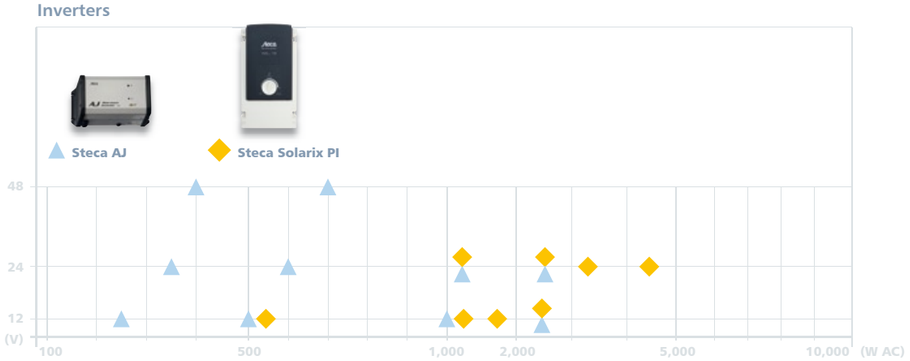
Inverter selection

Inverters



Inverters with battery chargers

General recommendations

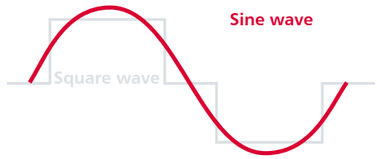
for alternating current and hybrid systems.

Selecting an inverter

The power of the inverter must be selected according to the way it will be used. The sum of the power of all loads must not exceed the rated power of the inverter. The maximum power of the inverter must be able to cover the starting currents of the loads.
In order to allow the connection of more loads, Steca recommends overdimensioning the inverter.

Sine wave inverters

In contrast to so-called square wave or trapezoidal inverters (grey square curve), Steca sine wave inverters produce a real and precisely controlled sinus wave (red sinus wave) at their output. The sinus wave inverters assure that all loads which are suitable for grid operation can also be operated on a solar home system without any problems. Furthermore, they offer the advantage that no significant noises are produced in the inverter and there is no loud background noise to be heard on a connected radio, for example.



Selecting the PV generator and solar charge controller

The solar module array has to be adjusted to the local sunlight conditions and the system's energy requirement. In order to avoid stagnation times, the PV generator must also provide enough power during months with little solar radiation in order to cover the requirement of the connected loads.

The chosen solar charge controller must also be suitable for the maximum short-circuit current of the PV generator and the maximum load current. In some applications, however, technical properties also play an important role in the choice of solar charge controller. This may mean that a high-performance solar charge controller with corresponding additional functions is used in a system with a low output.

In order to keep the initial investment small, we recommend planning the size of the PV generator and battery according to the current energy consumption and choosing a solar charge controller which will allow the system to be expanded later.

Selecting the battery

In order to also be able to supply loads with high requirements without any problems, the size of the battery must be chosen with care. Some critical loads such as fridges, freezers, pumps and motors need extremely high starting currents in their start-up phases. In order to be able to power such loads, it is important to use a high-performance inverter with a high overload capacity, particularly in the start-up phase. The battery must also possess a large enough capacity so that sufficient currents are made available to the inverter in the start-up phase. We recommend choosing the battery size according to the following formula: the battery capacity should be at least five times as large as the rated power of the inverter divided by the rated voltage of the battery.

$C_{batt} \geq 5\ h * P_{nom} / U_{nom}$

P_{nom} is the rated power of the inverter in watts and U_{nom} is the rated voltage of the battery.

P_{nom} inverter	U_{nom} battery	Battery capacity
200 W	12 V	> 100 Ah
500 W	12 V	> 200 Ah
1,000 W	12 V	> 400 Ah
2,000 W	12 V	> 800 Ah
2,000 W	24 V	> 400 Ah
3,500 W	24 V	> 700 Ah
3,500 W	48 V	> 350 Ah
5,000 W	48 V	> 500 Ah
7,000 W	48 V	> 700 Ah

Selecting the system voltage

The power requirement of the loads should be the decisive factor when choosing the system voltage. The higher the power, the higher the system voltage. If no 12 V DC loads are connected to the system, a higher system voltage of 24 V or 48 V should be chosen in order to reduce the alternating currents, and thus the losses on the DC side. Inverters also generally work more effectively with a higher input voltage. All in all, a higher system voltage leads to the system having a greater efficiency, since losses are reduced

Cable lengths and cross sections

Direct currents in inverter systems are typically large. For this reason, it is important to dimension the cables between the battery and the inverter appropriately. Always connect the inverter directly to the battery. The cable you use should be as short as possible. In addition, the cable cross section should match the expected flow of current. In case of doubt, a thicker cable should be chosen. This can have a significant influence on the overall behaviour of the system. Using thick and short cables can limit losses and thus allow you to create a system with a better level of efficiency and/or better performance.

If the cables on the direct current side of the inverter are included in the delivery, these should not be lengthened, and a smaller cross section should not be used.

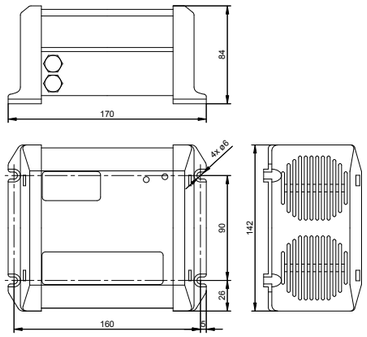
Steca AJ

275-12, 350-24, 400-48, 600-24, 700-48, 1000-12, 2100-12, 2400-24

The Steca AJ inverter series stands out with its wide range of available power classes and DC input voltages.

This enables the optimal inverter to be used for any application. The cables for connecting the battery and the load are already mounted on the Steca AJ, thus making it easier to install the device. The automatic standby mode considerably reduces the inverter's own consumption. The Steca AJ inverter's excellent overload capacity ensures that even critical loads can be operated easily.

[275 W ... 2,400 W]



Steca AJ 275-12, AJ 350-24, AJ 400-48

Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Automatic load detection
- Best reliability

Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse (except Steca AJ 2100-12)
- Acoustic alarm at deep discharge or overheating

Displays

- Multi-coloured LED shows operating states

Operation

- Main switch
- Adjustable load detection

Options

- Types with 115 V / 50 Hz, 115 V / 60 Hz or 230 V / 60 Hz
- Model with protective lacquered mainboard
- Terminal for connection of a remote control (On/Off) for the types Steca AJ 275-12 to Steca AJ 700-48
- Remote control JT8 (On/Off, LED) for connection to Steca AJ 1000-12 to Steca AJ 2400-24

Certificates

- Compliant with European Standards (CE)
- RoHS compliant

	275-12	350-24	400-48	600-24	700-48	1000-12	2100-12	2400-24
Characterisation of the operating performance								
System voltage	12 V	24 V	48 V	24 V	48 V	12 V	12 V	24 V
Continuous power	200 VA	300 VA	300 VA	500 VA	500 VA	800 VA	2,000 VA	2,000 VA
Power 30 min.	275 VA	350 VA	400 VA	600 VA	700 VA	1,000 VA	2,100 VA	2,400 VA
Power 5 sec.	450 VA	650 VA	1,000 VA	1,200 VA	1,400 VA	2,200 VA	5,000 VA	5,200 VA
Max. efficiency	93 %	94 %	94 %	94 %	94 %	93 %	92 %	94 %
Own consumption standby / ON	0.3 W / 2.4 W	0.5 W / 3.5 W	1.1 W / 5.2 W	0.6 W / 7.2 W	1.5 W / 12 W	0.7 W / 10 W	0.7 W / 16 W	1.2 W / 16 W
DC input side								
Battery voltage	10.5 V ... 16 V	21 V ... 32 V	42 V ... 64 V	21 V ... 32 V	42 V ... 64 V	10.5 V ... 16 V	10.5 V ... 16 V	21 V ... 32 V
AC output side								
Output voltage	230 V AC +0 / -10 % (true sine wave)							
Output frequency	50 Hz +/-0.05 % (crystal controlled)							
Load detection (standby)	2 W			adjustable: 1 W ... 20 W				
Operating conditions								
Ambient temperature	-20 °C ... +50 °C							
Fitting and construction								
Cable length battery / AC	1.2 m / 1 m			1.5 m / 1m			1.7 m / 1 m	
Degree of protection	IP 30						IP 20	
Dimensions (X x Y x Z)	170 x 142 x 84 mm			252 x 142 x 84 mm		455 x 142 x 84 mm	406 x 273 x 117 mm	
Weight	2.4 kg	2.6 kg		4.5 kg		8.5 kg	19 kg	18 kg

Technical data at 25 °C / 77 °F

[areas of application]

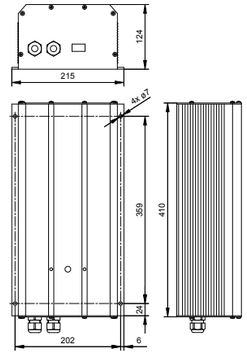
Steca XPC

1400-12, 2200-24, 2200-48

The Steca XPC series of inverters combine a very high overload capacity with the capability to operate highly critical loads.

Other important features of these high-quality inverters are their powerful device protection and their low own consumption. The Steca XPCs combine a sine wave inverter, four-stage battery charger and transfer system in one device, therefore making them also suitable for hybrid systems. The built-in multifunctional contact enables you, for example, to switch on and off diversion loads for excess power or start a diesel generator to recharge batteries

[1,400 W ... 2,200 W]



Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Adjustable integrated battery charger
- Automatic load detection
- Best reliability
- Can be used as a back-up system or uninterruptible power supply (UPS)
- Multifunction contact
- Ultra-fast transfer relay

Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse
- Acoustic alarm at deep discharge or overheating

Displays

- 7 LEDs show operating states
  - for operation, fault messages

Operation

- Main switch
- Adjustable load detection
- Programming by buttons

Options

- Type with 230 V / 60 Hz
- Type with 115 V / 60 Hz
- Model with protective lacquered mainboard
- Protection cover C-IP23 to raise the degree of protection
- Remote control RCC-01
- CFC-01 cable entry for strain relief and protection of connections
- Temperature sensor CT35 to correct the voltage thresholds according to the current battery temperature

Certificates

- Compliant with European Standards (CE)
- RoHS compliant

	1400-12	2200-24	2200-48
Characterisation of the operating performance			
System voltage	12 V	24 V	48 V
Continuous power	1,100 VA	1,600 VA	1,600 VA
Power 30 min.	1,400 VA	2,200 VA	2,200 VA
Power 5 sec.	3,300 VA	4,800 VA	4,800 VA
Max. efficiency	94 %	95 %	95 %
Own consumption standby / ON	0.6 W / 4 W	0.9 W / 7 W	1.3 W / 7 W
Input side			
Input voltage	adjustable: 150 V AC ... 230 V AC		
Charging current adjustable	0 A ... 45 A	0 A ... 37 A	0 A ... 20 A
Max. current on transfer system	16 A		
Switching time transfer relay	< 40 ms		
Battery side			
Battery voltage	9.5 V ... 16 V	19 V ... 32 V	38 V ... 64 V
Battery monitoring	LVD, HVD, floating and equalisation voltage adjustable by user via optional remote control RCC-01		
AC output side			
Output voltage	230 V AC +0 / -10 % (true sine wave)		
Output frequency	50 Hz +/-0.05 % (crystal controlled)		
Load detection (standby)	adjustable: 1 W ... 25 W		
Operating conditions			
Ambient temperature	-20 °C ... +55 °C		
Fitting and construction			
Cable length battery	165 cm		
Degree of protection	IP 20 / with optional top cover: IP 22		
Dimensions (X x Y x Z)	215 x 410 x 124 mm		
Weight	11.7 kg	12.6 kg	

Technical data at 25 °C / 77 °F

[areas of application]

Sine Wave Inverters

Steca Compact

1600-12, 2600-24, 4000-48

The Steca Compact series is specially designed for hybrid systems.

The devices consist of a sine wave inverter with a high overload capacity, a battery charger and a transfer system. The built-in multifunctional contact makes it possible, for example, to switch on and off diversion loads for excess power or start a diesel generator to recharge batteries. Even if you only use the device's sine wave inverter, the Steca Compact series is still very cost effective. The integrated power sharing function ensures that the transfer system always provides the connected loads with the desired power.

Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Adjustable integrated battery charger
- Automatic load detection
- Best reliability
- Can be used as a back-up system or uninterruptible power supply (UPS)
- Multifunction contact
- Adjustable power sharing
- Ultra-fast transfer relay

Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse
- Acoustic alarm at deep discharge or overheating

Displays

- 17 LEDs show operating states
  - for operation, state of charge, fault messages
- Display of power and charging current

Operation

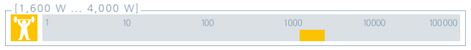
- Main switch
- Adjustable load detection
- Programming by buttons

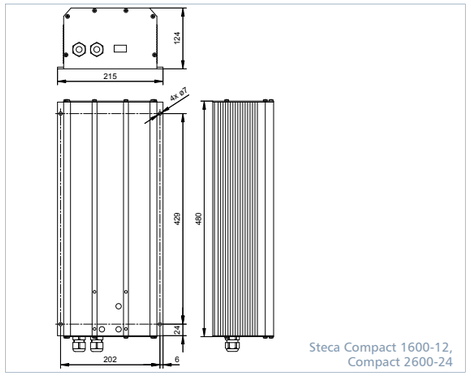
Options

- Type with 230 V / 60 Hz
- Model with protective lacquered mainboard
- Protection cover C-IP23 to raise the degree of protection
- Remote control RCC-01
- CFC-01 cable entry for strain relief and protection of connections
- Temperature sensor CT35 to correct the voltage thresholds according to the current battery temperature
- Remote control RPS-01 for the power sharing function

Certificates

- Compliant with European Standards (CE)
- RoHS compliant





Steca Compact 1600-12, Compact 2600-24

	1600-12	2600-24	4000-48
Characterisation of the operating performance			
System voltage	12 V	24 V	48 V
Continuous power	1,300 VA	2,300 VA	3,500 VA
Power 30 min.	1,600 VA	2,600 VA	4,000 VA
Power 5 sec.	3,900 VA	6,900 VA	10,500 VA
Max. efficiency	94 %	95 %	95 %
Own consumption standby / ON	0.6 W / 6 W	0.9 W / 9 W	1.4 W / 12 W
Input side			
Input voltage	adjustable: 150 V AC … 230 V AC		
Charging current adjustable	0 A … 55 A	0 A … 55 A	0 A … 50 A
Max. current on transfer system	16 A		
Switching time transfer relay	< 40 ms		
Battery side			
Battery voltage	9.5 V … 16 V	19 V … 32 V	38 V … 64 V
Battery monitoring	LVD, HVD, floating and equalisation voltage adjustable by user		
AC output side			
Output voltage	230 V AC +0 / -10 % (true sine wave)		
Output frequency	50 Hz +/-0.05 % (crystal controlled)		
Load detection (standby)	adjustable: 1 W … 25 W		
Operating conditions			
Ambient temperature	-20 °C … +55 °C		
Fitting and construction			
Input current repartition, „Power Sharing"	1 A … 16 A		
Cable length battery	165 cm		
Degree of protection	IP 20 / with optional top cover: IP 22		
Dimensions (X x Y x Z)	215 x 480 x 124 mm	215 x 480 x 124 mm	215 x 670 x 124 mm
Weight	16 kg	17.1 kg	29.4 kg

Technical data at 25 °C / 77 °F

[areas of application]

Steca HPC

2800-12, 4400-24, 6000-48, 8000-48

The technology of the Steca HPC inverter series is based on Steca Compact devices. However, the four different types offer considerably greater power.

What's more, Steca HPC devices are equipped with PG cable glands for strain relief and protection of all connections. The devices consist of a sine wave inverter, a battery charger, a transfer system and a potential-free multifunctional contact. They are primarily used in hybrid systems. The integrated power sharing function ensures that the transfer system always provides the connected loads with the desired power.

Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Adjustable integrated battery charger
- Automatic load detection
- Best reliability
- Can be used as a back-up system or uninterruptible power supply (UPS)
- Multifunction contact
- Adjustable power sharing
- Ultra-fast transfer relay

Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse
- Acoustic alarm at deep discharge or overheating

Displays

- 17 LEDs show operating states
  - for operation, state of charge, fault messages
- Display of power and charging current

Operation

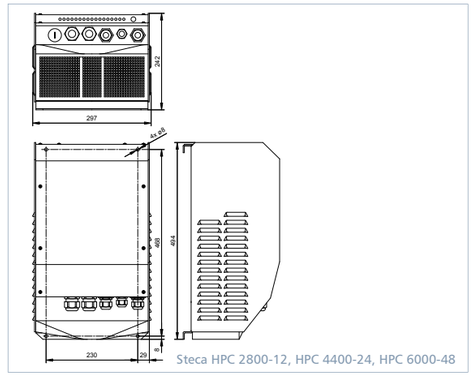
- Main switch
- Adjustable load detection
- Programming by buttons

Options

- Type with 230 V / 60 Hz
- Model with protective lacquered mainboard
- Remote control RCC-01
- Temperature sensor CT35 to correct the voltage thresholds according to the current battery temperature
- Remote control RPS-01 for the power sharing function

Certificates

- Compliant with European Standards (CE)
- RoHS compliant



Steca HPC 2800-12, HPC 4400-24, HPC 6000-48

	2800-12	4400-24	6000-48	8000-48
Characterisation of the operating performance				
System voltage	12 V	24 V	48 V	48 V
Continuous power	2,500 VA	4,000 VA	5,000 VA	7,000 VA
Power 30 min.	2,800 VA	4,400 VA	6,000 VA	8,000 VA
Power 5 sec.	7,500 VA	12,000 VA	15,000 VA	21,000 VA
Max. efficiency	93 %	94 %	96 %	96 %
Own consumption standby / ON	1.8 W / 10 W	2 W / 16 W	2.5 W / 18 W	3 W / 30 W
Input side				
Input voltage	adjustable: 150 V AC … 230 V AC			
Charging current adjustable	0 A … 110 A	0 A … 100 A	0 A … 70 A	0 A … 90 A
Max. current on transfer system	30 A			50 A
Switching time transfer relay	< 40 ms			
Battery side				
Battery voltage	9.5 V … 17 V	19 V … 34 V	38 V … 68 V	38 V … 68 V
Battery monitoring	LVD, HVD, floating and equalisation voltage adjustable by user			
AC output side				
Output voltage	230 V AC +0 / -10 % (true sine wave)			
Output frequency	50 Hz +/-0.05 % (crystal controlled)			
Load detection (standby)	adjustable: 1 W … 25 W			
Operating conditions				
Ambient temperature	-20 °C … +55 °C			
Fitting and construction				
Input current repartition, „Power Sharing"	1 A … 30 A			1 A … 50 A
Degree of protection	IP 22			
Dimensions (X x Y x Z)	297 x 480 x 242 mm			297 x 494 x 242 mm
Weight	33 kg	39 kg	41 kg	45 kg

Technical data at 25 °C / 77 °F

[areas of application]

Steca Xtender XTM

1500-12, 2000-12, 2400-24, 3500-24, 2600-48, 4000-48

The basic functions of the combined inverter of the Steca Xtender series are the inverter, the battery charger, the switching function and the support of external sources of alternating current. These functions can be combined and controlled fully automatically, the range offers outstanding user-friendliness and very good exploitation of the energy available.

All the settings of the Steca Xtender XTM can be remote controlled. When a software with new functions is available, it can be loaded into the system, so the Steca Xtender XTM always stays up to date. Several Steca Xtender XTM can be connected in parallel or to form a three-phase system. That means that up to nine Steca Xtender XTM can work together.

Multifunction contacts

These potential-free contacts can be programmed for many different applications. They can react to any event outside or inside of the inverter (grid availability, battery voltage, fault message ...) They can also be programmed on a timer or can be switched on during particular times (at night, at the weekend ...). In this way, they can serve to start up a generator, to switch off less important loads, to signal a fault, to charge batteries depending on the situation, etc.

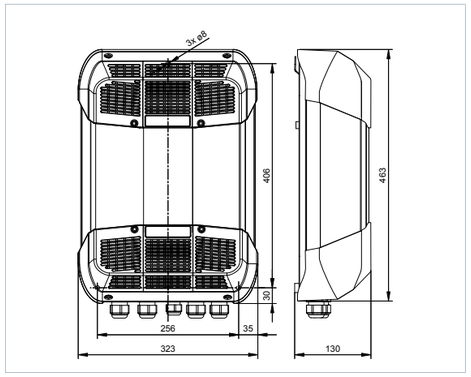
Smart-boost function

With the smart-boost function, the output of another source of alternating current, such as a power generator or a land connection, can be increased; even when special loads are being used (inductive, asymmetric, with high switch-on current). It is also possible to combine the Steca Xtender XTM with almost all inverters which are already present in order to increase the available output.

Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Adjustable integrated battery charger
- Multistage programmable battery charger with PFC
- Automatic load detection
- Standby load detection adjustable over a wide range, starting from a low value
- Parallel connectable
- Best reliability
- Can be used as a back-up system or uninterruptible power supply (UPS)
- Multifunction contact
- Adjustable power sharing
- Reliable and noiseless with any kind of load
- Support of sources of alternating current (Smart Boost)
- Automatic support for peak loads (Power Shaving)
- Ultra-fast transfer relay
- High efficiency
- Control by digital signal processor (DSP)

[1,500 W ... 4,000 W]



Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse
- Acoustic alarm at deep discharge or overheating

Displays

- 5 LEDs show operating states
  - for operation, fault messages

Operation

- Main switch
- Adjustable load detection

Options

- Type with 115 V / 60 Hz
- Model with protective lacquered mainboard
- Temperature sensor BTS-01 to correct the voltage thresholds according to the current battery temperature

Certificates

- Compliant with European Standards (CE)
- RoHS compliant

	XTM 1500-12	XTM 2000-12	XTM 2400-24	XTM 3500-24	XTM 2600-48	XTM 4000-48
Characterisation of the operating performance						
System voltage	12 V	12 V	24 V	24 V	48 V	48 V
Continuous power	1,500 VA	2,000 VA	2,000 VA	3,000 VA	2,000 VA	3,500 VA
Power 30 min.	1,500 VA	2,000 VA	2,400 VA	3,500 VA	2,600 VA	4,000 VA
Power 5 sec.	3.4 kVA	4.8 kVA	6 kVA	9 kVA	6.5 kVA	10.5 kVA
Max. efficiency	93 %	93 %	94 %	94 %	96 %	96 %
Own consumption standby / ON	1.4 W / 8 W	1.4 W / 10 W	1.6 W / 9 W	1.6 W / 12 W	2 W / 10 W	2.1 W / 14 W
Power Factor Correction (PFC)	according EN 61000-3-2					
Acoustic level	< 40 dB / < 45 dB (without / with ventilation)					
Input side						
Input voltage	< 265 V AC (adjustable: 150 V AC ... 265 V AC)					
Charging current adjustable	0 A ... 70 A	0 A ... 100 A	0 A ... 55 A	0 A ... 90 A	0 A ... 30 A	0 A ... 50 A
Max. current on transfer system	50 A					
Input frequency	45 Hz ... 65 Hz					
Battery side						
Battery voltage	9.5 V ... 17 V	9.5 V ... 17 V	19 V ... 34 V	19 V ... 34 V	38 V ... 68 V	38 V ... 68 V
AC output side						
Output voltage	230 V AC +/-2 % / 190 V AC ... 245 V AC (true sine wave)					
Output frequency	50 Hz, adjustable: 45 Hz ... 65 Hz +/-0.05 % (crystal controlled)					
Total harmonic distortion	< 2 %					
Load detection (standby)	2 W ... 25 W					
Operating conditions						
Ambient temperature	-20 °C ... +55 °C					
Fitting and construction						
Power Smart-Boost	1,500 VA	2,000 VA	2,400 VA	3,500 VA	2,600 VA	4,000 VA
Input current balance adjustment	1 A ... 50 A					
Multifunction contact adjustable	2 independent contacts 16 A / 250 V AC (potential free change-over contacts)					
Degree of protection	IP 20					
Dimensions (X x Y x Z)	323 x 463 x 130 mm					
Weight	15 kg	18.5 kg	16.2 kg	21.2 kg	16.2 kg	22.9 kg
Cooling principle	fan from 55 °C					
Parallel connection possible	3 x 1 phase and three-phase					

Technical data at 25 °C / 77 °F

Steca RCC-02

Remote control and display (incl. 2 m cable)

Suitable for wall-mounting *(see page 57)*.

Not illustrated:

Steca RCC-03

Remote control and display (incl. 2 m cable)

Suitable for rack installation.

Steca BTS-01

Battery temperature sensor (incl. 5 m cable)

This sensor allows the battery voltages to be adjusted to the battery temperature.

Communications cable

Connection to the three-phase system or to the parallel connection CAB-RJ45-2 (2 m)

This is used to connect several inverters together to a three-phase system or a system connected in parallel.

[areas of application]

Sine Wave Inverters

Steca Xtender XTH

3000-12, 5000-24, 6000-48, 8000-48

The basic functions of the combined inverter of the Steca Xtender series are the inverter, the battery charger, the switching function and the support of external sources of alternating current. These functions can be combined and controlled fully automatically, the range offers outstanding user-friendliness and very good exploitation of the energy available.

All the settings of the Steca Xtender XTH can be remote controlled. When a software with new functions is available, it can be loaded into the system, so the Steca Xtender XTH always stays up to date. Several Steca Xtender XTH can be connected in parallel or to form a three-phase system. That means that up to nine Steca Xtender XTH can work together.

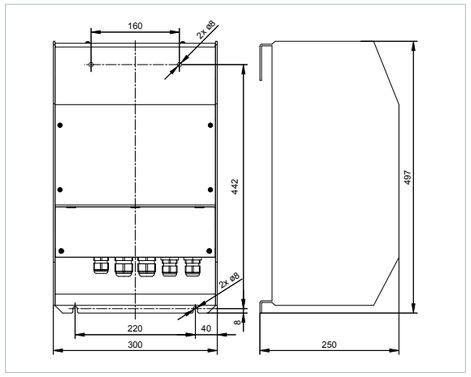
Multifunction contacts

These potential-free contacts can be programmed for many different applications. They can react to any event outside or inside of the inverter (grid availability, battery voltage, fault message ...) They can also be programmed on a timer or can be switched on during particular times (at night, at the weekend ...). In this way, they can serve to start up a generator, to switch off less important loads, to signal a fault, to charge batteries depending on the situation, etc.

Smart-boost function

With the smart-boost function, the output of another source of alternating current, such as a power generator or a land connection, can be increased; even when special loads are being used (inductive, asymmetric, with high switch-on current). It is also possible to combine the Steca Xtender XTH with almost all inverters which are already present in order to increase the available output.

[3,000 W ... 8,000 W]



	XTH 3000-12	XTH 5000-24	XTH 6000-48	XTH 8000-48
Characterisation of the operating performance				
System voltage	12 V	24 V	48 V	48 V
Continuous power	2,500 VA	4,500 VA	5,000 VA	7,000 VA
Power 30 min.	3,000 VA	5,000 VA	6,000 VA	8,000 VA
Power 5 sec.	7.5 kVA	12 kVA	15 kVA	21 kVA
Max. efficiency	93 %	94 %	96 %	96 %
Own consumption standby / ON	1.4 W / 14 W	1.8 W / 18 W	2.2 W / 22 W	2.4 W / 30 W
Power Factor Correction (PFC)	according EN 61000-3-2			
Acoustic level	< 40 dB / < 45 dB (without / with ventilation)			
Input side				
Input voltage	< 265 V AC (adjustable: 150 V AC ... 265 V AC)			
Charging current adjustable	0 A ... 160 A	0 A ... 140 A	0 A ... 100 A	0 A ... 120 A
Max. current on transfer system	50 A			
Input frequency	45 Hz ...65 Hz			
Battery side				
Battery voltage	9.5 V ... 17 V	19 V ... 34 V	38 V ... 68 V	38 V ... 68 V
AC output side				
Output voltage	230 V AC +/-2 % / 190 V AC ... 245 V AC (true sine wave)			
Output frequency	50 Hz, adjustable: 45 Hz ... 65 Hz +/-0.05 % (crystal controlled)			
Total harmonic distortion	< 2 %			
Load detection (standby)	2 W ... 25 W			
Operating conditions				
Ambient temperature	-20 °C ... +55 °C			
Fitting and construction				
Power Smart-Boost	3,000 VA	5,000 VA	6,000 VA	8,000 VA
Input current balance adjustment	1 A ... 50 A			
Multifunction contact adjustable	2 independent contacts 16 A / 250 V AC (potential free change-over contacts)			
Degree of protection	IP 20			
Dimensions (X x Y x Z)	300 x 497 x 250 mm			
Weight	34 kg	40 kg	42 kg	46 kg
Cooling principle	fan from 55 °C			
Parallel connection possible	3 x 1 phase and three-phase			

Technical data at 25 °C / 77 °F

Product features

- True sine wave voltage
- Excellent overload capabilities
- Optimal battery protection
- Adjustable integrated battery charger
- Multistage programmable battery charger with PFC
- Automatic load detection
- Standby load detection adjustable over a wide range, starting from a low value
- Parallel connectable
- Best reliability
- Can be used as a back-up system or uninterruptible power supply (UPS)
- Multifunction contact
- Adjustable power sharing
- Reliable and noiseless with any kind of load
- Support of sources of alternating current (Smart Boost)
- Automatic support for peak loads (Power Shaving)
- Ultra-fast transfer relay
- High efficiency
- Control by digital signal processor (DSP)

Electronic protection functions

- Deep discharge protection
- Battery overvoltage shutdown
- Overtemperature and overload protection
- Short circuit protection
- Reverse polarity protection by internal fuse (except Steca Xtender XTH 3000)
- Acoustic alarm at deep discharge or overheating

Displays

- 5 LEDs show operating states
- for operation, fault messages

Operation

- Main switch
- Adjustable load detection

Options

- Type with 115 V / 60 Hz (except Steca Xtender XTH 8000-48)
- Model with protective lacquered mainboard
- Temperature sensor BTS-01 to correct the voltage thresholds according to the current battery temperature

Certificates

- Compliant with European Standards (CE)
- RoHS compliant

Steca RCC-02

Remote control and display (incl. 2 m cable)

Suitable for wall-mounting *(see page 57)*.

Steca X-Connect system

Prewired mounting structure for devices from the Steca Xtender XTH series

Not illustrated:

Steca RCC-03

Remote control and display (incl. 2 m cable)

Suitable for rack installation.

Steca BTS-01

Battery temperature sensor (incl. 5 m cable)

This sensor allows the battery voltages to be adjusted to the battery temperature..

Communications cable

Connection to the three-phase system or to the parallel connection CAB-RJ45-2 (2 m)

This is used to connect several inverters together to a three-phase system or a system connected in parallel.

[areas of application]

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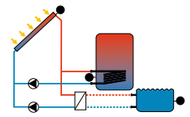
StecaGrid 300 and StecaGrid 500

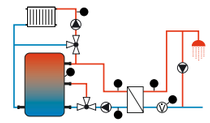
StecaGrid 2010+

StecaGrid 10 000 3ph

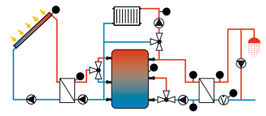
Solar controllers



Heating and domestic hot water controllers



System controllers



Mobile Use

Stationary Use

Equipment

Symbols

PV Off Grid

Solar home system
This device is particularly suitable for solar home systems.

LCD display
This device has a digital display which allows different system information to be shown.

Inverter system
This device is suitable for applications of higher performance classes or for supplying entire villages.

Camping
This device is particularly suitable for use in mobile homes or for camping applications.

Hybrid system
Suitable for hybrid systems in which additional generators are used.

Energy efficiency class
This device is highly energy efficient – highest qualification A++

Night light function
This device is suitable for night light systems.

Uninterruptible power supply
This device can also charge the battery from an external AC source.

SOC
This device calculates the state of charge of the battery using the AtonIC processor.

Telecom
This device is specially suitable for all kinds of telecommunication applications.

Remote monitoring
This device can transfer data using wires, telephone cables or wirelessly.

Sea water
This device is particularly protected against moisture and corrosion.

Prepayment
This device is suitable for prepayment applications for bringing electricity to rural areas.

Solar module performance
Maximum input power of the connected solar modules.

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„Steca PV Off Grid – Power from the sun for rural electrification.“

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