

Technical data

technology description	Lithium ion battery system (NMC)		
communication interface	CAN-Bus Ethernet		
nom. energy	48.6 kWh		
nom. voltage	463.0 V ---		
nom. capacity	105.0 Ah		
max. discharge power (at nom. voltage)	87.5 kW		
expected cycles	(1C charge 1.8C discharge 25 °C 80 % SOH) > 6,500 @ 80 % DoD > 4,500 @ 90 % DoD > 3,000 @ 100 % DoD	(0.5C charge 0.5C discharge 25 °C 80 % SOH) > 7,000 @ 80 % DoD > 5,000 @ 90 % DoD > 3,500 @ 100 % 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		
interconnection	1P9S		
standard scope of delivery	energy storage block esbL54E		9 qty
	control unit ccuHV200U		1 qty
	Rittal industry cabinet (800 x 2000 x 600 mm) excl. base accessories		1 qty
weight	approx. 586.0 kg		
EU directives	2006/66/EG (BattG), 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 (0.05C)		
max. discharge current	190.0 A (1.8C)		
rel. humidity	< 80 % (temperature-dependent) non-condensing		
operating temperature range	5 – 50 °C charge 5 – 50 °C discharge		
operating voltage range	393.0 – 524.0 V ---		
temperature range	transport storage	< 1 month < 6 month	-20 – 45 °C -20 – 25 °C
max. operating altitude	2,000 m above sea level		

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