

Industrial Batteries / Network Power

Classic Solar

»Powerful energy storage for
renewable energy systems«



Industrial Batteries

The powerful range of Network Power

GNB® Industrial Power offers reliable energy storage solutions for critical systems requiring uninterrupted power supply. With a comprehensive product range based on state-of-the-art technologies, GNB delivers the right battery for every application.

The below table is only indicative and depends on the specific customer application. For more information please ask a GNB sales representative.

Applica- tions	Battery ranges																			
	Sonnenschein							Marathon		Sprinter		Absolyte	Powerfit	Classic						
	A400/ A600	A400 FT	A500	A700	SOLAR	RAIL	Power Cycle	M-FT	L/XL	P/XP	XP-FT	GP/GX	S100/ S300	GroE	OCSM	OPzS	Energy Bloc/OGi	Solar	rail	
Telecom 	●	●	●	●			●	●	●		●	●			●	●	●			
UPS 	●	●	●	●			●	●	●	●	●	●			●		●			
Emergency lighting 	●	●	●	●			●	●	●	●	●		●			●	●			
Security 	●		●	●						●	●		●		●	●				
Utility 	●	●		●			●	●	●			●		●	●	●	●			
Railways 	●	●	●	●		●	●	●	●			●			●		●		●	
Photovoltaic 					●		●					●						●		
Universal 	●	●	●	●			●	●	●	●	●	●	●		●	●	●			

Powerful product brands

ABSOLYTE®

MARATHON®

Sprinter®

Powerfit®

- > VRLA batteries (Valve Regulated Lead Acid) in which the electrolyte is fixed in an Absorbent Glass Mat (AGM)
- > Excellent high current capability
- > Very economical
- > Maintenance-free (no topping up)



- > VRLA batteries (Valve Regulated Lead Acid) in which the electrolyte is fixed in a gel (dryfit® technology)
- > Inventor of Gel technology
- > Highest reliability, even in non-optimal conditions
- > Particularly suitable for cyclic applications
- > Maintenance-free (no topping up)

Classic®

- > Conventional lead-acid batteries with liquid electrolyte
- > Extreme reliability, proven over decades
- > Low maintenance

Classic OPzS Solar

Energy storage for outstanding power applications

The Classic OPzS Solar range has been well proven for decades in medium and large power applications. Due to their robustness, long design life and high operational safety they are ideally suitable for use in solar and wind power stations, telecommunications, power distribution companies, railways and many other safety equipment power supplies. The wide range of available capacities and sizes provides a solution for every power need, even in harsh environments.

Your benefits:

- > **Optimised design for renewable energy applications** – highest cycling ability and long life
- > **Special alloy and large electrolyte reserve** – very long topping up intervals
- > **Low maintenance** – saving costs
- > **Completely recyclable** – low CO₂ footprint



Specifications:

- > Nominal capacity (C₁₂₀ at 25 °C): 82.7 - 4600 Ah
- > Very thick tubular positive plates for the most demanding applications
- > Up to 2800 cycles at 60 % depth of discharge (C₁₀) with IU charging profile at 20 °C.
For enhanced performance and for systems ≥ 48 V we recommend IU charging to reach 3000 cycles and more.
- > Designed in accordance with IEC 61427 and IEC 60896-11
- > Screw connectors for a better contact and reliability
- > Also available in dry-charged version with separate electrolyte
- > High quality transparent or translucent containers for easy maintenance



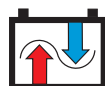
Nominal capacity
82.7 – 4600 Ah



Block battery/
Single cell



Tubular plate



up to 3000*+
cycles at
60 % depth
of discharge



Recyclable



Low
maintenance

*Using IU charging at 20 °C

Classic OPzS Solar

Technical data

Technical characteristics and data

Type	Part number	Nom. voltage V	Nominal capacity C_{120} 1.85 Vpc 25 °C Ah	Length (l) max. mm	Width (b/w) max. mm	Height* (h) max. mm	Installed length (L) max. mm	Weight incl. acid *** approx. kg	Weight acid** approx. kg	Internal resistance mOhm	Short circuit current A	Terminal	Pole pairs
OPzS Solar 190	NVSL020190WC0FB	2	190	105	208	395	115	13.7	5.20	1.45	1400	F-M8	1
OPzS Solar 245	NVSL020245WC0FB	2	245	105	208	395	115	15.2	5.00	1.05	1950	F-M8	1
OPzS Solar 305	NVSL020305WC0FB	2	305	105	208	395	115	16.6	4.60	0.83	2450	F-M8	1
OPzS Solar 380	NVSL020380WC0FB	2	380	126	208	395	136	20.0	5.80	0.72	2850	F-M8	1
OPzS Solar 450	NVSL020450WC0FB	2	450	147	208	395	157	23.3	6.90	0.63	3250	F-M8	1
OPzS Solar 550	NVSL020550WC0FB	2	550	126	208	511	136	26.7	8.10	0.63	3250	F-M8	1
OPzS Solar 660	NVSL020660WC0FB	2	660	147	208	511	157	31.0	9.30	0.56	3650	F-M8	1
OPzS Solar 765	NVSL020765WC0FB	2	765	168	208	511	178	35.4	10.8	0.50	4100	F-M8	1
OPzS Solar 985	NVSL020985WC0FC	2	985	147	208	686	157	43.9	13.0	0.47	4350	F-M8	1
OPzS Solar 1080	NVSL021080WC0FC	2	1080	147	208	686	157	47.2	12.8	0.43	4800	F-M8	1
OPzS Solar 1320	NVSL021320WC0FB	2	1320	212	193	686	222	59.9	17.1	0.30	6800	F-M8	2
OPzS Solar 1410	NVSL021410WC0FB	2	1410	212	193	686	222	63.4	16.8	0.27	7500	F-M8	2
OPzS Solar 1650	NVSL021650WC0FB	2	1650	212	235	686	222	73.2	21.7	0.26	7900	F-M8	2
OPzS Solar 1990	NVSL021990WC0FB	2	1990	212	277	686	222	86.4	26.1	0.23	8900	F-M8	2
OPzS Solar 2350	NVSL022350WC0FB	2	2350	212	277	836	222	108	33.7	0.24	8500	F-M8	2
OPzS Solar 2500	NVSL022500WC0FB	2	2500	212	277	836	222	114	32.7	0.22	9300	F-M8	2
OPzS Solar 3100	NVSL023100WC0FA	2	3100	215	400	812	225	151	50.0	0.16	12800	F-M8	3
OPzS Solar 3350	NVSL023350WC0FA	2	3350	215	400	812	225	158	48.0	0.14	14600	F-M8	3
OPzS Solar 3850	NVSL023850WC0FA	2	3850	215	490	812	225	184	60.0	0.12	17000	F-M8	4
OPzS Solar 4100	NVSL024100WC0FA	2	4100	215	490	812	225	191	58.0	0.11	17800	F-M8	4
OPzS Solar 4600	NVSL024600WC0FA	2	4600	215	580	812	225	217	71.0	0.11	18600	F-M8	4
6V 4 OPzS 200 LA	NVZS060200WC0FB	6	294	272	206	347	282	41.0	13.0	2.68	2283	F-M8	1
6V 5 OPzS 250 LA	NVZS060250WC0FB	6	364	380	206	347	392	56.0	20.0	2.39	2800	F-M8	1
6V 6 OPzS 300 LA	NVZS060300WC0FB	6	417	380	206	347	392	63.0	20.0	1.96	3106	F-M8	1
12V 1 OPzS 50 LA	NVZS120050WC0FB	12	82.7	272	206	347	282	35.0	15.0	18.1	688	F-M8	1
12V 2 OPzS 100 LA	NVZS120100WC0FB	12	139	272	206	347	282	45.0	14.0	9.26	1314	F-M8	1
12V 3 OPzS 150 LA	NVZS120150WC0FB	12	210	380	206	347	392	64.0	19.0	6.46	1884	F-M8	1

Type	C_6 1.75 Vpc	C_{10} 1.80 Vpc	C_{12} 1.80 Vpc	C_{24} 1.80 Vpc	C_{48} 1.80 Vpc	C_{72} 1.80 Vpc	C_{100} 1.85 Vpc	C_{120} 1.85 Vpc	C_{240} 1.85 Vpc
OPzS Solar 190	122	132	134	145	165	175	185	190	200
OPzS Solar 245	159	173	176	190	215	230	240	245	260
OPzS Solar 305	203	220	224	240	270	285	300	305	320
OPzS Solar 380	250	273	277	300	330	350	370	380	400
OPzS Solar 450	296	325	330	355	395	420	440	450	470
OPzS Solar 550	353	391	398	430	480	515	540	550	580
OPzS Solar 660	422	469	477	515	575	615	645	660	695
OPzS Solar 765	492	546	555	600	670	710	750	765	805
OPzS Solar 985	606	700	710	770	860	920	970	985	1035
OPzS Solar 1080	669	773	784	845	940	1000	1055	1080	1100
OPzS Solar 1320	820	937	950	1030	1150	1230	1295	1320	1385
OPzS Solar 1410	888	1009	1024	1105	1225	1305	1380	1410	1440
OPzS Solar 1650	1024	1174	1190	1290	1440	1540	1620	1650	1730
OPzS Solar 1990	1218	1411	1430	1550	1730	1850	1950	1990	2090
OPzS Solar 2350	1573	1751	1770	1910	2090	2200	2300	2350	2470
OPzS Solar 2500	1667	1854	1875	2015	2215	2335	2445	2500	2600
OPzS Solar 3100	2080	2318	2343	2520	2755	2910	3040	3100	3250
OPzS Solar 3350	2268	2524	2550	2740	2985	3135	3280	3350	3520
OPzS Solar 3850	2592	2884	2915	3135	3430	3615	3765	3850	4040
OPzS Solar 4100	2775	3090	3125	3355	3650	3840	4000	4100	4300
OPzS Solar 4600	3099	3451	3490	3765	4100	4300	4500	4600	4850
6V 4 OPzS 200 LA	203	206	229	250	296	304	287	294	338
6V 5 OPzS 250 LA	245	257	284	311	374	383	355	364	424
6V 6 OPzS 300 LA	284	309	322	354	420	432	408	417	482
12V 1 OPzS 50 LA	55.0	51.5	63.7	69.4	78.4	79.8	81.0	82.7	92.9
12V 2 OPzS 100 LA	95.4	103	108	118	141	145	136	139	162
12V 3 OPzS 150 LA	131	154	162	177	206	217	203	210	234

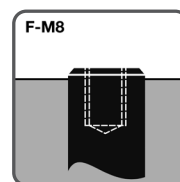
Capacities in Ah ($C_6 - C_{240}$ at 25 °C)

* Includes installed connector; the above mentioned height can differ depending on the used vent(s).

** Acid density $d_N = 1.24 \text{ kg/l}$

*** Filled and charged cell weights +/- 5%

Terminal and torque

12 Nm for blocks;
20 Nm for cells

Data is also valid for dry charged version.
Change »W« (Wet) to »D« (Dry) in the part number.
E.g.:

> filled and charged: NVSL023100 W C0FA

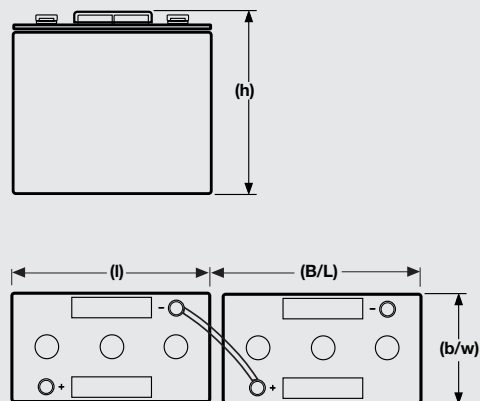
> dry charged: NVSL023100 D C0FA

Classic OPzS Solar

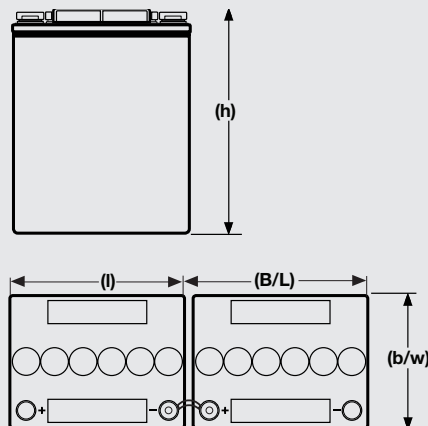
Drawings

Drawings with terminal position

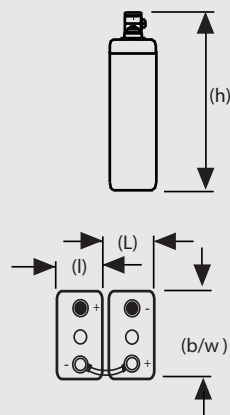
**6V 4 OPzS 200 LA –
6V 6 OPzS 300 LA**



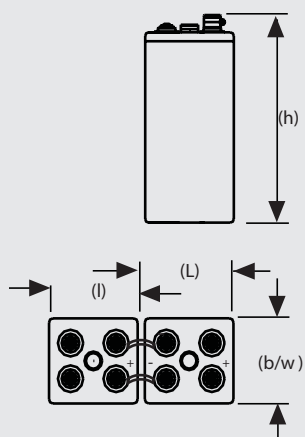
**12V 1 OPzS 50 LA –
12V 3 OPzS 150 LA**



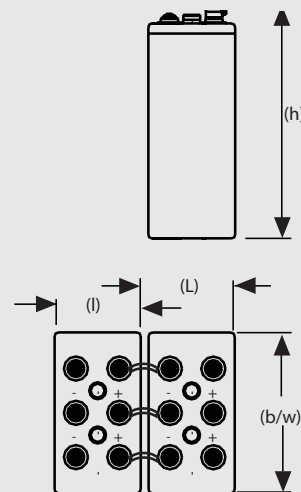
**OPzS Solar 190 –
OPzS Solar 1080**



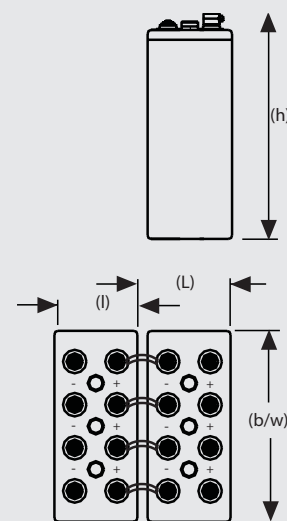
**OPzS Solar 1320 –
OPzS Solar 2500**



**OPzS Solar 3100 –
OPzS Solar 3350**



**OPzS Solar 3850 –
OPzS Solar 4600**



Not to scale!

Classic EnerSol

Powerful and universal, suitable for every application

Classic EnerSol batteries are universal, low maintenance energy supplies for medium industrial solar systems. These lead acid batteries with liquid electrolyte are renowned for being safe and reliable due to their high performance. Typical applications are small solar and wind power systems, holiday and weekend houses.

Your benefits:

- > **Positive tubular plates** – extremely robust design and enhanced cycling performance
- > **Low maintenance** – saving costs
- > **Completely recyclable** – low CO₂ footprint

Specifications:

- > Nominal capacity (C₁₂₀ at 25 °C): 372 - 1106 Ah
- > Containers made from translucent plastics for easy topping up
- > Screw connectors for a better contact and reliability



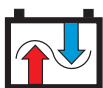
Nominal capacity
372 – 1106 Ah



Single cell



Tubular plate



up to 2000 cycles
acc. to IEC 60896-11
(60 % DoD)



Recyclable



Low maintenance

Classic EnerSol

Technical data, Drawings

Technical characteristics and data

Type	Part number	Nom. voltage V	Nominal capacity C_{120} 1.85 Vpc 25 °C Ah	Length (l) max. mm	Width (b/w) max. mm	Height* (h) max. mm	Installed length (L) max. mm	Weight incl. acid *** approx. kg	Weight acid** approx. kg	Internal resistance mOhm	Short circuit current A	Terminal	Pole pairs
03 EnerSol 380	NVTS020380WC0FB	2	372	83.0	198	503	93.0	17.5	6.9	0.83	2462	F-M10	1
04 EnerSol 490	NVTS020490WC0FB	2	486	101	198	503	111	22.5	7.8	0.69	2962	F-M10	1
05 EnerSol 600	NVTS020600WC0FB	2	597	119	198	503	129	27.1	8.9	0.59	3434	F-M10	1
06 EnerSol 720	NVTS020720WC0FB	2	720	137	198	503	147	31.0	9.7	0.53	3824	F-M10	1
07 EnerSol 840	NVTS020840WC0FB	2	832	155	198	503	165	35.5	11.0	0.47	4290	F-M10	1
08 EnerSol 950	NVTS020950WC0FB	2	942	173	198	503	183	39.5	12.1	0.43	4687	F-M10	1
09 EnerSol 1050	NVTS021050WC0FB	2	1048	191	198	503	201	44.0	13.3	0.40	5115	F-M10	1
10 EnerSol 1110	NVTS021110WC0FB	2	1106	191	198	503	201	45.5	12.0	0.37	5485	F-M10	1

* The above mentioned height can differ depending on the used vent(s).

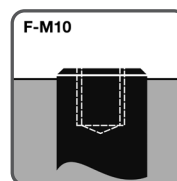
**Acid density $d_4 = 1.26 \text{ kg/l}$

*** Filled and charged cell weights +/- 5%

Type	C_6 1.75 V/C	C_{10} 1.80 V/C	C_{12} 1.80 V/C	C_{24} 1.80 V/C	C_{48} 1.80 V/C	C_{72} 1.80 V/C	C_{100} 1.85 V/C	C_{120} 1.85 V/C	C_{240} 1.85 V/C
03 EnerSol 380	267	285	294	318	351	360	363	372	384
04 EnerSol 490	352	376	388	420	455	473	478	486	512
05 EnerSol 600	436	464	482	518	555	579	587	597	642
06 EnerSol 720	516	552	574	620	669	696	702	720	768
07 EnerSol 840	591	632	658	710	767	802	816	832	899
08 EnerSol 950	668	715	744	804	869	909	924	942	1019
09 EnerSol 1050	748	800	834	901	974	1019	1037	1048	1144
10 EnerSol 1110	825	874	908	969	1035	1076	1088	1107	1182

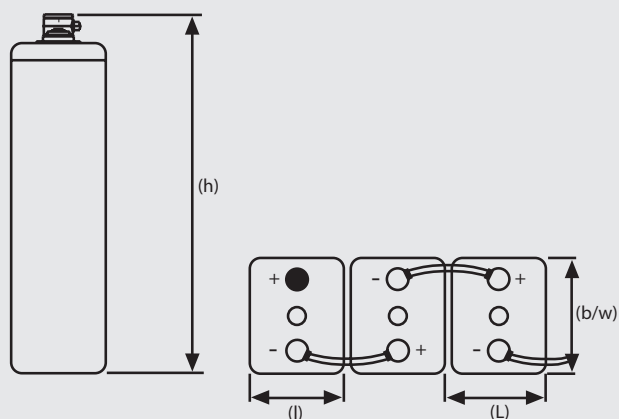
The capacities are given in Ah at 25 °C after 5 cycles.

Terminal and torque



25 Nm

Drawings with terminal position



Not to scale!



Exide Technologies, with operations in more than 80 countries, is one of the world's largest producers and recyclers of lead-acid batteries. Exide Technologies provides a comprehensive and customized range of stored electrical energy solutions. Based on over 120 years of experience in the development of innovative technologies, Exide Technologies is an esteemed partner of OEMs and serves the spare parts market for industrial and automotive applications.

GNB Industrial Power – A division of Exide Technologies – offers an extensive range of storage products and services, including solutions for telecommunication systems, railway applications, mining, renewable energy, uninterrupted power supply (UPS), electrical power generation and distribution, fork lifts and electric vehicles.

Exide Technologies takes pride in its commitment to a better environment. An integrated approach to manufacturing, distributing and recycling of lead-acid batteries has been developed to ensure a safe and responsible life cycle for all of its products.