



Prospective Short Circuit Current (PSCC) of REVOV Batteries

The PSCC of an ESS installation requires the installation of protection based on potential fault conditions. The PSCC values can be calculated via the specifics of the installation, as well as manufacturer data for the batteries as per **SANS 10142-1** regulation.

Please refer to the following **Table 1** for any information required for the calculation of PSCC values with REVOV battery products for the installation. Please note that the supplied information is for per battery.

Definition	# (Units)	E100	E300	R200	B220	R100	B100	12V 100 Ah	12V 200 Ah	R9	C8
Internal Resistance per cell (DCIR)	$DCIR_{CELL}$ (mΩ)	0.30	0.16	0.24	0.22	0.41	0.34	0.43	0.35	0.58	0.53
Open circuit voltage per cell	OCV_{CELL} (mV)	3.80	3.80	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68
Number of equivalent series cells in battery	S (QTY)	16	16	16	16	16	16	4	4	16	16
Total equivalent DCIR for cells (sources)	R_{CELLS} (mΩ)	4.80	2.56	3.90	3.50	6.50	5.50	1.70	1.40	9.30	8.50
Resistance of internal conduction path	R_{BATT_INT} (mΩ)	1.70	1.90	1.90	1.90	2.50	2.50	0.80	0.80	3.30	3.30
Resistance of terminal connector(s) for battery	$R_{TERMINALS}$ (mΩ)	1.50	1.40	1.50	1.50	1.70	1.70	0.90	0.90	1.70	1.70
Internal Resistance of the battery	R_B (mΩ)	8.00	5.86	7.30	6.90	10.70	9.70	3.40	3.10	14.30	13.50
Open Circuit Voltage of the Battery	E_B (V)	60.80	60.80	58.88	58.88	58.88	58.88	14.72	14.72	58.88	58.88
Internal Resistance of the Battery	R_B (Ω)	0.008 000	0.005 860	0.007 300	0.006 900	0.010 700	0.009 700	0.003 400	0.003 100	0.014 300	0.013 500
Resistance of the Battery Connections	R_{BL} (Ω)	0.00	0.00	0.00	0.00						
Resistance of the Conductors	R_Y (Ω)	0.00	0.00	0.00	0.00						
Total Resistance of the upstream network in Ohms	R_{BBr} (Ω)	0.007 200	0.005 274	0.006 570	0.006 210	0.009 630	0.008 730	0.003 060	0.002 790	0.012 870	0.012 150
Prospective Short Circuit Current at battery terminals	PSCC (A)	7600. 00	10375 .43	8065. 75	8533. 33	5502. 80	6070. 10	4329. 41	4748. 39	4117. 48	4361. 48
		E100	E300	R200	B220	R100	B100	12V 100 Ah	12V 200 Ah	R9	C8

Table 1: Resistance and voltage values for REVOV battery products for PSCC determination.

Please note: The PSCC value provided is applicable AT THE TERMINALS of the Battery. As such R_{BL} , R_Y are assumed to be short-circuit (0Ω) for the calculated $R_{BBr}/PSCC$ value shown. They can be determined as per the conditions of your installation.

REVOV reserve the right to modify information due to product changes that may occur over lifespan. Please follow and adhere to all local and national electrical safety guidelines as required.