

Generate your Power

Protect PV Utility Scale Inverter

Solar Inverter for Grid Connection Utility Scale

250 kW and 500 kW

Container application

500 kW and 1 MW

AEG Power Solutions have designed the new Solar Inverter for Utility Scale applications, on industrial roofs and ground area installations. One main feature is the power stack together with advanced peripheral equipment to allow DC voltages up to 1000 Vdc. Projects with thin film modules will benefit the most from this wide DC range.

Design of generator connector boxes is flexible, even with the option to group them independently switchable. Two units can act in a "Copain mode" (high efficient master/slave functionality).

Maximum Power Point Tracking is designed to meet the latest requirements for fast responses to dynamic changes in clear and cloudy conditions, plus reliable active/sleep detection for day and night shift.

Conversion efficiency will meet and exceed expectations for this type of inverter topology. The Solar Inverter can be adapted to the LV (400 Vac) or MV (10, 20, 33 kV) grid.



Monitoring and power plant integration is based on Modbus Protocol and advanced CAN BUS communication. This may include advanced string monitoring and failure analysis, regular reporting and performance statistics. Remote monitoring and access is available through different means: GSM, DSL and WebPortal, plus programmable alarm functions and settings via email/SMS. Future requirements from grid operators are supported.

Turnkey container solutions can be supplied ready for connection at site.

With over 60 years of experience in power conversion, the AEG service experts provides the ultimate peace of mind and maximum yields of your PV installation with a full range of services providing up to 99% inverter availability per year.



PERFECT IN FORM AND FUNCTION

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Protect PV: Technical Data

	Protect PV.250	Protect PV.500
DC INPUT		
Recom. PV power	250–320 kWp	500–580 kWp
DC voltage window	up to 1000 V	up to 1000 V
Max. DC voltage	1000 V	1000 V
U _{MPP} voltage range	450 - 820	500 - 820
Max. DC current	600 A	1200 A
Quantity DC inputs	1 MCCB	
Over voltage protection	Class 2	Class 2
AC OUTPUT		
Nom. AC power at cos φ = 1	255 kVA	510 kVA
Mains voltage:		
- LV-connection	400 VAC	-/-
- MV-connection	10, 20, 33 kV and other, as required	
Mains frequency	50/60 Hz	50/60 Hz
Current distortion	< 3 %	< 3 %
Over voltage protection	Class 2	Class 2
GENERAL DATA		
Efficiency *1 (Max. / Euro / CEC)	98,7 % / 98,5 % / 98, 5 %	> 98 %
External auxiliary power supply	TN-S, 230 V 50/60 Hz	
Operating temperature	-10 °C to +45 °C	
Rel. humidity	15 ... 95 % max, non condensing	
Protection degree, EN 60529	IP 20	IP 20
Altitude above sea level	1.000 m	1000 m
Dimensions (W x H x D) *1	2100 x 2000 x 600 mm	< 3000 x 2000 x 600 mm
Weight *1	approx.1130 kg	approx. 1700 kg
Equipment color	RAL 7035	RAL 7035
CE certificate	Yes	Yes
Standards	according to FNN (VDN, BDEW)	
ALARMS & CONTROLS		
Earth fault monitoring	Yes	Yes
Monitored over voltage protection	Yes	Yes
Contactors and Breaker position	Yes	Yes
Emergency Power Off	Yes	Yes
Failure indicators (acoustic/optical)	3 status LED, detailed history	
COMMUNICATION		
Display Operating Unit	240 x 64 graphical LC-Display and 4 display keys	
Hardware	RS 485, RS 232, CAN BUS, Ethernet Free programmable opto coupler inputs and dry-contacts	
Telecom line	ISDN, GSM, GPRS, DSL	
Software/Protocol	Modbus, Profibus DP, Web portal, CANopen CiA 437	
Over voltage protection	Option	Option
OPTIONS		
Container solution	TKS-C 500: 2 x 255 kVA	TKS-C 1000: 2 x 510 kVA
Transformer	3-port 500 kVA	3-port 1 MVA
MV Switchgear	Yes	Yes
String Monitoring	Yes	Yes
PV Plant operation	Yes	Yes
Copain mode (Partner-Master/Slave)	Yes	Yes
Standards	RD 1663, DK 5940 edition 2.2 (ENEL)	
*1: Without transformer (LV/MV) Technical data is preliminary and subject to change without prior notice		

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For further information
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