



Dear Reader,

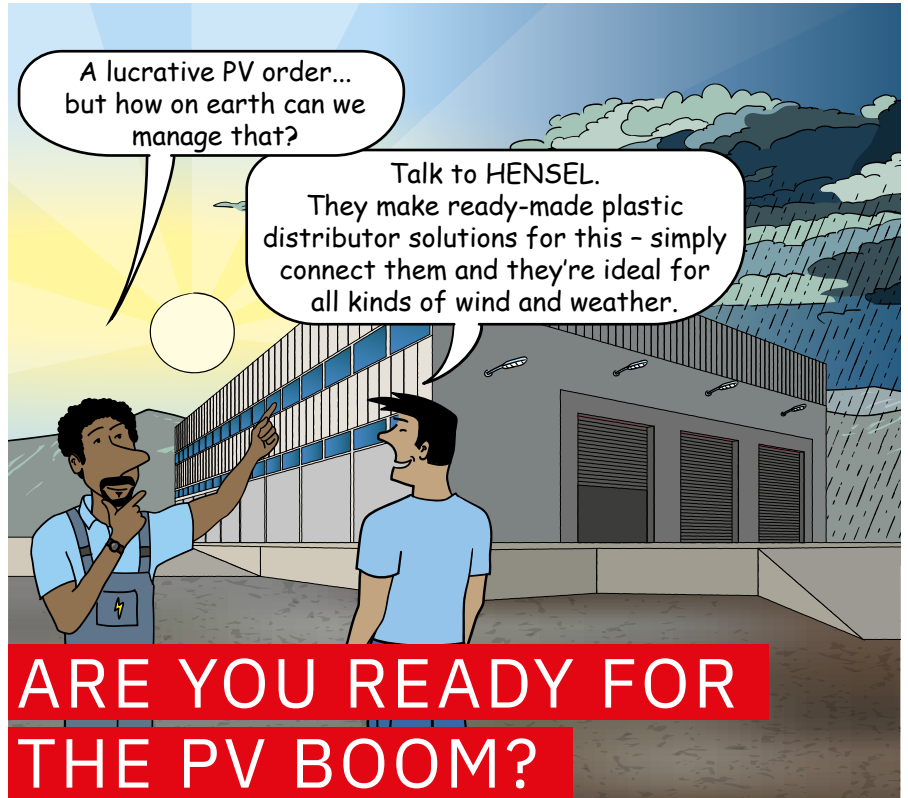
PV distributors in demanding outdoor areas pose special challenges. For long-term operation, the extreme climate conditions which continually confront the switching devices outdoors must be taken into account. Sheet steel distributors quickly lose their functionality as a result of rust and corrosion. In addition, special solutions are required for the dimensioning of PV systems that differ significantly from the usual installation inside a building. This is because the appliances are exposed to continuous stress. Normal planning and installation are not possible.

ENYSUN PV distribution solutions have been in use here for a long time, both on the direct current (DC) and alternating current (AC) sides.

They prove their worth even in the most difficult environmental conditions, and the installed devices function flawlessly and are easy to maintain. Safe photovoltaic solutions from HENSEL are planned in accordance with the relevant standards and correctly dimensioned. Assembled and wired ready for connection, they are quick and easy to install.

Take advantage of our expertise in this field and the personal support offered by your local HENSEL consultant!

Philipp C. Hensel, Managing Director,  
Gustav Hensel GmbH & Co. KG



## PV ENERGY DISTRIBUTOR IN CHALLENGING OUTDOOR AREAS SIMPLE AND SAFE INSTALLATION

There is increasing demand for more powerful PV systems in the high kWp range, particularly in industry and commerce. It is therefore a question of how this growth market can or should be managed, in view of the existing bottlenecks in planning and installation capacities. With the issue of PV being particularly complex, many different aspects have to be considered when planning PV systems, and the systems themselves have to be able to cope with the special challenges of outdoor installation. High levels of solar radiation, major temperature fluctuations, varying

weather conditions – PV systems are exposed to extreme conditions such as these over many years. PV distributors made of sheet steel quickly reach their limits here, due in particular to condensation and corrosion.

In addition, due to the thermal problem with a simultaneity factor of 1, PV distributors must be dimensioned differently from standard consumer systems with regard to the radiant heat output. Specialised expertise is required for correctly dimensioned and standard-compliant solutions.

### OUR SOLUTION

Pre-designed, ready-to-connect ENYSUN PV distribution solutions from HENSEL, made of high-quality, durable thermoplastics – easy to maintain with a service life of more than 20 years

# WHAT ARE THE BIGGEST CHALLENGES WITH PV INSTALLATIONS?



## PVS REQUIRE ENERGY DISTRIBUTION UNDER EXTREME CONDITIONS

PV distributors for outdoor use are permanently exposed to the wind and weather. Weather conditions such as rain and high humidity, salt-laden air, rapid temperature changes or major temperature fluctuations (day/night, weather changes, intense sunlight, rain/heavy rain) and the resulting condensation make **sheet steel housings** susceptible to **rust and corrosion** over time, which can impair their function or make them unsuitable for outdoor use.



However, even condensation formation can lead to malfunctions, short circuits or PV system failures. Problems often occur with sheet steel enclosures in unprotected outdoor installations within 2–3 years, if not sooner.

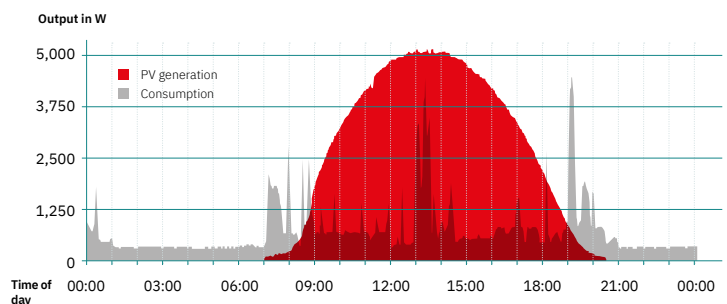
## PVS REQUIRE PLANNING INPUT AND SPECIAL EXPERTISE

Special distribution solutions are required for the installation of PV systems.

The corresponding **planning is complex and requires time** and specialist expertise. This is because the dimensioning of PV installations differs significantly from the usual installation inside a building and distribution board dimensioning, in that the installed devices are exposed to a permanent stress.

Consistently high loads lead to an above-average power loss or thermal load on the distribution technology during the generation phase.

The distributors must therefore be dimensioned so that the radiated power loss is sufficient to ensure that the maximum permissible temperature of the switching devices or the distributors is not exceeded.



# ENYSUN PV PLASTIC DISTRIBUTION SOLUTIONS – FOR DEMANDING ENVIRONMENTS, READY TO CONNECT AND EASY TO MAINTAIN

The ENYSUN PV distribution system includes, in addition to customised project solutions, PV connection housings, PV inverter collectors and disconnection points for mains connection.

## ADVANTAGES OF ENYSUN PV DISTRIBUTION SOLUTIONS

### ... made of thermoplastics:



+ **Corrosion-resistant** → Does not rust when exposed to environmental conditions such as rain, snow and ice, high humidity, salt-laden air or condensation.



+ **Modular distribution system** → The PV system can easily be extended thanks to the modular function of the ENYSUN distributors based on the Mi distribution system.



+ **Protection class II insulating material** → Does not conduct electricity and therefore offers a high level of safety against short circuits and maximum protection against the risk of electric shock. This ensures the safety of workers/operators onsite.



+ **High IP protection class up to IP 65** → Guarantees protection against dust and moisture.



+ **Weather-resistant, UV-resistant, temperature-resistant** → Provides decades of outdoor use without deterioration, resistant to extreme temperatures and high temperature differences, high levels of solar radiation and a wide range of weather conditions.



+ **Rated insulation voltage** → Suitable up to 1,500 V DC.

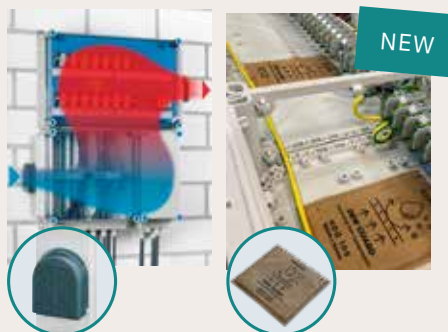


### ... during installation:

+ **Durable** → Reliable, easy to maintain and a secure investment thanks to high product quality.

+ **Dew guards, ventilation inserts and pressure equalisation elements (accessories)** → To prevent condensation or reduce the formation and accumulation of condensation.

+ **Pre-designed and ready for connection** → Detailed, well thought-out ENYSUN PV distribution solutions from HENSEL, accurately planned and dimensioned in accordance with the relevant standards – including consideration of the thermal effects of generation systems. Fully assembled and wired ready for connection. Quick and easy to install, activate and safely put into operation onsite.



## OUR SOLUTION

ENYSUN PV distribution solutions - reliable, easy to maintain, ready to connect



# FOR PV INSTALLATIONS, YOU CAN RELY ON OUR READY-TO-CONNECT ENYSUN DISTRIBUTION SOLUTIONS

How to handle the PV boom easily and safely

TALK TO US!

MORE THAN 90 YEARS OF EXPERIENCE



Your local HENSEL consultants will give you tailor-made support.

From consultation to our ready-to-connect ENYSUN PV distribution solution

[hensel-electric.de/en-ae](http://hensel-electric.de/en-ae)

Downloadable ENYSUN catalogue

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MADE IN GERMANY