GNB®
INDUSTRIAL POWER
A Division of Exide Technologies

Industrial Batteries / Network Power

Classic OCSM

*»**Exceptional combination** of **high power, long life** and **excellent cycling capability**«*

Classic®

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.

Applications	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 (**V**alve **R**egulated **L**ead **A**cid) in which the electrolyte is fixed in an **A**bsorbent **G**lass **M**at (AGM)
> Excellent high current capability
> Very economical
> Maintenance-free (no topping up)

Sonnenschein®

> VRLA batteries (**V**alve **R**egulated **L**ead **A**cid) 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 OCSM

Safe energy storage for stationary battery systems

The Classic OCSM range is an enhanced development of the OPzS series which uses the CSM (Copper Streched Metal) patent, developed by HAGEN Batterie AG in 1978. This patent, originally created and implemented for submarine batteries, has been successfully adapted for stationary applications where remarkable energy transformations or short-term discharges are required.

In addition to the positive tubular plates providing extreme stability and robustness, the unique feature of the OCSM range is the use of a copper stretch mesh as the core of the negative electrode. The higher conductivity of copper leads to a lower internal resistance and provides a much better performance during the discharge and charge of the battery.
The main applications of OCSM batteries are power plants (approved for use in nuclear power plants) and load levelling.

Your benefits:

> **High current discharge capability** – enhanced power output

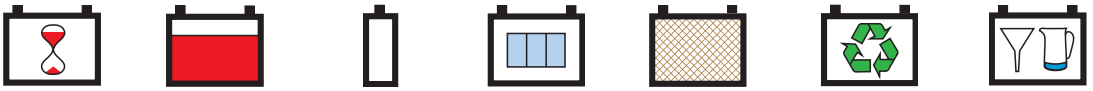
> **Very long float life, high power and excellent cycling endurance** – unique design

> **Low maintenance effort** – saving costs

> **Completely recyclable** – low CO_2 footprint

Specifications:

> Nominal capacity 160 - 3480 Ah C_{10}
> 25 years design life and service life at 20 °C ambient temperature (80 % remaining capacity from C_{10})
> Positive tubular plate and negative CSM (copper) plate technology
> Double separation with microporous and corrugated separators
> HAGEN Patentpol permanent sealing, female threaded terminals with copper insert
> Side protection of the plates
> Container made from high quality transparent plastics; tempered
> Flame arresting ceramic funnels according to DIN 40 740 available on request
> Also available in dry charged condition with separate electrolyte
> Dimensions according to DIN 40746-1
> Approval of the German nuclear standard: KTA 1401 for the factory and KTA 3703 for the product range
> Complies with the international standard IEC 60896-11
> Low gassing due to antimony alloy < 3 % (EN 50272-2)
> Manufactured in Europe in our ISO 9001 certified production plants



25 years design life | Nominal capacity 160 – 3480 Ah | Single cell | Tubular plate | Copper stretched metal plate | Recyclable | Low maintenance

Classic OCSM

Technical data

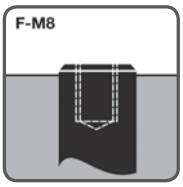
Technical characteristics and data

Type	Part number	Nom. voltage V	Nominal capacity C_{10} 1.80 Vpc 20 °C Ah	Actual capacity C_{10} 1.80 Vpc 20 °C Ah	Length (l) max. mm	Width (b/w) max. mm	Height * (h) max. mm	Installed length mm	Weight cell incl. acid approx. kg	Weight acid** approx. kg	Internal resis-tance mOhm	Short circuit current A	Terminal	Pole pairs
2 OCSM 160 LA	NVOC020160WC0FA	2	160	170	126	208	522	136	19.8	8.40	1.34	1567	F-M8	1
3 OCSM 240 LA	NVOC020240WC0FA	2	240	255	126	208	522	136	22.6	8.20	0.89	2351	F-M8	1
4 OCSM 320 LA	NVOC020320WC0FA	2	320	340	126	208	522	136	25.1	7.90	0.67	3184	F-M8	1
5 OCSM 400 LA	NVOC020400WC0FA	2	400	425	126	208	522	136	28.3	8.20	0.53	3918	F-M8	1
6 OCSM 480 LA	NVOC020480WC0FA	2	480	510	147	208	522	157	33.1	9.70	0.44	4701	F-M8	1
7 OCSM 560 LA	NVOC020560WC0FA	2	560	595	168	208	522	178	37.9	11.0	0.38	5485	F-M8	1
5 OCSM 575 LA	NVOC020575WC0FA	2	575	591	147	208	698	157	41.8	13.4	0.43	4808	F-M8	1
6 OCSM 690 LA	NVOC020690WC0FA	2	690	709	147	208	698	157	45.4	13.3	0.36	5769	F-M8	1
7 OCSM 805 LA	NVOC020805WC0FA	2	805	827	215	193	698	225	58.3	17.3	0.31	6731	F-M8	2
8 OCSM 920 LA	NVOC020920WC0FA	2	920	946	215	193	698	225	61.9	17.7	0.27	7692	F-M8	2
9 OCSM 1035 LA	NVOC021035WC0FA	2	1035	1064	215	235	698	225	71.6	21.6	0.24	8654	F-M8	2
10 OCSM 1150 LA	NVOC021150WC0FA	2	1150	1182	215	235	698	225	75.7	21.8	0.21	9615	F-M8	2
11 OCSM 1265 LA	NVOC021265WC0FA	2	1265	1300	215	277	698	225	86.3	26.5	0.19	10577	F-M8	2
12 OCSM 1380 LA	NVOC021380WC0FA	2	1380	1418	215	277	698	225	88.9	26.4	0.18	11538	F-M8	2
11 OCSM 1595 LA	NVOC021595WC0FA	2	1595	1743	215	277	848	225	106	33.3	0.19	10820	F-M8	2
12 OCSM 1740 LA	NVOC021740WC0FA	2	1740	1902	215	277	848	225	110	32.8	0.17	11803	F-M8	2
14 OCSM 2030 LA	NVOC022030WC0FA	2	2030	2219	215	400	824	225	143	47.8	0.15	13770	F-M8	3
16 OCSM 2320 LA	NVOC022320WC0FA	2	2320	2536	215	400	824	225	152	46.9	0.13	15738	F-M8	3
18 OCSM 2610 LA	NVOC022610WC0FA	2	2610	2853	215	490	824	225	178	57.9	0.11	17705	F-M8	4
20 OCSM 2900 LA	NVOC022900WC0FA	2	2900	3170	215	490	824	225	186	55.6	0.10	19672	F-M8	4
22 OCSM 3190 LA	NVOC023190WC0FA	2	3190	3487	215	580	824	225	214	69.0	0.09	21639	F-M8	4
24 OCSM 3480 LA	NVOC023480WC0FA	2	3480	3804	215	580	824	225	222	67.1	0.08	23607	F-M8	4

*The above mentioned height can differ depending on the used vent(s).
**Acid density dN = 1.26 kg/l

Container, terminal and torque

> Container: SAN (Styrene acrylonitrile)



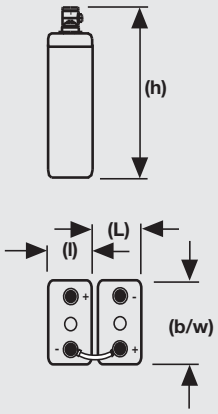
20 Nm

Figures are also valid for dry charged version.
Change »**W**« (wet) to »**D**« (dry) in the part number. E.g.:
> filled and charged: NVOC020160 **W** C0FA
> dry charged: NVOC020160 **D** C0FA

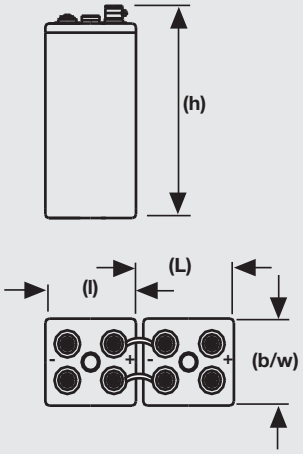
Classic OCSM

Drawings

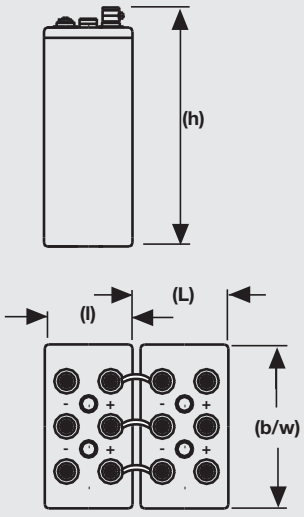
2 OCSM 160 LA - 6 OCSM 690



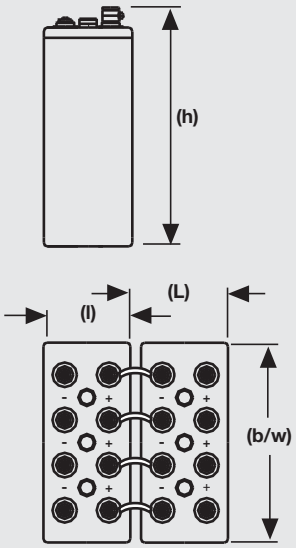
7 OCSM 805 LA - 12 OCSM 1740 LA



14 OCSM 2030 LA - 16 OCSM 2320 LA



18 OCSM 2610 LA - 24 OCSM 3480 LA



Not to scale!

Battery Service – Energy Solutions

Keeping your business on the move

GNB® is the Expert

Who could do this job better than the professionals of a company with more than 100 years of experience in battery development, production and application?

Leave the responsibility for the maintenance of your batteries and chargers to the professionals: a GNB service contract provides you with exceptional economic advantages through time savings, cost savings and safety!

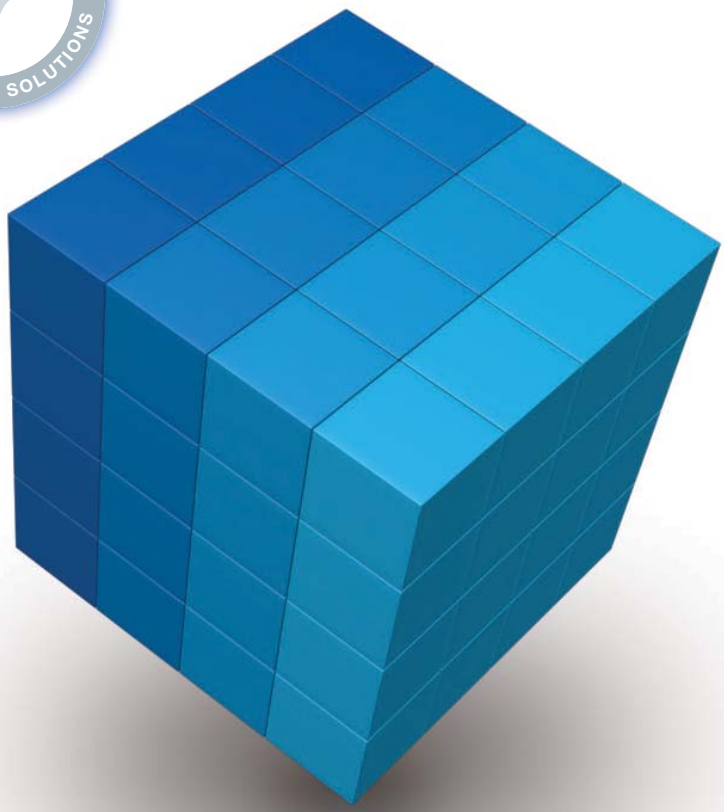
Installation of Batteries and Systems for Network Power

> Development of complete turnkey solutions from the design concept to installation and commissioning.

> Installation according to legal and safety regulations including CE certification by approved installation technicians.

> Training and certification of external installation technicians according to CE regulations.

BATTERY SERVICE ENERGY SOLUTIONS



- **Inspection Contract**
- **Maintenance Contract**
- **Lifetime Warranty Contract**
- **Full Service Contract**

*»**GNB Service** – individualized, professional and all over Europe!«*

Classic OCSM

Notes

GNB®
INDUSTRIAL POWER
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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, photovoltaic (solar 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.

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GNB® INDUSTRIAL POWER devises enduring energy concepts that convince with efficiency, flexibility and profitability.

www.gnb.com