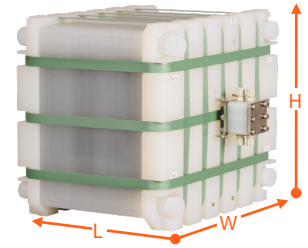


TECHNICAL DATA SHEET

smartSTACK



ELECTRICAL	vST.816 P	vST.832 P	vST.840 P
Voltage nominal	24 VDC	48 VDC	48 VDC
Voltage range	19.0 – 25.5 V	38.0 – 51.0 V	40.0 – 63.0 V
Current nominal	90 A	90 A	90 A
Current peak	150 A	150 A	150 A
Power constant	2.0 kW	4.0 kW	5.0 kW
Power peak	2.5 kW	5.0 kW	6.25 kW
Number of cells	16	32	40
Coulomb efficiency	97 ± 1.0%	95 ± 1.0%	95 ± 1.0%
Energy efficiency at constant power	81 ± 1.5%	80 ± 1.5%	79 ± 1.5%
Max. energy efficiency	85 ± 1.5%	83 ± 1.5%	82 ± 1.5%
Resistance charge / discharge	26 mΩ +2 /-6 mΩ	52 mΩ +4 /-12 mΩ	65 mΩ +5 /-15 mΩ
HYDRAULICAL			
Flow rate max. per side	12 L/min	24 L/min	30 L/min
Gauge pressure max.		1000 mbar	
Gauge pressure nominal		800 mbar	
Gauge pressure min.		-100 mbar	
Pipe connection		32 mm	
GENERAL			
Dimensions (±10 mm)	B 389 x L 165 x H 374 mm B 389 x L 248 x H 374 mm B 389 x L 290 x H 374 mm		
Weight	14.4 kg	18.7 kg	20.6 kg
Operating temperature	0 – 40°C		
Membrane	anion exchange for vanadium electrolyte		
SMART DATA			
	Measurement range	Resolution	Accuracy
Voltage	0 V – 70 V	0.01 V	± 0.1% von U _{max}
Current	-200 A – 200 A	0.1 A	± 1.5% von I _{max}
Open-Circuit-Voltage	0 V – 2 V	0.001 V	± 0.01 V
Condition of electrolyte	0 V – 2 V	0.001 V	± 0.01 V
Temperature, external sensor	-10 °C – 85 °C	0.1 °C	± 0.5 °C
Temperature pole contacts	0 °C – 70 °C	0.1 °C	± 0.2 °C
Leakage	resistiv		
Communication protocol	modbusTCP		