

# PROTECT PV.MH

## COMPACT OUTDOOR UNITS FOR PV POWER STATIONS



The Protect PV solar inverter product line, designed by AEG Power Solutions, offers professional solutions for utility-scale applications on industrial roofs and ground area installations.

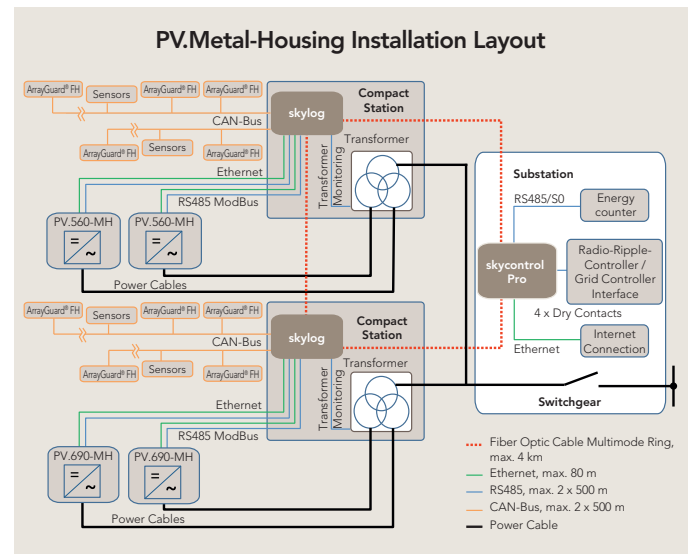
The PV.MH system is a light and compact connection comprised of an outer metal housing (with optimum corrosion protection) and an integrated Protect PV.560, PV.690 or PV.880 solar central inverter. The system is characterised by its low weight and small dimensions; it can be used virtually anywhere.

With this system, owners of large solar power plants benefit from the compact design and reduced transportation and assembly costs. The PV.MH is made of specially treated galvanised sheet steel mounted on a concrete foundation. Components such as the transformer and medium-voltage switchgear are located in a separate compact station, that can connect two PV.MH units with the medium-voltage grid.

Ethernet and fiber optic communication channels connected to the skylog via open standards such as ModBus or Ethernet form the foundation for communications in PV power plants using AEG PS solar central inverters.

A powerful online communications platform allows owners and operators to view the current and historical system status instantaneously.

With over 60 years of experience in power supply systems and solutions for power plants, AEG Power Solutions offers a comprehensive range of services aimed at securing maximum yields for your PV power installation. These services include contractual solutions with service guarantees and high inverter availability.



# PROTECT PV

TECHNICAL DATA

	Protect PV.560-MH	Protect PV.690-MH	Protect PV.880-MH
<b>DC INPUT</b>			
Recom. PV power <sup>*1</sup>	500 - 680 kWp	630 - 890 kWp	800 - 1150 kWp
DC voltage window	385 - 1000 V	465 - 1000 V	486 - 1000 V
Max. DC voltage	1000 V		
Extended U <sub>MPPT</sub> voltage range	385 - 820 V	465 - 820 V	486 - 820 V
U <sub>MPPT</sub> voltage range @ 50 °C (EN 50530)	500 - 820 V	550 - 820 V	573 - 820 V
Max. DC current	1060 A	1170 A	1440 A
Quantity DC inputs	1 MCCB		
Quantity DC fuses	up to 8 pcs. (pos & neg)		
Overvoltage protection	Grade 2		
<b>AC OUTPUT</b>			
Nom. AC power at cos φ = 1 (@ 50 °C)	510 kVA	630 kVA	800 kVA
Nom. AC power at cos φ = 1 (@ 25 °C)	560 kVA	690 kVA	880 kVA
Power factor, adjustable	lag 0.9 – 1 – lead 0.9		
Output voltage without transformer	283 V	345 V	360 V
Max. AC current	1144 A	1159 A	1283 A
Mains voltage: MV-connection <sup>*2</sup>	10, 20 kV and others as required		
Mains frequency	50/60 Hz		
Current distortion	< 3%		
Overvoltage protection	Grade 2		
<b>DEVICE DATA</b>			
Efficiency <sup>*3</sup> (Max. / Euro / CEC)	98.4 %/98.2 %/98.2 %		98.9 %/98.6 %/98.7 %
External power supply	TN-S, 230 V 50/60 Hz		
Operating temperature	-20 °C to +50 °C		
Relative humidity	15 ... 95 % max, non condensing		
Protection grade, EN 60529	IP 43		
Altitude above sea level	1,500 m (3000 m max. 40 °C)		
Dimensions (W x H x D)	3180 x 2792 x 1300 mm		3190 x 2792 x 1300 mm
Weight	2900 kg		ca. 2980 kg
Consumption of auxiliaries during night	100 W		
Method of cooling	Air		
Range of application	Outdoor		
Required air flow	6000 m <sup>3</sup> /h		7500 m <sup>3</sup> /h
Equipment color	RAL 7035		
CE Certificate	Yes		
Grid monitoring	according to FNN (VDN, BDEW) and corresponding to local requirements		
<b>ALARMS &amp; MONITORING</b>			
Earth fault monitoring	Yes		
Overvoltage protection	Yes		
Contact and breaker position	Yes		
Emergency power off	Yes		
Failure indicators (acoustic/optical)	3 status LED, detailed history		
<b>COMMUNICATIONS</b>			
Display	240 x 64 graphical LC Display and 4 display keys		
Hardware	RS 485, RS 232, CAN BUS, Ethernet Freely programmable opto coupler inputs and dry contacts		
Telecom line	ISDN, GSM, GPRS, DSL		
Software/Protocol	Modbus, Profibus DP, Web portal, CANopen CiA 437		
Overvoltage protection	Option		
<b>OPTIONS</b>			
MV transformer	in separate compact stations		
MV switchgear	in separate compact stations		
String monitoring	Yes		
PV plant control	Yes		

\*1: Depending on local environmental conditions - \*2: External transformer necessary

\*3: Without transformer (LV/MV) - Technical data is preliminary and subject to change without prior notice.

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