

TECHNICAL DATA SHEET

TPS HV 80 E

TESVOLT
Free to go green.

TECHNICAL DATA ENERGY STORAGE

Length of battery string (number of battery modules)	10	7
Energy content	80 kWh	56 kWh
Nominal voltage	810 V	567 V
Minimum operating voltage	726 V	508 V
Maximum operating voltage	913 V	639 V
Maximum charging/discharging current		100 A
Maximum C-Rate	0,6C	0,9C
Cell	Lithium NMC prismatic (Samsung SDI)	
Cell balancing	DynamiX Battery Optimizer	
Cycles expected @ 100% DoD 70% SoH 23°C +/-5°C 1C/1C	6,000	
Cycles expected @ 100% DoD 70% SoH 23°C +/-5°C 0.5C/0.5C	8,000	
Efficiency (battery)	up to 98 %	
Self-consumption (standby)	5 W (without battery inverter)	
Cooling concept	passive via fins and active via fans	
Altitude of installation site	< 2,000 m above sea level.	
Operating temperature	0 °C to 50 °C	
Ambient temperature	0 °C to 50 °C	
Humidity	0 to 80 % (non-condensing)	
Weight battery module	56 kg	
Weight battery management system (APU)	13 kg	
Certificates/standards	Cell	IEC 62619, UL 1642, UN 38.3
	Battery module	UN 38.3, IEC 62619:2017, IEC 62620:2014
	Product	CE, UN 38.3, IEC 62619:2017, IEC 61010-1+A1:2016, IEC 61508:2010, IEC 61000-6-2:2016, IEC 61000-6-4:2019, IEC 61000-6-7:2015, 2006/66/EG (Battery Directive)
Guarantee	10-year performance guarantee, 5-year system guarantee	
Recycling	TESVOLT offers a free take-back scheme for batteries from Germany	
Protection class battery module	IP 20	
Degree of protection battery module	II	
Battery specification as per IEC 62620:2014	INP46/175/127/[1P22S]M/-20+60/90	

TECHNICAL DATA STPS X 50

Nominal power	50 kVA
AC voltage range	340 V to 477 V
Grid frequency range	44 Hz to 66 Hz
DC voltage range	200 V ~ to 980 V ~
Dimensions (H x W x D)	837.3 mm x 772 mm x 443.8 mm
Max. efficiency/European efficiency	98%/97.2%
Self-consumption (standby)	25 W
Operating temperature	-25 to 60°C (with derating)
Noise emission (typical)	69 dB (A)
Weight	104 kg
Protection class	IP 65 NEMA 4X
Communication	Modbus (SMA, Sunspec), SMA Speedwire, Webconnect
Topology/cooling principle	Three-phase/active
Guarantee	5 years standard SMA guarantee (optional: 10 years)
Certificates	see SMA website for more: https://www.sma.de

TECHNICAL DATA CONTAINER

Corrosion protection (paint)	C3	
Ambient temperature (air conditioning)	-10 °C to 40 °C	
Altitude of installation site	< 2,000 m above sea level	
Sizes [ft]	10	20
Dimensions (as delivered) H x W x D [mm]	2,896 x 2,439 x 3,786	2,896 x 2,439 x 7,013
Dimensions (after installation) H x W x D [mm]	2,896 x 3,450 x 3,786	2,896 x 3,450 x 7,013
Max. Number of storage systems	8	16
Max. energy content [kWh]	640	1,280
Included in standard scope of delivery	Rack system, AC subdistribution, air conditioning, fire alarm system according to DIN 14675, rupture disk	
Special equipment (optional)	CSC certification, available in other RAL colors, extended operating temperature range, corrosion protection up to C4	
Extended ambient temperature (air conditioning) (optional)	- 35 °C to 40 °C	

SYSTEM CONFIGURATION

Number of systems	Energy [kWh]																	
16	1,280				20 ft					20 ft								20 ft
15	1,200					20 ft											20 ft	
14	1,120							20 ft									20 ft	
13	1,040																20 ft	
12	960			20 ft	20 ft			20 ft						20 ft				
11	880																20 ft	
10	800					20 ft						20 ft						
9	720				20 ft							20 ft						
8	640		10 ft			10 ft					10 ft							
7	560								10 ft									
6	480		10 ft	10 ft				10 ft										
5	400						10 ft											
4	320	10 ft	10 ft			10 ft												
3	240	10 ft		10 ft														
2	160	10 ft	10 ft															
1	80	10 ft																
Output [kW]		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
Number of SMA STPS 50		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

Available configurations Container size

Number of systems	Energy [kWh]																	
16	896					20 ft											20 ft	
15	840								20 ft									
14	784										20 ft							
13	728																	
12	672				20 ft	20 ft			20 ft									20 ft
11	616																20 ft	
10	560							20 ft								20 ft		
9	504				20 ft								20 ft					
8	448		10 ft			10 ft												
7	392																	
6	336		10 ft	10 ft					10 ft									
5	280									10 ft								
4	224	10 ft	10 ft			10 ft												
3	168	10 ft		10 ft														
2	112	10 ft	10 ft															
1	56	10 ft																
Output [kW]		50	100	150	200	250	300	350	400	450	500	550	600					
Number of SMA STPS 50		1	2	3	4	5	6	7	8	9	10	11	12					

Available configurations Container size

All 20ft variants and all variants with 56 kWh per battery string are project-specific variants.

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