Technical data

Home power stations of the S20 X PRO series
All In One

INFINITY
Battery retrofitting for 5 years

ENERGY STORAGE
E3DC

A member of Hager Group

Technical data

S20 X PRO
Generation

Input

Max. recommended PV power (W)	45,000
Start input voltage (V)	180
Min. MPP voltage (V)	120
Max. MPP voltage (V)	850
Max. PV input voltage (V)	1,000
Max. PV current per MPP tracker (A)	33
Max. PV short-circuit current per MPP tracker (A)	38
Independent MPP trackers	2 or 3 (depending on configuration)
Configuration options	2 x MPPT / 2 x BATT or 3 x MPPT / 1 x BATT
Input connection technology per MPP tracker	2 x MC4 pairs
Compatibility with module optimisers	Yes

Output

Max. AC rated power (230 V, 50 Hz) (W)	30,000 (depending on PV size)
Max. apparent output power (VA)	34,500
AC rated voltage 3 / N / PE (V)	230/400
AC rated frequencies (Hz)	50
Max. output current (per phase) (A)	50
Feed-in phases / connection phases	3 / 3
Technology	Transformerless
Cos (phi)	0.4 … 1

General data

Max. storage system efficiency incl. battery (%)	> 90
AC short-circuit-proof / earth-fault monit.	Yes / yes
Approvals	VDE-AR-N 4105:2018-11, VDE V 0124-100:2020-06, CE, NA/EEA-NE7_CH
Permissible / recommended ambient temperature (°C)	+5 to +35 / +15 to +25
Max. relative humidity (%)	85
Max. operating altitude (mamsl)	2,000
Protection class / cooling	IP20 / fan according to output
Data interface	USB / Ethernet / CAN
Dimensions W x H x D (mm)	675 x 1,450 x 375
Display	7” TFT display
Energy management	Integrated

Operating modes

DC operation	Yes
AC storage system	Yes
Emergency current supply (rechargeable using solar energy)	Yes [1] (3ph backup power)
Hybrid (DC + AC)	Yes

1) Additional motor switch required for the backup power function subject to a surcharge. Consumers with non-sinusoidal and excessively high power must be shut off if necessary. Possible for sub-distribution boxes up to 63 A.
2) Further configurations possible via additional battery cabinets.
Note: The same number of battery modules per battery tracker must be used for battery cabinets connected in parallel.
3) The actual power is dependent on the state of the system and the temperature. It can be lower depending on the given PV output and the prevailing weather and grid conditions.
4) 8 kVA per phase and depending on the battery / PV configuration.
5) Depending on availability / battery technology; equipment and installation space check necessary; not guaranteed.

Technical data

S20 X PRO
Storage, PV configuration and retrofitting

S20 X PRO home power station [2]	21	42	63	84	126
Battery inputs used	1	1	1	1	1
Usable battery capacity (kWh) [11]	20.6	41.2	61.2	82.0	122.3
With 1 battery input, can be extended to (kWh) [11]	82.0	163.2	82.0	163.2	163.2
Number of battery towers / modules	1x7	1x7	3x7	2x7	3x7
Dimensions per battery tower W x H x D (mm)	600 x 1,450 x 442	600 x 1,450 x 740	600 x 1,450 x 442	600 x 1,450 x 740	
Rated power, charging / discharge (1 battery input) [3]	23/23				
Rated power, charging / discharge (2 battery inputs) [3]	–	–	23/30	23/30	23/30
Battery technology	Lithium-ion				
Approvals	IEC62619, UN38.3				
Rated apparent backup power (kVA) [1]	23 [4]				
E3/DC temperature regulation	Yes				
Protection rating	IP20				
Total weight of battery module / battery system (kg)	24 / 234	50 / 434	24 / 702	50 / 868	50 / 1,302
INFINITY option: Extension of battery towers per input up to 5 y. after installation to [5][6]	4				
Battery capacity warranty [7]	10 years on 80 % of the usable battery capacity				
Permissible / recommended ambient temperature (°C)	+5 to +35 / +15 to +25				
Spat. sep. battery system, cable length (m) [10]	10				

Ready for future

System and options	21	42	63	84	126
Feed-in	Freely selectable between 0 % (non-EEG operation) and 100 %				
Optional overvoltage protection with monitoring	System is prepared				
Ext. interfaces	ModBUS(TCP), KNX, CAN–I/O, xComfort				
Backup power type [1]	3ph backup power (home / commercial) for light and comfort consumption; backup power operation of motors and (heat) pumps to be checked as regards starting current and typical, desired power				
Permanent backup power reserve	Can be set via software [8]; feasible on retrofitting an additional battery set [5][9]; implemented in hardware terms on use of 2 battery inputs				
SG Ready (for heat pumps, etc.)	SG Ready board (incl.), ModBUS(TCP) (incl.), xComfort actuators (optional)				
Home automation	KNX, myGEKKO, Loxone, xComfort				
Max. system weight without batteries (kg)	126				

The output and the temporal availability of the backup power function can be limited due to software updates, power inverter grid testing and grid conditions and external framework conditions (i.e. home load, generation, hardware defect, temperature, battery calibration). With two battery sets, the S20 X PRO series can permanently maintain a backup power reserve, although each battery set is calibrated each week with its own current. Further important information concerning backup power operation can be found in the “Backup power” flyer at e3dc.com/infocenter/#Downloads.

6) INFINITY retrofitting necessitates routing all existing battery sets (max. 4) to one battery input.
7) Within the warranty period on adherence to the warranty conditions.
8) Exact maintenance of the backup power reserve set via the software necessitates regular, usually weekly, calibration of the battery state of charge. During calibration, the storage system is completely discharged via home consumption. If necessary, the immediate restoration of the backup power reserve is also carried out with mains electricity.
9) The retrofit uses the third PV tracker. In this case, an additional solar power inverter has to take over the allocated PV output.
10) To be specified on ordering; additional charge for longer cable.
11) The specified usable capacity corresponds to the energy volume that can be discharged for consumption. This value already takes into account an additional capacity reserve at system level in order to ensure full availability even in adverse weather conditions. The usable capacity is measured in a defined, realistic reference cycle on the battery system. The usable capacity can deviate from the specified value in real operation.

The service life of the batteries is dependent on the installation and operating conditions. The terms and conditions of HagerEnergy GmbH apply.
Internet connection required for remote maintenance and checking the yield.

HagerEnergy GmbH
Ursula-Flick-Strasse 8
D-49076 Osnabrück

P +49 541 760 268 0
e3dc.com

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