

# SONNENSCHN LITHIUM TEL48100

RELIABLE ENERGY FOR A CONNECTED WORLD



## STAY CONNECTED WITH HIGH-PERFORMANCE LITHIUM-ION BATTERIES

Across sectors, regions and cultures, we rely more than ever on telecommunications. It is how we interact with companies, create business, consume entertainment, and keep in touch with family and friends. GNB® Industrial Power understands the importance of staying connected. It develops high-quality products that increase the reliability of telecommunication systems, reduce their energy costs and total cost of ownership, and make them more “green”.

### SUSTAINABLE & ENVIRONMENTAL-FRIENDLY

In emerging markets, base transceiver stations (BTS) at the front end of telecom networks are typically powered and backed up by diesel generators. Switching to green BTS powered by PV or wind, or to optimized diesel generator–battery hybrid BTS, can greatly reduce costs, opening up telecommunications to more people. It also reduces dependence on fossil fuels and allows renewables to be the sole source of energy. Such solutions require durable, high-performance batteries with exceptional energy throughput.

### REDUCED TOTAL COST OF OWNERSHIP

GNB® Sonnenschein Lithium TEL48100 is designed to provide exceptional performance in telecom applications. Costs are reduced thanks to zero or reduced fuel costs, lower installation costs, long service life and much lower maintenance needs. Batteries can be monitored via remote control, and log data can be used to further optimize the system, decrease costs, and improve reliability and performance.

### LEGACY SYSTEMS

The battery system can work with existing rectifier controllers used for traditional lead-acid batteries.

## BENEFITS IN A NUTSHELL

- › More flexibility in installation – half the volume of a lead-acid battery
- › More economic and sustainable use of energy
- › Battery management ensures it operates within predefined limits – providing safe, reliable and long-lasting performance
- › More operating freedom – great charge acceptance and robustness in partial-state-of-charge operation
- › Low total cost of ownership thanks to reduced installation cost, high energy throughput and high energy efficiency

## FEATURES

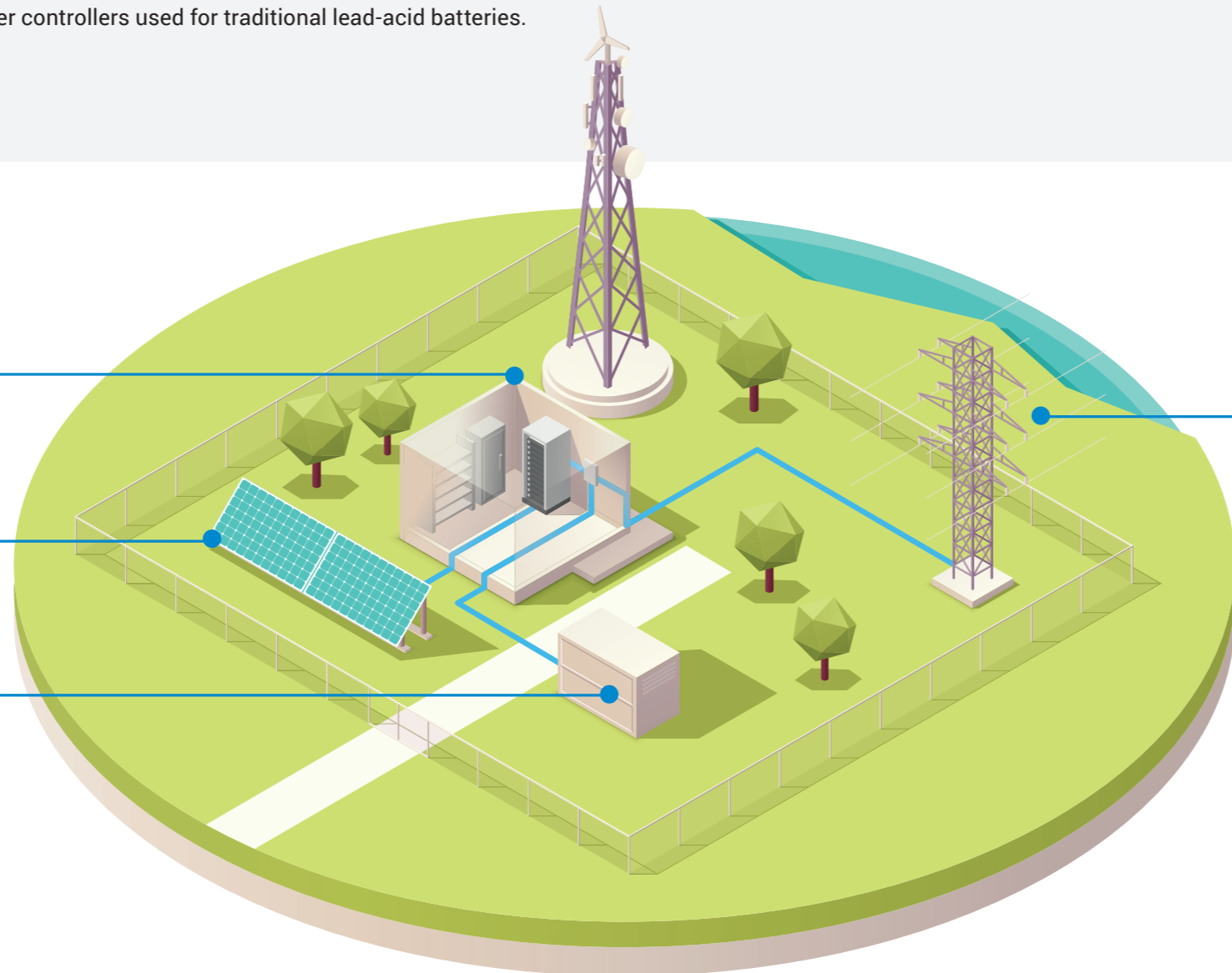
- › Compact, lightweight design
- › Highly energy efficient
- › Very good cycling capability and long service life
- › Suitable for existing and new installations
- › Intelligent remote supervision



**TELECOM EQUIPMENT**  
(INCLUDING BATTERY SYSTEM)

**SOLAR PANELS**

**DIESEL GENERATOR**



**MAIN GRID**  
(IF AVAILABLE)



## TECHNICAL SPECIFICATION OF TELECOM LITHIUM BATTERY FAMILY

### SIZE AND DIMENSIONS

Modules are designed for 19" rack mounted telecom racks in 600mm x 800 mm ETSI cabinets	
Depth (mm)	405 / 445 (with terminals and handles)
Width (mm)	442
Width with bracket (mm)	482
Height (mm)	222.3 / 5U (U =44.45)
Weight (Kg)	60

### OPERATING CONDITIONS

Available Operating Temperature	0 up to +55°C*
Optimal Operating Temperature	+15 to +30°C
Storage Temperature	-25 to +45°C
Humidity	5% to 95%
Altitude	≤ 3000m

\*depending on discharge current

Article Number: NLTL4801000S0F0



### PERFORMANCE

Nominal Capacity	100 Ah (50A; 25°C; 40.5V cut-off voltage)
Nominal Energy	4.8 kWh
Nominal Voltage	48V
Operating Voltage	40.5 to 53.25V
Max. Charge/Discharge Current	1C rate (one cycle per day)
Max. Continuous Charge Current	20 A (0 to 10°C and 45°C to 55°C) 50 A (10 to 45°C)
Max. Continuous Discharge Current	50 A
Round-Trip Efficiency	≥ 95%
Ingress Protection Rating	IP20
Cooling	No fan
Communication & Interface	RS485 Note: Battery can operate without communication to rectifier controller
Dry Contact	2Ch (Warning, Fault)

### SERVICE LIFE

Cycle Life	3500 cycles with 80% DoD at 25°C
Calendar Life	10 years @ 25°C

### DESIGN

Cell chemistry & technology	Re-chargeable Lithium-Ion Battery (Lithium Iron Phosphate cathode)
Scalability	up to 15 modules connected in parallel
Hot-Swapping	yes

### CERTIFICATION

Safety	IEC 62619
Transportation	UN38.3 (UNDOT)

### ALARMS AND SAFETY

- › LED status indicator
- › Alerts (alarm, protection)
- › Built in BMS for self-diagnostic, control and protection
- › Circuit protection by BMS control (FET)
- › Reverse polarity protection
- › Short circuit protection
- › Optional Data storage, remote controlling



Exide Technologies, with operations in more than 80 countries and more than 130 years of experience, is one of the world's largest producers and recyclers of lead-acid batteries. The company develops state-of-the-art energy storage solutions for the automotive and industrial market. Leading car, truck and lift truck manufacturers trust in Exide Technologies as an original equipment supplier. Exide also serves the aftermarket through a portfolio of successful and well-known brands.

Exide Transportation manufactures batteries for light and commercial vehicles, as well as agricultural and marine leisure applications. Industrial markets – under the division GNB Industrial Power – include efficient energy storage solutions for motive power applications such as lift trucks, cleaning machines and other commercial electrical vehicles, and network power applications such as telecommunications systems, renewables, and uninterruptible power supply (UPS).

Exide's engineers have always been at the forefront of bringing important innovations to the industry. Exide's ISO/TS-certified manufacturing facilities ensure that customers receive products that are produced with maximum efficiency and fulfill the highest quality standards, while minimizing impact on the environment.

Exide's extensive sales and distribution network provides quality service and delivers on time to its customers. Its world-class recycling facilities ensure that batteries will be reused, helping to make a positive contribution to the environment. Exide also provides services, accessories and energy consulting to its clients.

-  European headquarters
-  Manufacturing plants
-  Recycling plants
-  Distribution centers
-  Main sales offices
-  R&D centres
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Manufacturing plants ISO 9001 and ISO 14001 certified  
Automotive plants IATF 16949 approved

