

Technical data

technology description	Lithium ion battery system (NMC)	
communication interface	CAN-Bus Ethernet	
nom. energy	81.0 kWh	
nom. voltage	771.0 V ---	
nom. capacity	105.0 Ah	
end of life capacity / capacity loss	80 % / 20 %	
max. discharge power (at nom. voltage)	145.8 kW	
max. power fade (end of life)	1.0 %	
max round-trip-efficiency (RTE)	98.0 %	
internal resistance (AC, 1 kHz)	approx. 94.9 m Ω	
rise of internal resistance (end of life)	approx. 42.0 %	
usable DoD	93 %	
expected cycles (< +30 °C 80 % SoH)	> 6,500 @ 90 % DoD > 10,000 @ 80 % DoD	
expected operating life (calendric)	> 12 years	
installation site	indoors non-condensing	
IP Code	IP 20 (increasing IP Code by using optional accessories)	
protection class	2	
battery structure	1P15S	
standard scope of delivery	energy storage block esbL54E	15 qty
	control unit ccuHV200U	1 qty
	Rittal industry cabinet (1,000 x 2,000 x 600 mm) excl. base	1 qty
	Accessories	
weight	approx. 1,014.5 kg	
EU directives	Regulation (EU) 2023/1542, 2014/30/EU (EMC), 2014/35/EU (LVD), 2011/65/EU, 2015/863/EU (RoHS)	
norms and standards	DIN EN 62619, UN 38.3, DIN EN 61010-1, DIN EN 61000-6-2/4, DIN EN ISO 13849-1	

Operating window

operation mode	guided by the State-of-Power (SoP) according to the specifications of the battery management system (BMS)	
max. charge current	190.0 A (1.8C)	
end-of-charge current	5.3 A (0.1C)	
max. discharge current	190.0 A (1.8C)	
rel. humidity	< 80 % (temperature-dependent) non-condensing	
operating temperature range	+5 °C – +50 °C charge +5 °C – +50 °C discharge	
operating voltage range	654.0 V – 852.0 V ---	
transport conditions (< 1 month)	-20 °C – +45 °C	
storage conditions*	-20 °C – +25 °C 40 % – 60 % SoC	
max. discharge rate in % SoC per month	approx. 1 % (with disconnected control unit ccuHV)	
max. operating altitude	2,000 m above sea level	

* Check the SoC of every energy storage block after 6 months at the latest and charge every energy storage block to at least 40 % SoC.

 The user manual has to be strictly followed. The operating window of the battery has to be complied with.

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