TECHNICAL DATA

Lithium

powerball® stromspeichersysteme stay flexible

Item number	LIRO1-2000-5.4	LIRO1-2000-8	LIRO1-3500-5.4	LIRO1-3500-8	LIRO3-2250-5.4	LIRO3-2250-8	LIRO3-6000-16.2	LIRO3-6000-24	LIRO3-10500-16.2	LIRO3-10500-24	LIRO3-21000-48	LIRO3-31500-72	LIRO3-42000-96
System	Single phase AC coupled				Three phase AC coupled		Three phase AC coupled				Three phase AC coupled		
Power	2000 W		3500 W		3 * 750 W		3 * 2000 W		3 * 3500 W		3 * 7000 W	3 * 10500 W	3 * 14000 W
storage capacity)***	6.74 kWh	10.06 kWh	6.74 kWh	10.06 kWh	6.74 kWh	10.06 kWh	20.22 kWh	30.18 kWh	20.22 kWh	30.18 kWh	60.36 kWh	90.54 kWh	120.72 kWh
Nominal voltage of battery	48 V (dc)				48 V (dc)		48 V (dc)				48 V (dc)		
Input voltage range of the battery)*	38 - 68 V (dc)				38 - 68 V (dc)		38 - 68 V (dc)				38 - 68 V (dc)		
Max. power at 25°C	2000 VA		3500 VA		3 * 750 VA		3 * 2000 VA		3 * 3500 VA		2 * 3 * 3500 VA	3 * 3 * 3500 VA	4 * 3 * 3500 VA
Max. power at 25°C, 30 min)**	2600 VA		4000 VA		3 * 1200 VA		3 * 2600 VA		3 * 4000 VA		2 * 3 * 4000 VA	3 * 3 * 4000 VA	4 * 3 * 4000 VA
Max. power at 25°C, 3s)**	6500 VA		10500 VA		3 * 2800 VA		3 * 6500 VA		3 * 10500 VA		2 * 3 * 10500 VA	3 * 3 * 10500 VA	4 * 3 * 10500 VA
Maximum load	until short circuit				until short circuit		until short circuit				until short circuit		
Asymetric load max.	until continuous power				until continuous power		until continuous power				until continuous power		
Cos ϕ	0,1 - 1				0,1 - 1		0,1 - 1				0,1 - 1		
Efficiency electronics max.	96%				93%		96%				96%		
Own consumption Stand-By	12,5 W		17,5 W		26,5 W		37,5 W		52,5 W		105 W	157,5 W	210W
Output voltage	real sinus 230 V (ac) (+/- 2 %)				real sinus 230 V (ac) (+/- 2 %)		real sinus 230 V (ac) (+/- 2 %)				real sinus 230 V (ac) (+/- 2 %)		
Output frequency	50 Hz +/- 0,05%				50 Hz +/- 0,05%		50 Hz +/- 0,05%				50 Hz +/- 0,05%		
Distortion factor	< 2%				< 2%		< 2%				< 2%		
Overload and short circuit protection	automatic stop				automatic stop		automatic stop				automatic stop		
Overtemperature protection	acoustic warning before stop				acoustic warning before stop		acoustic warning before stop				acoustic warning before stop		
Battery charger													
Charging characteristics)*	6 steps				6 steps		6 steps				6 steps		
Max. charge power	1440 W		2400 W		1728 W		4320 W		7200 W		14400 W	21600 W	28800 W
Temperature compensation	yes				yes		yes				yes		
Power factor correction (PFC)	EN 61000-3-2				EN 61000-3-2		EN 61000-3-2				EN 61000-3-2		
Battery													
Self-discharging battery cell	approx. 2% / year				approx. 2% / year		approx. 2% / year				approx. 2% / year		
Stand-by consumption (aktiv / sleep)	5 W / 0.126 W				5 W / 0.126 W		15 W / 0.378 W				30 W / 0.756 W	45 W / 1.134 W	60W / 1.512W
Technology	Li-Ion NMC	Li-Ion NCA	Li-Ion NMC	Li-Ion NCA	Li-Ion NMC	Li-Ion NCA	Li-Ion NMC	Li-Ion NCA	Li-Ion NMC	Li-Ion NCA	Li-Ion NCA		
General data													
Input voltage range	150 to 265 V (ac)				150 to 265 V (ac)		150 to 265 V (ac)				150 to 265 V (ac)		
Input current max. / system	50 A (ac)				16 A (ac)		3 * 50 A (ac)				2 * 3 * 50 A (ac)	3 * 3 * 50 A (ac)	4 * 3 * 50 A (ac)
Output current max. / system	56 A (ac)				20 A (ac)		3 * 56 A (ac)				2 * 3 * 56 A (ac)	3 * 3 * 56 A (ac)	4 * 3 * 56 A (ac)
Transfer time (UPS)	< 15 ms				< 15 ms		< 15 ms				< 15 ms		
ca.-Gewicht / System	149 kg	153 kg	154 kg	157 kg	162 kg	166 kg	447 kg	459 kg	462 kg	471 kg	942 kg	1413 kg	1884 kg
Number of individual components / unit	2				2		2				2		
max. Gewicht einer Einzelkomponente	95 kg	99 kg	95 kg	99 kg	95 kg	99 kg	95 kg	99 kg	95 kg	99 kg	99 kg		
Dimmension HxBxL [mm] / unit	900 x 590 x 595				900 x 590 x 595		900 x 590 x 595				900 x 590 x 595		
Number of units	1				1		3				6	9	12
Protection type	IP21												
CE conformity	CEM 2004/108/CE : EN61000-6-1; EN61000-6-3; EN55014; EN5522; EN61000-3-2;												
Operating temperature	+4 bis 35°C, Recommended room temperature												
Noise level	< 45 dB												

The regulations of the respective countries / network operators need to be considered!

As of 15.05.2018
Subject to change

)* in dependence of the control unit
)** by emergency / off-grid operation
)*** 80% usable