

AEG

GRID-TIED SOLAR INVERTERS



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

CHARACTERISTICS



Power classes: 0.7 kW - 3 kW
single-phase, 1 MPPT
Matte black housing, compact size
RS485+WiFi

PRODUCT NAME CODE (PNC)



AS-IR12-700/-1000/1500/2000/2500/3000

EXTRA PEACE OF MIND



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

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 / SINGLE-PHASE GRID-TIED SOLAR INVERTER

PRODUCT SERIES			
AEG SINGLE-PHASE GRID-TIED SOLAR INVERTER			

TECHNICAL DATA			
MODEL: AS-IR12-XXX (XXX=...)	700	1000	1500

INPUT				
Max. Input Power ¹	[W]	910	1300	1950
Max. Input Voltage	[V]	500	500	500
MPPT Operating Voltage Range	[V]	40-450	40-450	50-450
MPPT Voltage Range at Nominal Power	[V]	65-450	85-450	125-450
Start-up Voltage	[V]	40	40	50
Nominal Input Voltage	[V]	360	360	360
Max. Input Current per MPPT	[A]	15	15	15
Max. Short Circuit Current per MPPT	[A]	18.75	18.75	18.75
Max. Backfeed Current to the Array	[A]	0	0	0
Number of MPP Trackers		1	1	1
Number of Strings per MPPT		1	1	1

OUTPUT				
Nominal Output Power	[W]	700	1000	1500
Nominal Output Apparent Power	[VA]	700	1000	1500
Max. AC Active Power ²	[W]	800	1100	1650
Max. AC Apparent Power ²	[VA]	800	1100	1650
Nominal Power at 40°C (only for Brazil)	[W]	700	1000	1500
Max. Power at 40°C (incl. AC Overload; only for Brazil)	[W]	700	1000	1500
Nominal Output Voltage	[V]	230	230	230
Output Voltage Range	[V]	154-288	154-288	154-288
Nominal AC Grid Frequency	[Hz]	50 / 60	50 / 60	50 / 60
AC Grid Frequency Range	[Hz]	45-50/57-63	45-50/57-63	45-50/57-63
Max. Output Current	[A]	3.5	4.8	7.2
Max. Output Fault Current (peak and duration)	[A/ms]	25@5ms	25@5ms	25@5ms
Inrush current (peak and duration)	[A/us]	50@2us	50@2us	50@2us
Nominal Output Current	[A]	3.0	4.3	6.5
Power Factor		~1 (Adjust. from 0.8 leading to 0.8 lagging)		
Max. Total Harmonic Distortion		<3%	<3%	<3%
Max. Output Overcurrent Protection	[A]	24	24	24

EFFICIENCY				
Max. Efficiency		97.2%	97.2%	97.3%
European Efficiency		96.0%	96.4%	96.6%

PROTECTION	
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
AFCI	Optional
Emergency Power Off	Optional
Remote Shutdown	Optional

GENERAL DATA	
Operating Temperature Range (°C)	[°C] -25 - +60
Relative Humidity	0 - 100%
Operating Altitude	[m] 3000
Cooling Method	Natural Convection
User Interface	LCD & LED, WLAN+APP
Communication	WiFi (optional: LAN or RS485)
Communication Protocol	Modbus-RTU (SunSpec compliant)
Weight	[kg] 5.8
Size (Width*Height*Depth)	[mm] 295*230*113
Noise Emission	[dB] <25
Topology	Non-isolated
Self-consumption at Night	[W] <1
Ingress Protection Rating	IP65
DC Connector	MC4 (2.5-4 mm ²)
AC Connector	Plug-and-play connector
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 ³

NOTES
 1-For Australia Max. Input Power (W): AS-IR12-700 is 945; AS-IR12-1350 is 1000; AS-IR12-1500 is 2025; AS-IR12-2000 is 2700; AS-IR12-2500 is 3375; AS-IR12-3000 is 4050.
 2-For Belgium Max. Output Apparent Power (VA) and Max. AC Active Power (W): AS-IR12-700 is 700; AS-IR12-1000 is 1000; AS-IR12-1500 is 1500; AS-IR12-2000 is 2000; AS-IR12-2500 is 2500; AS-IR12-3000 is 3000.
 3-AFDPF: Active Frequency Drift with Positive Feedback; AQDPF: Active Q Drift with Positive Feedback
 4-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.
 5-Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079")
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PRODUCT NAMECODE (PNC)			
AS-IR12-700/1000/1500/2000/2500/3000			

TECHNICAL DATA			
MODEL: AS-IR12-XXX (XXX=...)	2000	2500	3000

INPUT				
Max. Input Power ¹	[W]	2600	3250	3900
Max. Input Voltage	[V]	500	600	600
MPPT Range	[V]	50-450	50-550	50-550
MPPT Voltage Range at Nominal Power	[V]	165-450	200-450	240-450
Start-up Voltage	[V]	50	50	50
Nominal Input Voltage	[V]	360	360	360
Max. Input Current per MPPT	[A]	15	15	15
Max. Short Circuit Current per MPPT	[A]	18.75	18.75	18.75
Max. Backfeed Current to the Array	[A]	0	0	0
Number of MPP Trackers		1	1	1
Number of Strings per MPPT		1	1	1

OUTPUT				
Nominal Output Power	[W]	2000	2500	3000
Nominal Output Apparent Power	[VA]	2000	2500	3000
Max. AC Active Power ²	[W]	2200	2750	3300
Max. AC Apparent Power ²	[VA]	2200	2750	3300
Nominal Power at 40°C (only for Brazil)	[W]	2000	2500	3000
Max. Power at 40°C (incl. AC Overload; only for Brazil)	[W]	2000	2500	3000
Nominal Output Voltage	[V]	230	220/230	220/230
Output Voltage Range	[V]	154-288	154-288	154-288
Nominal AC Grid Frequency	[Hz]	50 / 60	50 / 60	50 / 60
AC Grid Frequency Range	[Hz]	45-50/57-63	45-50/57-63	45-50/57-63
Max. Output Current	[A]	9.6	12	14.3
Max. Output Fault Current (peak and duration)	[A/ms]	25@5ms	25@5ms	30@5ms
Inrush current (peak and duration)	[A/us]	50@2us	50@2us	50@2us
Nominal Output Current	[A]	8.7	11.4/10.9	13.6/13.0
Output Power Factor		~1 (Adjust. from 0.8 leading to 0.8 lagging)		
Max. Total Harmonic Distortion		<3%	<3%	<3%
Max. Output Overcurrent Protection	[A]	24	31.5	31.5

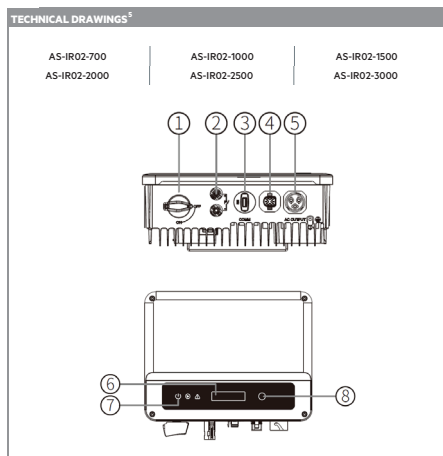
EFFICIENCY				
Max. Efficiency		97.5%	97.6%	97.6%
European Efficiency		97.0%	97.2%	97.2%

PROTECTION	
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
AFCI	Optional
Emergency Power Off	Optional
Remote Shutdown	Optional

GENERAL DATA	
Operating Temperature Range (°C)	[°C] -25 - +60
Relative Humidity	0 - 100%
Operating Altitude	[m] 3000
Cooling Method	Natural Convection
User Interface	LCD & LED, WLAN+APP
Communication	WiFi (optional: LAN or RS485)
Communication Protocol	Modbus-RTU (SunSpec compliant)
Weight	[kg] 5.8
Size (Width*Height*Depth)	[mm] 295*230*113
Noise Emission	[dB] <25 <30
Topology	Non-isolated
Self-consumption at Night	[W] <1
Ingress Protection Rating	IP65
DC Connector	MC4 (2.5-4 mm ²)
AC Connector	Plug-and-play connector
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 ³

WARRANTY ⁴	
Product warranty	5 + 5 years (optionally extendable to 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, UNE 217002, UNE 217001. For further information, please visit: www.aeg-solar.com	



NUMBER / ITEM	DESCRIPTION
1	DC Switch: During normal operation it is „on“. It can shut down the inverter after it is disconnected from the grid by the AC breaker
2	PV Input Terminal: For PV string connection
3	WiFi/LAN Module Port: For WiFi/LAN communication
4	CT&DRED/ Remote Shutdown /RS485 Communication Port: For CT & DRED / Remote Shutdown & RS485 Communication
5	AC Output Terminal: For AC Cable Connection
6	LCD Display: For viewing inverter operation data and for parameter configuration
7	Indicator Lights: Displays the inverter state
8	Button: For accessing the inverter menu and parameter configuration