



**Product information** as at: 7/2014

# ENYSUN

**Safe product solutions for Photovoltaic plants conforming to standards**

**Grid, on-grid and off-grid systems**

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Industrial Electrical Power Distribution Systems

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- PV Generator junction boxes
- Battery distributors
- Solar inverter collectors

**For all application areas of the new standard IEC 60 364-7-712 (Draft)**

# These application areas for PV systems are now new IEC 60 364-7-712 (Draft):

## Grid-connected PV systems

### GRID system

#### PV system for grid support

„PV system for supply to an installation in parallel with a system for distribution of electricity to the public“

#### PV generator



#### PV generator junction boxes



#### Centralised solar inverters



Source: Kostal

### ON-GRID system

#### PV system for consumer-oriented generation

„PV system for supply to an installation in parallel with a system for distribution of electricity to the public“

#### PV generator



#### PV system for consumer-oriented generation with energy storage

“PV system for supply to an installation as an alternative to a system for distribution of electricity to the public”

#### PV generator



#### PV generator junction boxes



#### String solar inverters



Source: SMA Solar Technology AG

#### Solar inverter collectors



Electrical installation or public power supply system

# specified by the

## Stand-alone PV systems

### OFF-GRID system

**PV system with energy storage, not connected to the public power supply system**

„PV system for supply to an installation which is not connected to a system for distribution of electricity to the public (**stand alone**)“

### PV generator



### PV generator junction boxes



### Solar inverters



Source: Kostal

### Solar inverter collectors



## Electrical installation

## Energy storage

Energy storage work

- in PV system for consumer-oriented production as an **alternative** to a system for distribution of electricity to the public

- and for **decentralized** supply to an electrical installation without a public supply network is available (off-grid system).

e.g. **Battery**



### Battery distributors



### Stand-alone solar inverters



Source: SMA Solar Technology AG

# DC

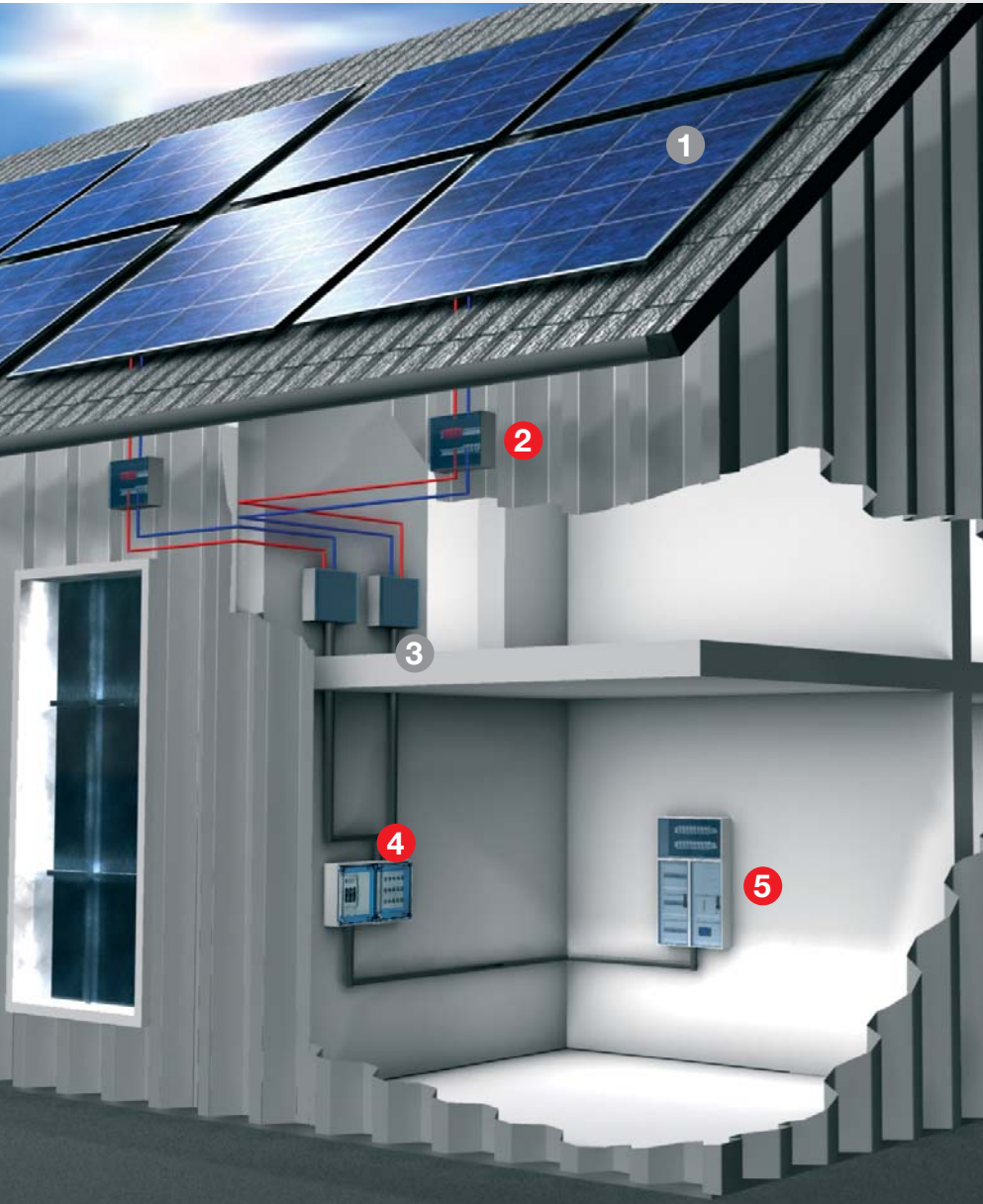
# AC

**ENYSUN distributors of Hensel for DC and AC areas in PV systems work safely and in conformity to the new standard (Draft) in all application areas.**

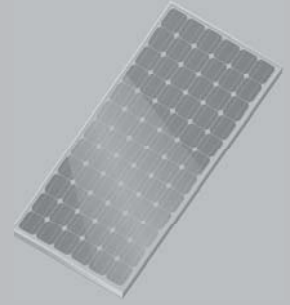
**Customised solutions? Contact us!**

### ENYSUN movie

Our ENYSUN product solutions provide you many advantages for the installation of photovoltaic plants. Learn more about ENYSUN in our product movie. Scan this QR code, then look at the ENYSUN movie on your phone.



1



PV generators

2



PV generator junction boxes

3



Solar inverter

4



PV Solar inverter collector

5



Distribution board with metering

### PV generator junction boxes



**Connection:**  
Ready for connection  
with plug-in connectors



**Electrical data:**  
Rated voltage: **DC 1,000 V**  
Rated current: up to 400 A  
Protective measure: **Total insulation** ☐



**Ambient conditions:**  
UV resistant  
Degree of protection: **IP 65**  
Stainless steel external brackets  
optional: Combi climate glands to  
reduce condensation formation in  
outdoor installations (order separately,  
see accessories).

### PV Solar inverter collector



**Complete set:**  
pre-fabricated and tested solar inverter  
collector solutions

**Electrical data:**  
Rated voltage: AC 230/400 V  
Rated capacity up to 220 kVA  
Degree of protection: up to **IP 65**  
optional with surge arrester



**Derating:**  
Assessing simultaneity and load  
capacity of the installed protective  
devices in connection with power  
generating plants

**PV generator junction boxes with DC surge arrester or DC generator disconnect switch**



**KV PV 1211**  
1 x PV string for  
1 x Inverter input



**KV PV 2211**  
1 x PV string for  
1 x Inverter input



**KV PV 2411**  
1 x PV string for  
1 x Inverter input

**PV generator junction boxes with DC/AC surge arrester**



**KV PV 1411**  
1 x PV string for  
1 x Inverter input  
1 x Inverter output  
1 x Grid  
1 x Type 2 DC/AC surge arrester



**KV PV 1461**  
1 x PV string for  
1 x Inverter input  
1 x Inverter output  
1 x Grid  
1 x Type 1 DC/AC surge arrester

**PV generator junction boxes with type 2 surge arrester**



**Mi PV 1111**  
1 x PV string for  
1 x Inverter input



**Mi PV 1122**  
2 x PV string for  
2 x Inverter input



**Mi PV 1133**  
3 x PV string for  
3 x Inverter input



**Mi PV 1121**  
2 x PV string for  
1 x Inverter input



**Mi PV 1242**  
4 x PV string for  
2 x Inverter input



**Mi PV 1263**  
6 x PV string for  
3 x Inverter input

**PV generator junction boxes with type 2 surge arrester and DC generator disconnect switch**



**Mi PV 2111**  
1 x PV string for  
1 x Inverter input



**Mi PV 2222**  
2 x PV string for  
2 x Inverter input



**Mi PV 2233**  
3 x PV string for  
3 x Inverter input



**Mi PV 2121**  
2 x PV string for  
1 x Inverter input



**Mi PV 2242**  
4 x PV string for  
2 x Inverter input



**Mi PV 2263**  
6 x PV string for  
3 x Inverter input

**PV generator junction boxes with type 1 surge arrester**



**Mi PV 1271**  
2 x PV string for  
1 x Inverter input

**PV generator junction boxes with type 1 surge arrester and DC generator disconnect switch**



**Mi PV 2271**  
2 x PV string for  
1 x Inverter input

**PV generator junction boxes with string overload protection and for string monitoring**



**Mi PV 3781**  
8 x PV string for  
1 x Inverter input



**Mi PV 3791**  
8 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester

**PV generator junction boxes with string overload protection and DC generator disconnect switch**



**Mi PV 3311**  
6 x PV string for  
1 x Inverter input



**Mi PV 3321**  
6 x PV string for  
1 x Inverter input  
1 x type 2 DC surge arrester



**Mi PV 3611**  
12 x PV string for  
1 x Inverter input



**Mi PV 3621**  
12 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester



**Mi PV 3931**  
24 x PV string for  
1 x Inverter input



**Mi PV 3941**  
24 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester

**PV generator junction boxes with string overload protection and DC generator disconnect switch**



**Mi PV 3731**  
3 x PV string for  
1 x Inverter input



**Mi PV 3741**  
3 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester

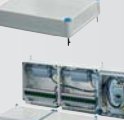
**PV generator junction boxes with blocking diodes and DC generator disconnect switch**



**Mi PV 4311**  
12 x PV string for  
1 x Inverter input



**Mi PV 4321**  
12 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester



**Mi PV 4631**  
24 x PV string for  
1 x Inverter input



**Mi PV 4641**  
24 x PV string for  
1 x Inverter input  
1 x Type 2 DC surge arrester

**Customised solutions? Contact us!**

**Battery distributor with disconnect switch and protective devices for outgoing circuits to solar inverters**



**Mi PV 3301**  
1 x Battery on  
1 x Inverter



**Mi PV 3802**  
1 x Battery on  
2 x Inverter



**Mi PV 3903**  
1 x Battery on  
3 x Inverter

**Solar inverter collector with circuit-breaker box**



Sample installation

**Mi PV 6532**  
Rated capacity 30 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~



Sample installation

**Mi PV 6632**  
Rated capacity 30 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~  
1 x Type 2 AC surge arrester



Sample installation

**Mi PV 6732**  
Rated capacity 30 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~  
1 x Type 1 AC surge arrester



Sample installation

**Mi PV 6111**  
Rated capacity 70 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~



Sample installation

**Mi PV 6123**  
Rated capacity 140 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~



Sample installation

**Mi PV 6544**  
Rated capacity 220 kVA,  
for inverters up to  
6,4 kVA, 1~ or 19,3 kVA, 3~

**Battery distributor with protective devices for outgoing circuits to solar inverters**



**Mi PV 3101**  
1 x Battery on  
1 x Inverter

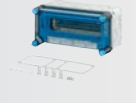


**Mi PV 3302**  
1 x Battery on  
3 x Inverter

**Solar inverter collector Extension boxes**



**Mi PV 5611**  
**Surge protection device box (SPD)**  
with fuse D 02, 3 x 63 A  
1 x Type 2 AC surge arrester



**Mi PV 5711**  
**circuit-breaker box**  
12 modules:  
1 x 12 x 18 mm  
1-row  
without PE and N terminals



**Mi PV 5511**  
**PV terminal boxes**  
terminals per PE+N  
12 x 1,5-16 mm<sup>2</sup>, Cu  
1 x 4-35 mm<sup>2</sup>, Cu



**Mi PV 5621**  
**Surge protection device box (SPD)**  
with fuse NH 00, 3 x 160 A  
1 x Type 1 AC surge arrester



**Mi PV 5521**  
**PV terminal boxes**  
terminals per PE+N  
9 x 1,5-16 mm<sup>2</sup>, Cu  
1 x 4-35 mm<sup>2</sup>, Cu

See Hensel main catalogue  
for further extension boxes and  
accessories!

# Here comes the sun!

Photovoltaic plants installed quickly, in accordance with standards and safely.



**NEW**

ENYSUN is here at last. Now there is no longer any problem selecting and installing photovoltaic plants safely. Hensel has the professional solution. ENYSUN, the safe photovoltaic distributors that comply with the standards, the plant is quickly, easily and safely installed, from the roof to the mains supply. Clear competitive advantages for you - from Hensel.

[www.enysun.eu](http://www.enysun.eu)

