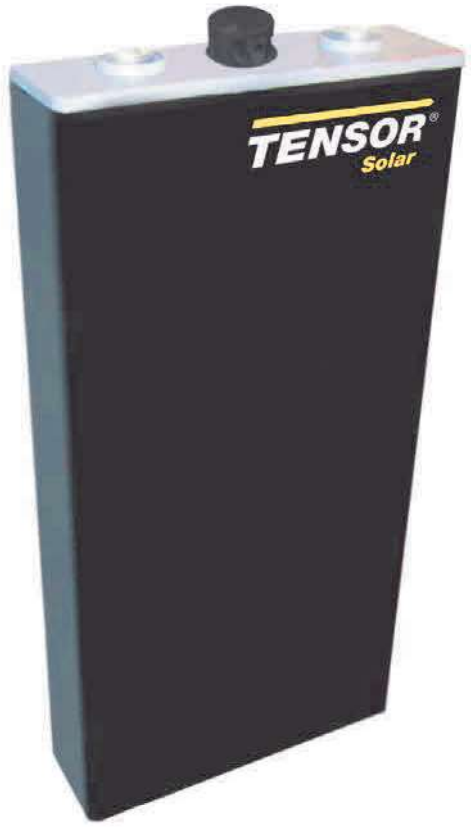
GNB®
INDUSTRIAL POWER
A Division of Exide Technologies

Industrial Batteries / Network Power

TENSOR *Solar*



- Back-up power (UPS)
- Hybrid & green deployment
- Renewable energy management
- Grid power quality
- Optimizing or replacing genset
- Generation smoothing
- Grid stabilization
- Grid stabilization
- Ramp rate control
- Peak shaving
- Grid building
- Own consumption
- Control power
- Intra day

TENSOR®
Solar

»The innovative high-performance battery for maximum storage capacity and peak power output«

Industrial Batteries

The powerful range of Network Power

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

GNB Network Power brand overview

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)

Sonnenschein

> 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 TENSOR Solar

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

BATTERY SERVICE ENERGY SOLUTIONS

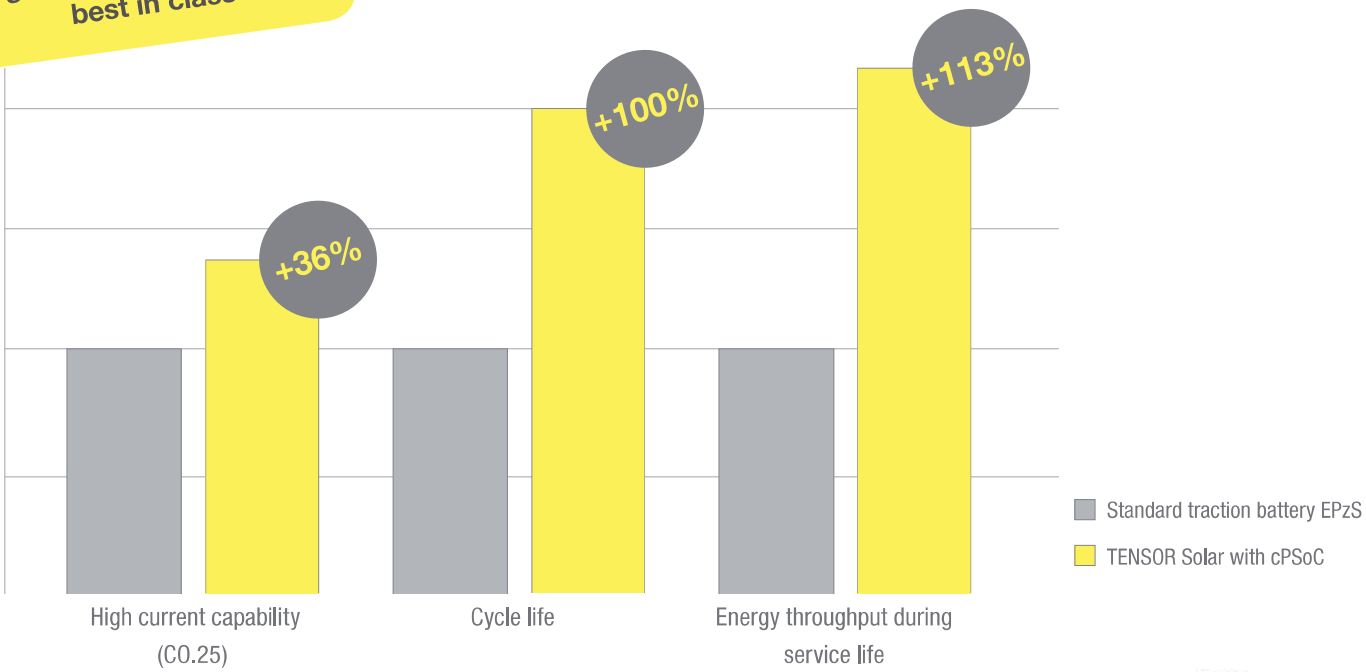
> Further information about service is available on page 7.

TENSOR *Solar*

Creating the future through energy

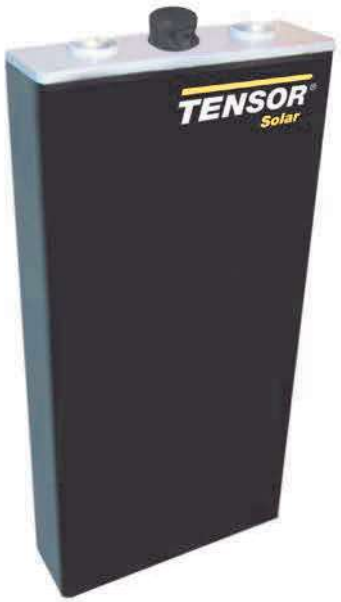
TENSOR Solar batteries offer an ideal combination of high performance when charging and discharging and a long cycle life due to the copper stretched metal and the optimized positive tubular electrodes.

High current and cycle life best in class



Your benefits:

> **Superior** charge and discharge power
> **Excellent** cycling endurance
> **Modular** tray design
> **High** efficiency
> **Optional:** low-maintenance



Specifications:

> Nominal capacity (C10 at 20°C) 477 Ah
> Suitable for controlled partial state of charge operation (cPSoC)
> Positive tubular plate and negative CSM (with copper stretched metal) grid plate technology
> Also available in dry-charged version with separate electrolyte
> Optimized for modular tray design
> Made in Europe, in ISO 9001 certificated production facilities

TENSOR *Solar*

Technical data

Technical characteristics and data

Type	Part number	Nominal voltage [V]	Nominal capacity* [Ah]	Energy content* [Wh]	Length (l) [mm]	Width (b/w) [mm]	Height (h1) [mm]	Installed height (h2)** [mm]	Weight incl. acid ±5% [kg]	Internal resistance [mOhm]	Short circuit current [A]	Terminal	Pole pairs
SCSM 955	NVSC020495WZ0FA	2	477.3	955	65	198	713	743	25.5	0.44	4560	F-M8	1

Mentioned dimensions +/- 2 mm
* C_{10} | 1.80 Vpc | 20°C
** incl. connector, plug, water refilling system, electrolyte circulation system

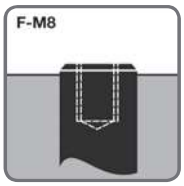
SCSM 955	$C_{0.25}$	$C_{0.5}$	$C_{0.75}$	C_1	C_3	C_5	C_{10}	C_{20}
1.95 Vpc	63.4	106.5	138.1	162.5	266.2	305.1	347.6	379.2
1.90 Vpc	82.0	136.2	174.9	204.1	322.6	364.0	406.9	436.9
1.85 Vpc	100.5	164.9	209.5	242.3	368.3	409.3	450.1	476.9
1.80 Vpc	118.7	192.1	240.9	275.4	401.4	439.9	477.3	501.0
1.75 Vpc	136.4	216.9	267.6	301.9	422.1	457.8	492.3	513.6
1.70 Vpc	153.4	238.6	288.5	320.7	433.4	467.0	499.6	519.7
1.65 Vpc	169.4	256.1	302.9	332.4	439.0	471.3	503.0	522.4
1.60 Vpc	184.0	268.8	311.6	338.7	441.5	473.3	504.5	523.6

Capacities in Ah (at 20°C)

Terminal and torque

> Container: PP (Polypropylene)

Data are also valid for dry charged version.
Change »**W**« (wet) to »**D**« (dry) in the part number. E.g.:
> filled and charged: NVSC020495 **W** Z0FA
> dry charged: NVSC020495 **D** Z0FA

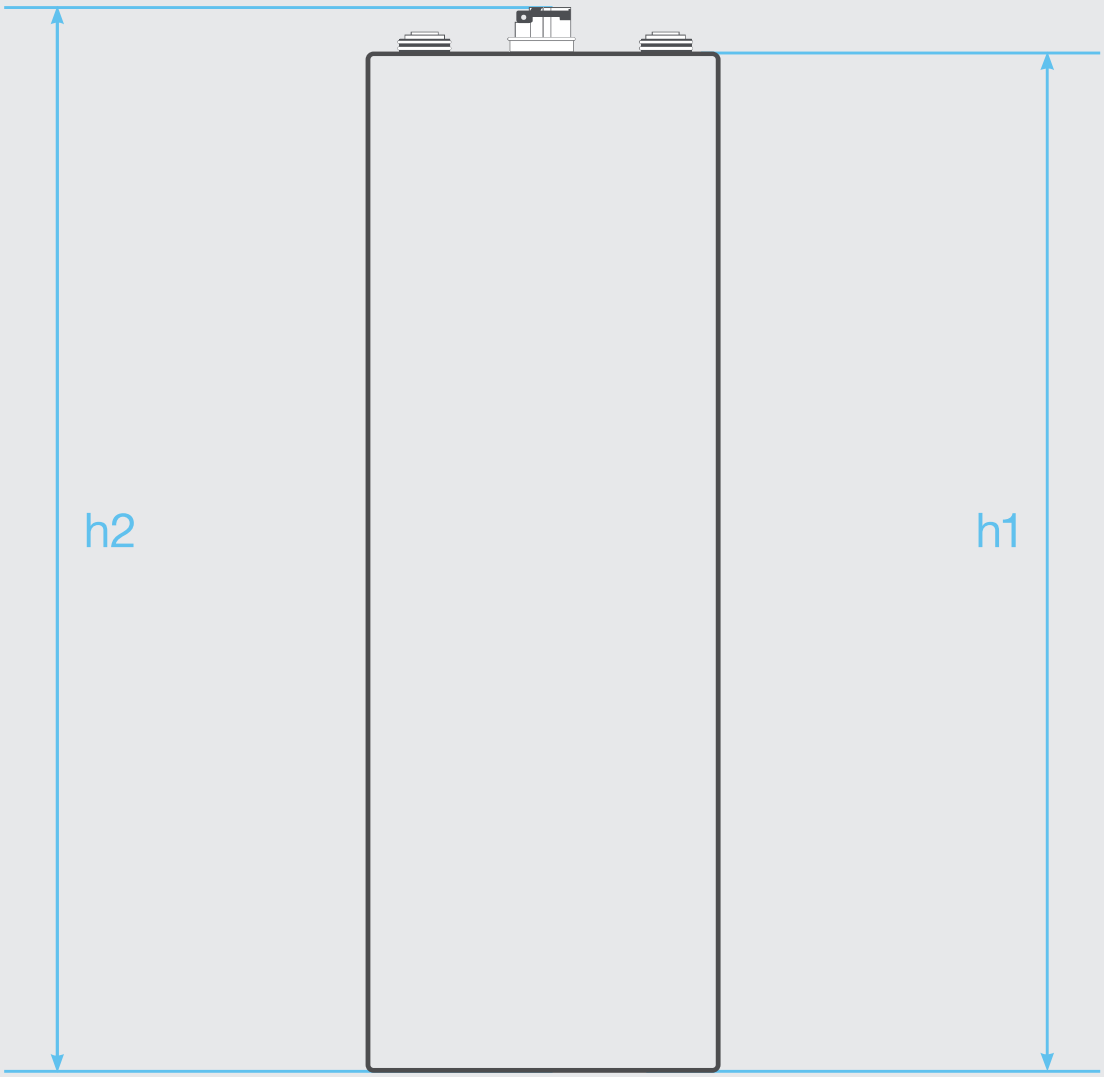


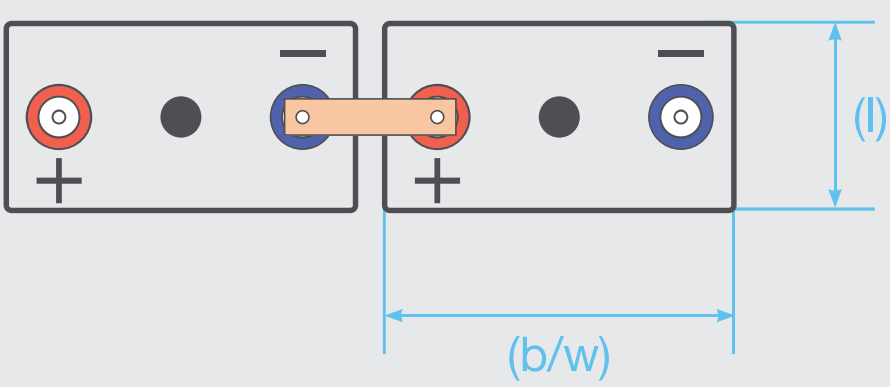
20 Nm

TENSOR *Solar*

Drawings

SCSM 955





TENSOR® Solar

Not to scale!

TENSOR *Solar*

Installation example

12V / 24V Tray design

> Complete DC building block / modular tray design
> Automatic water refilling system
> Air agitation system for higher energy efficiency, shorter charging time and longer life even under cPSoC operating conditions

GNB® solutions for all Renewable Energy needs

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!

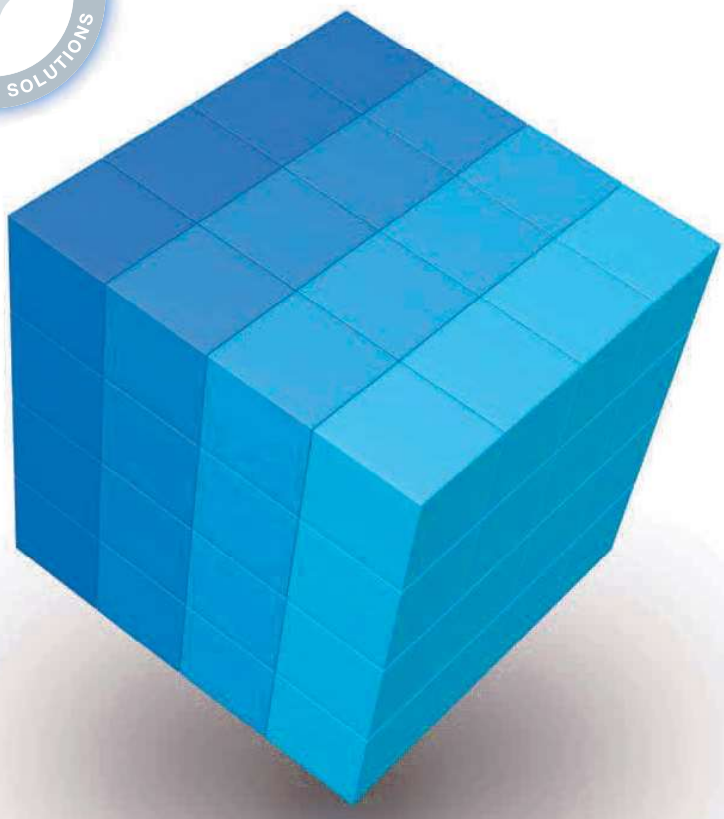
Installation of Batteries and Systems for Network Power

> 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!«*

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GNB®
INDUSTRIAL POWER
A Division of Exide Technologies

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.

NXCOCTEPDF00815 Subjects to alterations

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