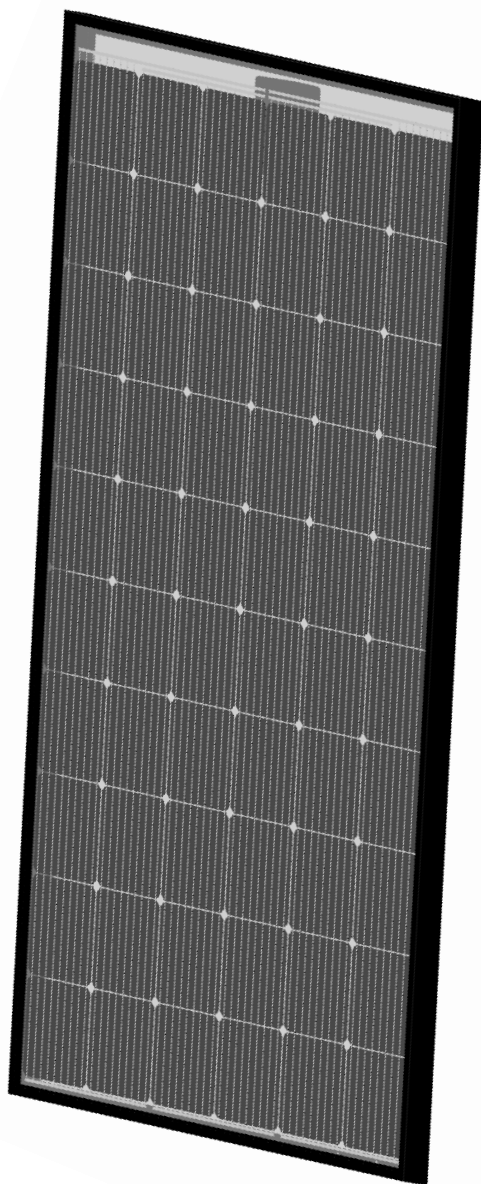


TSM360EX Solar Module

Ensuring safety requirements in your hazardous areas (Zone 1 and Zone 2), while providing high performance and durability, that is what the world's most efficient TSM360EX Solar Modules are built for. The TSM360EX solar module has highly efficient 60 monocrystalline PERC cells generating maximum energy.



ATEX/IECEx zone 1 certified

For applications in hazardous areas, we offer explosion proof solar modules. Fully certified by TÜV according latest ATEX and IECEx guidelines.

Cost effective design

Provided with a IP66 junction box which contains diodes in a molded terminal block you can connect solar modules in series and/or parallel. With 2 polyamide ATEX/IECEx M25 cable glands for cables with a maximum diameter of 19mm.

Optimized battery charging

In addition to MPPT charging, this module is optimized for PWM charging of batteries thus reducing losses.

9 Busbar technology

Incorporates 9 busbar technology which enhances the efficiency of the module by lowering the electrical losses

Ex-proof

The TSM360EX has been developed with your explosive environment in mind providing maximum protection in the most extreme conditions.

Glass-glass

Tempered glass is used to guarantee safety and strength and longer lifetime in offshore conditions.

Quality and durability

Extremely solid extruded anodized aluminium frame leading to high stability.

Warranty

5 year product warranty

90% performance warranty after 10 years

80% performance warranty after 25 years



TSM360EX Solar Module

Electrical Characteristics (*STC)

Max. power(P_{mpp})	360 W
Power tolerance	± 5 W
Voltage at P_{mpp} (V_{mpp})	34.96 V
Current at P_{mpp} (I_{mpp})	10.30 A
Open circuit voltage (V_{oc})	41.01 V
Short circuit current (I_{sc})	10.82 A
Solar cell efficiency	22.4 %
Nominal voltage	24 V

* Standard testing conditions (STC): 1,000W/ m² irradiation level, AM 1.5 spectrum at 25 °C cell temperature.

Thermal characteristics

TC P	-0.39 %/ °C
TC V_{oc}	-0.30 %/ °C
TC I_{sc}	0.06 %/ °C

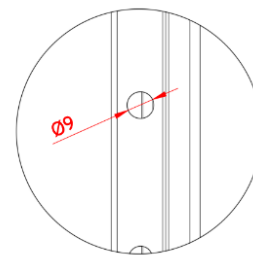
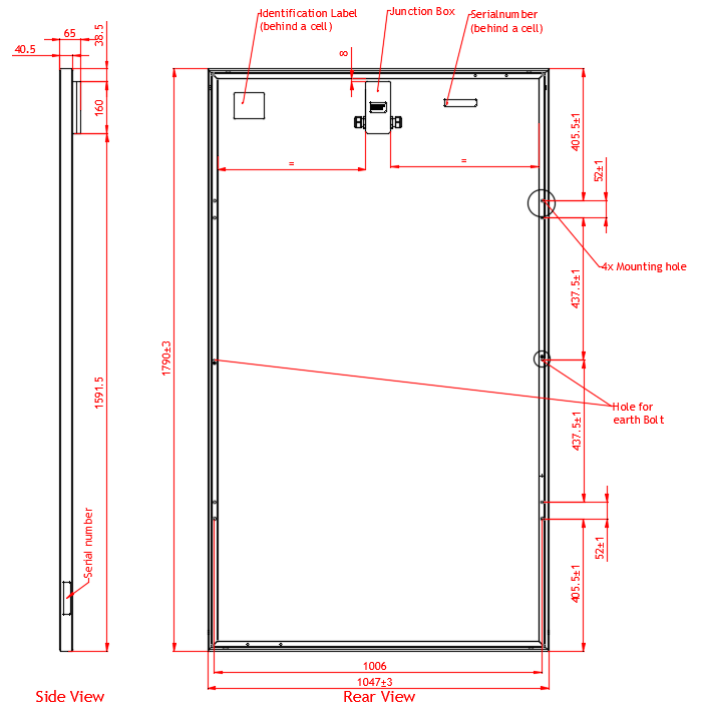
Additional data

Max. system voltage	320 Vdc
Junction box	GRP Ex e
Bypass diodes	3
Junction box	IP 66
Ambient temperature	-20 °C - +55 °C
Operational Temperature	-40 °C - +85 °C
Cells	166 x 166 mm
Frame	Black anodized aluminium
Dimensions (L x W x D)	1790 x 1047 x 65 mm
Weight	24 kg

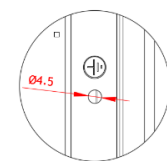
ATEX/IECEX certification

ATEX Protection	II 2 G Ex eb mb IIC T4 Gb
ATEX Certificate	TÜV 12 ATEX 7148 X
IECEX Protection	Ex eb mb IIC T4 Gb
IECEX Certificate	IECEX TUR 12.0012X

Hazardous area certification by TÜV according NEN-EN-IEC 60079-0, 60079-7 and 60079-18 for Zone 1. Solar modules are produced according to IEC 61215/2 and IEC 61730.



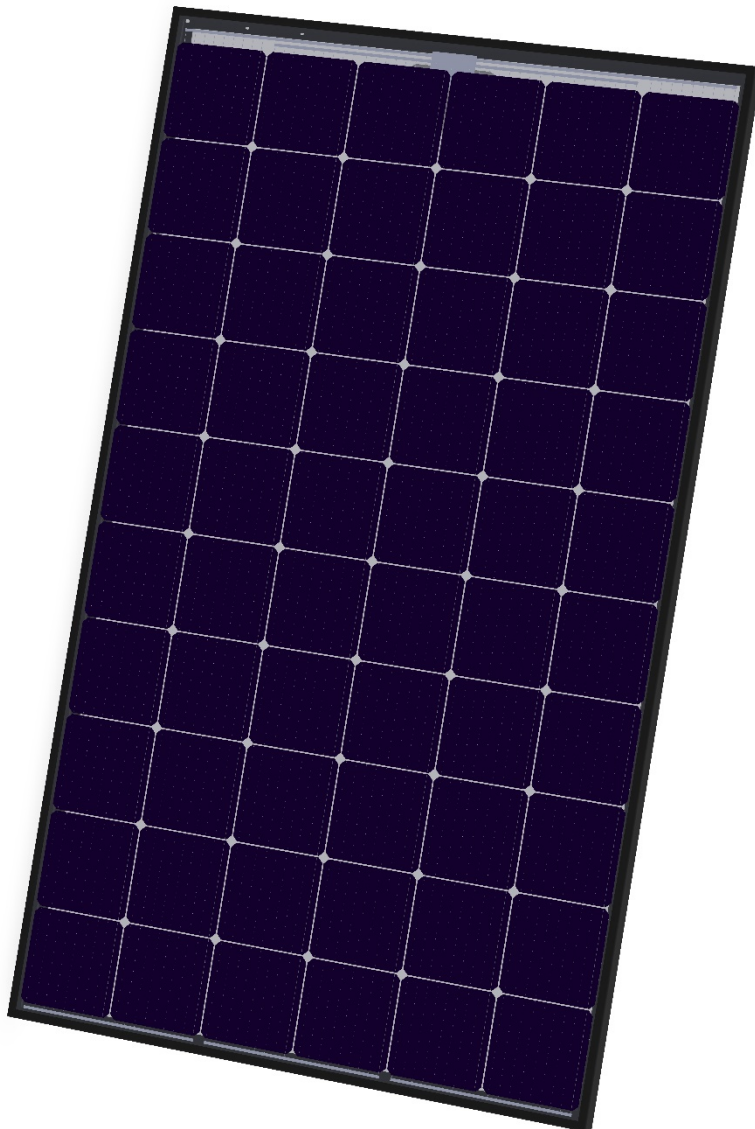
Mounting Hole



Hole for Earth Bolt

KPV ME NEC 370 Solar Module

The performance, quality and durability of the solar modules determine the amount of energy your system can generate over its lifetime. The 370 W_p solar module designed by TSS has highly efficient 60 monocrystalline PERC cells generating maximum energy.



Cost effective design

Provided with a junction box for both parallel and serial connections inside. No use of plug and sockets required resulting in more reliable and durable connections. No sub-array junction box and less cabling are required.

Optimized battery charging

In addition to MPPT charging, this solar module is optimized for PWM charging of batteries thus reducing losses.

9 busbar technology

Incorporates 9 busbar technology which enhances the efficiency of the solar module by lowering the electrical losses.

High temperature performance

Improved temperature coefficient reduces power loss at high temperatures.

Quality and durability

Performs exceedingly well under low-light irradiance environments. Extremely solid black aluminium frame leading to high stability. High strength 4mm glass providing extra mechanical rigidity to the solar module.

Quality standard

IEC 61215
IEC 61730

Warranty

5 year product warranty
90% performance warranty after 10 years
80% performance warranty after 25 years

KPV ME NEC 370 Solar Module

Electrical characteristics (*STC)	
Max. power (P_{mpp})	370 Wp
Power tolerance	-0 Wp to +5 Wp
Voltage at P_{mpp} (V_{mpp})	35.10 V
Current at P_{mpp} (I_{mpp})	10.57 A
Open circuit voltage (V_{oc})	40.86 V
Short circuit current (I_{sc})	11.10 A
Module efficiency	19.93 %
Nominal voltage	24 V

* Standard testing conditions (STC): 1,000 W/m² irradiation level, AM1.5 spectrum at 25°C cell temperature.

Thermal characteristics	
TC P	-0.39 %/°C
TC Voc	-0.30 %/°C
TC Isc	0.06 %/°C

Additional data	
Max. system voltage	1000 Vdc
Bypass diodes	3
Cable glands	4
Cable max. outside Ø	6.5 mm
Cable size	4 - 6 mm ²
IP degree	IP65
Operating Temperature	-40°C ~ +85°C
Solar cells	166 x 166 mm
Frame	Black anodized aluminium
Max. mechanical load	8000 N/m ²

Dimensions and weight	
Dimensions L x W x H	1773 x 1047 x 40 mm
Weight	24 kg

