

TEST RESULTS OF HOME STORAGE REVIEW

System	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Transport safety	Green	Red	Yellow	Green	Green	Green	Yellow	Green	Red	Red	Yellow	Red	Yellow	Green	Green	Green
Operational safety	Green	Red	Yellow	Green	Green	Yellow	Red	Yellow	Yellow	Red	Red	Yellow	Yellow	Green	Yellow	Yellow

The colours are assigned based on the level of safety risk.

Safety

Battery efficiency ¹ [%]	96.3	System not tested due to safety reasons	98.4	78.2	92.0	96.6	Measurements not possible due to EMC problems	81.5	97.5	System not tested due to safety reasons	89.8	96.4	Measurements not possible due to converter problems	94.7	94.0	92.2	
Power electronics efficiency ² [%]	charge PV/2BAT @ power _{max}		91.5	93.9	91.6	93.0		96.5	91.5		90.5	92.1		85.4	91.5	93.6	91.5
	@ 50 % power _{nom}		91.3	91.3	87.1	90.7		95.5	91.1		90.3	89.8		79.7	90.9	92.8	87.6
	discharge BAT2AC @ power _{max}		94.5	95.5	93.7	90.9		95.8	94.1		90.6	91.1		93.1	92.9	93.1	91.0
	@ 500 W		84.7	90.6	90.8	86.7		94.5	92.6		86.9	82.2		84.3	86.9	88.5	81.0
Standby consumption ² [W] @ SOC _{min}	9		30	22	36	< 3		8	20		10	72		< 3	50	18	
Response time ² [sec]	Dead time		0.8	5.2	< 0.2	0.8		10.2	1.1		21.7	2.2		3.0	0.7	5	< 0.2
	Settling time		13.5	5.7	3.6	4.7		40.8	7.5		71.9	7.5		13.3	9.4	20.3	1.5
Overall system efficiency ¹ [%]	83.9		87.1	85.2	82.1	94.2		82.3	85.5		79.6	78.5		81.5	85.0	79.0	
Degree of self-sufficiency ¹ [%]	45.3		48.8	42.4	45.8	43.8		48.6	50.2		45.4	39.3		50.1	46.4	47.6	
Intelligent Control Strategy ¹	Red	Green	Red	Red	Green	Red	Red	Red	Red	Red	Red	Red	Green				

Performance and contribution to grid stability

Each of the test criteria are divided into three colour-coded categories: battery efficiency: >95% green, 95 – 90% yellow, <90% red; power electronics: charge (@ 50% power_{nom}) >92% green, 88 – 92% yellow, <88% red & discharge (@ 500W) >91% green, 86 – 91% yellow, <86% red; standby consumption: <10W green, 10 – 25W yellow, >25W red; response time (settling time): <10s green, 10 – 20s yellow, > 20s red; system efficiency: >95% green, 85 – 95% yellow, <85% red; self-sufficiency: >47% green, 42 – 47% yellow, <42% red; control strategy: yes = green, no = red