

TECHNICAL DATA SHEET

TMS FLEX R

Product category		Energy storage system		
Product name		TMS flex R		
Type designation	TMS 4-20 R	TMS 5-20 R TMS 6-20 R TMS 7-20 R	TMS 8-20 R TMS 9-20 R TMS 10-20 R	
Energy content (at 100% DoD)	32 kWh	40 kWh 48 kWh 56 kWh	64 kWh 72 kWh 80 kWh	
Nominal voltage	324 V \approx	405 V \approx / 486 V \approx / 567 V \approx	648 V \approx / 729 V \approx / 810 V \approx	
Operating voltage	290 - 365 V \approx	363 - 457 V \approx / 436 - 548 V \approx / 508 - 639 V \approx	581 - 730 V \approx / 653 - 822 V \approx / 726 - 913 V \approx	
Nominal/maximum charging/discharging current		100 A \approx		
Max. C-Rate		1C		
Overvoltage category		III		
Cell		Lithium NMC prismatic (Samsung SDI)		
Cell balancing		Dynamix Battery Optimizer		
Cycles expected @ 100% DoD 70% SoH 23°C +/-5°C 1C/1C		6000		
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)		
Operating temperature		0°C to 50°C (derating at low temperatures)		
Ambient temperature		0°C to 50°C (optimal: 25°C +/-5°C)		
Ambient temperature for capacity guarantee		10°C to 45°C		
Humidity		0 to 80% (non-condensing)		
Cooling concept		Passive via fins and active via fans		
Altitude of installation site		< 2,000 m above sea level		
Max. noise emission (per fan running)		65 dB		
Weight	Battery module	56 kg		
	APU	13 kg		
Dimensions Rack (H x W x D)	991 mm x 450 mm x 750 mm	1159 mm x 450 mm x 750 mm	1663 mm x 450 mm x 750 mm	
		1372 mm x 450 mm x 750 mm	1831 mm x 450 mm x 750 mm	
		1495 mm x 450 mm x 750 mm	1999 mm x 450 mm x 750 mm	
Tilt height of rack sideways	1090 mm	1245 mm	1725 mm	
		1400 mm	1885 mm	
		1560 mm	2050 mm	
Certificates/ standards	Cell	IEC 62619:2017, 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, 10-year system guarantee			
Recycling	TESVOLT offers a free take-back scheme for batteries from Germany			
Protection class	IP 20			
Degree of protection	I			
Pollution degree	PD 2			
Battery specification as per IEC 62620:2014	INP46/175/127/[1P22S]M/-20+60/90			

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This data sheet is strictly informational and is not legally binding. The exact specifications and/or product features (particularly in case of further development of the product) may differ somewhat from the information provided here. Subject to errors and changes. Please read the safety and installation instructions carefully and completely before using the product. In case of purchase, the currently valid guarantee policies and the general terms and conditions of delivery and business of TESVOLT AG apply.

Registration in the manufacturer's myTESWORLD portal (<https://mytesworld.tesvolt.com>) is required to use the energy management system (EMS) TESVOLT Energy Manager.
Registration in Sunny Portal powered by ennexOS from the manufacturer SMA ([Sunny Portal powered by ennexOS](https://www.sunnyportal.com)) is required to use the energy management system (EMS) Data Manager M.