

# PROTECT PV.OD-UL

## 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 ground area installations.

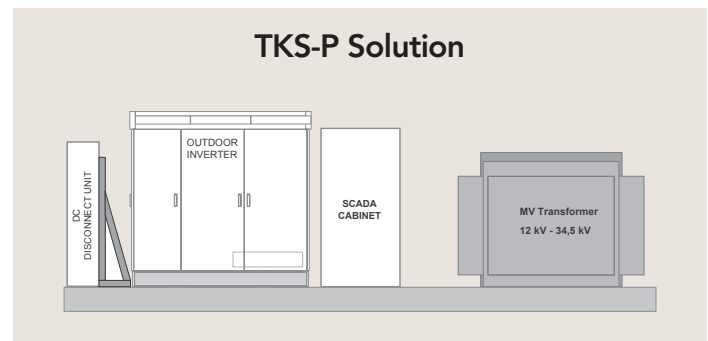
The Protect PV.Outdoor System for North America consists of a durable, external, weatherproof metal housing and an integrated, high-efficiency, solar central inverter, either the PV.500-UL or PV.630-UL. The design offers many advantages during transport, installation, and service thanks to its light weight and its small dimensions.

The PV.Outdoor offers ease of use and maintenance as is standard for all AEG products. In addition, AEG Power Solutions has developed a unique cooling system that provides optimal air circulation within the inverter. The enclosure consists of double-walled aluminum with a stainless steel plinth for mounting onto a concrete foundation. Additional components, such as transformers and medium-voltage switchgear, are part of the Skid solution, which can combine the output from two PV.Outdoor systems.

Ethernet and fiber optic communication channels connected to the datalogger in the SCADA cabinet 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

and proven 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.500-OD-UL	Protect PV.630-OD-UL
<b>DC INPUT</b>		
Recom. PV power <sup>*1</sup>	500 - 680 kWp	630 - 890 kWp
DC voltage window	385 - 1000 V	465 - 1000 V
Max. DC voltage	1000 V	
Extended U <sub>MPPPT</sub> voltage range	385 - 820 V	465 - 820 V
U <sub>MPPPT</sub> voltage range @ 50 °C (EN 50530)	500 - 820 V	550 - 820 V
Max. DC current	1060 A	1170 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
Nom. AC power at cos φ = 1 (@ 25 °C)	560 kVA	690 kVA
Power factor, adjustable	lag 0.9 – 1 – lead 0.9	
Output voltage without transformer	283 V	345 V
Max. AC current	1040 A	1159 A
MV-connection <sup>*2</sup>	10, 20 kV and other, 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%	
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 54, Nema3R	
Altitude above sea level	1,500 m (4,920 ft) (3000 m max 40°C)	
Dimensions (W x H x D)	2200 x 2250 x 900 mm (87 x 89 x 36 in)	
Weight	approx. 1650 kg (3,638 lbs)	
Consumption of auxiliaries during night	100 W	
Method of cooling	Air	
Range of application	Outdoor	
Required air flow	4000 m³/h	
Equipment color	RAL 7035	
CE Certificate	Yes	
Standards	Certified to UL 1741, NEC Article 690	
Grid monitoring	IEEE 1547, FERC, NERC, and others can be configured	
<b>ALARMS &amp; MONITORING</b>		
Earth fault monitoring	Yes	
Overvoltage protection	Yes	
Contactors 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	
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>		
Container solution	TKS-MC 500 or 1000	TKS-MC 630 or 1250
MV transformer with switchgear	Yes	
Monitoring	Yes	
PV plant control	Yes	
DC disconnect unit with circuit breakers	Separate cabinet with options on number and sizes of breakers	
LV disconnection switch	Separate cabinet with AC circuit breaker	

\*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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