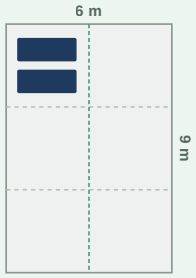
Emergency tent with integrated PV

SEYBOLD PV-SYSTEME GmbH

01 Configuration examples

6 m tent width · extendable in 3 m sections. All examples show the 6 × 9 m tent.

M

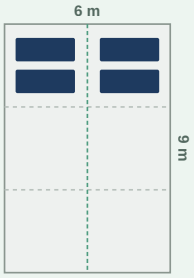


840 Wp

Daily generation:
Ø 2.6 kWh/day*
March–October
Ø 0.6 kWh/day*
November–February

2 modules · One roof side
Storage: 2 kWh

L

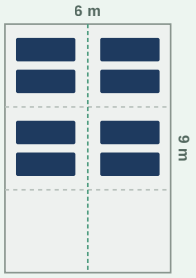


1,680 Wp

Daily generation:
Ø 5.2 kWh/day*
March–October
Ø 1.2 kWh/day*
November–February

4 modules · Both sides of one section
Storage: 4 kWh

XL



3,360 Wp

Daily generation:
Ø 10.5 kWh/day*
March–October
Ø 2.5 kWh/day*
November–February

8 modules · Both sides of two sections
Storage: 6–30 kWh

Top view with three roof sections. Dark blue: module-covered areas.

02 Solar modules

Design & installation

420–430 Wp[1]

Glass-free, semi-flexible · back-contact cells
Module efficiency above 22 %[2]

1,850 × 1,160 × 24 mm[3]
Approx. 10 kg per module incl. carry bag[3]

−40 to +85 °C · Stäubli MC4-Evo 2

Once the tent is erected, slide the modules into the keder fastening from the eaves. There is no need to walk on the roof.

Voltage & current[1]

35.18 V per module at MPP

70.36 V for two modules in series
MPP current 12.23 A · short-circuit current 13.11 A

Open-circuit voltage in cold conditions

Cell temp.	1 module	2 in series
+25 °C	42 V	84 V
0 °C	45 V	89 V
−20 °C	46 V	92 V

Series comparison, not a wiring diagram.

Standards & certifications[4]

Design qualification
IEC/EN IEC 61215-1/-1-1/-2:2021

Safety
IEC 61730-1, -2:2023

Sand / dust
IEC 60068-2-68:1994 (mod.)

Salt mist
IEC/EN IEC 61701:2020

PID
IEC TS 62804-1:2015 (mod.)

Ammonia
IEC/EN 62716:2013

Fire classification
DIN EN 13501-1:2019

External fire · B_{ROOF}(t1)
DIN EN 13501-5:2016

CE / Low Voltage Directive
2014/35/EU

[1] Electrical values from the 430 Wp module datasheet; system rating calculated at 420 Wp per module. STC: 1,000 W/m², AM 1.5, cell temperature 25 °C. Calculated Voc values are rounded, not guaranteed maxima; Voc temperature coefficient −0.220 %/°C, power −0.240 %/°C. Measurement ±3 %, power tolerance 0/+5 W.
[2] Based on effective module area. [3] Finished system module; dimensions and weight are approximate. [4] Certifications apply to the respective components or tested assemblies, not automatically to the entire tent. Use approved connector pairings only.

* Calculation: Seasonal daily averages per PVGIS 5.3 (SARAH3, 2005–2023), Cologne; 18° roof pitch, 14 % system losses.
M east; L and XL half east / half west. Before storage losses; dependent on weather, orientation and shading. No daily guarantee.

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03 Battery storage comparison

EU versions with lithium iron phosphate ($LiFePO_4$) cells. Storage classes are rounded.

Rated capacity Storage class above, device capacity in Wh below.	M 2 kWh	L 4 kWh	XL 6–30 kWh
	2,304 Wh	**4,096 Wh**	**6,144 Wh** per battery · 1–5 batteries up to 30,720 Wh

Outputs

	M	L	XL
230 V · continuous output	2,400 W	4,000 W	6,900 W
USB-C / USB-A[1]	2 × 100 W / 2 × 18 W	2 × 100 W / 2 × 18 W	2 × 100 W / 2 × 12 W
12 V DC output[2]	12 V · 10 A	12.6 V · 30 A total	12.6 V · 30 A

Charging inputs

	M	L	XL
PV / High-PV	12–145 V · 15 A max. 1,200 W	30–150 V · 15 A max. 1,600 W	80–450 V · 15 A max. 4,000 W
Second PV / Low-PV	—	11–60 V · 20 A max. 1,000 W	30–150 V · 15 A max. 1,600 W
AC charging input[3]	max. 2,400 W (Turbo)	max. 2,900 W	max. 2,800 W

Dimensions & operation

	M	L	XL
Dimensions approx. (L × W × H)	42 × 28 × 37 cm	69 × 34 × 41 cm	Inverter: 69 × 48 × 21 cm Battery: 66 × 46 × 20 cm
Weight approx.	28.3 kg	51.5 kg	32.1 kg inverter + 50.7 kg per battery
Charging temperature	0 to +40 °C	0 to +45 °C	−20 to +45 °C[4]
Discharging temperature	−20 to +40 °C	−10 to +45 °C	−20 to +45 °C

Connection notes

AC output is total; USB output is per port. [1] 2 kWh unit: both USB-C ports combined max. 150 W. [2] 4 kWh unit: Anderson max. 30 A, DC5521 max. 5 A. [3] Charging input, not a general generator approval. [4] Below freezing: battery heating per manual requires ≥250 W input; actual battery temperature applies. Inverter = power inverter.

PV wiring, protection concept, cables and generator connection must be specified for each configuration. Usable AC energy is below rated capacity.