

**Orchestrating**

**energy**

**flows**





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# Welcome to enwitec - orchestrating energy flows

Enwitec electronic GmbH is a leading manufacturer of innovative connection technologies and solutions for renewable energies. With decades of experience and close market ties, enwitec is a valuable service provider and partner for its customers. We combine consistency with our passion for the latest technologies to offer you a wide range of professional connection technology on the DC and AC side for small and large PV projects.



## Our strengths

- **Experience and expertise:** Decades of experience and qualified employees enable us to develop customised solutions for your individual requirements.
- **High quality:** Our company is regularly audited by "All-Cert Gesellschaft für Zertifizierung mbH" to ensure that our ISO certificate is up to date. We guarantee extensive technical testing right from the development stage and detailed documentation for each individual product.
- **Innovation and flexibility:** We continuously set new industry standards with our innovative and customised systems. In addition to flexible standard solutions, we develop advanced new products that are perfectly tailored to your needs in order to always offer you the optimum solution.

## The greenLink Group

enwitec is part of the greenLink group of companies, which has established itself as a leading provider of connection technology and systems for the green energy sector throughout Europe. The greenLink Group drives sustainable energy solutions across Europe. With the vision of becoming Europe's leading innovator for connection technologies for the green energy transition, greenLink not only connects components, but also perfects the flow of energy.

## Values of the greenLink Group

- **Innovation:** For us, creativity is the driving force behind the development of pioneering solutions in the green energy flow and connection sector. We promote innovative ideas and implement them consistently to give our customers a competitive advantage.
- **Partnership:** Trust, friendship and a familiar working atmosphere form the basis of our business relationships. We regard our customers and employees as long-term partners and maintain open and honest communication.
- **Integrity:** Safety, reliability and the highest quality are a matter of course for us. We rely on proven technologies and strict quality standards to provide our customers with safe and durable products.



## LinQ - A strong member of the greenLink Group

LinQ, also part of the greenLink Group, specialises in the development and provision of state-of-the-art connection systems. LinQ offers advanced solutions that maximise the efficiency and reliability of energy systems and minimise downtime. Together with enwitec and LinQ, greenLink is setting new standards in the industry and contributing to the sustainable energy transition in Europe.



# orchestrating energy flows

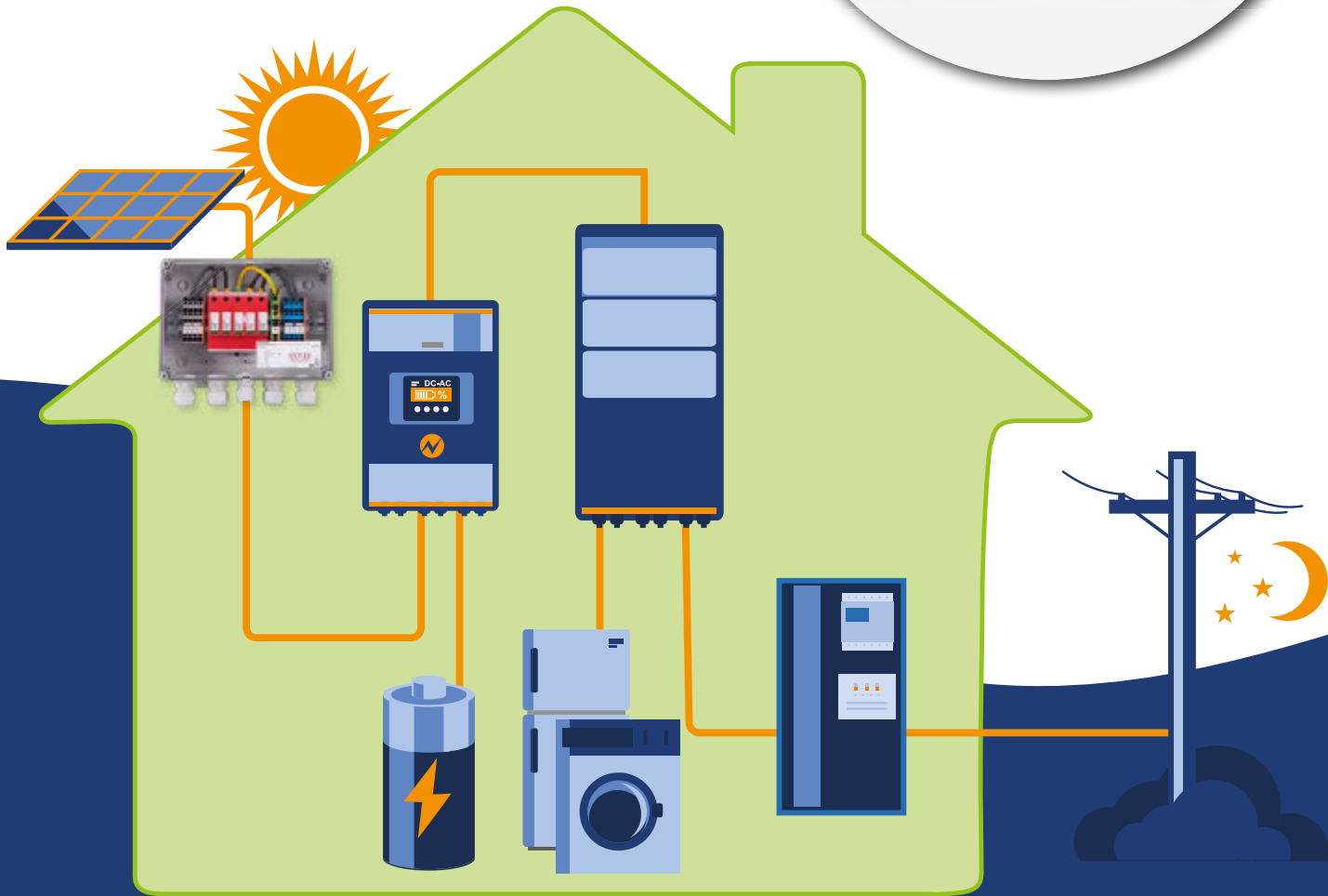
# GENERATOR TERMINAL BOX

Protection by GAKs with integrated lightning and surge protection

Protect your PV system and prevent costly overvoltage damage and failures with our GAKs. The ready-to-connect system solution is available for 1 MPPT up to 12 MPPT applications and can be used for all common string inverter types in residential or small commercial buildings.

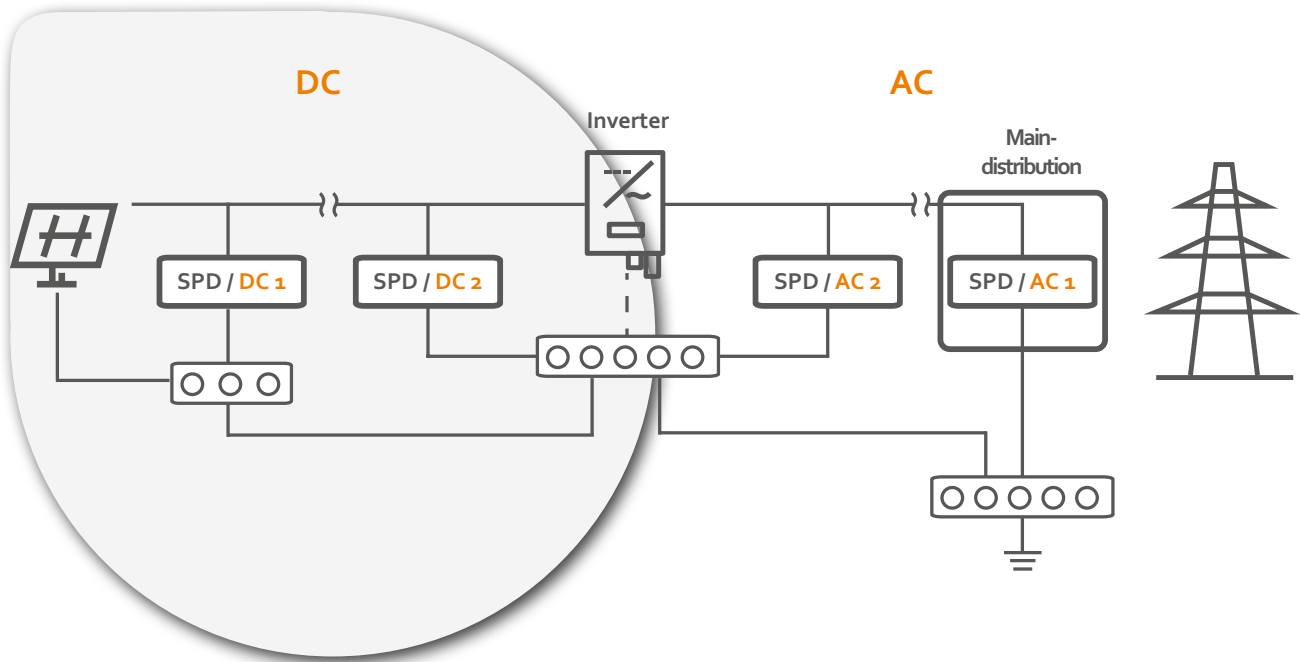
## Ready-to-connect and pre-tested solutions for collecting the individual string cables (DC) in PV systems

- Suitable for every type of system from 100 V to 1,500 V DC
- With overvoltage protection types: Type 2 or 1/2
- Fuse protection + and - pole from three PV strings
- Polycarbonate housing with transparent screw cap or
- Polyester housing with grey hinged door and double-bit lock
- All GAKs in dust and water-protected housings (IP65)
- Fast installation and commissioning thanks to pre-assembly
- Short-term creation of customised solutions
- Standardised switchgear and controlgear assembly thanks to the application of DIN EN 61439
- Optional: DC load-break switch, Al/Cu terminals, string monitoring



## Determine the right surge protection for you

Answer the questions in the table below to determine which surge protection is required for your installation on the DC side. You can find out more about the AC side from page 14 .  
The chart illustrates:  
(DC1) at the entry of the PV cables into the building,  
(DC2) on or in the inverter (DC side).



external lightning protection system available?	Separation distance complied with?	Cable length larger than 10 metres?	SPD / DC 1	SPD / DC 2
no	-	yes	TYPE 2 DC	TYPE 2 DC
no	-	no	TYPE 2 DC	-
yes	yes	yes	TYPE 2 DC	TYPE 2 DC
yes	yes	no	TYPE 2 DC	-
yes	no	yes	TYPE 1 DC	TYPE 1 DC
yes	no	no	TYPE 1 DC	-





# SOLARCONNECT 1500

Maximum flexibility for your PV projects

The enwitec SolarConnect 1500 is a highly flexible PV generator junction box (GAK) that has been specially developed for large PV projects with central inverters. With a system voltage of up to 1,500VDC and string current monitoring via MOD-BUS, it offers maximum safety and efficiency.

The SolarConnect 1500 offers all the necessary connection technologies to optimally supplement large-scale PV projects in the utility sector in terms of flexibility, availability and sustainability. It includes functions such as remotely controllable load-break switches, string current monitoring and integrated overvoltage protection.



## What makes the SolarConnect 1500 so special?

- **Certification:** Complies with the highest quality standards and is certified in accordance with EN 61439-1, EN 61439-2, VDE 0100-712 and HD 60364-7-712.
- **Versatility:** Enclosure options for indoor and outdoor applications, including wall mounting and optional PV string connections with connectors (e.g. MC4).
- **Flexibility:** Project-specific development and coordination
- **monitoring:** Precise string current monitoring with MOD-BUS interface

## Technical specifications

- **Output:** PV generator junction box for up to 24 strings.
- **System voltage:** Up to 1,500VDC.
- **Load-break switch:** Manually or motor-operated, up to 630A.
- **monitoring:** string current monitoring with MOD-BUS connection, voltage and temperature monitoring.
- **Housing:** GRP-reinforced polyester, protection class up to IP65, protection class II.
- **Mounting:** Options for wall, floor or recessed base mounting.

Article no.	Matchcode	Tension	MPP	Strings IN per MPP	Strings OUT per MPP	Fuse holder	oSS	Switch-disconnector	Connection IN / OUT
10017213	GAK-S-1000-2R-T50-BC-PC-1.0_MC4	1.000	1	2	1	without	Type 2	50 A	MC4
10016650	GAK-S-1000-2R-T50-Y-PC-1.0_MC4	1.000	1	2	1	without	Type 2	50 A	MC4
10014968	GAK-S-1000-2R-X-BC-PC-1.0 (with DEHN ÜSS)	1.000	1	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10015741	GAK-S-1000-2R-X-BC-PC-1.1	1.000	1	2	2	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10015744	GAK-S-1000-2R-X-Y-PC-1.1_MC4	1.000	1	2	2	without	Type 2		MC4
10014331	GAK-S-1000-3R-X-BC-PC-1.0 (with DEHN ÜSS)	1.000	1	3	3	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10014330	GAK-S-1000-3R-X-BC-PC-1.0 (with DEHN ÜSS)	1.000	1	3	1	without	Type 1/2		6 mm <sup>2</sup> / 50 mm <sup>2</sup>
10013926	GAK-S-1000-3R-X-BC-PC-1.2	1.000	1	3	1	without	Type 1/2		16 mm <sup>2</sup> / 35/50 mm <sup>2</sup>
10013055	GAK-S-1000-3R-X-BC-PC-1.2	1.000	1	3	3	without	Type 1/2		16 mm <sup>2</sup> / 16 mm <sup>2</sup>
10012766	GAK-S-1000-4(x2)Sxx-T50-Y-PC-1.0	1.000	1	4	2	two-pole	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10013101	GAK-S-1000-4(x2)Sxx-X-BC-PC-1.1	1.000	1	4	2	two-pole	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10014965	GAK-S-1000-4(x2)Sxx-X-Y-PC-1.0 (with DEHN ÜSS)	1.000	1	4	1	two-pole	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10012765	GAK-S-1000-4(x2)Sxx-X-Y-PC-1.1	1.000	1	4	1	two-pole	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10015870	GAK-S-1000-4R-X-BC-PC-1.0	1.000	1	4	4	without	Type 1/2		16 mm <sup>2</sup> / 16 mm <sup>2</sup>
10017264	GAK-S-1100-2R-X-Y-PC DEHNCube (900913)	1.100	1	2	1	without	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016613	GAK-S-1500-12S(x2)xx-T315-BC-PES-1.0	1.500	1	12	1	two-pole	Type 1/2	315A	16 mm <sup>2</sup> / M10
10016616	GAK-S-1500-12S(x2)xx-T315-BC-US-PES-1.0	1.500	1	12	1	two-pole	Type 1/2	315A	16 mm <sup>2</sup> / M10
10016745	GAK-S-1500-12S(x2)xx-X-X-PES-1.0	1.500	1	12	1	two-pole	without		16 mm <sup>2</sup> / M12
10015746	GAK-enwitec-S-1000-2x1R-X-Y-PC-1.1_SC	1.000	2	1	1	without	Type 2		Sunclix
10015739	GAK-S-1000-2x1R-X-BC-PC-1.1_MC4	1.000	2	1	1	without	Type 1/2		MC4
10015821	GAK-S-1000-2x1R-X-BC-PC-1.1_SC	1.000	2	1	1	without	Type 1/2		Sunclix
10018440	GAK-S-1000-2x2R-T50-BC-PC-1.0	1.000	2	2	1	without	Type 1/2	50A	6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10012735	GAK-S-1000-2x2R-X-BC-PC-1.1 (with DEHN ÜSS)	1.000	2	2	1	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10012874	GAK-S-1000-2x2R-X-BC-PC-1.1_MC4	1.000	2	2	1	without	Type 1/2		MC4
10015827	GAK-S-1000-2x2R-X-BC-PC-1.1_SC	1.000	2	2	1	without	Type 1/2		Sunclix
10015829	GAK-S-1000-2x2R-X-BC-PC-1.2	1.000	2	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10013312	GAK-S-1000-2x3S(x2)xx-X-BC-PC-1.0	1.000	2	3	3	two-pole	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10012769	GAK-S-1000-2x4(x2)Sxx-X-Y-PC-1.1	1.000	2	4	1	two-pole	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10017263	GAK-S-1100-2x2R-X-Y-PC DEHNCube (900923)	1.100	2	2	1	without	Type 2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10014801	GAK-S-1000-3x1R-X-BC-PC-1.1_MC4	1.000	3	1	1	without	Type 1/2		MC4
10015824	GAK-S-1000-3x1R-X-BC-PC-1.1_SC	1.000	3	1	1	without	Type 1/2		Sunclix
10014799	GAK-S-1000-3x1R-X-Y-PC-1.0_MC4	1.000	3	1	1	without	Type 2		MC4
10012876	GAK-S-1000-3x2R-X-BC-PC-1.1 (with DEHN ÜSS)	1.000	3	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10012822	GAK-S-1000-3x2R-X-BC-PC-1.2	1.000	3	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016453	GAK-S-1000-3x2R-X-BC-PES-1.0	1.000	3	2	2	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10014959	GAK-S-1000-3x2R-X-Y-PC-1.0 (with DEHN ÜSS)	1.000	3	2	1	without	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10012759	GAK-S-1000-3x2R-X-Y-PC-1.1	1.000	3	2	1	without	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016321	GAK-S-1000-4x2R-X-BC-PC-1.0	1.000	4	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016307	GAK-S-1000-4x2R-X-BC-PC-1.0 (with DEHN ÜSS)	1.000	4	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016455	GAK-S-1000-4x2R-X-BC-PES-1.0	1.000	4	2	2	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>

Article no.	Matchcode	Tension	MPP	Strings IN per MPP	Strings OUT per MPP	Fuse holder	oSS	Switch-disconnector	Connection IN / OUT
10016467	GAK-S-1000-4x2R-X-BC-PES-1.0_MC4	1.000	4	2	2	without	Type 1/2		MC4
10016454	GAK-S-1000-4x2R-X-Y-PES-1.0	1.000	4	2	2	without	Type 2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10014960	GAK-S-1000-6x2R-X-BC-PC-1.0 (with DEHN ÜSS)	1.000	6	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10012880	GAK-S-1000-6x2R-X-BC-PC-1.1	1.000	6	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016457	GAK-S-1000-6x2R-X-BC-PES-1.0	1.000	6	2	2	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10012763	GAK-S-1000-6x2R-X-Y-PC-1.0 (with DEHN ÜSS)	1.000	6	2	1	without	Type 2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016456	GAK-S-1000-6x2R-X-Y-PES-1.0	1.000	6	2	2	without	Type 2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10016324	GAK-S-1000-10x2R-X-BC-PC-1.0	1.000	10	2	1	without	Type 1/2		6 mm <sup>2</sup> / 16 mm <sup>2</sup>
10016459	GAK-S-1000-10x2R-X-BC-PES-1.0	1.000	10	2	2	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10016501	GAK-S-1000-10x2R-X-BC-PES-1.0_MC4	1.000	10	2	2	without	Type 1/2		MC4
10016458	GAK-S-1000-10x2R-X-Y-PES-1.0	1.000	10	2	2	without	Type 2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10016461	GAK-S-1000-12x2R-X-BC-PES-1.0	1.000	12	2	2	without	Type 1/2		6 mm <sup>2</sup> / 6 mm <sup>2</sup>
10019463	GAK-S-1500-24S(x2)xx-T500-BC-US-PES-1.0	1.500	24	2	2	two-pole	Type 1/2	500A	16 mm <sup>2</sup> / M16

# FIRE BRIGADE SWITCH

Intelligent safety solution for reliably de-energising DC cables in buildings.

enwitec offers an intelligent safety solution in the form of PV firefighting switches, which reliably de-energise the cables in the building. This minimises the danger to firefighters. The PV firefighting switches are located either immediately after the roof entry or, in the case of an installation in a protected outdoor area, directly on the PV generator and de-energise the lines into the building when required or automatically in conjunction with an existing fire alarm system.

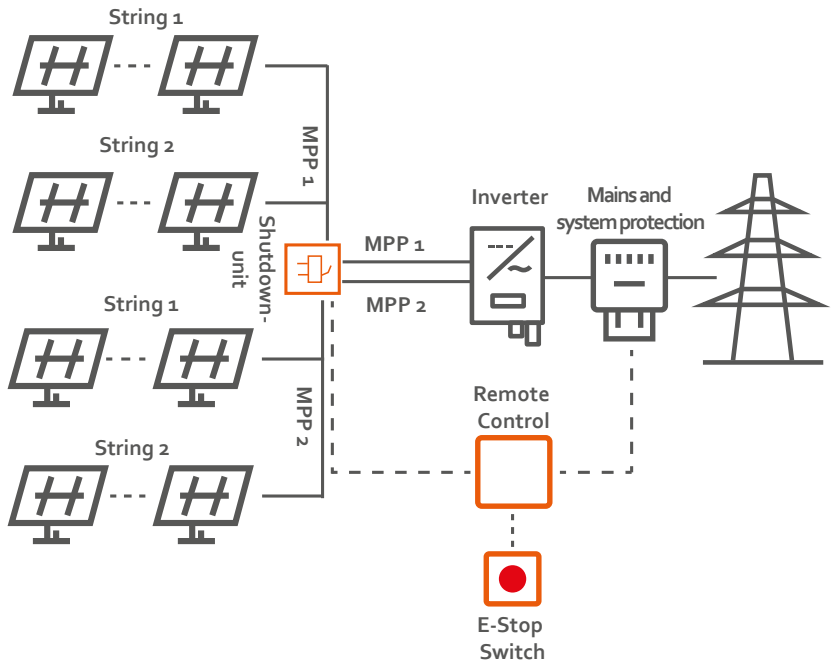
The main advantage of the system with AC-coupled disconnection is that in the event of a fire, for example, it is no longer necessary to search for a switch or it is no longer accessible. When the AC grid is switched off, the DC lines from the switch box on the roof are automatically disconnected. If the AC grid is switched on again, the system is automatically switched back on.



## Combination of conventional connection technology for PV systems with a special circuit breaker

### Our advantages:

- AC-coupled safety circuit
- Simple assembly
- Manual switch-off also possible
- Easy to retrofit, manufacturer-independent
- Suitable for fire alarm systems
- Optional: Key switch can be connected
- With integrated overvoltage protection
- Arc-free switching thanks to modern switching technology
- Fast installation and commissioning thanks to pre-assembly of the fire service switches
- Short-term creation of customised solutions
- Fittings already included in the scope of delivery
- Standardised switchgear and controlgear assembly thanks to the application of DIN EN 61439



### Shutdown unit (fireman's switch):

MPP	Article no.	Match-code	oSS
2 MPP	10012215	Santon-1000-2x2R-T50-X-PES-1.0	-
	10012217	Santon-1000-2x2R-2xT50-BC-PES-1.0	Type 1/2
4 MPP	10012233	Santon-1000-4x2R-T50-X-PES-1.0	-
	10012235	Santon-1000-4x2R-T50-BC-PES-1.0	Type 1/2
6 MPP	10013565	Santon-1000-6x2R-T50-X-PES-1.0	-
	10014008	Santon-1000-6x2R-T50-BC-PES-1.0	Type 1/2
8 MPP	10015733	Santon-1000-8x2R-T50-X-PES-1.0	-
	10016826	Santon-1000-8x2R-T50-BC-PES-1.0	Type 1/2
10 MPP	10015656	Santon-1000-10x2R-T50-X-PES-1.0	-
	10014856	Santon-1000-10x2R-T50-BC-PES-1.1	Type 1/2
12 MPP	10016739	Santon-1000-12x2R-T50-X-PES-1.0	-
	10019159	Santon-1000-12x2R-T50-BC-PES-1.0	Type 1/2



### E-Stop Switch & Remote Control

Quantity	Article no.	Match-code
	10012955	Legrand safety box E-Stop-Switch surface-mounted
1 Shutdown	10018660	santon-remote control-1-R+
2 Shutdown	10018661	santon-remote control-2-R+
4 Shutdown	10018662	santon-remote control-4-R+
6 Shutdown	10018592	santon-remote control-6-R+
8 Shutdown	10018658	santon-remote control-8-R+
10 Shutdown	10018659	santon-remote control-10-R+





AC DISTRIBUTOR

The AC distributors are the link between the inverter and the grid connection.

The AC distributors are the link between the inverter and the grid connection, which minimises the amount of cabling required. This can save a considerable amount of time during installation.

By using AC distribution boards, individual parts of the system can be protected or disconnected for maintenance and repair work without taking the entire PV system out of operation. In addition, versions with overvoltage protection or residual current circuit breakers protect the PV system against overvoltage couplings and excessive currents.

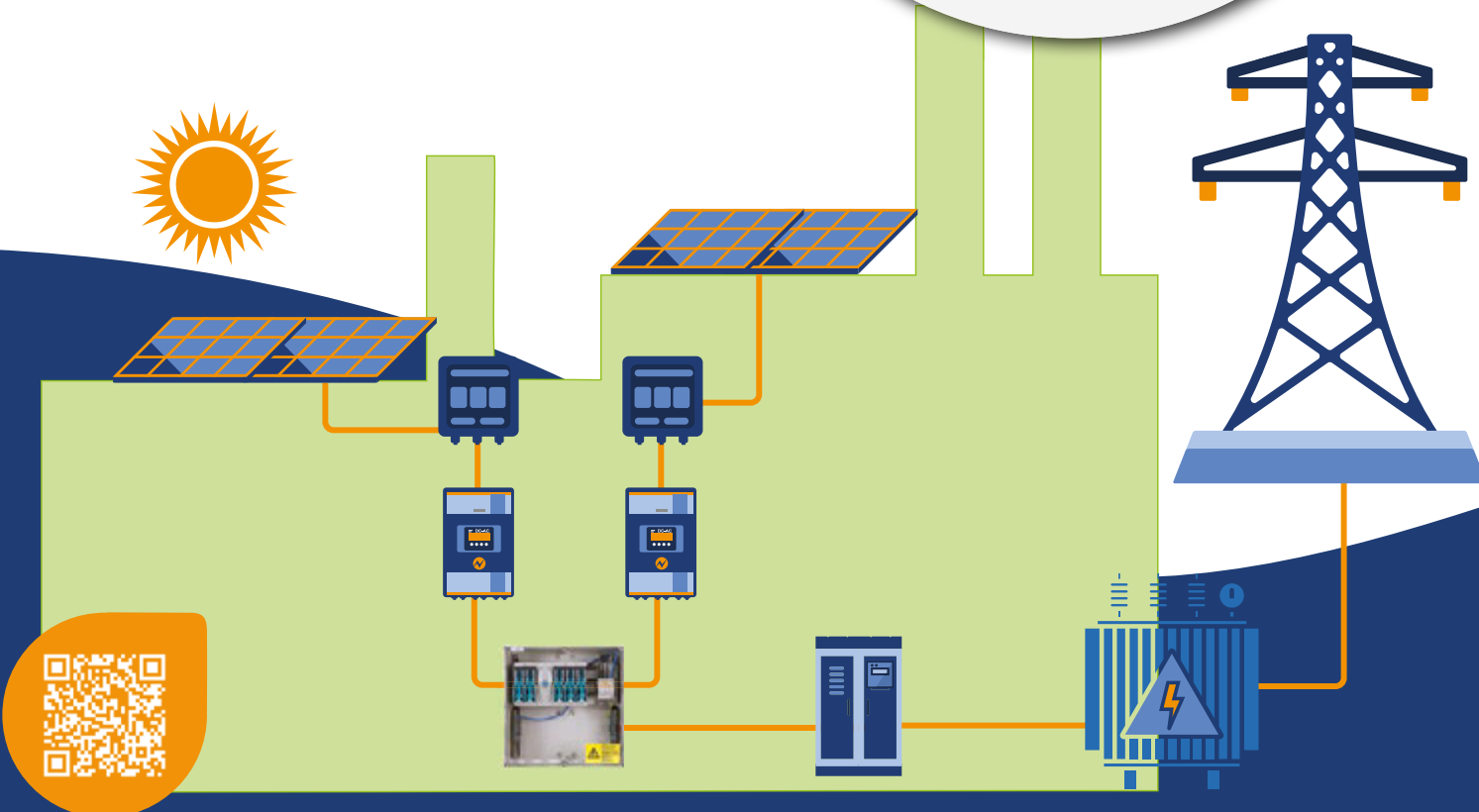
Enwitec's modular concept offers a high degree of flexibility to adapt our standard products to individual customer requirements.

Your advantages:

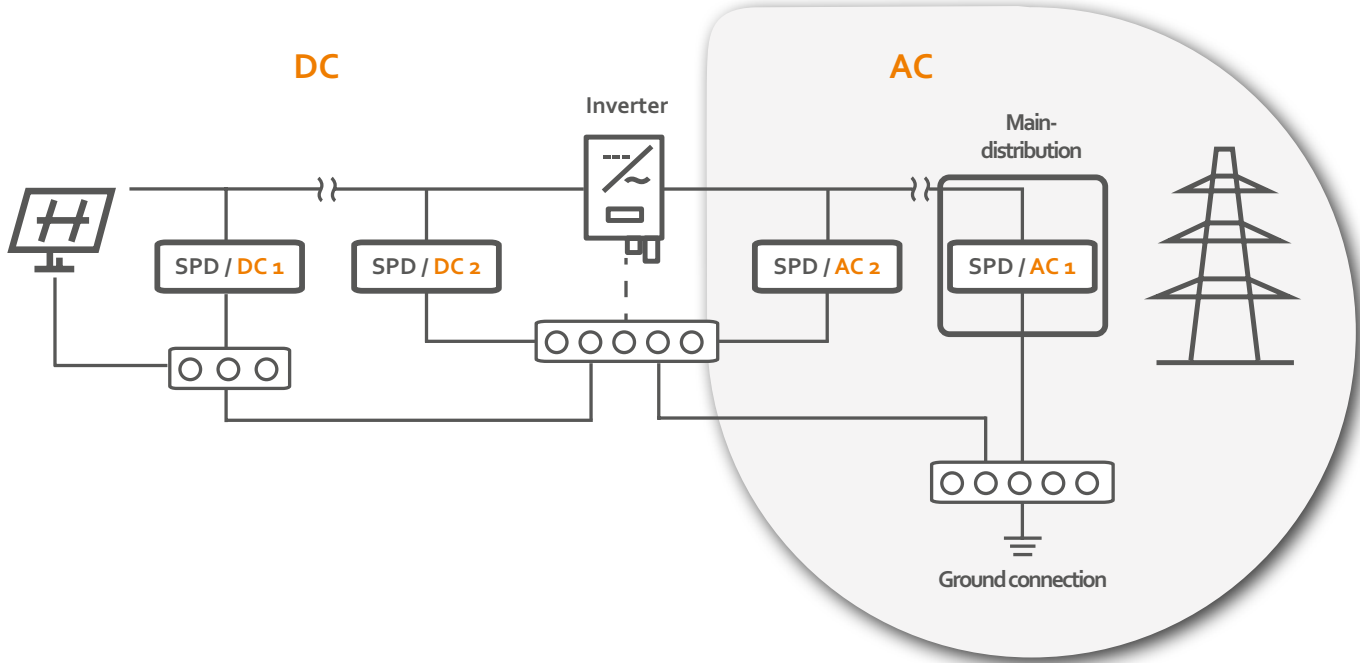
- Protection against overvoltage on the AC side
- Reduce the amount of wiring required
- Easy way to measure the system during maintenance or in the event of a fault
- Simple merging of several string inverters
- Integration of data logger possible

Options:

- overvoltage protection
- NH load-break switches/automatic circuit-breakers Mains forms (TN-C, TN-S...)
- Country-specific incl. RCD if applicable
- Air conditioning/heating
- Wall or plinth mounting



Answer the questions in the table below to determine which overvoltage protection is required for your installation on the AC side. The chart illustrates:  
(AC1) on or in the inverter  
(AC2) in the main distribution



external lightning protection system available?	Separation distance complied with?	Cable length larger than 10 metres?	SPD / AC 1	SPD / AC 2
no	-	yes	TYPE 2 AC	TYPE 2 AC
no	-	no	TYPE 2 DC	-
yes	yes	yes	TYPE 2 DC	TYPE 2 DC
yes	no	yes	TYPE 2 DC	-
yes	no	no	TYPE 1 AC	-

Article no.	Matchcode	Net shape	Mains voltage	Number Inverters	overvoltage protection	Fuse type
10015678	3AC-400-TNC-1-NH00-X-X-W-PES-V-1.0	TNC	400 VAC	1	-	NH00
10015392	3AC-400-TNC-2-NH00-X-X-W-PES-V-1.0	TNC	400 VAC	2	-	NH00
10015606	3AC-400-TNC-3-NH00-X-X-W-PES-V-1.0	TNC	400 VAC	3	-	NH00
10015916	3AC-400-TNC-4-NH00-X-X-W-PES-V-1.0.1	TNC	400 VAC	4	-	NH00
10015918	3AC-400-TNC-6-NH00-X-X-W-PES-V-1.0.1	TNC	400 VAC	6	-	NH00
10015380	3AC-400-TNS-2-NH000-X-X-PES-1.0	TN-S	400 VAC	2	-	NH000
10015385	3AC-400-TNS-3-NH000-X-BC-PES-1.0	TN-S	400 VAC	3	Type 1/2	NH000
10015381	3AC-400-TNS-3-NH000-X-X-PES-1.0	TN-S	400 VAC	3	-	NH000
10015383	3AC-400-TNS-5-NH000-X-BC-PES-1.0	TN-S	400 VAC	5	Type 1/2	NH000
10019566	Field connect 800	TN-S	800VAC	5	Type 1/2/3	NH1
10019560	Field connect 400	TN-S	400VAC	5	Type 1/2	NH1

Further articles on request.



# FIELDCONNECT 400 & 800

Your partner for reliable energy distribution

The FieldConnect 400 and 800 is an AC distribution board for the 230/400V grid and for the 800V grid, designed for a total system output of up to 500 KW (552 KVA) and up to 1 MW (1.1 MVA) respectively, maximum operating current of 800A and a flexible, project-specific design, it sets new standards in terms of performance and availability.

It offers a reliable and flexible solution for the distribution of AC power. It is prepared for high thermal and electrical loads and can be used for both indoor and outdoor applications. The distribution board is equipped with a high-quality 185mm busbar system and offers various connection options to meet the specific requirements of your projects.

Maximise the efficiency and security of your energy infrastructure with the FieldConnect 400/800. Contact us today for more information and a personal consultation!



## What makes the FieldConnect so special?

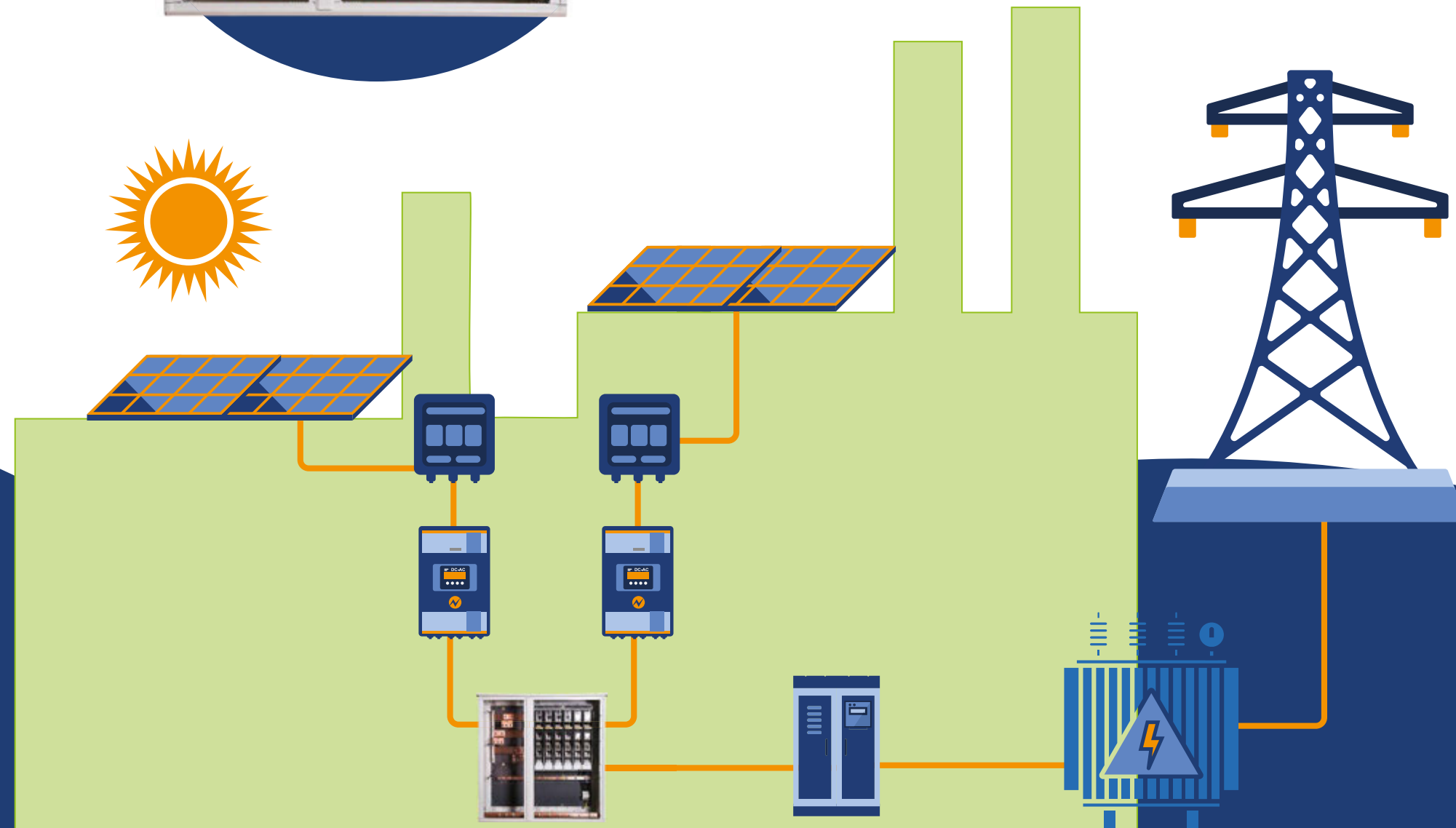
- **Universal applicability:** Suitable for indoor and outdoor applications, flexible integration of safety devices.
- **High load capacity:** Designed for a total system output of 500 KW (552 KVA) or 1 MW and a maximum operating current of 800A.
- **Safety standards:** Complies with the highest European safety standards (EN 61439-1; EN 61439-2).

## Technical specifications for FieldConnect 400:

- **AC distributor 230/400V 50Hz** in accordance with EN 61439-1 and EN 61439-2
- **Maximum operating current of 800A** (at  $\cos \phi 0.9$ )
- **Mains feed:** Standard cable lugs M12 (3 x per phase busbar)
- **Outgoing circuit:** 5 x NH01 switch-disconnector strip with M10 cable lug connections
- **overvoltage protection type 1/2 integrated**
- **5-pole busbar system:** Prepared as standard for a TN-S mains system
- **Outdoor installation:** recessed base or base for floor mounting possible
- **Outdoor housing:** Made of glass fibre-reinforced polyester material and in protection class II

## Technical specifications for FieldConnect 800:

- **AC distributor 800V 50Hz** in accordance with EN 61439-1 and EN 61439-2
- **Maximum operating current of 800A** (at  $\cos \phi 0.9$ )
- **Mains feed:** Standard cable lugs M12 (3 x per phase busbar)
- **Outgoing circuit:** 5 x NH01 switch-disconnector strip with M10 cable lug connections
- **overvoltage protection type 1/2 integrated**
- **5-pole busbar system:** Prepared as standard for a T(N)-S mains system
- **Outdoor installation:** recessed base or base for floor mounting possible
- **Outdoor housing:** Made of glass fibre-reinforced polyester material and in protection class II



# CENTRALCONNECT 500/800

Centralised control and protection for your stand-alone system

The CentralConnect 500/800 distributes and controls the power of a stationary electrical storage system comprising several AC-coupled battery inverters. It connects consumer loads and photovoltaic inverters in an AC coupling. When photovoltaic generation is low, a public grid or an emergency generator can be switched on. All power supply sources and loads are protected by integrated fuses or circuit breakers. Loads can be prioritised and switched off when the battery's state of charge is low.



## What makes the CentralConnect 500/800 so special?

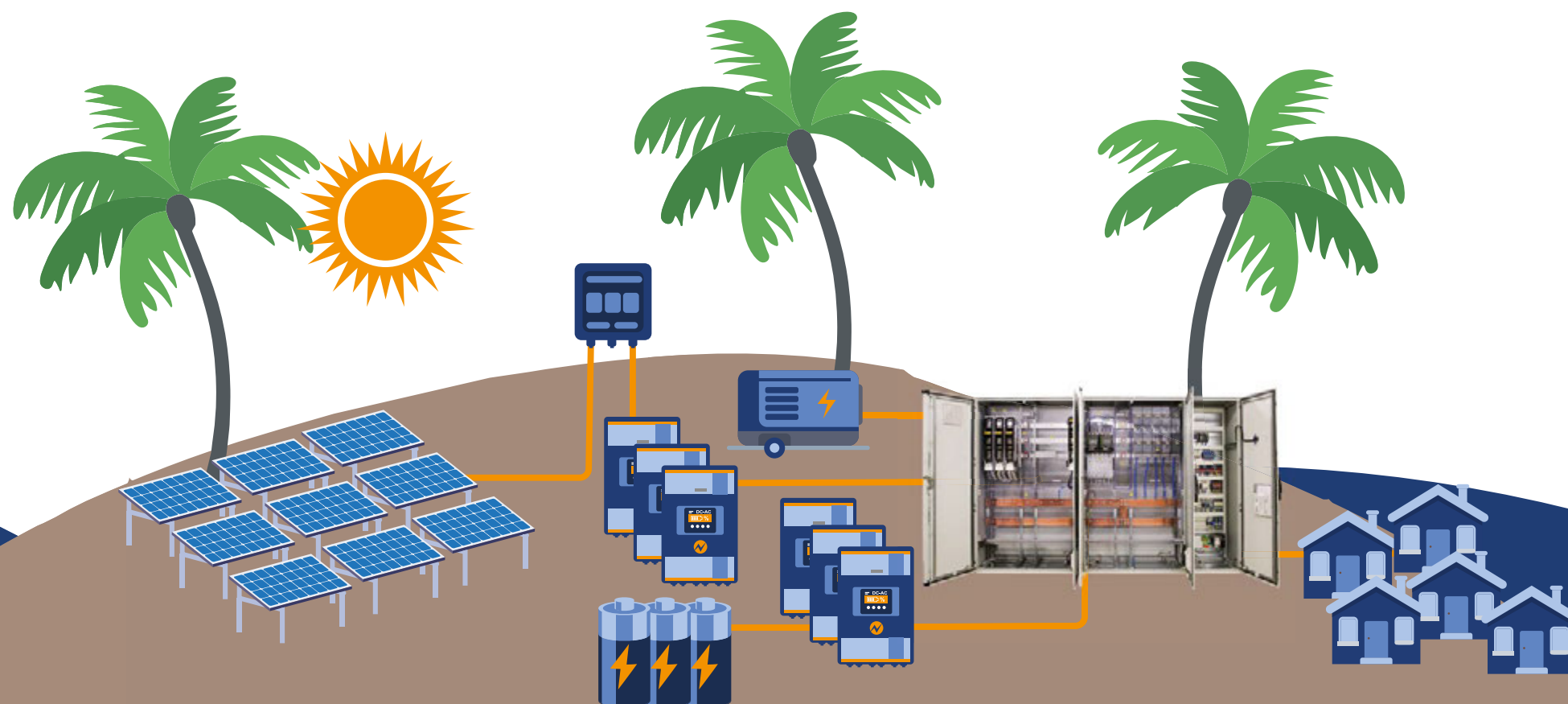
- **All-in-one control cabinet system:** For decentralised, large stand-alone systems.
- **Centralised power distribution and power control:** In the stand-alone grid.
- **Central communication control cabinet:** For measuring and control components.
- **Compact design:** For high ambient temperatures.
- **Sophisticated surge protection concept:** For maximum availability.
- **High-quality components:** For maximum reliability.
- **Generously dimensioned cable connections:** For easy installation.
- **Partial contact protection covers:** Easy to maintain.
- **Powder-coated steel enclosure system:** For indoor installation.

## Technical specifications for 500 kW class:

- **Variant 1:** Connection for 10 x 50 kW battery inverter, max. 690 kW emergency generator, PV connection: max. 750 kW, load max. 500 kW, Dimensions: 3000 x 2200 x 600 mm, approx. 810 kg, Item number 10018946.
- **Variant 2:** As variant 1, but with generator protection device, approx. 850 kg, article number 10018967.
- **Variant 3:** As variant 2, but with transfer switch for switching between generator or mains recharging, approx. 880 kg, article number 10018968.

## Technical specifications for 800 kW class:

- **Variant 1:** Connection for 16 x 50 kW battery inverter, max. 800 kW emergency generator, PV connection: max. 1000 kW, load max. 800 kW, Dimensions: 4000 x 2200 x 600 mm, approx. 1200 kg, Item number 10019237.
- **Variant 2:** As variant 1, but with generator protective device, approx. 1240 kg, article number 10019236.
- **Variant 3:** As variant 2, but with transfer switch for switching between generator or mains recharging, approx. 1300 kg, article number 10018593.



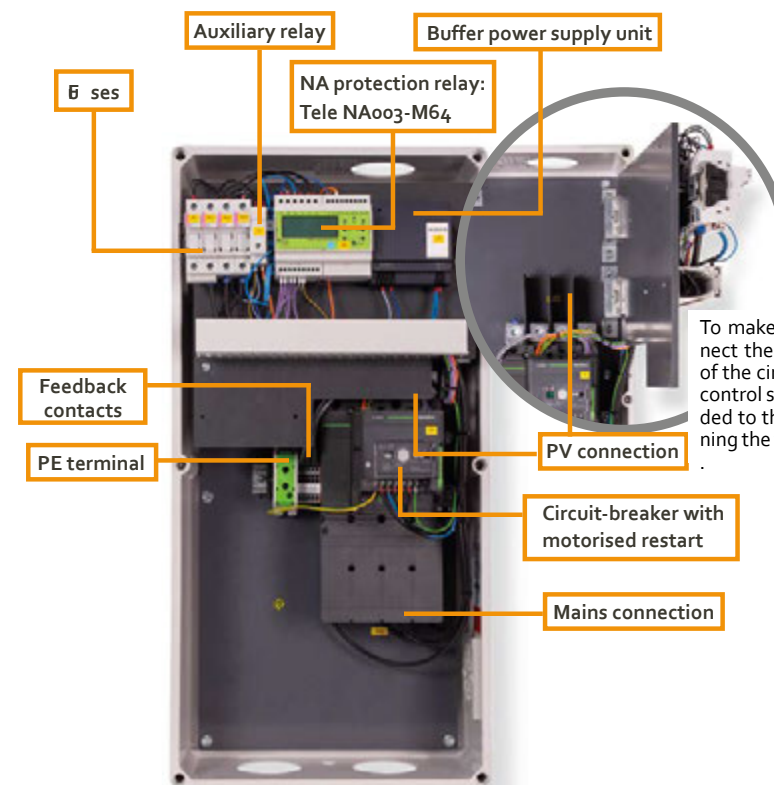


# MAINS AND SYSTEM PROTECTION

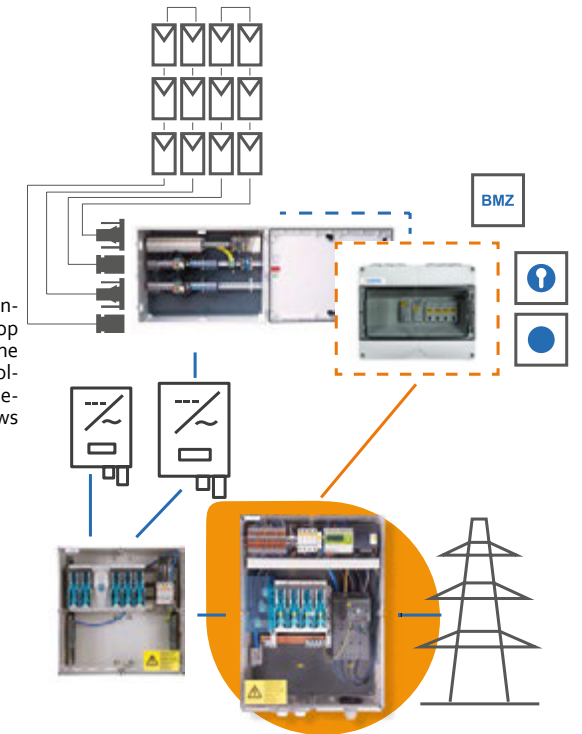
Compliance with voltage and frequency limits, as well as disconnection of island grids

The task of grid and system protection is to maintain voltage and frequency limits in the electricity grid, for which the grid operator is responsible. It intervenes in the event of a grid fault and disconnects the photovoltaic system from the public low-voltage grid. Our new variants now also enable direct coupling with the fire brigade switch in order to optimally protect the system in emergencies.

- Variants with integrated AC distributor for direct inverter connection!
- Power connection can be clamped directly up to including 172.5 KVA variant (no cable lug required)
- Project-dependent flexibility with the new 276 KVA variants:
  - Installation of current transformers possible (transformer lugs 30 x 10 mm)
  - Variant with simple direct cable lug connections
  - Variant with 2 x NH02
  - Switch-disconnector at the input and 3 x NH01 switch-disconnector at the output
  - Variant - can be freely equipped with NH switch-disconnectors (available as accessories)



To make it easier to connect the cable to the top of the circuit-breaker, the control section can be folded to the right by loosening the two fixing screws



## OUR SOLUTIONS: Mains-compliant Connecting your energy generation systems

- A device for the local and international market
- Easy handling for service personnel and commissioning engineers
- Preconfigured parameter sets for various countries in Europe and worldwide
- Individual solutions can be realised thanks to a wide range of configuration options



# POWERCONTROL 500

Certified control and telecontrol technology for PV systems  
- efficient, safe and cost-effective.

The enwitec PowerControl 500, developed in 2025, is a state-of-the-art generation plant controller (EZA controller) for photovoltaic systems in the C&I (Commercial & Industrial) and Utility market. Developed to fulfil the latest VDE/FNN guidelines, the PowerControl 500 offers a comprehensive solution for the control and monitoring of PV systems.

The PowerControl 500 acts as an interface to the grid operator and communicates the required setpoint specifications for the feed-in of active power (kW) and reactive power (kvar) to the generating units. It continuously compares the setpoint and actual values and transmits the calculated control variables back to the generating units to ensure grid-compliant feed-in management.

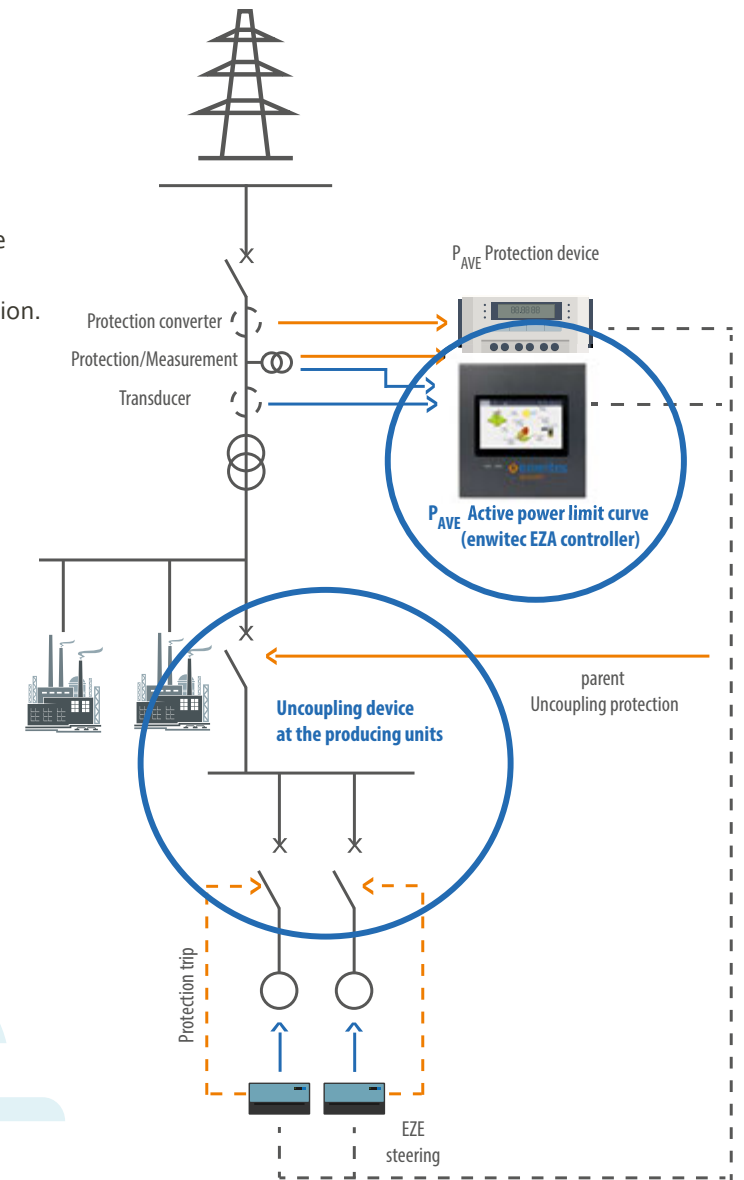


## What makes the PowerControl 500 so special?

- **Certification:** EZA controller certified according to VDE-AR-N 4110.
- **Telecontrol technology:** Supports IEC 101/104 or analogue technology.
- **Direct marketing:** Integrated interface via VPN-encryption.
- **Remote maintenance:** Commissioning via remote maintenance, no cost-intensive on-site commissioning required.
- **Compatibility:** Woodward protection devices can be integrated via Modbus TCP.

## Technical specifications

- All common inverters via Modbus TCP or RS485
- Approved meters for VDE 4110 via Modbus TCP or RS485
- Telecontrol technology according to IEC 101/104 or analogue technology
- Direct marketers via VPN or via contacts
- Redispatch 2.0
- CHP, storage
- Integration of protection device (e.g. Woodward) via Modbus TCP
- Commissioning via remote maintenance (request test, system acceptance)
- Up to 4 RS485 interfaces



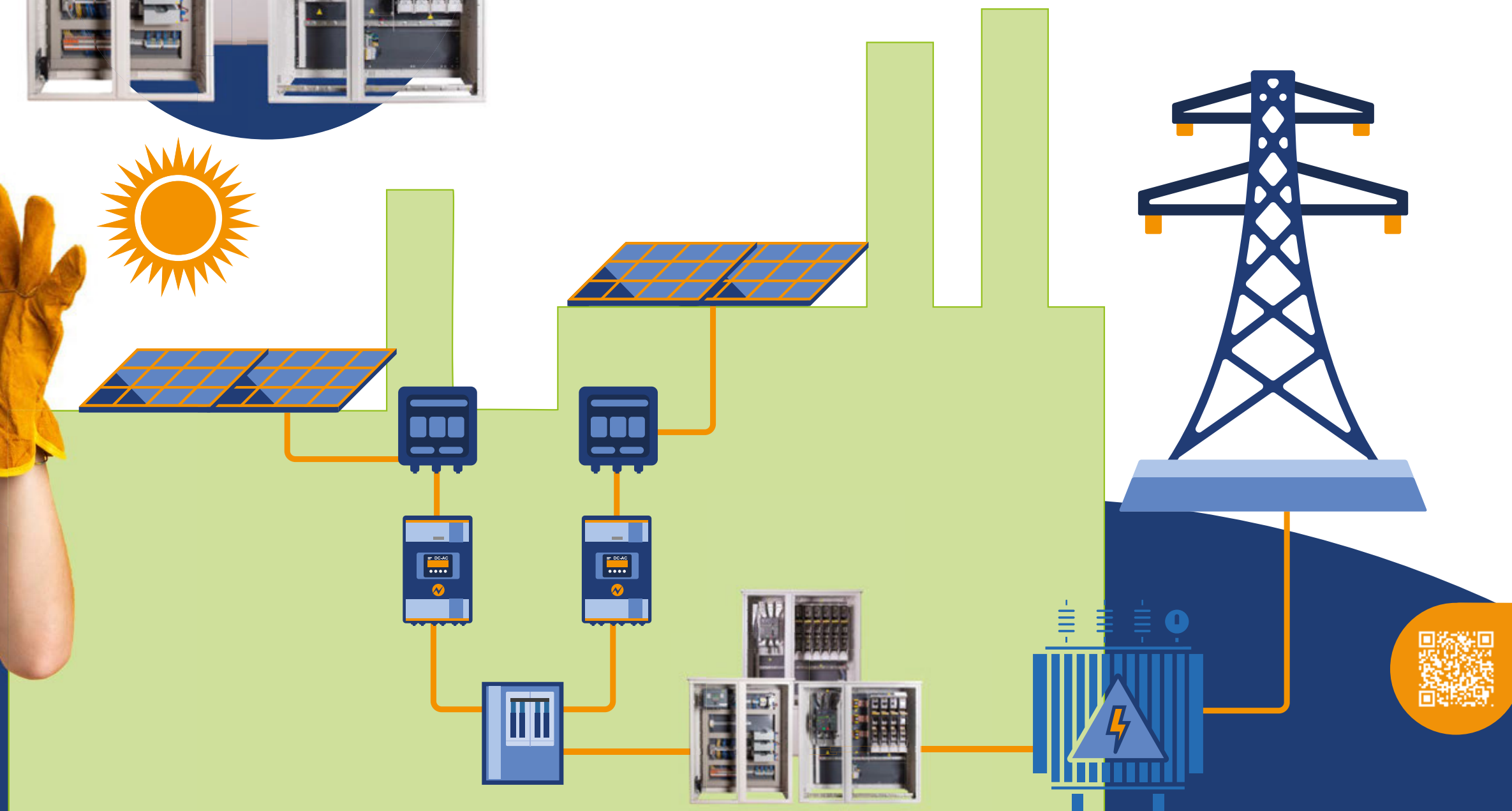


# POWERSHIELD 500

Compliance with voltage and frequency limits,  
and disconnection of island grids

Discover one of our highlights in 2025 - the PowerShield 500, which was specially developed for the grid and system protection of PV systems with a total output of up to 500 kW.

The PowerShield 500 is a state-of-the-art grid and system protection device that has been developed in accordance with the new extension of the power limits of the Low Voltage Directive VDE-AR-N 4105. It serves as decoupling protection on the generating unit and is only to be operated in conjunction with a higher-level decoupling protection or equivalent according to TAR of the respective grid connection level (normally "medium voltage" according to VDE-AR-N 4110). The product includes the mains protection relay, associated test disconnect terminals, the communication connection and the coupling switch.



## What makes the PowerShield 500 so special?

- **Safety:** The PowerShield 500 is certified in accordance with VDE-AR-N 4105 and VDE-AR-N 4110 and offers maximum reliability and flexibility for PV systems up to 500 kW.
- **Versatile application:** The robust housing is suitable for both indoor and outdoor applications and offers protection ratings up to IP54.
- **Project-specific customisation:** The PowerShield 500 can be customised to meet the requirements of your project
- **Simple installation:** Depending on the size, wall, floor or recessed mounting is possible, making installation flexible and uncomplicated.
- **Comprehensive protection:** Including mains protection relay, test disconnect terminals and communication connection for higher-level decoupling protection.

## Technical specifications

- **Decoupling protection:** Up to a cumulative power of 500 kW and a maximum feed-in power of 270 kW in accordance with 4105 and 4110
- **Housing:** Powder-coated sheet steel or GRP-reinforced polyester housing
- **Mounting options:** Wall, floor or recessed mounting
- **Protective relay:** With component certificate in accordance with VDE-AR-N 4110
- **Communication connection:** For higher-level Decoupling protection (PAV<sub>E</sub> protective device)
- **EZA controller:** option for installation with integrated telecontrol technology and direct marketer interface

# POWERSHIELD PRO 1100

Certified control and telecontrol technology for PV systems  
- efficient, safe and cost-effective.

The enwitec PowerShield Pro 1100 is an advanced solution for grid and system protection of photovoltaic systems with an output of 500 kW up to 1.1 MW. Developed to fulfil the latest VDE guidelines, the PowerShield Pro 1100 offers comprehensive protection and maximum efficiency for your PV systems.

The PowerShield Pro 1100 acts as decoupling protection and ensures compliance with the VDE-AR-N 4110 medium-voltage directive. It comprises the higher-level decoupling circuit breaker with communication connections, as well as the decoupling protection (protective relay with test disconnect terminals + circuit breaker) on the generating units to ensure a safe and reliable connection to the grid operator.



## What makes the PowerShield Pro 1100 so special?

- **Certification:** Protective relay with component certificate in accordance with VDE-AR-N 4110.
- **Versatility:** Enclosure options for indoor and outdoor applications.
- **Flexibility:** Project-specific development and coordination with the grid operator.
- **Telecontrol technology:** Installation option for EZA controllers with integrated telecontrol technology and direct marketer interface.




## Technical specifications

- **Power:** Decoupling protection for generation units up to 1.1 MW.
- **Enclosure:** Options for powder-coated sheet steel or GRP-reinforced polyester enclosure.
- **Mounting:** Wall, floor or recessed mounting (plinth) depending on size.
- **Communication:** Connection for the integrated higher-level coupling switch (PAV<sub>E</sub> protective relay optionally included).
- **Standards:** VDE-AR-N 4110; EN 61439-1; EN 61439-2.



Article no.	Matchcode	Net shape	Performance	Country release	Country standard	Test disconnect terminal strip	Cable entries
10016127	feed-guard-NE7-PV-100KVA-TNS_TT_1.0	TT / TN-S	100 kVA	CH	NA/EEA-NE7 - CH2020	no	Cable grommet M75
10016128	feed-guard-NE7-PV-173KVA-TNS_TT_1.0	TT / TN-S	173 kVA	CH	NA/EEA-NE7 - CH2020	no	Cable grommet M75
10016124	feed-guard-NE7-PV-41,4KVA-TNS_TT_1.0	TT / TN-S	41.4 kVA	CH	NA/EEA-NE7 - CH2020	no	Cable grommet M50
10016125	feed-guard-NE7-PV-55,2KVA-TNS_TT_1.0	TT / TN-S	55.2 kVA	CH	NA/EEA-NE7 - CH2020	no	Cable grommet M63
10016126	feed-guard-NE7-PV-72,5KVA-TNS_TT_1.0	TT / TN-S	72.5 kVA	CH	NA/EEA-NE7 - CH2020	no	Cable grommet M63
10018522	NA-Schutz-NA4105-PV172.5KVA-TNS_TT	TT / TN-S	172.5 kVA	D	VDE-AR-N 4105:2018-11	no	Cable grommet M75
10018716	NA-Schutz-NA4105-PV-2x86.3KVA-TNS_TT_1.0	TT / TN-S	2 x 86.3 kVA	D	VDE-AR-N 4105:2018-11	no	Cable grommet M63
10018521	NA-Schutz-NA4105-PV86.3KVA-TNS_TT	TT / TN-S	86.3 kVA	D	VDE-AR-N 4105:2018-11	no	Cable grommet M63
10018566	NA-Schutz-PV-172.5KVA-NH-TNS_TT	TT / TN-S	172.5 kVA	D, A	VDE-AR-N 4105:2018-11 ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75/ Cable glands
10018567	NA-Schutz-PV-276KVA-TNS_TT_1.0	TT / TN-S	276 kVA	D, A	VDE-AR-N 4105:2018-11 ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75
10018565	NA-Schutz-PV-86.3KVA-NH-TNS_TT_1.0	TT / TN-S	86.3 kVA	D, A	VDE-AR-N 4105:2018-11 ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75/ Cable glands
10018545	NA-Schutz-PV-276KVA-NH-CT-TNS_TT_1.0	TT / TN-S	276 kVA	D, A	VDE-AR-N 4105:2018-11 ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75
10018524	NA-Schutz-TOR-PV-172.5KVA-TNS_TT_1.0	TT / TN-S	172.5 kVA	A	ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75
10018523	NA-Schutz-TOR-PV-86.3KVA-TNS_TT	TT / TN-S	86.3 kVA	A	ÖVE TOR R25 NS ASYNC	yes	Cable grommet M63
10018546	NA-Schutz-PV-276KVA-CT-TNS_TT_1.0	TT / TN-S	276 kVA	D, A	VDE-AR-N 4105:2018-11 ÖVE TOR R25 NS ASYNC	yes	Undrilled! Drill holes on request
10019614	NA-Schutz-TOR-OÖ-PV-172.5KVA-TNS_TT	TT / TN-S	172.5 kVA	A	ÖVE TOR R25 NS ASYNC	yes	Cable grommet M75
10019613	NA-Schutz-TOR-OÖ-PV-86.3KVA-TNS_TT	TT / TN-S	86.3 kVA	A	ÖVE TOR R25 NS ASYNC	yes	Cable grommet M63



Housing processing	Art. No.: 10018618	Art. No.: 10018618	Art. No.: 10018618
Current transformer	-	On request	On request
type 2 surge protection with NH00 with isolator	-	Art. No.: 10018625	Art. No.: 10018625
overvoltage protection type 1/2 with NH00 with isolator	-	Art. No.: 10018624	Art. No.: 10018624
NH2 separator	-	already 2 x on Mains page available	Art. No.: 10018623
NH1 isolator	-	already 3 x on PV page available	Art. No.: 10018622
2 x NH00 isolators	-	-	Art. No.: 10018621
4 x NH000 separators	-	-	Art. No.: 10018620
Buried base	Art. No.: 10019611	Art. No.: 10018616	Art. No.: 10018616
Short base	Art. No.: 10019606	Art. No.: 10018617	Art. No.: 10018617
Wall bracket	in the scope of delivery	not possible	not possible
	 10018567	 10018545	 10018546

Direct connection to a copper rail or installation of a fuse-switch disconnect is possible here.  
Optionally, a maximum of 2 of these components can be fitted on the grid side and 3 on the PV side (same or mixed).

Machining, but without components  
z. E.g. screw connections

# MAINS SWITCH BOXES

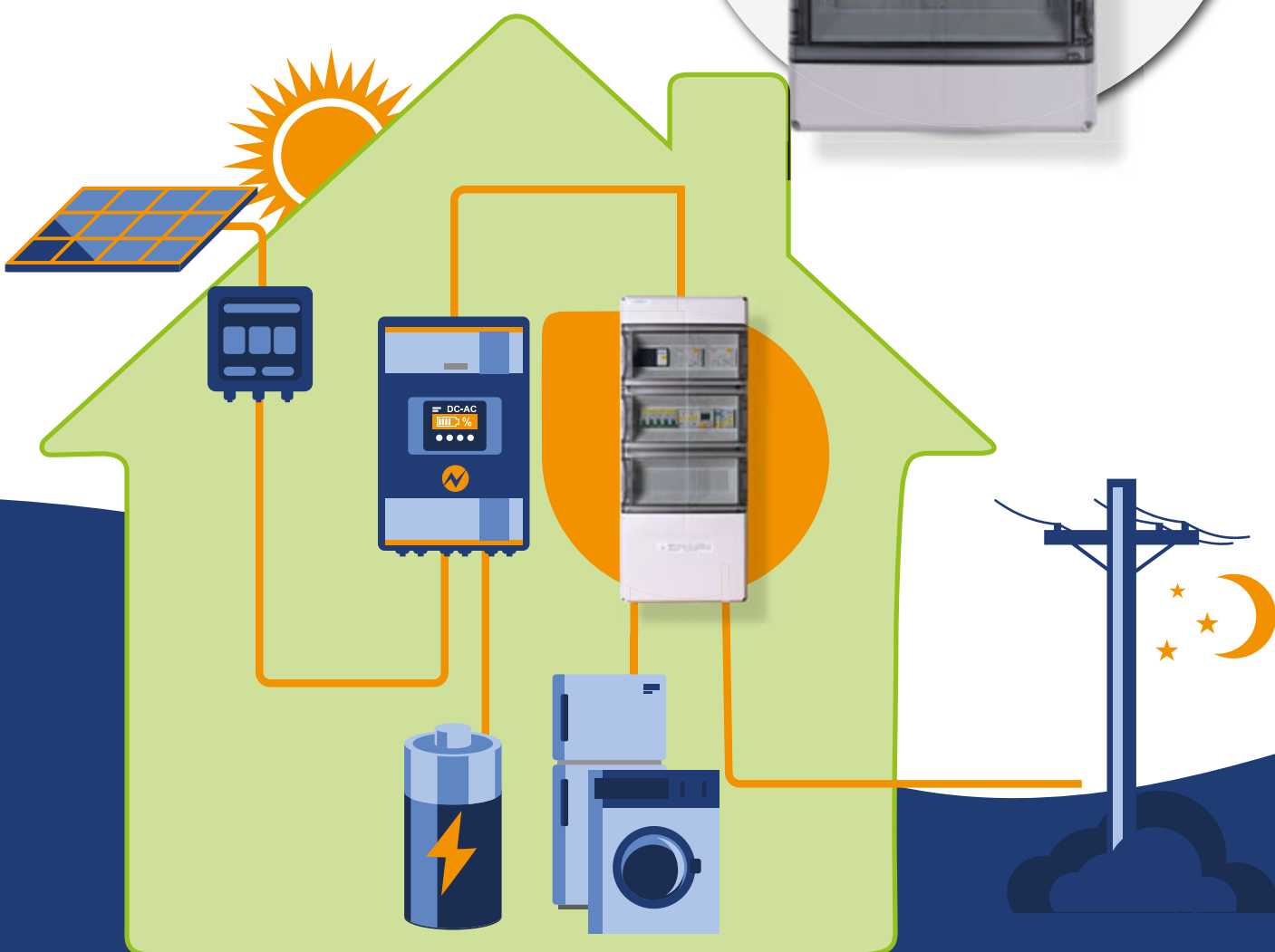
## Reliable backup power supply

In the event of a grid failure, the backup power system safely disconnects the connected PV system and the consumer distribution from the public grid and simultaneously provides the customer with a backup power supply.

Thanks to the ready-to-connect and pre-tested systems from enwitec, installers no longer have to undertake the time-consuming and cost-intensive process of installing the changeover unit themselves, nor do they have to provide their own warranty.

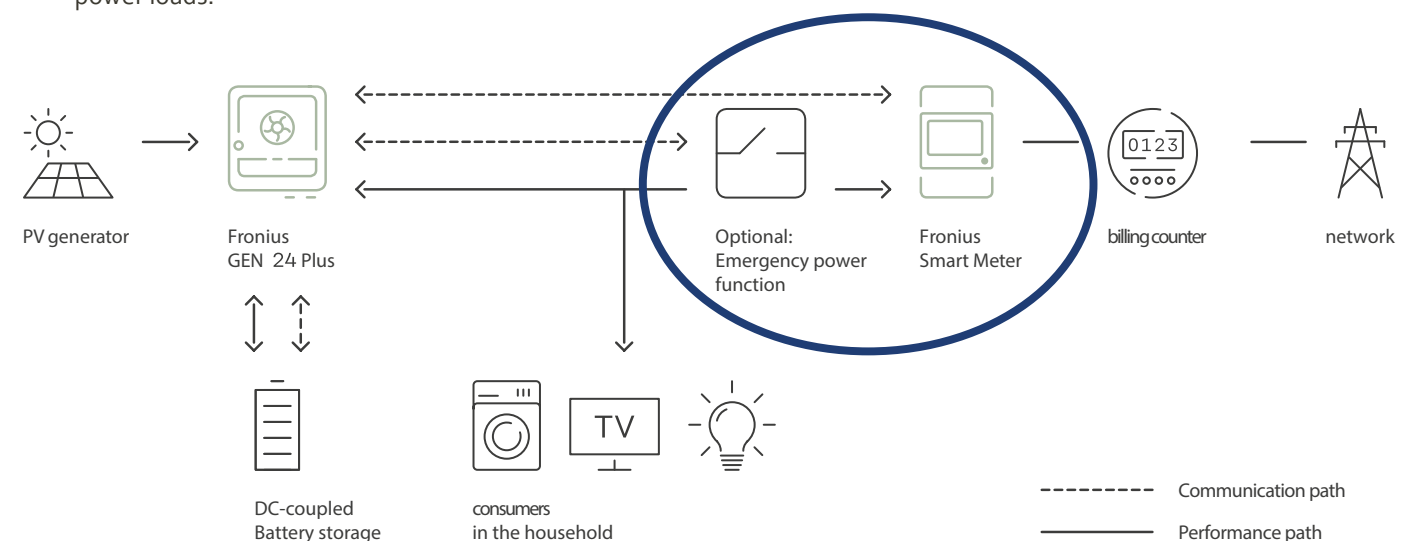
enwitec supplies solutions that are officially approved by Fronius, KOSTAL, LG and SMA and listed at.

Other manufacturers in preparation.



## Tasks of our mains switchover boxes:

- Measurement and transmission of the parameters required for energy management using an integrated smart meter
- Mains disconnection in the event of mains failure/mains fault
- Reconnection in the event of mains recovery/ mains fault rectification
- Establishing the safety-relevant earth connection in emergency power mode (with all-pole disconnection)
- If required: Separation of the consumer circuits into "normal" consumer loads (without emergency power functionality) and emergency power loads.



Source: Fronius





# POWERBACKUP DUAL EU

Simple installation, full backup power!

The enwitec Power Backup Dual EU is an innovative grid switching box for off-grid capable battery and hybrid inverters with two AC outputs ("Grid" and "Backup"). Developed for the residential market, it offers maximum security and flexibility for your power supply.

Experience the future of power supply with the enwitec Power Backup Dual EU. Contact us today to find out more about this innovative product and how it can optimise your projects.



## Technical specifications

- **Maximum "Mains" back-up fuse:** 63A.
- **Mains forms in consumer distribution:** TN-S, TT (all-pole disconnection).
- **Compatibility:** For all battery/hybrid inverters up to an output of 30 kW with integrated partial backup.
- **Backup function:** Enables "full backup" - all consumer circuits can be supplied in the event of a backup.
- **Connections:** Inverter, grid, for consumer distribution
- **Quality standards/certifications:** CE (low voltage and EMC); EN 61439-1; EN 61439-3; EN 61000-6-1, EN 61000-6-3.

## What makes the PowerBackup Dual EU so special?

- **Universal applicability:** Compatible with all off-grid battery and hybrid inverters with two three-phase AC connections.
- **Complete backup functionality:** All consumer circuits can be supplied in the event of a backup without the need for time-consuming conversion of the consumer distribution system
- **Integrated current monitoring:** Protects the inverter from overload in the event of a fault
- **Simple installation:** Installation option for circuit breaker and residual current circuit breaker of the inverter

## Preliminary compatibility list:

Manufacturer	Type of inverter	Services (KW)
SOLIS	S6-EH3P(12-20)K-H	12 / 15 / 20
SOLAX	X3 HYBRID G2, X3 HYBRID G4, X3 ULTRA	5 / 6 / 8 / 10, 5 / 6 / 8 / 10 / 12 / 15, 15 / 19.9 / 20 / 25 / 30
Growatt	MOD 3~10KTL3-XH(BP), SPH4000-10000TL3BH-UP	3 / 4 / 5 / 6 / 7 / 8 / 9 / 10, 4 / 5 / 6 / 7 / 8 / 10
GOODWE	GW5K to GW10K-ET, GW5KN - GW10KN-ET GW15K - GW29.9K-ET, GW5K- GW10K-BT	5 / 6.5 / 8 / 10, 5 / 6.5 / 8 / 10 15 / 20 / 25 / 29.9, 5 / 6 / 8 / 10
SOLINTEG	MHT-4K to MHT-12K-25, MHT-10K to MHT-20K-40, MHT-25K to MHT-30K-100	4 / 5 / 6 / 8 / 10 / 12, 10 / 12 / 15 / 20 25 / 30
SUNGROW Clean power for all	SH5.0 to SH10RT and SH5.0 - SH10RT-20, SH15 to SH25T	5 / 6 / 8 / 10, 15 / 20 / 25
Trinasolar	TRH 6K-T2 to TRH 12K-T3	6/8/10/12
Deye	SUN-5 to SUN-12K-SG04LP3-EU, SUN-5 to SUN-25K-SG01HP3-EU-AM2	5 / 6 / 8 / 10 / 12, 5 / 6 / 8 / 10 / 12 / 15 / 20 / 25
SGFAR	AC-coupled energy storage inverter Hybrid energy storage inverter	5 / 6 / 8 / 10 / 15 / 20 5 / 6 / 8 / 10 / 15 / 20
SMA	STP Smart Energy 5.0 to 10.0	5 / 6 / 8 / 10
SUNPOWER	RESERVE-INV-1-P10-L3-INT	10
CHNT	ECH8~20K-TH-EU	8 / 10 / 12 / 15 / 18 / 20
FOX	H3-5.0 to H3-12.0E and AC3-5.0 to AC3-10.0-E, H3-5.0 - H3-15.0-Smart H3-Pro-15 to H3-Pro-30.0, AIO-H3-5.0 to AIO-H3-10.0	5 / 6 / 8 / 10 / 12, 5 / 6 / 8 / 9.9 / 10 / 12 / 15 15 / 20 / 24.9 / 25 / 29.9 / 30 5 / 6 / 8 / 10
IBC SOLAR	IBC Inverter 5 AS-H21, IBC Inverter 6 AS-H21, IBC Inverter 8 AS-H31, IBC Inverter 10 AS-H31, IBC Inverter 12 AS-H31	5, 6, 8, 10, 12



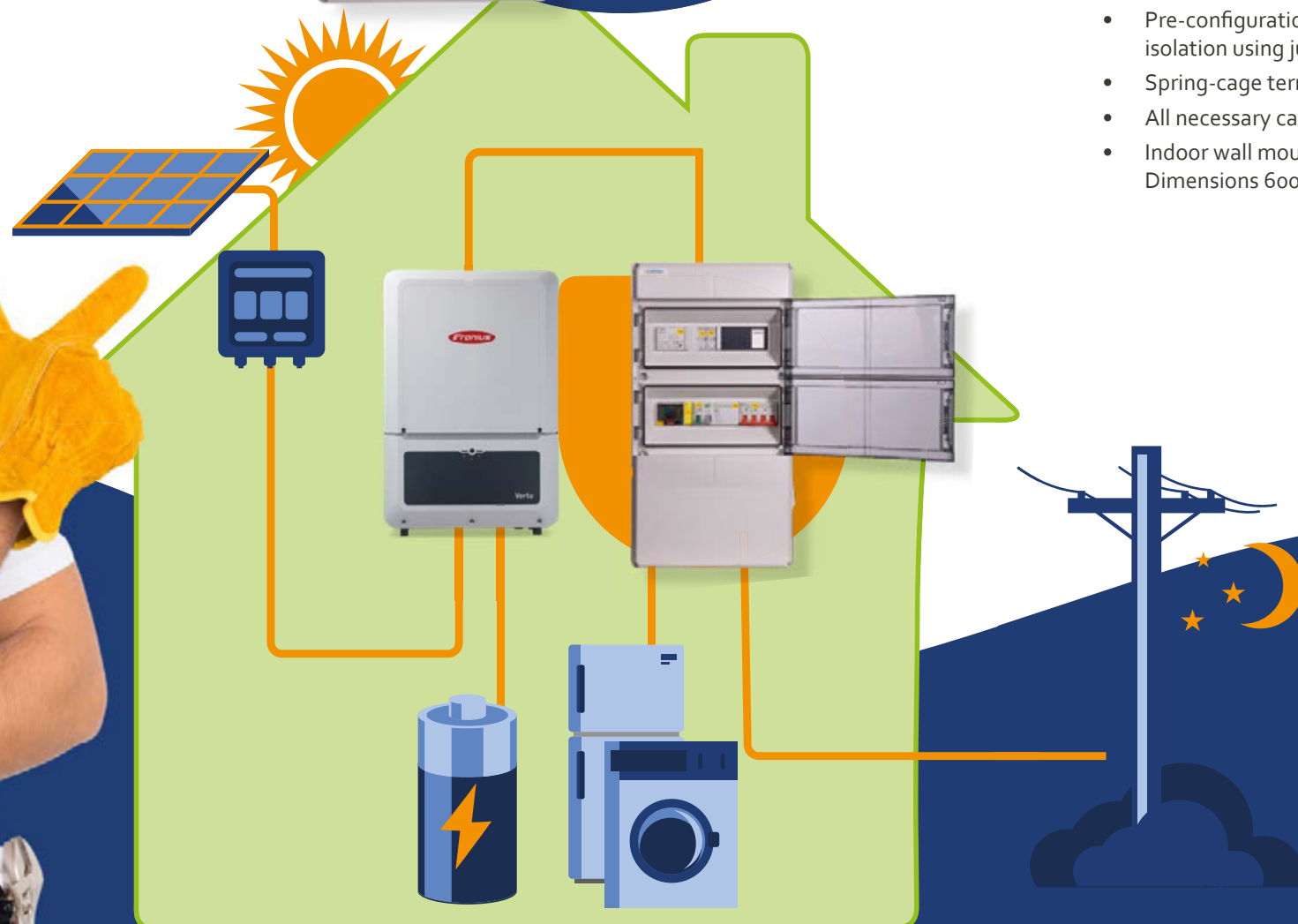
# POWERBACKUP 63 VERTO PLUS

Flexibility and reliability for your PV system

The enwitec PowerBackup 63 VERTO PLUS is the latest grid switching box for Fronius inverters, which has been specially developed for the European market. This innovative solution offers maximum flexibility and reliability for your photovoltaic system.

In the event of a power failure, the PowerBackup 63 VERTO PLUS provides an isolated network for a full back-up at.

It is available in two versions: one with FRT support (Fault Ride Through) for the EU market and one without FRT support for the German and Swiss markets. Both variants can be operated up to a maximum mains-side back-up fuse of 63A and offer pre-parameterisation for three-pole or all-pole disconnection.



## What makes the PowerBackup 63 VERTO PLUS so special?

- **Universal applicability:** For all new power classes of the Fronius VERTO PLUS and all standard supply networks.
- **FRT support:** The FRT variant fulfils the normative requirements of many EU countries.
- **High connection capacity:** Connection up to 63A back-up fuse possible, compared to Fronius' own backup products at, which only reach up to 35A.
- **Robust construction:** Improved design based on years of experience, resulting in high reliability and customer satisfaction.

## Technical specifications Variant 1 - "without FRT" (article number 10019509):

- Exclusively for the **German market (+ Switzerland)**
- Max. Mains" back-up fuse 63A
- Incl. Fronius Smart Meter TS65A-3
- For supply networks: TN-C; TN-S; TT (no TN-C network in consumer distribution)
- Suitable for all performance classes VERTO PLUS
- Incl. "MCB" all-pole circuit breaker and "RCD" residual current circuit breaker (for mains operation in the TT network)
- Pre-configuration for three-pole or all-pole isolation using jumpers
- Spring-cage terminal connections throughout
- All necessary cable glands at Accessories
- Indoor wall mounting, Dimensions 600 x 315 x 155mm

## Technical specifications Variant 2 - "with FRT" (article number 10019335):

- For the **entire EU 27 market** (except Italy and DE/Switzerland)
- Max. Mains" back-up fuse 63A
- Incl. Fronius Smart Meter TS65A-3
- For supply networks: TN-C; TN-S; TT (no TN-C network in consumer distribution)
- Suitable for all performance classes VERTO PLUS
- Incl. "MCB" all-pole circuit breaker and "RCD" residual current circuit breaker (for mains operation in TT mains)
- Preconfiguration for three-pole or all-pole disconnection using jumpers
- Spring-cage terminal connections throughout
- All necessary cable glands in the accessories
- Indoor wall mounting, Dimensions 600 x 315 x 155mm



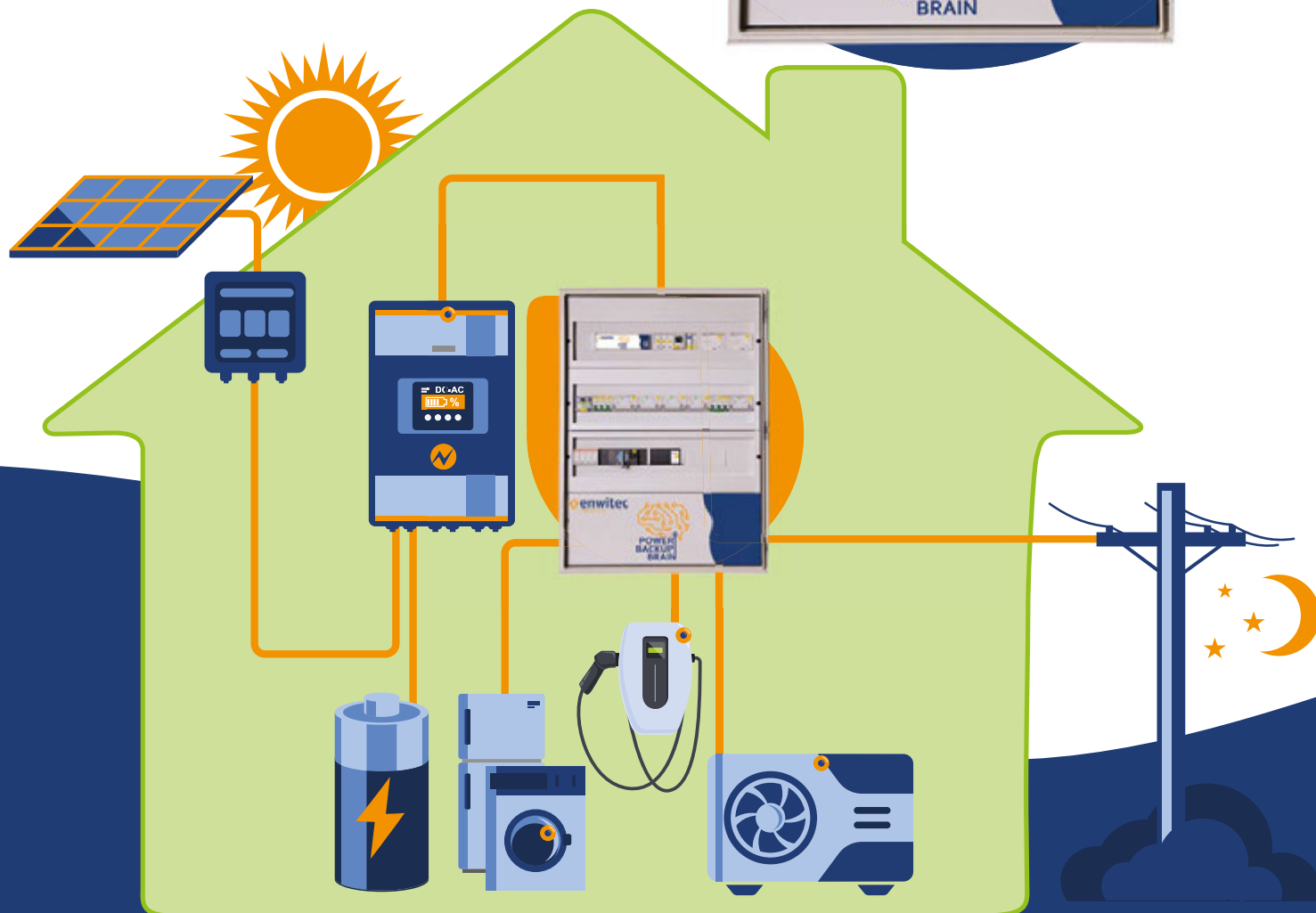


# POWERBACKUP BRAIN

The ultimate smart backup solution for your energy systems

Discover the PowerBackup Brain - the ultimate smart backup solution for your energy systems! This revolutionary full backup solution seamlessly combines an integrated energy management system (EMS), which also utilises AI, with universal compatibility for all hybrid inverters up to 30 kW.

Our EMS technology records and analyses energy consumption, power flow, battery charge levels, daily weather data and electricity tariffs to maximise the efficiency and reliability of your systems. With functions such as adaptive emergency power reserve, load peak capping and generation peak capping, the PowerBackup Brain sets new standards in modern home technology. The intelligent control system optimises energy trading and comfort, provides forecast data for grid operators and enables dynamic adjustment of energy management. You also benefit from simple installation without the need for time-consuming conversion of the consumer distribution system! Ready for the entire EU, the PowerBackup Brain makes your home future-proof and offers maximum efficiency and security. Experience the future of energy supply with the PowerBackup Brain!



## Features:

- **PowerBackup Brain:** Perfectly integrated EMS unit
- **Full backup for ALL "partial backup" home storage systems up to 30kW**
- **No modifications to the existing consumer distribution system necessary**
- **Can be used throughout the EU**
- **Integrated AC distributor for connecting a heat pump, auxiliary heater, wallbox, hybrid inverter and much more.**
- **optional overvoltage protection**
- **Ethernet switch and suitable power supply included**

## Technical specifications

- **Maximum back-up fuse "Mains":** 63A.
- **Mains forms in consumer distribution:** TN-S, TT (all-pole disconnection).
- **Compatibility:** For all common battery/hybrid inverters up to an output of 30 kW with integrated partial backup.
- **Backup function:** Enables "full backup" - all consumer circuits can be supplied in the event of a backup.
- **Connections:** Inverter, grid, for consumer distribution
- **Quality standards/certifications:** CE (low voltage and EMC); EN 61439-1; EN 61439-2; EN 61439-3; EN 60255-26, EN 61000-6-2, EN 61000-6-3.

## What makes the PowerBackup Brain so special?

- **Universal applicability:** Compatible with all off-grid battery and hybrid inverters with two three-phase AC connections.
- **Complete backup functionality:** All consumer circuits can be supplied in the event of a backup without the need for time-consuming conversion of the consumer distribution system
- **Integrated current monitoring:** Prevents overloading and protects the inverter.
- **Simple installation:** Installation option for circuit breakers and residual current circuit breakers of the inverter



Article no.	Matchcode	Inverter	Country release	Max. thermal feed-through line	Separation
10014304	1PH_FRO_BBDAP_12KW_1PH_1.1_IT	Fronius Primo Gen24 Plus (3.0/3.6/4.0/4.6/5.0/6.0)	IT	12 kW	all-pole
10013676	1PH_SMA.SI_BBDAP_12KW_1PH_PREP_FR_1.0	SMA Sunny Island 4.0/6.0/8.0	FR	12 kW	all-pole
10017485	3PH_FRO_BBD3P_20KW_3PH_1.0	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	D	20 kW	three-pole
10016181	3PH_FRO_BBD3P_20KW_3PH_FRT	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	A	20 kW	three-pole
10015613	3PH_FRO_BBDAP_20KW_3PH	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	D, CH	20 kW	all-pole
10014305	3PH_FRO_BBDAP_20KW_3PH_1.1_IT	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	IT	20 kW	all-pole
10017349	3PH_FRO_BBDAP_20KW_3PH_FRT	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	A	20 kW	all-pole
10016114	3PH_FRO_BBDAP_20KW_3PH_SPL_1.0	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	D, CH	20 kW	all-pole
10015842	3PH_FRO_BBDAP_30KW_3PH_SPI_1.0_IT	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	IT	30 kW	all-pole
10016289	3PH_FRO_MTS-3P-3PH_FRT_1.0	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	D, A	35 kW	three-pole
10016117	3PH_FRO_MTS-AP-3PH_FRT_1.0	Fronius Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus	D-A-CH	35 kW	all-pole
10012549	3PH_IPC_SMA.SI_BBDAP_20KW_1PH_PREP_DACH_1.1	SMA Sunny Island 4.0/6.0/8.0	D, CH	20 kW	all-pole
10013728	3PH_IPC_SMA.SI_BBDAP_20KW_1PH_PREP_FR_1.0	SMA Sunny Island 4.0/6.0/8.0	FR	20 kW	all-pole
10016022	3PH_LG_BBD3P_20KW_3PH_FRT_1.0	LG ESS Home 8 and Home 10	A	20 kW	three-pole
10013677	3PH_LG_BBDAP_20KW_3PH_1.1	LG ESS Home 8 and Home 10	D-A-CH	20 kW	all-pole
10017468	3PH_KOSTAL_BBD3(A)P_63A_DE-CH	Kostal Plenticore G3	D, CH	35 kW	all- three-pole
10017469	3PH_KOSTAL_BBD3(A)P_63A_FRT_AUT_1.0	Kostal Plenticore G3	A	35 kW	all- three-pole
10017517	3PH_SMA.SI_BBDAP_35KW_3PH_PREP_AUT_1.0	SMA Sunny Island 4.0/6.0/8.0	A	35 kW	all-pole
10013549	3PH_SMA.SI_BBDAP_100KVA_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	100 kW	all-pole
10013762	3PH_SMA.SI_BBDAP_125KVA_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	125 kW	all-pole
10014230	3PH_SMA.SI_BBDAP_150KVA_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	150 kW	all-pole
10012569	3PH_SMA.SI_BBDAP_35KW_3PH_PREP_DACH_1.1	SMA Sunny Island 4.0/6.0/8.0	D, CH	35 kW	all-pole

Article no.	Matchcode	Inverter	Country release	Max. thermal feed-through line	Separation
10013729	3PH_SMA.SI_BBDAP_35KW_3PH_PREP_FR_1.0	SMA Sunny Island 4.0/6.0/8.0	FR	35 kW	all-pole
10013546	3PH_SMA.SI_BBDAP_40KW_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	40 kW	all-pole
10013092	3PH_SMA.SI_BBDAP_48KW_3PH_PREP_UK_1.2	SMA Sunny Island 4.0/6.0/8.0	UK	48 kW	all-pole
10013547	3PH_SMA.SI_BBDAP_55KW_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	55 kW	all-pole
10013548	3PH_SMA.SI_BBDAP_72.5KW_3PH_INT.HM_DACH_1.0	SMA Sunny Island 4.0/6.0/8.0	D, CH	72.5 kW	all-pole
10016510	3PH-ATNU-30KW-63A-3PH-DE-1.1	Mains genset switchover in accordance with VDN guideline "Emergency power gensets"	D	35 kW	all-pole
10019361	Power Backup Dual EU	Inverter-independent	EU	30 kW	three-pole/ all-pole
10019509	Power Backup Verto Plus D	Fronius Verto Plus	D, CH	35 kW	three-pole/ all-pole
10019335	Power Backup Verto Plus EU	Fronius Verto Plus	EU	35 kW	three-pole/ all-pole

## LISTENING

Article no.	Matchcode	Inverter	Country release	Max. thermal feed-through line	Separation
10011457	3PH_Bypass_Netzersatz_34.5KW_max. 63A_1.0	Mains changeover switch "Emergency power generators" according to VDN guideline	D-A-CH		all-pole
10010813	SK Legrand fan 30.5mm (036579)				

Further articles on request.



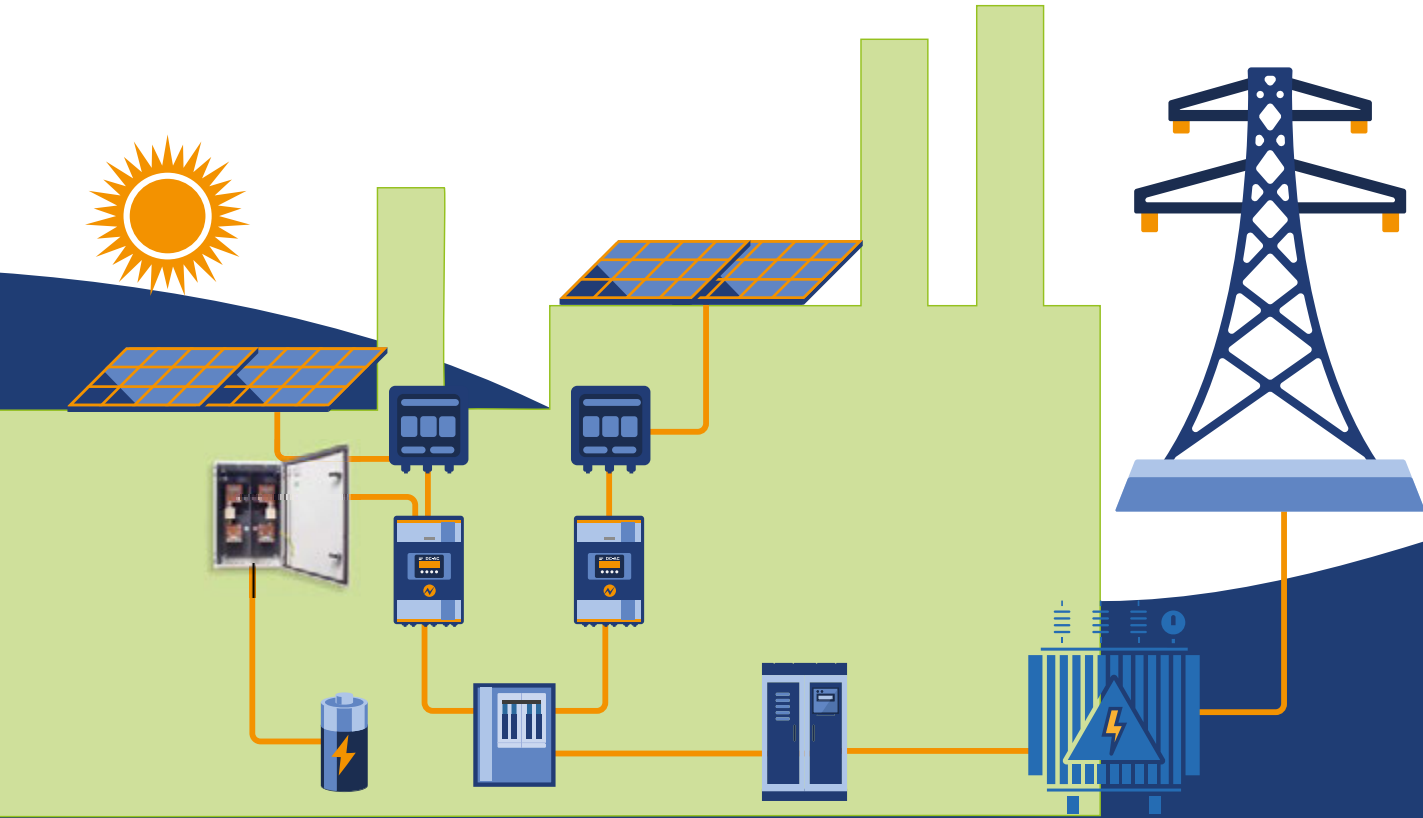
# BATTERY FUSE

## Protection for battery systems

The "BAT BREAKER" series of battery fuses was developed to protect mobile and stationary battery storage systems of various technologies (lead, lithium, etc.) against overcurrent and short circuits. The specially matched nominal values of the circuit breakers used offer optimum reliability and safety.

In contrast to the previously available battery protection, the enwitec BAT Breaker can be operated without protective equipment, which is particularly important as most energy storage systems are installed in private households.

- External, cost-effective DC fuse and distribution
- Simple wall mounting
- Simple activation/deactivation
- Compact design
- Fast installation and commissioning
- Simple parallel connection of several battery towers
- Fuse protection for positive and negative pole



Article no.	Matchcode	Number Inverters	Number of batteries	Tension	Rated current inverter	Rated current battery
10011034	BAT BREAKER -BIG 200-	3	3	75 V	200 A	-
10011143	BAT BREAKER -BIG 200VT-	3	3	75 V	200 A	-
10011141	BAT BREAKER -BIG 250-	3	3	75 V	250 A	-
10011144	BAT BREAKER -BIG 250VT-	3	3	75 V	250 A	-
10011033	BAT BREAKER -SLIM 200-	1	2	75 V	200 A	-
10011139	BAT BREAKER -SLIM 250-	1	2	75 V	250 A	-
10015859	BAT BREAKER-3xAccu_1xCharger_600VDC_HVS_HVM_1.0	1	3	600 V	32 A	32 A
10015451	BAT BREAKER-BYD_LVLPR_3xAcc_3xCharg_KS_exsf	3	3	60 V	250 A	250 A
10015647	BAT BREAKER-BYD_LVLPR_4xAcc_3xCharg_KS_exsf	3	3	60 V	250 A	250 A
10015452	BAT BREAKER-BYD_LVLPR-6xAcc-3xCharg_KS	3	6	60 V	250 A	250 A
10015453	BAT BREAKER-BYD_LVLPR-9xAcc-3xCharg_KS	3	9	60 V	250 A	250 A
10012459	BAT BREAKER-Spec.BYD-3xAccu-1x Charger_standard_KL	1	3	75 V	200 A	-
10012809	BAT BREAKER-Spec.BYD-3xAccu-1x Charger_standard_KS	1	3	75 V	200 A	-
10012582	BAT BREAKER-Spec.BYD-3xAccu-3x Charger_ex-safe_KS	3	3	75 V	200 A	200 A
10012417	BAT BREAKER-Spec.BYD-3xAccu-3x Charger_standard_KS	3	3	75 V	200 A	-
10012453	BAT BREAKER-Spec.BYD-4xAccu-3x Charger_ex safe_KS	3	9	60 V	250 A	250 A
10012460	BAT BREAKER-Spec.BYD-5xAccu-3x Charger_ex safe_KL	3	5	75 V	200 A	200 A
10012575	BAT BREAKER-Spec.BYD-5xAccu-3x Charger_ex safe_KS	3	5	75 V	200 A	200 A
10015462	enwitec BAT FUSE B-01 W	2/1	2	48 V	-	-
10015463	enwitec BAT FUSE B-03 W	4/3	1	48 V	-	-







LinQ Europe, based in Złocieniec, Poland, was founded in 2012 as a supplier of electrical equipment for manufacturers of service lifts for the wind sector. The expertise has been continuously expanded over the years. Today, LinQ is also known as a renowned manufacturer of electrical control cabinets and electromechanical assemblies. LinQ Europe reliably serves the markets in Europe, America and the Far East and is a valued partner in the industry thanks to its flexibility and adaptability.

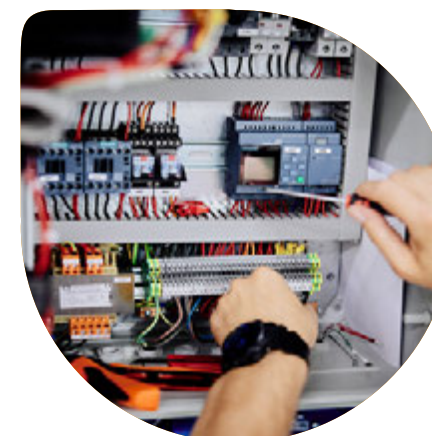
## Our products & services for the wind sector and industrial use:

- Development of electrical control systems for use in the wind industry (e.g. safety interlock, UL application)
- Development and assembly of conductor-guided and cable-guided electrical applications
- Electrical enclosures: High-quality enclosures for controlling and monitoring wind turbines
- Electromechanical assemblies: Precisely manufactured assemblies for reliable performance
- Engineering and design: Development and implementation of customised solutions for specific customer requirements
- Project support: Comprehensive support from planning to series production to ensure that projects are completed on time and within budget



## Our manufacturing options:

- Series production of electronic devices for various markets - with a strong focus on e-mobility and the wind industry.
- The company is certified according to the ISO 9001:2015 standard - certification of design and production process.
- Employees who are certified in accordance with the IPC/WHMA-A-620 production standard
- UL production certification possible on request
- Lean manufacturing knowledge and approach:
  - Stand-up meetings
  - KAIZEN programme
  - Poka-Yoke solutions
  - Gemba walk
  - Transparent KPI monitoring
  - Kanban production approach
  - Process flow monitoring
  - 8D reports, PFMEA and diff. Tools for daily use





# PREPARE YOUR CAR PARK FOR THE FUTURE

LinQ Europe offers high-quality DC charging stations that enable customers to charge electric vehicles quickly, safely and easily. LinQ Europe stands for years of experience in the electrical industry in various sectors.

We now utilise our experience in the production of DC charging stations and offer uncompromising quality, confirmed by certificates, tests and recommendations.

Our team consists of highly qualified engineers who develop professional solutions that meet the expectations of our customers.

**Efficient and fast charging:**  
Maximum 30 minutes if the Conditions are right!

By choosing the highest power, you can offer your customers fast charging in just 30 minutes, under suitable external conditions (e.g. temperature) and vehicle technology.

**Wide temperature range**

The LQ series works reliably in a wide temperature range, from -25° C to +50° C. This ensures safe and reliable operation in all weather conditions.



**Security is the basis for trust.**

**We take care of both**

The LQ series fulfils all requirements and standards: overcurrent protection, overvoltage protection, short-circuit protection, residual current protection, phase failure protection, insulation monitoring, earth fault protection.

**Easy to use: Details for improving customer satisfaction.**

The standard version includes a 5 metre cable with a guide arm and a start/stop system with RFID technology or a mobile app.

They are therefore extremely simple and easy to use.

**Perfect communication**

The use of an open standard - using the corresponding OCPP protocol - enables interoperability with the charging services offered by leading European companies.

**Fast return on investment**

By setting your own rates and taking advantage of cross-selling opportunities, you can optimise your revenue and achieve a fast ROI.

## THE LQ SERIES IS TAILORED TO THE NEEDS OF YOUR COMPANY.

**Scalability:** The modular design allows the charging station's performance to be customised

The modular design allows flexible power scaling by installing additional 40 kW modules in the device, which enables higher power and shorter charging times. It is very cost-efficient - you don't have to order a new device, just convert it. The power range extends from 40 kW up to 240 kW.

**Customisation**

Customisable charging stations:

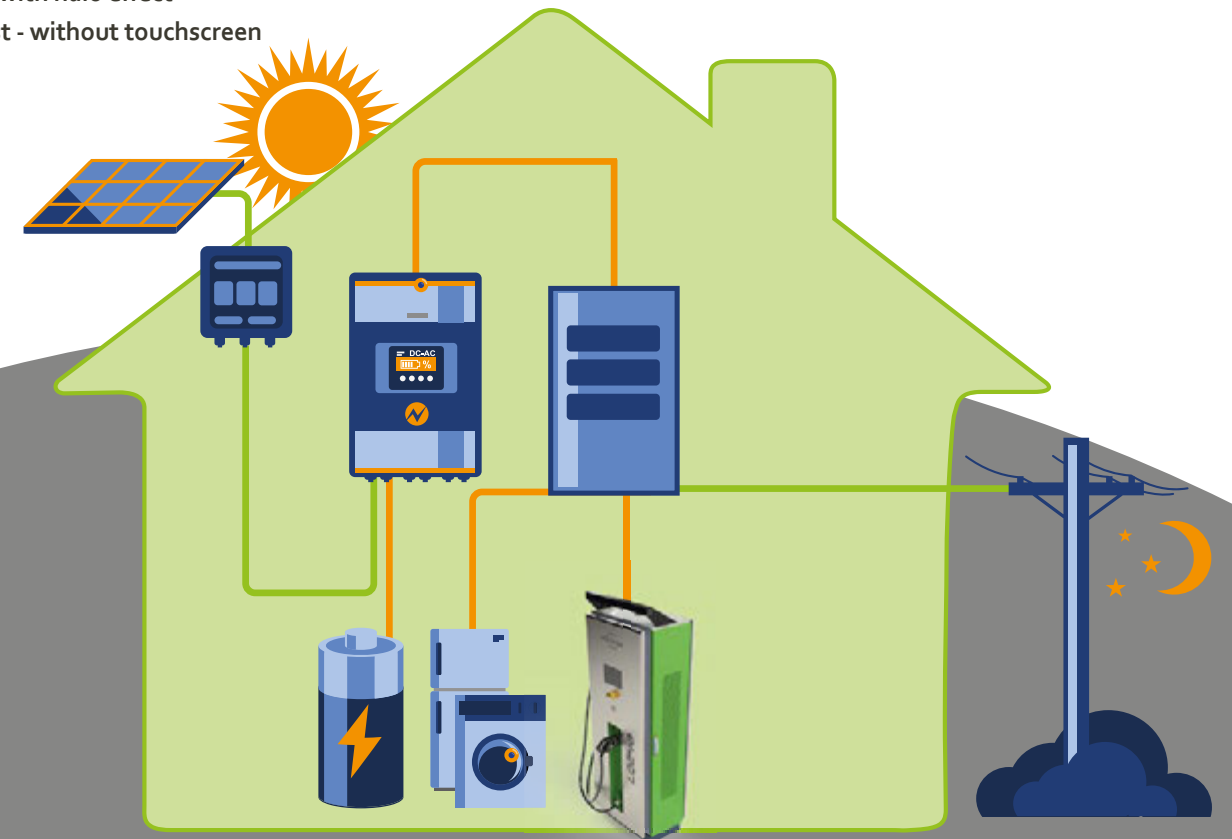
- Attach your own logo,
- Colour changes,
- Setting the lighting.

This is not only an additional advertising space, but also an excellent opportunity to integrate the QL into the brand and business world.

Promote charging stations in your marketing material to capitalise on the booming electric car market and expand your customer base.

## EXPAND YOUR DEVICE WITH FOLLOWING ACCESSORIES:

- Version 2 - 2 DC plugs + load equalisation
- Version 3 - 2 DC plugs + 1 AC plug + load equalisation
- Version 4 - 1 DC plug + 1 AC plug + load equalisation
- Payment terminal, CE-approved
- DC-MID meter (custody transfer)
- Backlight with halo effect
- On request - without touchscreen



# COST-EFFECTIVE AND COMPACT WQ SERIES 40 - 80 KW

## Scalability in the 40 - 80 KW range

You can order the 80 kW option immediately or start with the basic output and scale up by adding power modules (40 kW each).

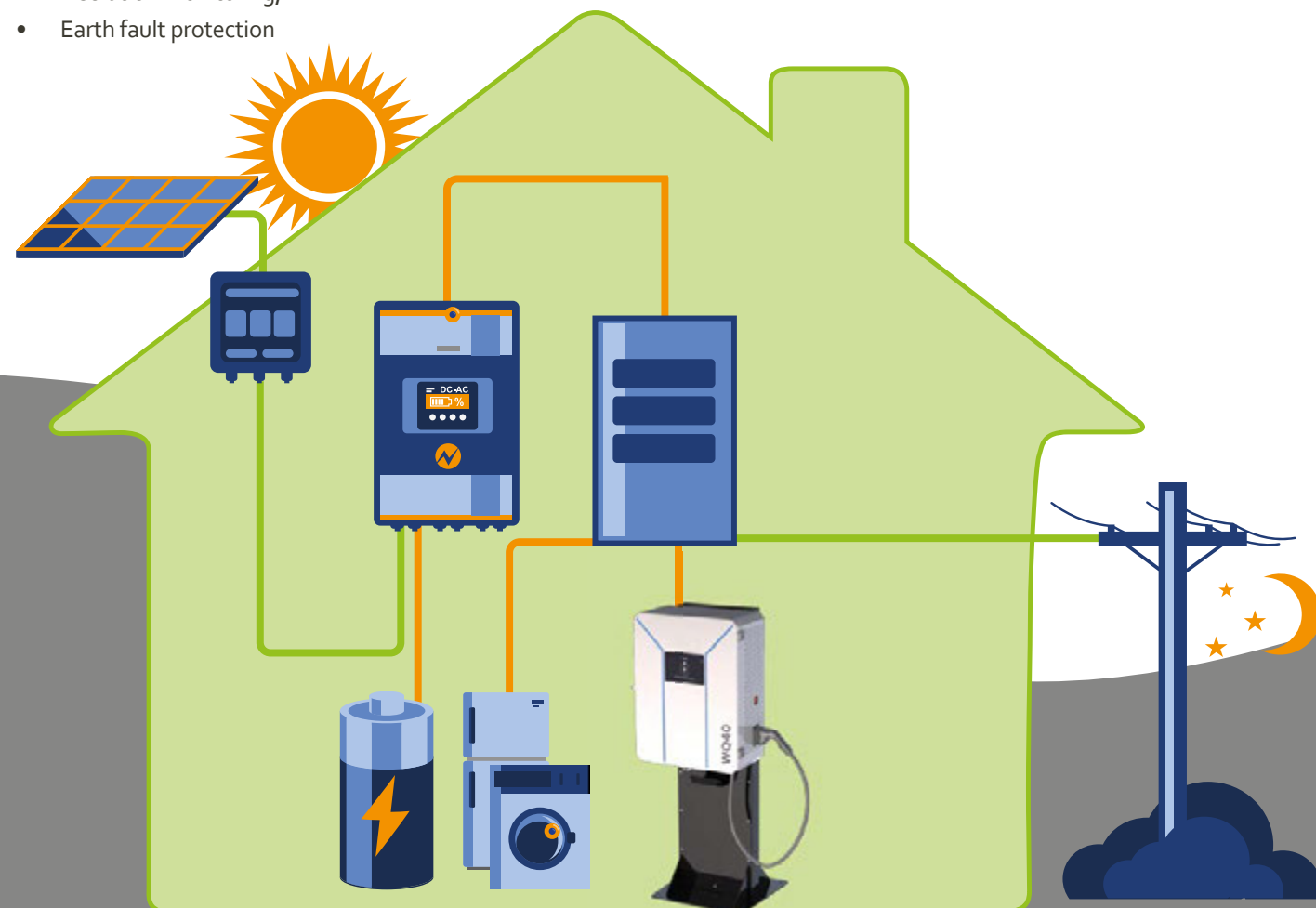
## Perfect communication

The use of an open standard - use of the corresponding OCPP protocol - enables interoperability with the charging services offered by leading European companies.

## Security is the basis for trust. Both are important to us

The WQ series fulfils all requirements and standards:

- overcurrent protection,
- overvoltage protection,
- Short-circuit protection, residual current protection,
- Undervoltage protection,
- Insulation monitoring,
- Earth fault protection



## User-friendly: details that improve the customer experience

The standard version includes a 5 metre long cable and a start/stop system with RFID or a mobile app. This makes operation incredibly simple and trouble-free.

## Quick return on investment

By setting your own rates and taking advantage of cross-selling opportunities, you can optimise your revenue and achieve a fast ROI.

# CHOOSE OUR CHARGING STATION WITH AN UNBEATABLE PRICE-PERFORMANCE RATIO

## Variants with a high standard

- Scalable modular output from WQ40 to WQ80 (+40 kW module)
- 10" touchscreen
- Standard length of the charging cable: 5 metres
- Compatible with almost every European platform
- Sleep mode in inactive state
- Future-proof design up to 1000 V

## Improve your device by following options

- Payment terminal, CE-approved
- Fixing base in concrete or metal
- MID direct current meter (calibration law)

## OUR DEDICATED ENGINEERING TEAM WILL ALWAYS ACTIVELY SUPPORT THEM!

So don't hesitate to contact us if you have any further requirements or requests for your charging station!

## Customisation

However, you can also change the appearance at a later date to adapt it to the presence and topicality of your company. Personalise your station according to your ideas: Side panels, top and even the type of lighting. Order with your logo, choose the ideal lighting style.



