Commeo energy storage block Longlife
esbL54ER

FOR 48V SYSTEMS

system component for battery systems

Technical data

technology description		pluggable Lithium ion battery (NMC)
nom. energy		5.40 kWh
nom. voltage		51.4 V ⎓
nom. capacity		105.0 Ah
max. discharge power (at nom. voltage)		5.4 kW
energy density		126.4 Wh/l
specific energy		100.0 Wh/kg
expected cycles		(< 30 °C | 80 % SOH) > 6,500 @ 90 % DoD > 10,000 @ 80 % DoD
installation site		indoors | non-condensing
IP Code		IP 20
protection class		2
breaking capacity	60 V ⎓, 2 A	45,000 cycles
(resistive, bidirectional)	60 V ⎓, 100 A	15 cycles
expected operating life (calendric)		> 12 years
dimensions (W x H x D)		265 x 310 x 520 mm
weight		approx. 54.0 kg
communication interface		CAN-Bus
EU directives		2006/66/EG (BattG), 2014/30/EU (EMC), 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		continuous	97.0 A (0.9C)
end-of-charge current			5.3 A (0.05C)
max. discharge current		continuous	100.0 A (1.0C)
		60 sec.	150.0 A (1.4C)
		45 sec.	175.0 A (1.7C)
		15 sec.	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			43.6 – 56.8 V ⎓
temperature range	transport	< 1 month	-20 – 45 °C
	storage	< 6 month	-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.

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