ZON.E

Datasheet

Rev. 1.04

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Model	ZN2K2.5L	ZN3K2.5L	ZN4K5L	ZN5K5L
AC Output (On-grid)				
Wave form	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase
Nominal output power to utility grid [W] [1]	2000	3000	3680	4600
Max. output apparent power to utility grid [VA] [1]	2200	3300	4050	5100
Max. input apparent power from utility grid [VA] [1]	4000	6000	7360	9200
Rated voltage [V]	230	230	230	230
Rated frequency [Hz]	50/60	50/60	50/60	50/60
Maximum discharge current [A]	8,7	14	16	20
Maximum charge current [A]	17,4	28	32	40
Adjustable displacement factor	0,8 overexcited 0,8 underexcited	0,8 overexcited 0,8 underexcited	0,8 overexcited 0,8 underexcited	0,8 overexcited 0,8 underexcited
Total harmonic distortion (THD)	<3%	<3%	<3%	<3%
AC Output (EPS-Back up)				
Wave form	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase
Maximum apparent power in discharge [VA][1]	2000	3000	3680	5000
Maximum apparent peak power in discharge (10 sec) [VA][1]	2400	3600	4416	5500
Rated voltage [V]	230 (+/-2%)	230 (+/-2%)	230 (+/-2%)	230 (+/-2%)
Rated frequency [Hz]	50/60 (+/-0.2%)	50/60 (+/-0.2%)	50/60 (+/-0.2%)	50/60 (+/-0.2%)
Maximum discharge current [A]	8,7	13,1	16	22,8
Total harmonic distortion (THD)	<3%	<3%	<3%	<3%
Battery				
Battery type	LiFePO4			
Rated voltage [V]	48 – 51,2			
Maximum charge current [A][1]	41,5	62,5	75	100

Maximum discharge current [A][1]	41,5	62,5	75	100
Nr. of battery modules standard configuration	1	1	2	2
Maximum permissible energy [kWh]	2,4	2,4	4,8	4,8
Usable energy [kWh]	1,92	1,92	3,84	3,84
DoD [kWh]	80%	80%	80%	80%
Minimum number of working cycles @ 25°C	4000	4000	4000	4000
Number of battery modules at maximum capacity[12]	4	4	4	4
Maximum permissible energy at maximum capacity [kWh] [1]	9,6	9,6	9,6	9,6
Efficiency				
Maximum conversion efficiency	95,5%	95,5%	95,5%	95,5%
Protections				
Anti-islanding	Yes	Yes	Yes	Yes
Overvoltage protection	Yes	Yes	Yes	Yes
Short circuit protection in output	Yes	Yes	Yes	Yes
Overtemperature protection	Yes	Yes	Yes	Yes
AC lines protection	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker
Battery protection	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker
General data				
Working temperature range for normal functioning [°C]	from -5 to +45	from -5 to +45	from -5 to +45	from -5 to +45
Inverter type	HF insulated	HF insulated	HF insulated	HF insulated
Relative humidity	0 % ÷ 95 %	0 % ÷ 95 %	0 % ÷ 95 %	0 % ÷ 95 %
Maximum altitude [m]	< 2000	< 2000	< 2000	< 2000
Cooling	Natural convection (Fanless)	Natural convection (Fanless)	Natural convection (Fanless)	Natural convection (Fanless)

[1]Limited from BMS to 35 A for each battery module and from the rated voltage of the battery module.

[2] Expandable up to 19,2 kWh with nr. 2 modules of expansion (4 battery modules)

Noise annoyance [dB]	< 25	< 25	< 25	< 25
Weight [kg] (standard nr. of batteries)	81	81	104	104
Dimensions [Length x width x H.] [mm]	590x485x965	590x485x965	590x485x965	590x485x965
Assembly	On the floor	On the floor	On the floor	On the floor
Protection type	IP20	IP20	IP20	IP20
Environmental conditions of use	Indoor			
Interfaces				
GPRS (standard)	2G Dual band	2G Dual band	2G Dual band	2G Dual band
WiFi (optional)	2.4 GHz IEEE Std. 802.11 b/g	2.4 GHz IEEE Std. 802.11 b/g	2.4 GHz IEEE Std. 802.11 b/g	2.4 GHz IEEE Std. 802.11 b/g
LAN (optional)	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps
Wireless home automation (optional)	EnOcean 868 MHz	EnOcean 868 MHz	EnOcean 868 MHz	EnOcean 868 MHz
Certifications and Regulations				
Certifications	CE, CEI0-21/2017, VDE-AR-N4105, DIN VDE 0126-1-1/A1 VFR2014, ERDF-NOI-RES_13E			
Safety Regulations	IEC62477 & IEC62040			
EMC Compatibility	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4			
Spare parts and accessories				
Inverter	ATZ-2K	ATZ-3K	ATZ-4K	ATZ-5K
Battery module	US2000B	US2000B	US2000B	US2000B
Control card	ATN820 + ATN823	ATN820 + ATN823	ATN820 + ATN823	ATN820 + ATN823
GPRS communication card equipped with antenna and connection cable	ATN811	ATN811	ATN811	ATN811
WiFi communication card equipped with antenna and connection cable	ATN813	ATN813	ATN813	ATN813
LAN communication card (only applicable on SLOT1 card ATN820)	ATN816	ATN816	ATN816	ATN816
Communication card RS485	AT814 + ATN105 + GD814-105	AT814 + ATN105 + GD814-105	AT814 + ATN105 + GD814-105	AT814 + ATN105 + GD814-105
Single phase power meter	C.Gavazzi EM111DINA V81XS1PFB			

Three-phase power meter	C.Gavazzi EM24DINA V93XISX	C.Gavazzi EM24DINA V93XISX	C.Gavazzi EM24DINA V93XISX	C.Gavazzi EM24DINA V93XISX
Led card	ATN821	ATN821	ATN821	ATN821
Led lights bar (led lights are not supplied)	-	-	-	-
Upper panel	-	-	-	-
Right panel	-			
Left panel	-			
Front panel	-			

Number of battery modules, nominal storage capacity and weight

Model ZON.E	Nr. of battery modules	Nominal storage capacity [kWh]	Total weight [kg]
ZN2K2.5L	1	2,5	81
ZN2K5L	2	5	104
ZN2K7.5L	3	7,5	127
ZN2K10L	4	10	150
ZN3K2.5L	1	2,5	81
ZN3K5L	2	5	104
ZN3K7.5L	3	7,5	127
ZN3K10L	4	10	150
ZN4K2.5L	1	2,5	81
ZN4K5L	2	5	104
ZN4K7.5L	3	7,5	127
ZN4K10L	4	10	150
ZN5K2.5L	1	2,5	81
ZN5K5L	2	5	104
ZN5K7.5L	3	7,5	127
ZN5K10L	4	10	150

Weights for the transport

	ZN2KxxL	ZN3KxxL	ZN4KxxL	ZN5KxxL
Weight of the base structure without batteries [kg]	49,5	49,5	49,5	49,5
Weight with one battery module [kg]	72,5	72,5	72,5	72,5
Weight with two battery modules [kg]	95,5	95,5	95,5	95,5
Weight with three battery modules [kg]	118,5	118,5	118,5	118,5
Weight with four battery modules [kg]	141,5	141,5	141,5	141,5