

EISW - SOLAR INVERTER STATION

Availability for a sustainable world
as an energy source of the future





AVAILABILITY FOR A SUSTAINABLE WORLD AS AN ENERGY SOURCE OF THE FUTURE

The innovation and development of new technologies greatly contribute to simplifying and optimizing processes and, of course, transforming people's lives. As a result, the demand for energy has exponentially increased, stimulating the use of alternate and sustainable sources.

Solar power plants are among the most competitive renewable energy sources in Brazil and in the world. An adaptable source for several locations, it is fast to install with low environmental impact, providing growth where implanted and generating employment and development.

To meet the market demands and adapt to the global search for renewable energy sources, WEG introduces a **complete product line for photovoltaic power generation plants**. It is a complete solution for investors who want to be ahead and contribute to a more sustainable world.



Main Characteristics



National production



Low maintenance



Technical support
all over the national
territory



Optimized design
for plants on a large
scale



Control of reactive
power at night



Remote monitoring
via SCADA



Weather resistant



Flexible output voltage
range 600...690 V



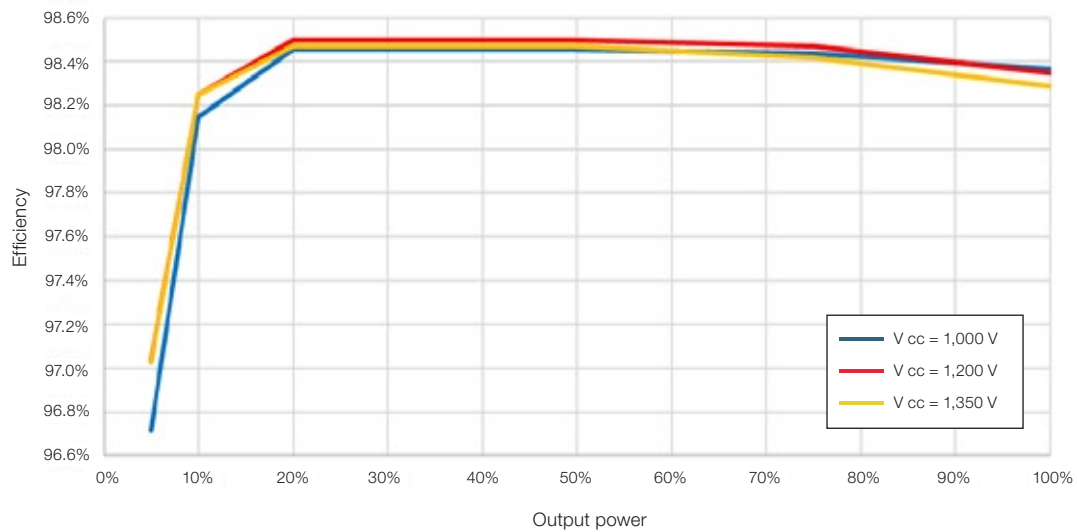
Up to 150% oversizing

Equipment Integration in a Single Module

The Solar Inverter Station is an integrated solution with central inverters, auxiliary switchboards, medium voltage switchgear and transformers developed and manufactured with cutting-edge technology, withstanding the severest environmental conditions and complying with the strict regulations of the photovoltaic sector, providing quick installation and simplified O&M. As the project developer and manufacturer of this product in Brazil, WEG can customize the design, making technical adjustments when necessary to meet any specific technical condition of the end customer.



Efficiency Curve - SIW750



600 V Solar Inverter Station Technical Data

Inverter model	SIW750-1.0-600	SIW750-2.1-600	SIW750-2.6-600	SIW750-3.1-600	SIW750-3.7-600	SIW750-4.2-600
Input (DC)						
Maximum recommended current	1,640 A	3,280 A	4,100 A	4,920 A	5,740 A	6,560 A
Maximum voltage	1,500 V					
MPPT Range ¹⁾	874...1.350 V					
Number of MPPTs	01	02				
Static/dynamic efficiency of the MPPT	99.8 / 99.7%					
Number of DC inputs	up to 20 inputs, defined according to the project					
Power oversizing	up to 150%					
Saída (CA)						
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,050 kVA	2,100 kVA	2,600 kVA	3,150 kVA	3,700 kVA	4,200 kVA
Power cos $\phi = 0.95$ (-10 °C to +40 °C)	1,000 kW	2,000 kW	2,500 kW	3,000 kW	3,500 kW	4,000 kW
Power cos $\phi = 1$ (+50 °C)	970 kVA	1,940 kVA	2,425 kVA	2,910 kVA	3,400 kVA	3,885 kVA
Power cos $\phi = 0.95$ (+50 °C)	920 kW	1,840 kW	2,300 kW	2,760 kW	3,230 kW	3,690 kW
Maximum current	1,020 A	2,035 A	2,545 A	3,055 A	3,565 A	4,075 A
Output voltage 3 ϕ	600 V					
Rated frequency	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz					
Power factor	0,01i...1...0,01c					
Total harmonic distortion of the output current ²⁾	< 3%					
Maximum efficiency ³⁾	98.50%					
European efficiency ³⁾	98.40%					
Protections						
DC input protection	Switch-disconnector + Fuse					
Protection with fuses on the negative pole	Yes (optional)					
AC output protection	Circuit breaker					
Overvoltage protection	DC type I + II / AC type II					
Network monitoring / ground fault monitoring	Yes / Yes					
Insulation monitoring	Yes					
Overheating protection	Yes					
GFDI	Yes (optional)					
Q night function	Yes (optional)					
General information						
Communication networks	Modbus-RTU (RS485, USB), Modbus-TCP (Ethernet)					
Local operating interface	Touch screen (optional)					
Structure	IP54					
Relative humidity	0 to 100% non-condensing					
Ambient temperature ⁴⁾	-10...+50 °C					
Maximum auxiliary consumption	1,595 W	3,185 W	3,900 W	4,700 W	5,500 W	6,300 W
Standby consumption	500 W					
Consumption at night	< 200 W					
Low / High voltage ride through (L/HVRT) function	Yes					
Active, reactive power control and ramp control	Yes					
Standards	EN 61000 (parts 4-2, 4-3, 4-4, 4-5, 4-6), CISPR 11, EN 55011, EN 50178, IEC 62116, NBR IEC 62116, IEC 62109-1, IEC 62109-2, NBR 16149 e NBR 16150					

Model of the solar inverter station	SIW750-1.0-600	EISW750-4.0-600	EISW750-5.0-600	EISW750-6.0-600	EISW750-7.0-600	EISW750-8.0-600
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,050 kVA	4,200 kVA	5,200 kVA	6,300 kVA	7,400 kVA	8,400 kVA
Structure	Outdoor cabinet	High Cube Container 40'				
Protection rating	IP54	IP55				
Temperature control	Forced exhaustion					
Inverter						
Model	1x SIW750-1.0-600	2x SIW750-2.1-600	2x SIW750-2.6-600	2x SIW750-3.1-600	2x SIW750-3.7-600	2x SIW750-4.2-600
Operating temperature range	-10...+50 °C					
Maximum voltage	1.500 V					
MV protection cubicle						
Rated voltage	13.8 / 34.5 kV					
Switching/protection device	DC switch-disconnector, AC contactor and AC circuit breaker					
Transformer						
Power	1,100 kVA	4,300 kVA	5,300 kVA	6,400 kVA	7,500 kVA	8,500 kVA
Primary voltage	13.8 / 34.5 kV					
Secondary voltage	0.60 kV	0.60 - 0.60 kV				

- Notes: 1) For output voltage at rated value (600 V ac).
2) Measurement with THD of the line voltage smaller than 2%.
3) Efficiency of the electric panel components.
4) Power limitation above +40 °C.
5) SIW750 - Configurable output power from 1,000 kVA to 5,500 kVA.
6) EISW750 - Configurable output power from 1,000 kVA to 11,000 kVA.

660 V Solar Inverter Station Technical Data

Inverter model	SIW750-1.2-660	SIW750-2.4-660	SIW750-3.0-660	SIW750-3.6-660	SIW750-4.2-660	SIW750-4.8-660
Input (DC)						
Maximum recommended current	1,700 A	3,400 A	4,250 A	5,100 A	5,950 A	6,800 A
Maximum voltage	1,500 V					
MPPT Range ¹⁾	961...1,350 V					
Number of MPPTs	01					02
Static/dynamic efficiency of the MPPT	99.8 / 99.7%					
Number of DC inputs	up to 20 inputs, defined according to the project					
Power oversizing	up to 150%					
Output (AC)						
Power $\cos \phi = 1$ (-10 °C to +40 °C)	1,200 kVA	2,400 kVA	3,000 kVA	3,600 kVA	4,200 kVA	4,800 kVA
Power $\cos \phi = 0.95$ (-10 °C to +40 °C)	1,140 kW	2,280 kW	2,850 kW	3,420 kW	3,990 kW	4,560 kW
Power $\cos \phi = 1$ (+50 °C)	1,100 kVA	2,220 kVA	2,780 kVA	3,300 kVA	3,890 kVA	4,450 kVA
Power $\cos \phi = 0.95$ (+50 °C)	1,045 kW	2,100 kW	2,640 kW	3,135 kW	3,690 kW	4,220 kW
Maximum current	1,050 A	2,115 A	2,640 A	3,170 A	3,700 A	4,225 A
Output voltage 3 ϕ	660 V					
Rated frequency	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz					
Power factor	0.01i...1...0.01c					
Total harmonic distortion of the output current ²⁾	< 3%					
Maximum efficiency ³⁾	98.50%					
European efficiency ³⁾	98.40%					
Protections						
DC input protection	Switch-disconnector + Fuse					
Protection with fuses on the negative pole	Yes (optional)					
AC output protection	Circuit breaker					
Overvoltage protection	DC type I + II / AC type II					
Network monitoring / ground fault monitoring	Yes / Yes					
Insulation monitoring	Yes					
Overheating protection	Yes					
GFDI	Yes (optional)					
Q night function	Yes (optional)					
General information						
Communication networks	Modbus-RTU (RS485, USB), Modbus-TCP (Ethernet)					
Local operating interface	Touch screen (optional)					
Structure	IP54					
Relative humidity	0 to 100% non-condensing					
Ambient temperature ⁴⁾	-10...+50 °C					
Maximum auxiliary consumption	1,595 W	3,185 W	3,900 W	4,700 W	5,500 W	6,300 W
Standby consumption	500 W					
Consumption at night	< 200 W					
Low / High voltage ride through (L/HVRT) function	Yes					
Active, reactive power control and ramp control	Yes					
Standards	EN 61000 (parts 4-2, 4-3, 4-4, 4-5, 4-6), CISPR 11, EN 55011, EN 50178, IEC 62116, NBR IEC 62116, IEC 62109-1, IEC 62109-2, NBR 16149 e NBR 16150					

Model of the solar inverter station	SIW750-1.2-660	EISW750-4.8-660	EISW750-6.0-660	EISW750-7.2-660	EISW750-8.4-660	EISW750-9.6-660
Power $\cos \phi = 1$ (-10 °C to +40 °C)	1,200 kVA	4,800 kVA	6,000 kVA	7,200 kVA	8,400 kVA	9,600 kVA
Structure	Outdoor cabinet	High Cube Container 40'				
Protection rating	IP54	IP55				
Temperature control	Forced exhaustion					
Inverter						
Model	1x SIW750-1.2-660	2x SIW750-2.4-660	2x SIW750-3.0-660	2x SIW750-3.6-660	2x SIW750-4.2-660	2x SIW750-4.8-660
Operating temperature range	-10...+50 °C					
Maximum voltage	1,500 V					
MV protection cubicle						
Rated voltage	13.8 / 34.5 kV					
Switching/protection device	DC switch-disconnector, AC contactor and AC circuit breaker					
Transformer						
Power	1,300 kVA	4,900 kVA	6,100 kVA	7,300 kVA	8,500 kVA	9,700 kVA
Primary voltage	13.8 / 34.5 kV					
Secondary voltage	0.66 kV	0.66 - 0.66 kV				

- Notes: 1) For output voltage at rated value (660 V ac).
2) Measurement with THD of the line voltage smaller than 2%.
3) Efficiency of the electric panel components.
4) Power limitation above +40 °C.
5) SIW750 - Configurable output power from 1,000 kVA to 5,500 kVA.
6) EISW750 - Configurable output power from 1,000 kVA to 11,000 kVA.

690 V Solar Inverter Station Technical Data

Inverter model	SIW750-1.2-690	SIW750-2.5-690	SIW750-3.1-690	SIW750-3.7-690	SIW750-4.3-690	SIW750-5.0-690
Input (DC)						
Maximum recommended current	1,700 A	3,400 A	4,250 A	5,100 A	5,950 A	6,800 A
Maximum voltage	1,500 V					
MPPT Range1)	1,005...1,350 V					
Number of MPPTs	01	02				
Static/dynamic efficiency of the MPPT	99.8 / 99.7%					
Number of DC inputs	up to 20 inputs, defined according to the project					
Power oversizing	up to 150%					
Output (AC)						
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,250 kVA	2,500 kVA	3,125 kVA	3,750 kVA	4,375 kVA	5,000 kVA
Power cos $\phi = 0.95$ (-10 °C to +40 °C)	1,200 kW	2,375 kW	3,000 kW	3,560 kW	4,150 kW	4,750 kW
Power cos $\phi = 1$ (+50 °C)	1,150 kVA	2,300 kVA	2,900 kVA	3,450 kVA	4,000 kVA	4,650 kVA
Power cos $\phi = 0.95$ (+50 °C)	1,090 kW	2,185 kW	2,755 kW	3,275 kW	3,800 kW	4,400 kW
Maximum current	1,050 A	2,115 A	2,640 A	3,170 A	3,700 A	4,225 A
Output voltage 3 ϕ	690 V					
Rated frequency	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz					
Power factor	0.01i...1...0.01c					
Total harmonic distortion of the output current ²⁾	< 3%					
Maximum efficiency ³⁾	98.50%					
European efficiency ³⁾	98.40%					
Protections						
DC input protection	Switch-disconnector + Fuse					
Protection with fuses on the negative pole	Yes (optional)					
AC output protection	Circuit breaker					
Overvoltage protection	DC type I + II / AC type II					
Network monitoring / ground fault monitoring	Yes / Yes					
Insulation monitoring	Yes					
Overheating protection	Yes					
GFDI	Yes (optional)					
Q night function	Yes (optional)					
General information						
Communication networks	Modbus-RTU (RS485, USB), Modbus-TCP (Ethernet)					
Local operating interface	Touch screen (optional)					
Structure	IP54					
Relative humidity	0 to 100% non-condensing					
Ambient temperature ⁴⁾	-10...+50 °C					
Maximum auxiliary consumption	1,595 W	3,185 W	3,900 W	4,700 W	5,500 W	6,300 W
Standby consumption	500 W					
Consumption at night	< 200 W					
Low / High voltage ride through (L/HVRT) function	Yes					
Active, reactive power control and ramp control	Yes					
Standards	EN 61000 (parts 4-2, 4-3, 4-4, 4-5, 4-6), CISPR 11, EN 55011, EN 50178, IEC 62116, NBR IEC 62116, IEC 62109-1, IEC 62109-2, NBR 16149 e NBR 16150					

Model of the solar inverter station	SIW750-1.2-690	EISW750-5.0-690	EISW750-6.2-690	ESW750-7.5-690	ESW750-8.7-690	ESW750-10.0-690
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,250 kVA	5,000 kVA	6,250 kVA	7,500 kVA	8,750 kVA	10,000 kVA
Structure	Outdoor cabinet	High Cube Container 40'				
Protection rating	IP54	IP55				
Temperature control	Forced exhaustion					
Inverter						
Model	1x SIW750-1.2-690	2x SIW750-2.5-690	2x SIW750-3.1-690	2x SIW750-3.7-690	2x SIW750-4.3-690	2x SIW750-5.0-690
Operating temperature range	-10...+50 °C					
Maximum voltage	1,500 V					
MV protection cubicle						
Rated voltage	13.8 / 34.5 kV					
Switching/protection device	DC switch-disconnector, AC contactor and AC circuit breaker					
Transformer						
Power	1,300 kVA	5,100 kVA	6,300 kVA	7,600 kVA	8,800 kVA	10,100 kVA
Primary voltage	13.8 / 34.5 kV					
Secondary voltage	0.69 kV	0.69 - 0.69 kV				

- Notes: 1) For output voltage at rated value (690 V ac).
2) Measurement with THD of the line voltage smaller than 2%.
3) Efficiency of the electric panel components.
4) Power limitation above +40 °C.
5) SIW750 - Configurable output power from 1,000 kVA to 5,500 kVA.
6) EISW750 - Configurable output power from 1,000 kVA to 11,000 kVA.

755 V Solar Inverter Station Technical Data

Inverter model	SIW750-1.3-755	SIW750-2.7-755	SIW750-3.4-755	SIW750-4.1-755	SIW750-4.8-755	SIW750-5.5-755
Input (DC)						
Maximum recommended current	1,690 A	3,380 A	4,230 A	5,075 A	5,920 A	6,770 A
Maximum voltage	1,500 V					
MPPT Range ¹⁾	1,100...1,400 V					
Number of MPPTs	01					02
Static/dynamic efficiency of the MPPT	99.8 / 99.7%					
Number of DC inputs	up to 20 inputs, defined according to the project					
Power oversizing	up to 150%					
Output (AC)						
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,350 kVA	2,700 kVA	3,400 kVA	4,100 kVA	4,800 kVA	5,500 kVA
Power cos $\phi = 0.95$ (-10 °C to +40 °C)	1,275 kW	2,565 kW	3,230 kW	3,895 kW	4,560 kW	5,225 kW
Power cos $\phi = 1$ (+50 °C)	1,250 kVA	2,500 kVA	3,150 kVA	3,750 kVA	4,400 kVA	5,000 kVA
Power cos $\phi = 0.95$ (+50 °C)	1,180 kW	2,375 kW	2,980 kW	3,550 kW	4,180 kW	4,750 kW
Maximum current	1,050 A	2,100 A	2,630 A	3,150 A	3,680 A	4,205 A
Output voltage 3 ϕ	755 V					
Rated frequency	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz					
Power factor	0.01i...1...0.01c					
Total harmonic distortion of the output current ²⁾	< 3%					
Maximum efficiency ³⁾	98.50%					
European efficiency ³⁾	98.40%					
Protections						
DC input protection	Switch-disconnector + Fuse					
Protection with fuses on the negative pole	Yes (optional)					
AC output protection	Circuit breaker					
Overvoltage protection	DC type I + II / AC type II					
Network monitoring / ground fault monitoring	Yes / Yes					
Insulation monitoring	Yes					
Overheating protection	Yes					
GFDI	Yes (optional)					
Q night function	Yes (optional)					
General information						
Communication networks	Modbus-RTU (RS485, USB), Modbus-TCP (Ethernet)					
Local operating interface	Touch screen (optional)					
Structure	IP54					
Relative humidity	0 to 100% non-condensing					
Ambient temperature ⁴⁾	-10...+50 °C					
Maximum auxiliary consumption	1,595 W	3,185 W	3,900 W	4,700 W	5,500 W	6,300 W
Standby consumption	500 W					
Consumption at night	< 200 W					
Low / High voltage ride through (L/HVRT) function	Yes					
Active, reactive power control and ramp control	Yes					
Standards	EN 61000 (parts 4-2, 4-3, 4-4, 4-5, 4-6), CISPR 11, EN 55011, EN 50178, IEC 62116, NBR IEC 62116, IEC 62109-1, IEC 62109-2, NBR 16149 e NBR 16150					

Model of the solar inverter station	SIW750-1.3-755	ESW750-5.5-690	ESW750-6.8-690	ESW750-8.2-690	ESW750-9.6-690	ESW750-11.0-690
Power cos $\phi = 1$ (-10 °C to +40 °C)	1,350 kVA	5,400 kVA	6,800 kVA	8,200 kVA	9,600 kVA	11,000 kVA
Structure	Outdoor cabinet	High Cube Container 40'				
Protection rating	IP54	IP55				
Temperature control	Forced exhaustion					
Inverter						
Model	1x SIW750-1.3-755	2x SIW750-2.7-755	2x SIW750-3.4-755	2x SIW750-4.1-755	2x SIW750-4.8-755	2x SIW750-5.5-755
Operating temperature range	-10...+50 °C					
Maximum voltage	1,500 V					
MV protection cubicle						
Rated voltage	13.8 / 34.5 kV					
Switching/protection device	DC switch-disconnector, AC contactor and AC circuit breaker					
Transformer						
Power	1,400 kVA	5,500 kVA	6,900 kVA	8,300 kVA	9,700 kVA	11,100 kVA
Primary voltage	13.8 / 34.5 kV					
Secondary voltage	0.755 kV	0.755 - 0.755 kV				

- Notes: 1) For output voltage at rated value (755 V ac).
 2) Measurement with THD of the line voltage smaller than 2%.
 3) Efficiency of the electric panel components.
 4) Power limitation above +40 °C.
 5) SIW750 - Configurable output power from 1,000 kVA to 5,500 kVA.
 6) EISW750 - Configurable output power from 1,000 kVA to 11,000 kVA.

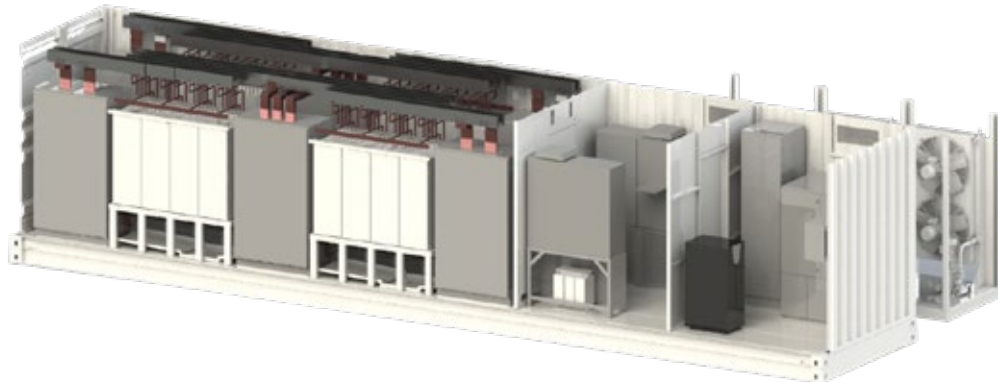
Construction Types

1



Solar Inverter Station

2



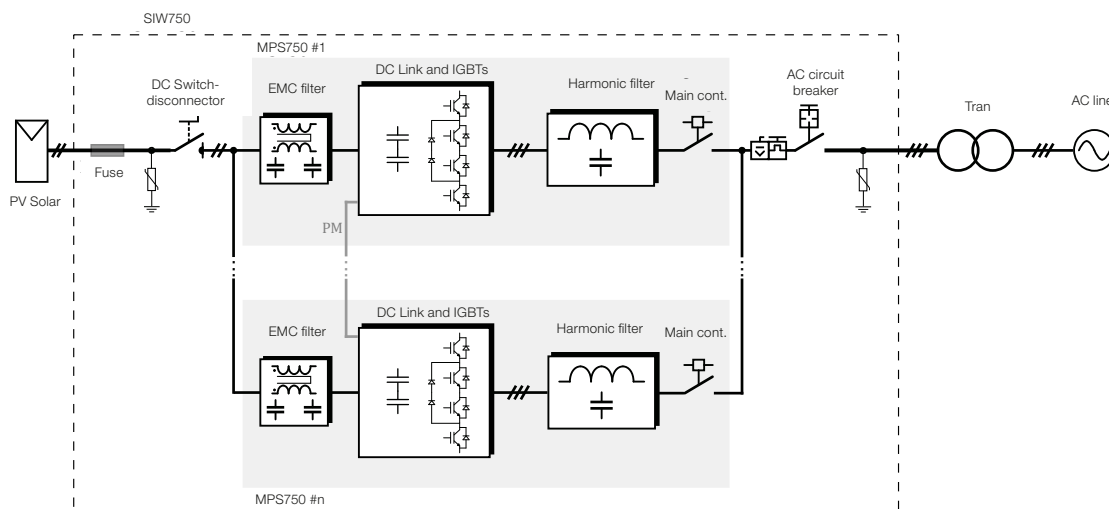
Solar Inverter Station



Greater local content for your project, seeking maximum availability of funds.

Disconnection and Protection Devices

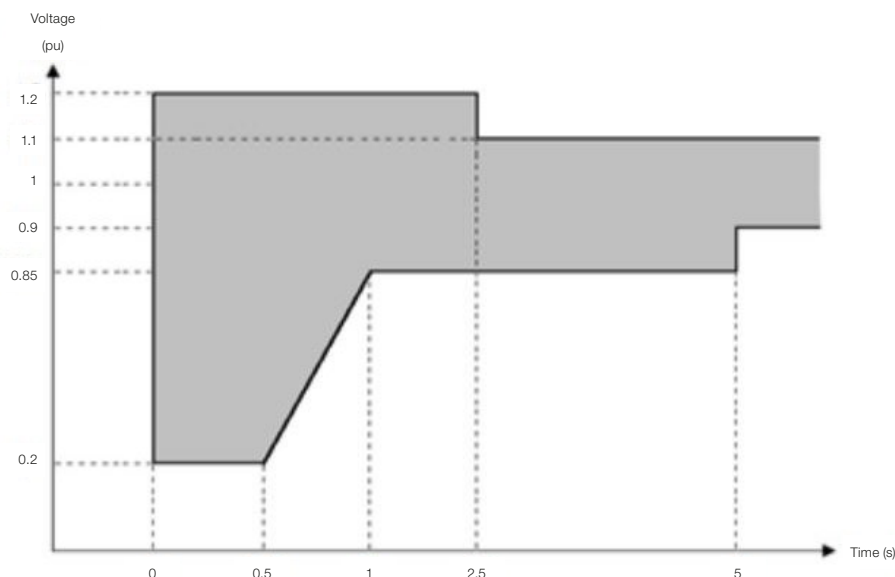
- 1** - Protection fuses at the PV inputs
- 2** - AC and DC side surge suppressor
- 3** - Motor-operated switch-disconnectors for connection/disconnection on the DC side
- 4** - Individual contactors for each power module for connection/disconnection on the AC side
- 5** - General circuit breaker for connection/disconnection on the AC side



Network Protection and Support Functions

- 1** - DC undervoltage and overvoltage
- 2** - DC short circuit and link imbalance
- 3** - Power limitation
- 4** - Overtemperature in the semiconductors and magnets
- 5** - AC under/overvoltage and under/overfrequency
- 6** - AC current imbalance
- 7** - Anti-islanding
- 8** - LVFRT and HVFRT

The inverter meets the withstand capacity requirements for dynamic undervoltages and overvoltages that occur in the grid and are required by the National Operator of the Electrical System - Sub Module 3.6, according to the variations shown in the following graph:





Global presence is essential,
as much as understanding your needs.

Global Presence

With more than 30,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **EISW - Solar Inverter Station** is the right choice for your application and business, assuring safety, efficiency and reliability.



Availability is to have a global support network



Partnership is to create solutions that suit your needs



Competitive edge is to unite technology and innovation

Know More

High performance and reliable products to improve your production process.

Excellence is to provide a whole solution in industrial automation that improves our customers productivity.



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The values shown are subject to change without prior notice.
The information contained is reference values.