

VARTA element

130 Years of Battery Expertise in Your Energy Storage System.



- ▶ **Teddy bear: From Grandpa.**
- ▶ **New kitchen: From the Christmas bonus.**
- ▶ **Energy storage system: From VARTA Storage.**

DECLARATION OF INDEPENDENCE – FOR FAMILIES.



VKB-NUMBER

VARTA element 6/S4 energy storage system	02709 858 302
VARTA element 9/S4 energy storage system	02709 858 303
VARTA element 12/S4 energy storage system	02709 858 304
Retrofit Kit VARTA element S3/S4-6/9	37000 720 006
Retrofit Kit VARTA element S3/S4-6/12	37000 720 007

► Technical data and facts

SYSTEM DATA	ELEMENT 6	ELEMENT 9	ELEMENT 12
Battery capacity nominal	6.5 kWh *	9.8 kWh *	13.0 kWh *
Max. AC power charge / discharge	2.2 / 1.8 kW	3.4 / 3.0 kW	4.0 / 3.7 kW
Dimensions (w x h x d) in mm	600 x 1,176 x 500	600 x 1,176 x 500	600 x 1,176 x 500
Weight	115 kg	145 kg	165 kg
Electrochemistry	Lithium nickel manganese cobalt oxide (NMC)		
Safety	Multi-level, hard- and software redundant cell monitoring		
Mains connection / configuration	400 V AC, 3-phase, 50 Hz (TN- and TT-systems)		
Efficiency	85.7 % System Performance Index **		
Country licences	Germany, Austria, Switzerland		
Protection class	IP 32		
Ambient conditions	+5 °C to +30 °C		
System warranty	7 years maintenance warranty ***		
Warranty on batteries	10 years or 4,000 cycles ****		

FUNCTIONS

Energy management system	EMS VS-Pro 2
PV yield optimisation	Through avoidance of PV export limitation losses
Visualisation of PV production	Pv sensor, Modbus TCP (Sunspec) *****
Dynamic export limitation	Modbus TCP (Sunspec) *****
Cascading	Up to five VARTA energy storage systems
Private consumption optimisation	3-phase, phase symmetrical
Hardware interfaces	RJ45 (Ethernet), 2x RJ12 (current sensor and PV sensor)
Visualisation	VARTA Storage app for Android and iOS, web portal and internal web server
Smart home interfaces	XML, Modbus TCP
Smart home compatibility	SolarLog, innogy SmartHome, Smartfox, myGEKKO, my-PV smart water heater, Rutenbeck TCR IP 4

STANDARDS

CE-conformity, Low Voltage Directive (LVD) 2014/35/EU, EMC Directive 2014/30/EU, UN 38.3, DIN EN 62109-1:2011, VDE-AR-N 4105:2018-11, TOR 2016 V.2.3 D4, NA-EEA-CH

* 90 % depth of discharge, capacity measurement at 25 °C with 0,2 C charge to 58,8 V and 0,05 C cut-off current and discharge with 0,2 C to 42 V.

** VARTA element 12 with reference house 5010 kWh/year and 5 kWp PV system. Simulated according to efficiency guideline 2.0.

*** According to terms of manufacturer's warranties (available at: www.varta-storage.com/service/downloads).

**** Residual capacity: 80 %.

***** According to compatibility list (available at: www.varta-storage.com/res-compatibility.pdf).