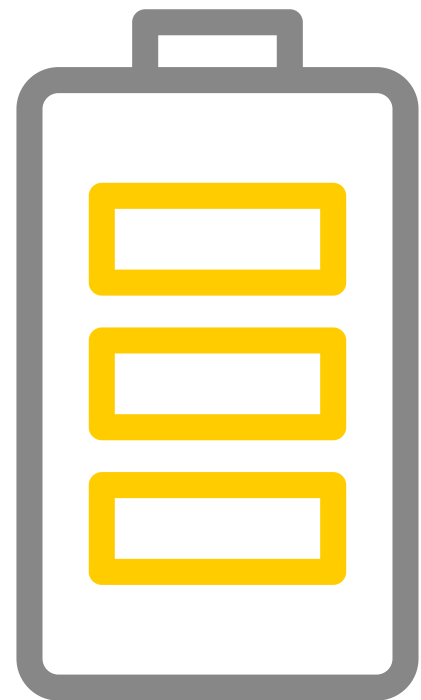


RESIDENTIAL STORAGE SYSTEMS



RESIDENTIAL
EMOBILITY
MOUNTING

krannich

Welcome to the Krannich Residential Storage Overview 2.0.

With our new interactive version, we want to make planning and system selection even easier for you. The small yellow Krannich icons on the following pages will take you to our web shop with just one click of the mouse. An initial preliminary selection of the desired inverter or storage package has already been made. Use the shop filters to find your desired package by power class, storage capacity, etc. We hope you enjoy your selection with a click.

- With the new Krannich hot-links  you can go directly to our webshop with just one mouse click
- For inverters, go directly to the manufacturer with a suitable preselection
- For further selection of the power class, etc. please use the shop filters
- The icons next to the storage systems lead directly to the storage packages of the combi
- Here, too, to select the capacities and functions please use the shop filters
- If there is not yet a set for the selected device combination the link leads to the memory

Inverter manufacturer



Storage inverter type		AXIhycon 5 / 6 / 8 / 10 H	AXIhycon 12 / 15 / 20 H	AXIhycon 29.9 / 40 / 50 H
Max. PV system size (kWp)		DC: 8.0 to 16.0 AC: without restriction	DC: 19.2 to 32.0 AC: without restriction	DC: up to 41.86 AC: without restriction
AC phases	1	☐		
	3	☒		
Surge Protection Device DC / AC		Type 2 / -		
Bat.- coupling	AC (Bat.-Inv)	☒		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage		-AXITEC		
Storage type		AXIstorage Li SV1 10.1 to 23.6	AXIstorage Li SV2 6.7 to 16.9	
Number of storages per unit (tower) / Max. Units (towers) parallel		3 - 7 / 6	2 - 5 / 6	
Max. charging power Sys- tem		to be calculated depending on the set / table		
Usable capacity (kWh) per unit		10,1 to 23,6	6,7 to 16,9	
Time window for expansion from commissioning		Up to 5 years		
Emergency power (separate AC clamp)		☒ backup connection		
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ backup connection		
Full battery backup (automatic transfer switch)		☐		
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)		Connection FRE and heat pump via DRM interfaces		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (FW update coming soon); Limitation by EVU (currently via ext.EMS, soon via integrated DRM contact)		
System information		3-phase DC coupled storage system;Power classes up to 10kW with 2 MPPT - 12 / 15 / 20 / 40 / 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; UPS functionality (<10ms); integrated arc detection; peak shaving; up to 3 devices in parallel operation (only same inverter performance classes andNd battery sizes, EPS outputs not synchronized); use of hybrid as offgrid system (with / without generator) possible; control for external NA protection possible		

*In Germany limited to 4.6 kW in single-phase operation (VDE-AR-N 4105) // **With suitable PV inverter // ***Availability /Release according to manufacturer's specification // All information without guarantee and subject to reservation according to manufacturer's approval.

Please note the instructions at the end of the document.

Inverter manufacturer



Storage inverter type		Enphase Microinverter	
Max. PV system size (kWp)		AC: without restriction	
AC phases	1	☒	
	3	☒	
Surge Protection Device DC / AC		- / -	
Bat.-coupling	AC (Bat.-Inv)	☒	
	DC (Hybrid)	☐	
Bat. charging via separate PV inverter (AC-coupling)		☒	
Manufacturer storage			
Storage type		Enphase Energy AC Storage System 5P-3P Flex Phase	
Number of storages per unit (tower) / Max. Units (towers) parallel		1 / unlimited	
Max. charging power System		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5	
Time window for expansion from commissioning		Unlimited	
Emergency power (separate AC clamp)		☐	
Battery backup light (backup connection inverter, i.n. transfer switch)		☐	
Full battery backup (automatic transfer switch)		☐ (IQ7 series) Announced (IQ8 series)	
Active PV-modules in backup mode		☐ (IQ7 series) Announced (IQ8 series)	
Interfaces (Heat pump + FRE)		Connection FRE via Envoy-S Gateway	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs; Limitation by EVU (via contact at the gateway)	
System information		Module inverter with 1/3-phase AC coupled storage system	

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Inverter manufacturer



Storage inverter type		PRIMO GEN24 / PRIMO GEN24 Plus 3.0 / 3.6 / 4.0 / 4.6 / 5.0 (not DE) / 6.0 (not DE) / 8.0 (not DE) / 10.0 (not DE) 			
Max. PV system size (kWp)		DC: 4.5 to 15.0 AC: without restriction			
AC phases	1	☒			
	3	☐			
Surge Protection Device DC / AC		Type 1+2 opt. / -			
Bat.-coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage					
Storage type		B-Box HVS 5.1 to 7.7 	B-Box HVM 11 to 19.3 	enblock FLEX 8.6 to 12.9 	Reserva 6.3 / 9.5 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 3 / up to 3	4 - 8 / up to 3	2 - 3 / -	2 - 3 / up to 4
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table	to be calculated depending on the set / table
Usable capacity (kWh) per unit		5,1 to 7,7	11,0 to 19,3	8,6 to 12,9	6,3 to 9,5
Time window for expansion from commissioning		Unlimited	Unlimited	Up to 2 years	Up to 2 years
Emergency power (separate AC clamp)		☒ , 1-phase at PV-Point			
Battery backup light (backup connection inverter, i.n. transfer switch)		☐			
Full battery backup (automatic transfer switch)		☒ , backup box must be assembled by yourself			
Active PV-modules in backup mode		☒			
Interfaces (Heat pump + FRE)		Connection Heat pump Mpe and FRE via 6 x DI / DO contact			
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Smart Meter IP + FW Update); Limitation by EVU (integr.Interface)			
System information		1-phase Siges hybrid device with additional PV inverter via AC coupling Version GEN24 Plus: the GEN24 Plus series is delivered, as usual, with an active battery connection as a hybrid; Version GEN24: the new GEN24 series is delivered with deactivated battery connection; This can be activated with an additional activation code At power classes 5.0 to 10.0 kW by selecting VDE-AR-N 4105 no limit to 4.6 kVA, therefore not usable in DE			

Inverter manufacturer



Storage inverter type		SYMO GEN24 / SYMO GEN24 Plus 3.0 / 4.0 / 5.0	SYMO GEN24 / SYMO GEN24 Plus 6.0 / 8.0 / 10.0	SYMO GEN24 12.0 SC / SC Plus
Max. PV system size (kWp)		DC: 4.5 to 18.0 AC: without restriction		
AC phases	1	☐		
	3	☒		
Surge Protection Device DC / AC		Type 1 + 2 opt. / -		
Bat.- coupling	AC (Bat.-Inv)	☒		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage				
Storage type		B-Box HVS 5.1 to 12.8	B-Box HVM 11.0 to 22.1	RESU FLEX 8.6 to 17.2
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 3	4 - 8 / up to 3 (19.3), 2 (22.1)	2 - 4 / -
Max. charging power Sys- tem		to be calculated depending on the set / table		
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	8,6 to 17,2
Time window for expansion from commissioning		Unlimited	Up to 2 years	Up to 2 years
Emergency power (separate AC clamp)		☒ 1-phase at PV-Point		
Battery backup light (backup connection inverter, i.n. transfer switch)		☐		
Full battery backup (automatic transfer switch)		☐	☒ with Enwitec Backup Box / Fronius BACKup Switch + Controller	
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)		Connection Heat pumpMpe and FRE via 6 x DI / DO contact		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Smart Meter IP + FW Update); Limitation by EVU (integr.Interface)		
System information		3-phase hybrid device with high charging performance and zAdditional PV inverter via AC coupling; control for external NA protection possible; Version GEN24 (SC) Plus: the GEN24 Plus series is delivered, as usual, with an active battery connection as a hybrid; Version GEN24 (SC): the new GEN24 series wlrđ delivered with deactivated battery connection; this can be activated with additional activation code		

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Inverter manufacturer



Storage inverter type		Verto Plus 15.0 / 17.5 / 20.0 / 25.0 / 30.0 / 33.0		
Max. PV system size (kWp)		DC: 22,5 to 50,0 AC: without restriction		
AC phases	1	○		
	3	●		
Surge Protection Device DC / AC		Type 1+2 / Type 2		
Bat.- coupling	AC (Bat.-Inv)	●		
	DC (Hybrid)	●		
Bat. charging via separate PV inverter (AC-coupling)		●		
Manufacturer storage				
Storage type		B-Box HVS 5.1 to 12.8 (Release announced)	B-Box HVM 11.0 to 22.1 (Release announced)	Reserva 6.3 / 9.5 / 12.6 / 15.8
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / to 3	4 - 8 / To 3 (19.3), 2 (22.1)	2 - 5 / up to 4
Max. charging power Sys- tem		to be calculated depending on the set / table		to be calculated depending on the set / table
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	6,3 to 15,8
Time window for expansion from commissioning		Unlimited	Unlimited	Up to 2 years
Emergency power (separate AC clamp)		○		
Battery backup light (backup connection inverter, i.n. transfer switch)		○		
Full battery backup (automatic transfer switch)		●, with Fronius Backup Switch + Controller		
Active PV-modules in backup mode		●, with Fronius Backup Switch + Controller		
Interfaces (Heat pump + FRE)		Connection Heat pumpMpe and FRE via 6 x DI / DO contact		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Smart Meter IP + FW Update); Limitation by EVU (integr.Interface)		
System information		3-phase DC-coupled hybrid unit with additional PV inverter via AC coupling; 3 MPPT; control for external NA protection possible;		

Storage inverter type		GW-ES-G2 3600 / 5000* / 6000*		
Max. PV system size (kWp)		DC: 3,9 to 6,5 (ES + EM) AC: without restriction		
AC phases	1	☒		
	3	☐		
Surge Protection Device DC / AC		Type 2 / -		
Bat.- coupling	AC (Bat.-Inv)	☐		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage				
Storage type		B-Box LVS 4.0 to 24.0		B-Box LVL 15.4
Number of storages per unit (tower) / Max. Units (towers) parallel		1 - 6 / up to 16 (16.0)		1 / 64
Max. charging power Sys- tem		to be calculated depending on the set / table		
Usable capacity (kWh) per unit		4,0 to 24,0		15,4
Time window for expansion from commissioning		Unlimited		
Emergency power (separate AC clamp)		☒ , backup connection		
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection		
Full battery backup (automatic transfer switch)		☐		
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)				
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Goodwe HEMS)		
System information		1-phase DC-coupled hybrid unit with additional PV inverter via AC coupling		

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Storage inverter type		GW-EH plus + Hybrid 3600 - 6000*			
Max. PV system size (kWp)		DC: 4,8 to 8,0 (only EH / EH plus +) AC: without restriction			
AC phases	1	☒			
	3	☐			
Surge Protection Device DC / AC		- / -			
Bat.- coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage					
Storage type		B-Box HVS 5.1 to 12.8 	B-Box HVM 11 to 22.1 	Force-H1 10.1 to 23.6 	Force-H2 6.7 to 16.9 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 3	4 - 8 / up to 3	3 - 7 / 6	2 - 5 / 6
Max. charging power Sys- tem		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	10,1 to 23,6	6,7 to 16,9
Time window for expansion from commissioning		Unlimited		Up to 2 years	
Emergency power (separate AC clamp)		☒ , backup connection			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection with UPS functionality			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒ (only EH / EH plus +)			
Interfaces (Heat pump + FRE)					
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limita- tion by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Goodwe HEMS)			
System information		1-phase DC-coupled hybrid device with additional PV inverter via AC coupling; BH series only via AC coupling to suitable PV inverter			

Inverter manufacturer

GOODWE

Storage inverter type		GW-EH plus + Hybrid 3600 - 6000*			
Max. PV system size (kWp)		DC: 4,8 to 8,0 (only EH / EH plus +) AC: without restriction			
AC phases	1	☒			
	3	☐			
Surge Protection Device DC / AC		- / -			
Bat.-coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage		-AXITEC		GOODWE	
Storage type		AXIstorage Li SV1 10.1 to 23.6	AXIstorage Li SV2 6.7 to 16.9	Lynx Home F Plus + LX F6.6 to 13.1-H	Lynx D 5.0 to 40.0
Number of storages per unit (tower) / Max. Units (towers) parallel		3 - 7 / 6	2 - 5 / 6	2 - 4 / bis 8	1 - 8 / -
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		10,1 to 23,6	6,7 to 16,9	6,55 to 13,1	5,0 to 40,0
Time window for expansion from commissioning		Up to 5 years		Up to 2 years	Unlimited
Emergency power (separate AC clamp)		☒ , backup connection			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection with UPS functionality			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒ (only EH / EH plus +)			
Interfaces (Heat pump + FRE)					
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Goodwe HEMS)			
System information		1-phase DC-coupled hybrid device with additional PV inverter via AC coupling; BH series only via AC coupling to suitable PV inverter			

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Inverter manufacturer

GOODWE

Storage inverter type		GW ET plus + Hybrid 5K / 6.5K / 8K / 10K GW ET plus + Hybrid 5KN / 6.5KN / 8KN / 10KN (16A)					
Max. PV system size (kWp)		DC: 6,5 to 13,0 AC: without restriction					
AC phases	1						
	3						
Surge Protection Device DC / AC		Type 2 / Type 2					
Bat.- coupling	AC (Bat.-Inv)						
	DC (Hybrid)						
Bat. charging via separate PV inverter (AC-coupling)							
Manufacturer storage							
Storage type		B-Box HVS 5.1 to 12.8	B-Box HVM 11 to 22.1	Force-H1 13.5 to 23.6	Force-H2 6.7 to 16.9	AXIstorage Li SV1 13.5 to 23.6	AXIstorage Li SV2 6.7 to 16.9
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 3	4 - 8 / up to 3	4 - 7 / 6	2 - 5 / 6	4 - 7 / 6	2 - 5 / 6
Max. charging power Sys- tem		to be calculated depending on the set / table		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	13,5 to 23,6	6,7 to 16,9	13,5 to 23,6	6,7 to 16,9
Time window for expansion from commissioning		Unlimited	Unlimited	Up to 2 years		Up to 5 years	
Emergency power (separate AC clamp)		, backup connection					
Battery backup light (backup connection inverter, i.n. transfer switch)		, backup connection					
Full battery backup (automatic transfer switch)							
Active PV-modules in backup mode		(only ET plus +)					
Interfaces (Heat pump + FRE)		Connection of heat pump via potential-free contact; Connection FRE via connection terminals					
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times;Dynamic electricity tariffs (announced - via Goodwe HEMS)					
System information		3-phase DC coupled storage system; Up to 10 devices in parallel operation (hybrid only) (SEC1000S box required, DE+A: all EPS outputs active - not synchronized) *** BT series only via AC coupling to suitable PV inverters					

Inverter manufacturer

GOODWE

Storage inverter type		GW ET plus + Hybrid 5K / 6.5K / 8K / 10K GW ET plus + Hybrid 5KN / 6.5KN / 8KN / 10KN (16A)			
Max. PV system size (kWp)		DC: 6,5 to 13,0 AC: without restriction			
AC phases	1	☐			
	3	☒			
Surge Protection Device DC / AC		Type 2 / Type 2			
Bat.-coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage		GOODWE		ZYC ENERGY	LG Energy Solution
Storage type		Lynx Home F Plus + LX F6.6 to 16.4-H	Lynx D 5.0 to 40.0	SIMPO HV 6.4 to 28.8	enblock FLEX 8.6 to 17.2
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 8	1 - 8 / -	2 - 9 / up to 8	2 - 4 / up to 2***
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table	to be calculated depending on the set / table
Usable capacity (kWh) per unit		6,55 to 16,38	5,0 to 40,0	6,4 to 28,8	8,6 to 17,2
Time window for expansion from commissioning		Up to 2 years	Unlimited	Unlimited	Up to 2 years
Emergency power (separate AC clamp)		☒ ,backup connection			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒ (only ET plus +)			
Interfaces (Heat pump + FRE)		Connection of heat pump via potential-free contact; Connection FRE via connection terminals			
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times;Dynamic electricity tariffs (announced - via Goodwe HEMS)			
System information		3-phase DC coupled storage system; Up to 10 devices in parallel operation (hybrid only) (SEC1000S box required, DE+A: all EPS outputs active - not synchronized) *** BT series only via AC coupling to suitable PV inverters			

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Inverter manufacturer

GOODWE

Storage inverter type		GW ET Hybrid 15K / 20K / 25K / 29.9K				
Max. PV system size (kWp)		DC: 22.5 to 44.85 AC: not possible ***				
AC phases	1	○				
	3	●				
Surge Protection Device DC / AC		Type 2 / -				
Bat.- coupling	AC (Bat.-Inv)	●				
	DC (Hybrid)	●				
Bat. charging via separate PV inverter (AC-coupling)		●				
Manufacturer storage				GOODWE		
Storage type		B-Box HVS 5.1 to 12.8 	B-Box HVM 11.0 to 22.1 	SIMPO HV 6.4 to 28.8 	Lynx Home F Plus + LX F6.6 to 16.4-H 	Lynx D 5.0 to 40.0  Lynx C 60K 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / -	4 - 8 / -	2 - 9 / up to 8	2 - 5 / up to 8	1 - 8 / - 1 / 3
Max. charging power Sys- tem		to be calculated depending on the set / table		depending on the set / table	to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	6,4 to 28,8	6,55 to 16,38	5,0 to 40,0 each 60,0
Time window for expansion from commissioning		Unlimited	Unlimited	Up to 2 years	Unlimited	-
Emergency power (separate AC clamp)		●, backup connection				
Battery backup light (backup connection inverter, i.n. transfer switch)		●, backup connection with UPS functionality				
Full battery backup (automatic transfer switch)		○				
Active PV-modules in backup mode		●				
Interfaces (Heat pump + FRE)		Connection heat pump via SG-Ready contact; Connection FRE via DRM connection				
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; Dynamic electricity tariffs (announced - via Goodwe HEMS)				
System information		3-phase DC coupled storage system; 3-fold cascade; no logger connection of PV-WR possible; UPS functionality (<10ms); Peak-Shaving; Version 15K + 20K with 2 MPPT and 1 x battery; 25K + 29.9K with 3 MPPT and 2 x battery connection; High DC input currents with 15A / string; high charging currents with up to 2 x 50 A (Version 25K + 29.9K); optional with AFCI				

Inverter manufacturer



Storage inverter type		SUN2000-2 / 3 / 3.68 / 4 / 4.6 / 5* / 6* KT-L1		SUN2000- 3 / 4 / 5 / 6 / 8 / 10 KTL-M1		SUN2000-12 / 15 / 17 / 20 / 25K-MB0	
Max. PV system size (kWp)		DC: 3,0 to 9,0 AC: without restriction		DC: 4,5 to 22,0 AC: without restriction		DC: 18,0 to 37,5 AC: without restriction	
AC phases	1	●					
	3	○	●		●		
Surge Protection Device DC / AC		Type 2 / Type 2		Type 2 / Type 2		Type 2 / Type 2	
Bat.-coupling	AC (Bat.-Inv)	●		●		●	
	DC (Hybrid)	●		●		●	
Bat. charging via separate PV inverter (AC-coupling)		●		●		●	
Manufacturer storage		HUAWEI		HUAWEI		HUAWEI	
Storage type		LUNA2000-5 / 10 / 15-S0	LUNA2000-7 / -14 / -21-S1	LUNA2000-5 / 10 / 15-S0	LUNA2000-7 / -14 / -21-S1	LUNA2000-5 / 10 / 15-S0	LUNA2000-7 / -14 / -21-S1
Number of storages per unit (tower) / Max. Units (towers) parallel		1 - 3 / up to 2	1 - 3 / up to 2	1 - 3 / up to 2	1 - 3 / up to 2	1 - 3 / 2 per Input	1 - 3 / 2 per Input
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5,0 to 15,0	7,0 to 21,0	5,0 to 15,0	7,0 to 21,0	5,0 to 15,0	7,0 to 21,0
Time window for expansion from commissioning		Unlimited		Unlimited		Unlimited	
Emergency power (separate AC clamp)		●, 1-phase with Huawei Backup Box-B0		●, M1 with Backup Box-B1 (1-ph)MAP0 with Smart Guard-63A-T0 (3-ph)		●, With Smart Guard-63A-T0 (1-ph)	
Battery backup light (backup connection inverter, i.n. transfer switch)		●, 1-phase with Huawei Backup Box-B0		●, M1 with Backup Box-B1 (1-ph)MAP0 with Smart Guard-63A-T0 (3-ph)		●, With Smart Guard-63A-T0 (1-ph)	
Full battery backup (automatic transfer switch)		○		●, Only MAP0 with Smart Guard-63A-T0 (3-ph)		●, With Smart Guard-63A-T0 (1-ph)	
Active PV-modules in backup mode		●		●		●	
Interfaces (Heat pump + FRE)		Connection heat pump (withEMMA) + FRE via Huawei Smart Logger					
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (with EMMA); Limitation by EVU					
System information		1-phase hybrid device with additional PV inverter via AC coupling; optional use of the Huawei Optimizer possible; use as off-grid system without mains connection possible		3-phase DC coupled system;Optional use of the Huawei Optimizer possible; Up to 3 devices in parallel operation ***; Replacement power operation M1 series only 1-phase with backup box-B1; Replacement power operation MAP0 series 3-phase with Smart Guard-63A-T0 Box		3-phase hybrid device withAdditional PV inverter via AC coupling; optional use of the Huawei Optimizer possible; 2 separate battery connections; arc detection	

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Please note the instructions at the end of the document.

Inverter manufacturer



Storage inverter type		Blueplanet Hybrid 10.0 TL3 	Hybrid NH3 M3 8.0 / 10.0 / 12.0 
Max. PV system size (kWp)		DC: 12,0 AC: without restriction	DC: 16,0 to 24,0 kWp AC: without restriction
AC phases	1		
	3		
Surge Protection Device DC / AC		- / -	Type 2 / -
Bat.- coupling	AC (Bat.-Inv)		
	DC (Hybrid)		
Bat. charging via separate PV inverter (AC-coupling)			
Manufacturer storage			
Storage type		B-Box HVS  5.1 to 10.2	B-Box HVM  11.0 to 22.1
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 4 / up to 3	2 - 5 / up to 3
Max. charging power Sys- tem		to be calculated depending on the set / table	to be calculated depending on the set / table
Usable capacity (kWh) per unit		5,1 to 10,2	5,1 to 12,8
Time window for expansion from commissioning		Unlimited	Unlimited
Emergency power (separate AC clamp)			 , backup connection
Battery backup light (backup connection inverter, i.n. transfer switch)			 , backup connection
Full battery backup (automatic transfer switch)		 , with Kaco Hy-Switch Backup Box	 , with Kaco replacement power box
Active PV-modules in backup mode			
Interfaces (Heat pump + FRE)		Connection FRE via Kaco Powador protect	Connection FRE via connection terminals
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Kaco Leaflet HEMS); Limitation by EVU (via Kaco Leaflet HEMS)	
System information		3-phase DC-coupled storage system; Replacement power application possible by optional activation; No coupling with second inverter possible, no monitoring portal from the manufacturer	3-phase DC-coupled hybrid device with additional PV inverter via AC coupling; 3 independent MPP trackers; can also be used as a pure memory WR; Up to 3 devices in parallel operation (only the same inverter power classes and battery sizes, EPS outputs not synchronized)

Inverter manufacturer



Storage inverter type		Hybrid NH3 M3 8.0 / 10.0 / 12.0			
Max. PV system size (kWp)		DC: 16,0 to 24,0 kWp AC: without restriction			
AC phases	1				
	3				
Surge Protection Device DC / AC		Type 2 / -			
Bat.-coupling	AC (Bat.-Inv)				
	DC (Hybrid)				
Bat. charging via separate PV inverter (AC-coupling)					
Manufacturer storage		-AXITEC		PYLONTECH	
Storage type		AXIstorage Li SV1 10.1 to 23.6 	AXIstorage Li SV2 6.7 to 16.9 	Force-H1 10.1 to 23.6 	Force-H2 6.7 to 16.9 
Number of storages per unit (tower) / Max. Units (towers) parallel		3 - 7 / 6	2 - 5 / 6	3 - 7 / 6	2 - 5 / 6
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		10,1 to 23,6	6,7 to 16,9	10,1 to 23,6	6,7 to 16,9
Time window for expansion from commissioning		Up to 5 years		Up to 2 years	
Emergency power (separate AC clamp)		 , backup connection			
Battery backup light (backup connection inverter, i.n. transfer switch)		 , backup connection			
Full battery backup (automatic transfer switch)		 , with Kaco replacement power box			
Active PV-modules in backup mode					
Interfaces (Heat pump + FRE)		Connection FRE via connection terminals			
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (via Kaco Leaflet HEMS); Limitation by EVU (via Kaco Leaflet HEMS)			
System information		3-phase DC-coupled hybrid device with additional PV inverter via AC coupling; 3 independent MPP trackers; can also be used as a pure memory WR;Up to 3 devices in parallel operation (only the same inverter power classes and battery sizes, EPS outputs not synchronized)			

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Inverter manufacturer

KOSTAL
 Solar Electric

Storage inverter type		Piko MP Plus 3.0-2 / 3.6-2 / 4.6-2 / 5.0-2 *			
Max. PV system size (kWp)		DC: 4,5 to 6,9 AC: without restriction			
AC phases	1	☒			
	3	☐			
Surge Protection Device DC / AC		- / -			
Bat.- coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage					
Storage type		B-Box HVS 5.1 to 12.8		B-Box HVM 8.3 to 22.1	
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / -		4 - 8 / -	
Max. charging power Sys- tem		to be calculated depending on the set / table			
Usable capacity (kWh) per unit		5,1 to 12,8		8,3 to 22,1	
Time window for expansion from commissioning		Unlimited		Unlimited	
Emergency power (separate AC clamp)		☐			
Battery backup light (backup connection inverter, i.n. transfer switch)		☐			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☐			
Interfaces (Heat pump + FRE)		Connection FRE via external data logger			
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; Limitation by EVU (via KSEM G2)			
System information		1-phase DC-coupled hybrid unit with additional PV inverter via AC coupling			

Inverter manufacturer

KOSTAL
Solar Electric

Storage inverter type		Plenticore Plus G2 3.0 / 4.2 / 5.5 / 7.0 / 8.5 / 10 (Plenticore Plus 3.0 with BYD HVM only 11.0) Plenticore BI 5.5 / 26 and 10 / 26 - G2			Plenticore MP G3 S/M (Performance depending on version and activation level)			Plenticore G3S / M / L (Power depending on version and activation level of 4.0 - 20.0 kW)		
Max. PV system size (kWp)		DC: 4,5 to 15,0 (only Hybrid) AC: without restriction			DC: 4,5 to 10,5 (depending on activation level) AC: without restriction			DC: 6,0 to 30,0 (depending on activation level) AC: without restriction		
AC phases	1	☐			☒			☐		
	3	☒			☐			☒		
Surge Protection Device DC / AC		- / -			Type 2 (opt.) / -			Type 2 (opt.) / -		
Bat.-coupling	AC (Bat.-Inv)	☒ (only BI)			☒ (act. storage connection)			☒ (with activated storage connection)		
	DC (Hybrid)	☒ (only Hybrid)			☒ (act. storage connection)			☒ (with activated storage connection)		
Bat. charging via separate PV inverter (AC-coupling)		☐								
Manufacturer storage		-AXITEC		PYLONTECH		BYD		ZYC ENERGY		
Storage type		AXIstorage Li SV1 10.1 to 23.6	AXIstorage Li SV2 6.7 to 16.9	Force-H1 10.1 to 23.6	Force-H2 6.7 to 16.9	B-Box HVS 5.1 to 12.8	B-Box HVM 11.0 to 22.1	SIMPO HV 6.4 to 28.8	enblock FLEX 8.6 to 17.2	
Number of storages per unit (tower) / Max. Units (towers) parallel		3 - 7 / 6	2 - 5 / 6	3 - 7 / 6	2 - 5 / 6	2 - 5 / up to 3	4 - 8 / up to 3	2 - 9 / -	2 - 4 / up to 2***	
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table		to be calculated depending on the set / table		set / table		set / table
Usable capacity (kWh) per unit		10,1 to 23,6	6,7 to 16,9	10,1 to 23,6	6,7 to 16,9	5,1 to 12,8	11,0 to 22,1	6,4 to 28,8	8,6 to 17,2	
Time window for expansion from commissioning		Up to 5 years		Up to 2 years		Unlimited	Unlimited	Unlimited	Up to 2 years	
Emergency power (separate AC clamp)		☐			☐					
Battery backup light (backup connection inverter, i.n. transfer switch)		☐			☐					
Full battery backup (automatic transfer switch)		☐			☒ , manually with Kostal Backup Switch					
Active PV-modules in backup mode		☐			☒					
Interfaces (Heat pump + FRE)		Connection heat pump via SG Ready contact; Connection FRE via connection terminals				Connection heat pump via SG Ready contact; Connection FRE via connection terminals				
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs; Limitation by EVU (via KSEM G2)				Fixed charging times; dynamic electricity tariffs; Limitation by EVU (via KSEM G2)				
System information		3-phase AC / DC coupled storage system (hybrid / storage WR) Plenticore Plus G2: 3-phase PV / hybrid / storage inverter with additional PV inverter via AC coupling; Battery connection must be activated via activation code;				1-phase AC / DC coupled storage system (hybrid / memory WR) 2 versions (S / M) with up to 2 additional performance levels; activation via activation code (Plenti-Coins);		3-phase AC / DC coupled storage system (hybrid / storage WR)Plenticore G3: 3 versions (S / M / L) with 2 additional performance levels each; activation via activation code (Plenti-Coins); 3-phase PV/ hybrid/storage inverter with additional PV inverter via AC coupling; Battery connection muSs can be activated via activation code;		

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Inverter manufacturer



Storage inverter type		Sunny Island 4.4M / 6.0H / 8.0H 		Sunny Boy Storage 2.5 / 3.7 / 5.0* / 6.0* 	
Max. PV system size (kWp)		AC: without restriction **		AC: without restriction **	
AC phases	1	☒		☒	
	3	☒		☐	
Surge Protection Device DC / AC		/		/	
Bat.-coupling	AC (Bat.-Inv)	☒		☒	
	DC (Hybrid)	☐		☐	
Bat. charging via separate PV inverter (AC-coupling)		☒		☒	
Manufacturer storage					
Storage type		B-Box LVS 4.0 to 24.0 	B-Box LVL 15.4 	B-Box HVS 5.1 to 10.2 	B-Box HVM 8.3 to 22.1 (except SBS 2.5) 
Number of storages per unit (tower) / Max. Units (towers) parallel		1 - 6 / up to 16 (16.0)	1 / up to 64	2 - 4 / up to 3	3 - 8 / up to 3
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		4,0 to 24,0	15,4	5,1 to 10,2	8,3 to 22,1
Time window for expansion from commissioning		Unlimited		Unlimited	
Emergency power (separate AC clamp)		☐		☒ (except SBS 2.5)	
Battery backup light (backup connection inverter, i.n. transfer switch)		☐		☐	
Full battery backup (automatic transfer switch)		☒ , with Enwitec Backup Box (1-/3-phase, 1-phase with phase coupling)		☒ , with Enwitec Backup Box (1-/3-phase, 1-phase with phase coupling)	
Active PV-modules in backup mode		☒ **		☒ **	
Interfaces (Heat pump + FRE)		Connection FRE depends on the PV-WR		Connection FRE depends on the PV-WR	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times Limitation by EVU (via Home Manager)		Fixed charging times Limitation by EVU (via Home Manager)	
System information		1/3-phase AC coupled storage system with suitable PV inverter; use as a pure offgrid system (PV + generator) possible;		1-phase AC coupled storage system with suitable PV inverter; 3 battery inputs on the inverter (except SBS 2.5)	

Inverter manufacturer



Storage inverter type		Sunny Boy Smart Energy 3.6 / 4.0 / 5.0* / 6.0* 		
Max. PV system size (kWp)		DC: 7,2 to 12,0 AC: without restriction		
AC phases	1	☒		
	3			
Surge Protection Device DC / AC		/		
Bat.-coupling	AC (Bat.-Inv)	☒		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage				
Storage type		B-Box HVS 5.1 to 10.2 *** 	B-Box HVM 8.3 to 22.1 *** 	Home Storage 3.2 to 13.1 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 4 / up to 3	3 - 8 / up to 3	1 - 4 / -
Max. charging power System		to be calculated depending on the set / table		to be calculated depending on the set / table
Usable capacity (kWh) per unit		5,1 to 10,2	8,3 to 22,1	3,28 to 13,12
Time window for expansion from commissioning		Unlimited		
Emergency power (separate AC clamp)		☒ , PLC / Backup connection		
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection (Release is currently still pending)		
Full battery backup (automatic transfer switch)		☐		
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)		WP via SG Ready Contact		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; Dynamic electricity tariffs (via Home Manager 2.0); Limitation by EVU (via Home Manager)		
System information		1-phase DC-coupled hybrid unit with additional PV inverter via AC coupling; 3 MPPT with low input voltage; AFCI integrated; ShadeFix shadow management		

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Please note the instructions at the end of the document.

Inverter manufacturer



Storage inverter type		Sunny Tripower 5.0 / 6.0 / 8.0 / 10.0 Smart Energy		
Max. PV system size (kWp)		DC: 7,5 to 15,0 AC: without restriction		
AC phases	1	☐		
	3	☒		
Surge Protection Device DC / AC		Type 2 / Type 2		
Bat.-coupling	AC (Bat.-Inv)	☒		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage				
Storage type		B-Box HVS 5.1 to 12.8 ***	B-Box HVM 11 to 22.1 ***	Home Storage 6.5 to 16.4
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 3	4 - 8 / up to 3	2 - 5 / -
Max. charging power System		to be calculated depending on the set / table		depending on the set / table
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	6,56 to 16,4
Time window for expansion from commissioning		Unlimited		Up to 2 years
Emergency power (separate AC clamp)		☐		
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ , backup connection		
Full battery backup (automatic transfer switch)		☐		
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)		WP via SG Ready contact; Connection FRE via 5 x DI contact		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; Dynamic electricity tariffs (via Home Manager 2.0); Limitation by EVU (via Home Manager)		
System information		3-phaseDC-coupled hybrid device with additional PV inverter via AC coupling; ShadeFix shadow management		

Inverter manufacturer

SOFAR

Storage inverter type		HYD 5 / 6 / 8 KTL		HYD 10 / 15 / 20 KTL	
Max. PV system size (kWp)		DC: 7,5 to 12,0 AC: without restriction		DC: 15,0 to 30,0 AC: without restriction	
AC phases	1	☐			
	3	☒			
Surge Protection Device DC / AC		Type 2 / Type 2			
Bat.- coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage		PYLONTECH		SOFAR	
Storage type		Force-H1 13.5 to 23.6	Force-H2 10.1 to 16.9	BTS-D5 E5 to E20	AXIstorage Li SV1 13.5 to 23.6
Number of storages per unit (tower) / Max. Units (towers) parallel		4 - 7 / 6	2 - 5 / 6	1 - 4 / up to 2 (only HYD 10-20)	4 - 7 / 6
Max. charging power Sys- tem		to be calculated depending on the set / table			
Usable capacity (kWh) per unit		13,5 to 23,6	6,7 to 16,9	4,75 to 19,0	13,5 to 23,6
Time window for expansion from commissioning		Up to 2 years		Unlimited	Up to 5 years
Emergency power (separate AC clamp)		☒ backup connection			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ backup connection			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒			
Interfaces (Heat pump + FRE)		Control heat pump possible		Control of heat pump possible; Connection FRE via connection terminals	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; Dynamic electricity tariffs (via Sofar EMS Box);Limitation by EVU		Fixed charging times; Dynamic electricity tariffs (via Sofar EMS Box);Limitation by EVU	
System information		3-phase DC or AC coupled hybrid device with additional PV inverter via AC coupling; 1 battery connection; up to 10 GerPossible in grid-coupled parallel operation (VDE 4110 is available); in backup mode only 6 devices are possible in parallel; use of hybrid as off-grid system (with / without generator) possible; control for external NA protection possible			

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Inverter manufacturer



Storage inverter type		HD-WAVE StorEdge RWS SE 2200H / 3000 / 3500H / 3680H / 4000H / 5000H* / 6000H* 	RWB Home Hub Inverter*** SE3000H / SE3680H / SE4000H / SE5000H* / SE6000H* 
Max. PV system size (kWp)		DC: 3,4 to 7,8 AC: without restriction	DC: 10,0 to 15,0 AC: without restriction
AC phases	1	☒	☐
	3	☐	☒
Surge Protection Device DC / AC		- / -	
Bat.- coupling	AC (Bat.-Inv)	☒	
	DC (Hybrid)	☒	
Bat. charging via separate PV inverter (AC-coupling)		☒	
Manufacturer storage			
Storage type		Home Battery HV 	Home Battery HV 
Number of storages per unit (tower) / Max. Units (towers) parallel		1 / up to 3	1 / up to 3
Max. charging power Sys- tem		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		9,7	9,7
Time window for expansion from commissioning		Unlimited	Unlimited
Emergency power (separate AC clamp)		☐	
Battery backup light (backup connection inverter, i.n. transfer switch)		☐	
Full battery backup (automatic transfer switch)		☐	☒ with Home Backup Interface 1P***
Active PV-modules in backup mode		☐	☒
Interfaces (Heat pump + FRE)		Connection of heat pump via SE Smart Home components; Connection FRE via RPI connections inverter	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (with SolarEdge ONE); Limitation by EVU (with the SolarEdge ONE Controller)	
System information		1-phase DC or AC-coupled hybrid device with additional PV inverter via AC coupling	1-phase DC or AC-coupled hybrid device with additional PV inverter via AC coupling; Backup application only possible in 1P networks

Inverter manufacturer



Storage inverter type		RWS StorEdge Hybrid 5 / 7 / 8 / 10		RWB48 Home Hub Inverter 5 / 8 / 10
Max. PV system size (kWp)		DC: 6.5 to 13.5 AC: without restriction		DC: 10.0 to 15.0 AC: without restriction
AC phases	1		☐	
	3		☒	
Surge Protection Device DC / AC			- / -	
Bat.- coupling	AC (Bat.-Inv)		☒	
	DC (Hybrid)		☒	
Bat. charging via separate PV inverter (AC-coupling)			☒	
Manufacturer storage				
Storage type		B-Box LVS 4.0 to 24.0	Home Battery LV 4.6 to 23.0	Home Battery LV 4.85 to 23.25 ***
Number of storages per unit (tower) / Max. Units (towers) parallel		1 - 6 / -	1 - 5 / -	1 - 5 / -
Max. charging power Sys- tem		to be calculated depending on the set / table		
Usable capacity (kWh) per unit		4,0 to 24,0	4,6 to 23,0	4.85 to 24.25 ***
Time window for expansion from commissioning		Unlimited , only 1 tower		
Emergency power (separate AC clamp)			☐	
Battery backup light (backup connection inverter, i.n. transfer switch)			☐	
Full battery backup (automatic transfer switch)		☐		☒ with Home Backup Interface 3P
Active PV-modules in backup mode		☐		☒
Interfaces (Heat pump + FRE)		Connection of heat pump via SE Smart Home components; Connection FRE via RPI connections inverter		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs (with SolarEdge ONE); Limitation by EVU (with the SolarEdge ONE Controller)		
System information		3-phase DC or AC coupled hybrid device; Up to 3 devices in parallel operation ***; With additional PV inverter via AC coupling		3-phase DC or AC coupled hybrid device; BIs to 3 devices in parallel operation (only master inverter active in emergency mode) ***, memory from 01.01.25 with 4.85 kWh

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Please note the instructions at the end of the document.

Inverter manufacturer



Storage inverter type		X3-HYBRID G4.2 (Version D) 5.0-D / 6.0-D / 8.0-D / 10.0-D / 12.0-D / 15.0-D X3-Hybrid-G4 PRO 5.0-P / 6.0-P / 8.0-P / 10.0-P / 12.0-P / 15.0-P		
Max. PV system size (kWp)		DC: 8,0 to 30,0 AC: without restriction		
AC phases	1	☐		
	3	☒		
Surge Protection Device DC / AC		Type 2 / Type 2 (only PRO Version)		
Bat.- coupling	AC (Bat.-Inv)	☒		
	DC (Hybrid)	☒		
Bat. charging via separate PV inverter (AC-coupling)		☒		
Manufacturer storage				
Storage type		T-BAT H 3.0 6.0 / 9.0 / 12.0 	T-BAT HV-S 2.5 7.5 bis 32.5 	T-BAT-HV-S 5.1 15.3 to 66.5 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 4 / -	3 - 13 / -	3 - 13 / 3
Max. charging power Sys- tem		to be calculated depending on the set / table		
Usable capacity (kWh) per unit		5,58 to 11,16	6.9 to 29.9	13,7 to 59,8
Time window for expansion from commissioning		Up to 1 year	Unlimited	
Emergency power (separate AC clamp)		☒		
Battery backup light (backup connection inverter, i.n. transfer switch)		☒		
Full battery backup (automatic transfer switch)		☒ With Solax X3-Mate-Box G2 Cascade with X3 EPS parallel box		
Active PV-modules in backup mode		☒		
Interfaces (Heat pump + FRE)		Connection HeatPump (via Solax adapter box G2); Connection FRE via Solax Datahub1000		
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limita- tion by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs; Limitation by EVU (Integrated terminals / data hub)		
System information		X3-Hybrid: each 2 MPPT + 1 Bat connection; X3-Hybrid-G4 Pro: depending on the performance class, up to 3 MPPT + 2 Bat connections; 3-phase DC or AC-coupled storage system with additional PV inverter via AC coupling; Use of hybrid as offgrid system (with / without generator) possible; Hybrid up to 10 devices in parallel mode (for backup operation X3-EPS Parallel Box notwEndig, only same inverter power classes and battery sizes, EPS outputs synchronized)		

Inverter manufacturer



Storage inverter type		X3-IES compact system 5K 7 6K / 8LK / 10K / 12K		X3-Ultra Hybrid 15K / 19.9K / 20K / 25K / 30K	
Max. PV system size (kWp)		DC: 10.0 to 30.0 AC: without restriction		DC: 30,0 to 60,0 kWp AC: without restriction	
AC phases	1				
	3				
Surge Protection Device DC / AC		Type 2 / Type 2			
Bat.-coupling	AC (Bat.-Inv)				
	DC (Hybrid)				
Bat. charging via separate PV inverter (AC-coupling)					
Manufacturer storage					
Storage type		T-BAT HV-S 2.5 7.5 to 32.5	T-BAT-HS50E 10.2 to 30.6	T-BAT HV-S 2.5 7.5 to 32.5	T-BAT-HV-S 5.1 15.3 to 66.5
Number of storages per unit (tower) / Max. Units (towers) parallel		3 - 13 / 3	3 - 6 / -	3 - 13 / 2	
Max. charging power System		To be calculated depending on the set / Table		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		6.9 to 29.9	9.2 to 27.6	6.9 to 29.9	13,7 to 59,8
Time window for expansion from commissioning		Unlimited		Unlimited	
Emergency power (separate AC clamp)					
Battery backup light (backup connection inverter, i.n. transfer switch)					
Full battery backup (automatic transfer switch)		, with Solax X3-Matebox G2		, with Solax X3-EPS Parallel Box	
Active PV-modules in backup mode					
Interfaces (Heat pump + FRE)		Connection WP (via Solax Adapterbox G2); Connection FRE via 5 x DI		Connection WP (via Solax Adapterbox G2); Connection FRE via 5 x DI	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times; dynamic electricity tariffs; Limitation by EVU (Integrated terminals / data hub)		Fixed charging times; dynamic electricity tariffs; Limitation by EVU (Integrated terminals / data hub)	
System information		3-Phase DC coupled storage system; Use of hybrid as offgrid system (with / without generator) possible; devices in parallel operation;		3-phase DC coupled storage system; Use of hybrid as offgrid system (with / without generator) possible; probably up to 10 devices in parallel operation; Execution 15K - 20K With 2 MPPT and 2 x battery; 25K + 30K with 3 MPPT and 2 x battery connection; When using both battery connections the same capacity (tower height) mandatory!	

*In Germany limited to 4.6 kW in single-phase operation (VDE-AR-N 4105) // **With suitable PV inverter // ***Availability /Release according to manufacturer's specification // All information without guarantee and subject to reservation according to manufacturer's approval.

Please note the instructions at the end of the document.

Inverter manufacturer

SUNGROW

Clean power for all

Storage inverter type		SH 5.0 / 6.0 / 8.0 / 10.0 RT-20			
Max. PV system size (kWp)		DC: 5,0 to 15,0 AC: without restriction			
AC phases	1	☐			
	3	☒			
Surge Protection Device DC / AC		Type 2 / Type 2			
Bat.-coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage					
Storage type		B-Box HVS 5.1 to 12.8 	B-Box HVM 11.0 to 22.1 	Force-H1 13.5 to 23.6 	Force-H2 6.7 to 16.9 
Number of storages per unit (tower) / Max. Units (towers) parallel		2 - 5 / up to 3	4 - 8 / up to 3	4 - 7 / 6	2 - 5 / 6
Max. charging power System		to be calculated depending on the set / table			
Usable capacity (kWh) per unit		5,1 to 12,8	11,0 to 22,1	13,5 to 23,6	6,7 to 16,9
Time window for expansion from commissioning		Unlimited		Up to 2 years	
Emergency power (separate AC clamp)		☒ backup connection (can only be used separately per device in parallel operation)			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ backup connection (can only be used separately per device in parallel operation)			
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒			
Interfaces (Heat pump + FRE)		Connection heat pump via D0 contact;Connection FRE via 4 x DI contact			
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times, dynamic electricity tariffs (announced - via iHomeManager) Limitation by EVU (via integrated control contact)			
System information		3-phase DC-coupled storage system with additionalHem PV inverter via AC coupling; Up to 2 devices in parallel operation; (observe the requirements for FRE connection and network and system protection in DE; Only the same inverter performance classes possible)			

Inverter manufacturer

SUNGROW

Clean power for all

Storage inverter type		SH 5.0 / 6.0 / 8.0 / 10.0 RT 		SH 15 / 20 / 25 T 	
Max. PV system size (kWp)		DC: 5,0 to 15,0 AC: without restriction		DC: 30,0 to 50,0 AC: without restriction	
AC phases	1	☐			
	3	☒			
Surge Protection Device DC / AC		Type 2 / Type 2			
Bat.- coupling	AC (Bat.-Inv)	☒			
	DC (Hybrid)	☒			
Bat. charging via separate PV inverter (AC-coupling)		☒			
Manufacturer storage		-AXITEC		SUNGROW Clean power for all	SUNGROW Clean power for all
Storage type		AXIstorage Li SV1 13.5 to 23.6	AXIstorage Li SV2 6.7 to 13.5	SBR (with RT Serie) 064*** / 096 / 128 / 160 / 192 / 224 / 256	SBH (RT + T Serie) 100 / 150 / 200 / 250 / 300 / 350 / 400
Number of storages per unit (tower) / Max. Units (towers) parallel		4 - 7 / 6 	2 - 5 / 6 	2 - 8 / - 	2 - 8 / bis 2 
Max. charging power Sys- tem		to be calculated depending on the set / table		depending on the set / table	to be calculated depending on the set / table
Usable capacity (kWh) per unit		13,5 to 23,6	6,7 to 16,9	6,4 to 25,6	10,0 to 40,0
Time window for expansion from commissioning		Up to 5 years		Unlimited	Unlimited
Emergency power (separate AC clamp)		☒ backup connection (can only be used separately per device in parallel operation)			
Battery backup light (backup connection inverter, i.n. transfer switch)		☒ backup connection (can only be used separately per device in parallel operation)			☒ backup connection (Compl. Domestic load up to 43 kW)
Full battery backup (automatic transfer switch)		☐			
Active PV-modules in backup mode		☒			
Interfaces (Heat pump + FRE)		Connection heat pump via D0 contact;Connection FRE via 4 x DI contact			Connection heat pump via D0 contact;Conne- ction FRE via 4 x DI contact
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		Fixed charging times, dynamic electricity tariffs (announced - via iHome- Manager) Limitation by EVU (via integrated control contact)			Fixed charging times, dynamic electricity tariffs (Announced - via iHomeManager); Limitation by EVU (Via integrated control contact)
System information		3-phase DC-coupled storage system with additionalHem PV inverter via AC coupling; Up to 2 devices in parallel operation; (observe the requirements for FRE connection and network and system protection in DE; Only the same inverter performance classes possible)			3-phase DC-coupled storage system with toAdditional PV inverters via AC coupling (up to 5 WR of the CX series); Up to 4 devices in parallel operation; (Observe the requirements for FRE connection and network and system protection in DE; Only the same inverter performance classes possible)

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Inverter manufacturer



Storage inverter type		SunESS SW 8 / 10 / 12 / 15 KH3UT	
Max. PV system size (kWp)		DC: 12.0 to 22.5 AC: without restriction	
AC phases	1	☐	
	3	☒	
Surge Protection Device DC / AC		Type 2 / Type 2	
Bat.- coupling	AC (Bat.-Inv)	☐	
	DC (Hybrid)	☒	
Bat. charging via separate PV inverter (AC-coupling)		☐	
Manufacturer storage		SUNWODA ENERGY	
Storage type		SunESS 5.0 / 10.0 / 15.0 / 20.0 / 25.0 / 30.0 / 35.0 / 40.0	
Number of storages per unit (tower) / Max. Units (towers) parallel		1 - 8 / -	
Max. charging power Sys- tem		to be calculated depending on the set / table	
Usable capacity (kWh) per unit		5,0 to 40,0	
Time window for expansion from commissioning		Unlimited	
Emergency power (separate AC clamp)		☒	
Battery backup light (backup connection inverter, i.n. transfer switch)		☒	
Full battery backup (automatic transfer switch)		☐	
Active PV-modules in backup mode		☒	
Interfaces (Heat pump + FRE)		Heat pump connection via DRM contact; FRE connection via 4 x DRM contacts	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limi- tation by EVU according to EnWG §14a		k.A.	
System information		3-phase hybrid device with additional PV inverter via AC coupling; must always be installed as a complete system including storage; currently no cascading approved	

Inverter manufacturer



Storage inverter type		Pulse neo 6	Element Backup
Max. PV system size (kWp)		AC: without restriction	
AC phases	1	☒	☐
	3	☐	☒
Surge Protection Device DC / AC		-/-	
Bat.-coupling	AC (Bat.-Inv)	☒	
	DC (Hybrid)	☐	
Bat. charging via separate PV inverter (AC-coupling)		☒	
Manufacturer storage			
Storage type		Pulse neo	Element 6 / 12 / 18
Number of storages per unit (tower) / Max. Units (towers) parallel		1 / -	1 - 3 / -
Max. charging power System		To be calculated depending on the set / Table to be found	
Usable capacity (kWh) per unit		5,9	5.9 / 11.7 / 17.7
Time window for expansion from commissioning		-	Unlimited
Emergency power (separate AC clamp)		☐	☒ , backup connection / box (only active on the master device)
Battery backup light (backup connection inverter, i.n. transfer switch)		☐	☒ , backup connection / box (only active on the master device)
Full battery backup (automatic transfer switch)		☐	☐
Active PV-modules in backup mode		☐	
Interfaces (Heat pump + FRE)		AnbiHeat pump via external relay control	
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Fixed charging times	
System information		1-/3-phase AC-coupled storage system; Ideal for storage retrofitting in existing systems; Up to 5 devices can be cascaded with Varta Link	

**Explanation of
The specifications**
Description

Storage inverter type		Name inverter series and power classes
Max. PV system size (kWp)		DC System size according to manufacturer's specifications *
AC phases	1	1-phase grid connection
	3	3-phase grid connection
Surge Protection Device DC / AC		Specification of integrated overvoltage protection, if applicable also as an additional option
Bat.-coupling	AC (Bat.-Inv)	Definition of battery coupling via AC: Inverter is designed as pure AC-coupled device (e.g. SMA Sunny Island) or can also be used as hybrid inverter without connection of PV modules as bat inverter.
	DC (Hybrid)	Definition of battery coupling via DC: The inverter is designed as a hybrid device and can charge the battery via DC coupling from the directly connected PV modules.
Bat. charging via separate PV inverter (AC-coupling)		Use of a second inverter (same or different manufacturer) for charging the battery storage via AC coupling
Manufacturer storage		Manufacturer storage
Storage type		Name storage types (Compatible variants) Battery sets compatible with this storage system
Number of storages per unit (tower) / Max. Units (towers) parallel		Number of battery modules in individual setups / max. parallel setups Setups
Max. charging power System		maximum charge / discharge power in the respective unit combination *
Usable capacity (kWh) per unit		Usable capacity according to storage manufacturer *
Time window for expansion from commissioning		Possibility of a battery expansion as well as the time window for this from the time of commissioning
Emergency power (separate AC clamp)		Definition: Separate clamp at inverter for external socket(s), which is fed from battery and if possible by solar power.
Battery backup light (backup connection inverter, i.n. transfer switch)		Definition: direct supply of few defined circuits via backup connection at the inverter, if necessary also with switching by backup box (no complete house load)
Full battery backup (automatic transfer switch)		Definition: by means of automatic transfer switch in central main line (according to local regulations) supply of all/defined circuits takes place
Active PV-modules in backup mode		Recharge option in case of grid failure
Interfaces (Heat pump + FRE)		Information on interfaces for heat pumps and FRE cell chemistry
SMART Charging Features Dynamic electricity tariffs, fixed charging times, Limitation by EVU according to EnWG §14a		Additional charging modes of the storage system (in addition to PV surplus) with fixed charging times or via external control based on stock market prices, energy supply company specifications, etc.
System information		Additional information on the products

* The respective columns for the appliance series contain different performance classes, therefore all information refers to the smallest and largest appliance in each case, as well as a storage tower/unit. Detailed information can be found in the data sheet.

Krannich Solar GmbH & Co. KG

Heimsheimer Str. 65/1

71263 Weil der Stadt / Hausen

Germany

Tel. +49 (0) 7033 3042 0

info@de.krannich-solar.com