

AEG

GRID-TIED SOLAR INVERTERS



AS-IR12-2 / SINGLE-PHASE GRID-TIED SOLAR INVERTER

CHARACTERISTICS



Power classes: 3 kW - 6 kW
single-phase, 2 MPPT
Matte black housing, compact size
RS485+WiFi

EXTRA PEACE OF MIND



Extensive certifications and Quality Control
5 years product warranty
(optionally extendable to 10/15/20 years)

PRODUCT NAME CODE (PNC)



AS-IR12-3000/3600/4200/5000/6000-2

ADVANTAGES



Compact size and light weight
Sleek looks designed for residential installations
Global monitoring
Suitable for use with high currents
generated by larger solar modules

AS-IR12-2 / SINGLE-PHASE GRID-TIED SOLAR INVERTER

PRODUCT SERIES			
AEG SINGLE-PHASE GRID-TIED SOLAR INVERTER			

TECHNICAL DATA			
MODEL: AS-IR12-XXX-2 (XXX=...)	3000	3600	4200

INPUT			
Max. Input Power ¹	[W]	4500	5400
Max. Input Voltage	[V]	600	600
MPPT Operating Voltage Range	[V]	40-560	40-560
MPPT Voltage Range at Nominal Power	[V]	100-500	120-500
Start-up Voltage	[V]	50	50
Nominal Input Voltage	[V]	360	360
Max. Input Current per MPPT	[A]	16	16
Max. Short Circuit Current per MPPT	[A]	23	23
Max. Backfeed Current to the Array	[A]	0	0
Number of MPP Trackers		2	2
Number of Strings per MPPT		1	1

OUTPUT			
Nominal Output Power	[W]	3000	3600
Nominal Output Apparent Power	[VA]	3000	3600
Max. AC Active Power ²	[W]	3300	3960
Max. AC Apparent Power ³	[VA]	3300	3960
Nominal Power at 40°C (incl. AC Overload, only for Brazil)	[W]	3000	3600
Max. Power at 40°C (incl. AC Overload, only for Brazil)	[W]	3000	3600
Nominal Output Voltage	[V]	220/230/240	220/230/240
Output Voltage Range	[V]	196-311 (according to local standard)	196-311 (according to local standard)
Nominal AC Grid Frequency	[Hz]	50 / 60	50 / 60
AC Grid Frequency Range	[Hz]	45-55/55-65	45-55/55-65
Max. Output Current	[A]	14.4	17.3
Max. Output Fault Current (peak and duration)	[A/ms]	33.4@4ms	33.4@4ms
Inrush current (peak and duration)	[A/us]	39@10ms	39@10ms
Nominal Output Current	[A]	13.7	16.4
Power Factor		-1 (Adjust. from 0.8 leading to 0.8 lagging)	
Max. Total Harmonic Distortion		<3%	<3%
Max. Output Overcurrent Protection	[A]	31	42

EFFICIENCY			
Max. Efficiency		97.9%	97.9%
European Efficiency		97.0%	97.0%
CEC Efficiency		97.2%	97.3%

PROTECTION	
PV String Current Monitoring	Integrated
PV Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
PV Reverse Polarity Protection	Integrated
Anti-islanding Protection	Integrated
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
DC Switch	Integrated
DC Surge Protection	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)
AFCI	Optional
Emergency Power Off	Optional
Remote Shutdown	Optional
Power Supply at Night	Optional

GENERAL DATA	
Operating Temperature Range (°C)	[°C] -25 ~ +60
Relative Humidity	0 ~ 100%
Max. Operating Altitude ⁴	[m] 4000
Cooling Method	Natural Convection
User Interface	LCD & LED, WLAN+APP
Communication	WiFi (optional: LAN or RS485)
Communication Protocol	Modbus-RTU (SunSpec compliant)
Weight	[kg] 12.8
Size (Width*Height*Depth)	[mm] 410*350*143
Noise Emission	[dB] <25
Topology	Non-isolated
Self-consumption at Night	[W] <1
Ingress Protection Rating	IP66
Anti-Corrosion Class	C4
DC Connector	MC4 (4-6 mm ²)
AC Connector	Plug-and-play connector (max. 6 mm ²)
Environmental Category	4K4H
Pollution Degree	III
Overvoltage Category	DC II / AC III
Protective Class	I
Decisive Voltage Class (DVC)	PVC, ACC, ComA
Active Anti-Islanding Method	AFDPF+AQDPF ⁵

NOTES	
1-For Malaysia AS-IR12-4200-2: Nominal Output Power (W) and Nominal Output Apparent Power (VA) and Max. AC Active Power (W) and Max. AC Apparent Power (VA) is 4000.	
2-For Belgium Max. AC Active Power (W): AS-IR12-3000-2 is 3000, AS-IR12-3600-2 is 3600, AS-IR12-4200-2 is 4200, AS-IR12-5000-2 is 5000, AS-IR12-6000-2 is 6000.	
3-For Belgium Max. AC Apparent Power (VA): AS-IR12-3000-2 is 3000, AS-IR12-3600-2 is 3600, AS-IR12-4200-2 is 4200, AS-IR12-5000-2 is 5000, AS-IR12-6000-2 is 6000.	
4-For Australia, Max. Operating Altitude (m) is 3000.	
5-AFDPF: Active Frequency Drift with Positive Feedback; AQDPF: Active Q Drift with Positive Feedback	
6-For the full Warranty Terms please visit www.aeg-solar.com © Solar Solutions Group, Version 2023.06.V1EN Specifications in this datasheet are subject to change without notice.	
7-Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (+0.079 °)	
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PRODUCT NAMECODE (PNC)			
AS-IR12-3000/3600/4200/5000/6000-2			

TECHNICAL DATA			
MODEL: AS-IR12-XXX-2 (XXX=...)	5000	6000	

INPUT			
Max. Input Power ¹	[W]	7500	9000
Max. Input Voltage	[V]	600	600
MPPT Range	[V]	40-560	40-560
MPPT Voltage Range at Nominal Power	[V]	165-500	195-500
Start-up Voltage	[V]	50	50
Nominal Input Voltage	[V]	360	360
Max. Input Current per MPPT	[A]	16	16
Max. Short Circuit Current per MPPT	[A]	23	23
Max. Backfeed Current to the Array	[A]	0	0
Number of MPP Trackers		2	2
Number of Strings per MPPT		1	1

OUTPUT			
Nominal Output Power	[W]	5000	6000
Nominal Output Apparent Power	[VA]	5000	6000
Max. AC Active Power ²	[W]	5500	6600
Max. AC Apparent Power ³	[VA]	5500	6600
Nominal Power at 40°C (only for Brazil)	[W]	5000	6000
Max. Power at 40°C (incl. AC Overload, only for Brazil)	[W]	5000	6000
Nominal Output Voltage	[V]	220/230/240	220/230/240
Output Voltage Range	[V]	196-311 (according to local standard)	196-311 (according to local standard)
Nominal AC Grid Frequency	[Hz]	50 / 60	50 / 60
AC Grid Frequency Range	[Hz]	45-55/55-65	45-55/55-65
Max. Output Current	[A]	24.0	28.8
Max. Output Fault Current (peak and duration)	[A/ms]	44.5@4ms	55.8@4ms
Inrush current (peak and duration)	[A/us]	39@10ms	39@10ms
Nominal Output Current	[A]	22.8	27.3
Output Power Factor		-1 (Adjust. from 0.8 leading to 0.8 lagging)	
Max. Total Harmonic Distortion		<3%	<3%
Max. Output Overcurrent Protection	[A]	42	52

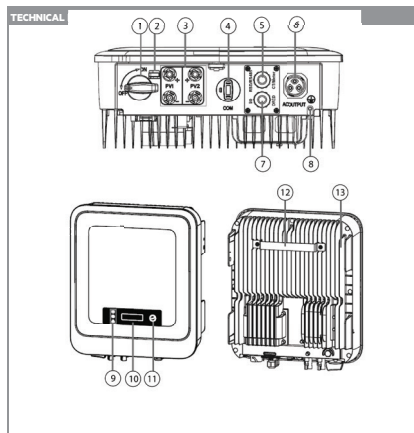
EFFICIENCY			
Max. Efficiency		97.9%	97.9%
European Efficiency		97.3%	97.4%
CEC Efficiency		97.3%	97.4%

PROTECTION	
PV Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
Residual Current Monitoring	Integrated
PV Reverse Polarity Protection	Integrated
Anti-islanding Protection	Integrated
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
DC Switch	Integrated
DC Surge Protection	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)
AFCI	Optional
Emergency Power Off	Optional
Remote Shutdown	Optional
Power Supply at Night	Optional

GENERAL DATA	
Operating Temperature Range (°C)	[°C] -25 ~ +60
Relative Humidity	0 ~ 100%
Max. Operating Altitude ⁴	[m] 4000
Cooling Method	Natural Convection
User Interface	LCD & LED, WLAN+APP
Communication	WiFi (optional: LAN or RS485)
Communication Protocol	Modbus-RTU (SunSpec compliant)
Weight	[kg] 13.4
Size (Width*Height*Depth)	[mm] 410*350*143
Noise Emission	[dB] <25
Topology	Non-isolated
Self-consumption at Night	[W] <1
Ingress Protection Rating	IP66
Anti-Corrosion Class	C4
DC Connector	MC4 (4-6 mm ²)
AC Connector	Plug-and-play connector (max. 6 mm ²)
Environmental Category	4K4H
Pollution Degree	III
Overvoltage Category	DC II / AC III
Protective Class	I
Decisive Voltage Class (DVC)	PVC, ACC, ComA
Active Anti-Islanding Method	AFDPF+AQDPF ⁵

WARRANTY⁶	
Product warranty	5 years (optionally extendable to 10 / 15 / 20 years)

CERTIFICATIONS AND STANDARDS	
IEC-EN 62109-1:2010, IEC-EN 62109-2:2011, IEC 61727:2004, IEC 62116:2014, EN 50549-1:2019, VDE-AR-N 4105:2018, CEI 0-21:2019, Synergrid / C10/C11, NTS 2.1, UNE2127002, UNE2127001, UTE C15-712-1, VDE 0126 VFR 2019.	
For further information, please visit: www.aeg-solar.com	



NUMBER / ITEM	DESCRIPTION
1	DC Switch Start or stop DC input.
2	DC Switch Lock Only for Australia. Turn the DC switch to OFF and lock it to avoid electric shock when working on the inverter.
3	PV Input Terminal Used to connect the PV module DC input cables.
4	COM Port for communication module: USB-RS485 cable/USB. WiFi/LAN, WiFi, GPRS, 4G, etc.
5	COM Port for RS485, remote shutdown, meter, or CT. Used to connect the RS485, meter, CT, or remote shutdown communication cable.
6	AC Terminal For connecting the AC output cable (connecting inverter and utility grid)
7	COM Port for DRED or dry contact. Reserved port. For connecting the DRED cable or dry contact cable.
8	Grounding Point For connecting the PE cable.
9	Indicator Indicates working state of the inverter.
10	LCD For viewing inverter parameters
11	Button For accessing the inverter menu and parameter configuration
12	Mounting Plate For inverter installation
13	Heat sink Inverter cooling