

PROTECT PV.OD

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 consists of a durable, external, weatherproof metal housing and an integrated, high-efficiency, solar central inverter, either the PV.690 or the PV.880.

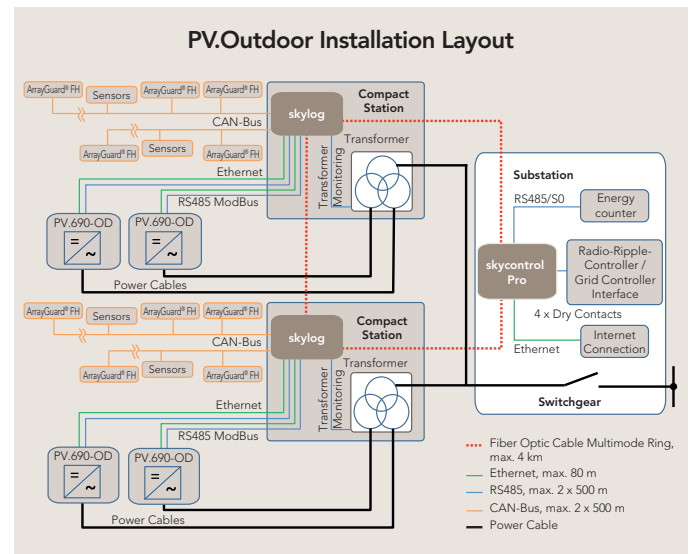
The design offers many advantages during transport, installation, and service thanks to its light weight and its small dimensions.

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 separate Compact Station, which can combine the output from two PV.Outdoor systems.

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 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.690-OD | Protect PV.820-OD |
|--|---|-----------------------|
| DC INPUT | | |
| Recom. PV power ^{*1} | 630 - 945 kWp | 800 - 1300 kWp |
| DC voltage window | 465 - 1000 V | 486 - 1000 V |
| Max. DC voltage | 1000 V | |
| U _{MPP} voltage range | 550 - 820 | 573 - 820 |
| Max. DC current | 1170 A | 1440 A |
| Quantity DC inputs | 1 MCCB | |
| Quantity DC fuses | up to 8 pcs. (pos & neg) | |
| Overvoltage protection | Grade 2 | |
| AC OUTPUT | | |
| Nom. AC power at cos φ = 1 (@ 50 °C) | 630 kVA | 800 kVA |
| Nom. AC power at cos φ = 1 (@ 25 °C) | 690 kVA | 880 kVA |
| Power factor, adjustable | lag 0.9 – 1 – lead 0.9 | |
| Output voltage without transformer | 345 V | 360 V |
| Max. AC current | 1159 A | 1411 A |
| MV-connection ^{*2} | 10, 20, 33 kV and others as required | |
| Mains frequency | 50/60 Hz | |
| Current distortion | < 3% | |
| Overvoltage protection | Grade 2 | |
| DEVICE DATA | | |
| Efficiency ^{*3} (Max. / Euro / CEC) | 98.4% / 98.2% / 98.2% | 98.7% / 98.3% / 98.5% |
| External power supply | 1N-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 | |
| Altitude above sea level | 1,500 m (3000 m max 40 °C) | |
| Dimensions (W x H x D) | 2200 x 2250 x 900 mm | |
| Weight | approx. 1800 kg | approx. 1850 kg |
| 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 | |
| Grid monitoring | according to FNN (VDN, BDEW) and corresponding to local requirements | |
| ALARMS & MONITORING | | |
| 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 | |
| COMMUNICATIONS | | |
| 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 | |
| OPTIONS | | |
| MV transformer | in separate compact stations | |
| MV switchgear | in separate compact stations | |
| Zone monitoring | No | Yes |
| 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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