



BOSCH

Invented for life

Leisure and Off-Highway Batteries

High energy supply for mobile applications



Leisure and Off-Highway Batteries

Overview

Modern mobile applications are equipped with more and more components running on electric energy. They need to be supplied by reliable sources of energy with high performance. Equipped with modern technology and featuring a corrosion-proof design, Bosch batteries provide different types of vehicles with the energy they need – over long periods.

Battery expert since 1922

In 1922, the first Bosch battery was produced in Stuttgart-Feuerbach (Germany).

Patented PowerFrame® (grid)

Compared to conventional grids, the special alloy of the PowerFrame® ensures a higher corrosion resistance and at the same time a particularly high conductivity – as has been proven by durability tests in line with the SAE J240 standard performed at 75°C. Furthermore, the flow-optimized PowerFrame® grid design also generates continuously high starting power thus contributing to a long service life.

Reliable performance, high safety

Bosch batteries are subject to safety and resilience tests complying with legal requirement criteria and standards and monitored regularly in market applications.

High capacity, operational reliability

Owners of campers, mobile homes and boats appreciate their independence and the proximity to nature. At the same time, they demand comfort and safety. Golf carts, lawn mowers and other mobile devices need large amounts of energy over a longer period of time while having to be recharged quickly. Bosch batteries are perfectly adapted to these specific requirements. They stand out for their high capacity, their outstanding deep-cycle resistance as well as top safety and operational reliability.



Leisure and Off-Highway Batteries

Product range



	L5	L5G
	<p>For mobile applications with several electrical consumers having to be supplied with energy for a long time; e.g. campers, mobile homes, electric boats and motorboats</p>	<p>Top endurance and quick operational readiness. L5G are powerful supply batteries allowing deep discharge and staying operational over extended periods of time</p>
Technology	  <p>Lead-acid SLI ⁽¹⁾; PowerFrame[®] ⁽²⁾, Labyrinth lid ⁽³⁾, Deep Cycle ⁽⁴⁾</p>	 <p>Lead-acid SLI ⁽¹⁾; Deep Cycle ⁽⁴⁾</p>
Scope of application	     <p>Camper/mobile homes, electric boats and motorboats</p>	 <p>Golf carts, mobile and industrial applications</p>
Maintenance	Absolutely maintenance-free	Maintenance made easy – special caps open all vents with a single turn of the lid
Installation inside the vehicle	Yes	No
Cold starting performance	●	●
Number of electrical consumers	● ● ●	● ●
Deep-cycle resistance	● ● ●	● ● ●
Suitability as supply battery	● ● ●	● ●
Vibration resistance	●	● ●
Installation angle	Up to 45°	0°

(1) SLI: Starting-Lighting-Ignition battery

(2) PowerFrame[®]: patented stamping process for optimum current flow, reduced corrosion and a long service life

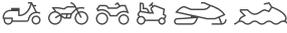
(3) Labyrinth lid: returns condensed water to the battery; integrated central degassing, backfire protection and an additional sealing ring ensure high operational safety

(4) Deep Cycle: high deep-cycle resistance and power density

Leisure and Off-Highway Batteries

Product range



	L4	M4
	<p>Bosch L4 leisure batteries are designed for mobile applications with few electrical consumers and particularly suitable for long-term discharge. They can be fully recharged in short time and can even be used as starter batteries; e.g. for boats, mobile homes and golf caddies</p>	<p>For reliable starting power: the conventional Bosch M4 SLI two-wheeler starter battery is suitable for every-day applications</p>
Technology	 <p>Lead-acid SLI ⁽¹⁾; PowerFrame® ⁽²⁾, Labyrinth lid ⁽³⁾</p>	
Scope of application	 <p>Campers/mobile homes and electric boats and motorboats</p>	 <p>Two-wheelers, ATV quads, lawn mowers, snowmobiles and jetskis</p>
Maintenance	Absolutely maintenance-free	Supplied with acid pack and filling aid for initial filling; maintenance-free
Installation inside the vehicle	Yes	No
Cold starting performance	●●	●●
Number of electrical consumers	●	●
Deep-cycle resistance	●●	●
Suitability as supply battery	●●	●
Vibration resistance	●	●
Installation angle	Up to 45°	0°

L5 PowerFrame® leisure battery

Product details

For mobile applications with several electrical consumers having to be supplied with energy for a long time; e.g. campers, mobile homes, electric boats and motorboats



Advantages at a glance

- ▶ **Powerful and comfortable:** the flow-optimized and corrosion-resistant PowerFrame® (grid) ensures optimum cranking power and a long service life
- ▶ **High deep-cycle resistance and power density:** Deep Cycle technology allows twice as many charge/discharge cycles as conventional batteries combined with a good charge acceptance and minimum self-discharge rates
- ▶ **Ideal for seasonal applications:** equipped with Deep Cycle technology, L5 batteries are designed for long-term discharge
- ▶ **High safety:** thanks to its backfire protection and the labyrinth lid returning condensed water to the battery
- ▶ **Absolutely maintenance-free, leak-and tilt-proof up to 45°:** thanks to its sealed lid with labyrinth design

PowerFrame® Technology

Set of plates with particularly robust connection

The central arrangement of the connectors between positive and negative plates ensures additional stability.

Labyrinth lid for high operational safety

The double lid with labyrinth design ensures that evaporated liquid remains inside the battery. This makes the L5 battery absolutely maintenance-free and leak-proof.

Terminal covers

Provide protection against short circuits.

Ergonomic handles

For easy transport and installation.

Ion-permeable pocket separator

Prevents contact between positive and negative plate – for longer service life and higher starting power.

Patented PowerFrame® (grid) for Optimized current flow and reduced corrosion

The flow-optimized grid design of the PowerFrame® ensures consistently high starting power and a long service life. In addition, a special alloy ensures high corrosion resistance and a lower self-discharge.

Universal adapter bottom rail with high degree of vehicle compatibility

For safe, precisely fitting installation. Reduced type variations simplify the stockkeeping.

? Did you know?

Battery expert since 1922

In 1922, Bosch produced its first battery in Stuttgart-Feuerbach.



L5G leisure battery

Product details

Top endurance and quick operational readiness. L5G are powerful supply batteries allowing deep discharge and staying operational over extended periods of time



Advantages at a glance

- ▶ **Particularly high reserve capacity, good charge acceptance and long overall service life:** due to optimized electrode plates
- ▶ **High deep-cycle resistance:** Deep Cycle technology allows more charge/discharge cycles at a high depth of discharge
- ▶ **Maintenance made easy:** special caps open all vents with a single turn of the lid
- ▶ **High reliability and operational readiness:** thanks to Deep Cycle technology, the active material features a higher density than in case of conventional starter batteries – as a result, L5G batteries cope with heavy strains caused by frequent charging/discharging and vibrations without loss of battery capacity

L4 PowerFrame® leisure battery

Product details

Bosch L4 leisure batteries are designed for mobile applications with few electrical consumers and particularly suitable for long-term discharge. They can be fully recharged in short time and can even be used as starter batteries; e.g. for boats, mobile homes and golf caddies



Advantages at a glance

- ▶ **Powerful and comfortable:** the flow-optimized and corrosion resistant PowerFrame® (grid) ensures optimum cranking power and a long service life
- ▶ **High deep-cycle resistance:** short charging periods and a long service life
- ▶ **High safety:** thanks to its backfire protection and the labyrinth lid returning condensed water to the battery
- ▶ **Absolutely maintenance-free, Leak-and tilt-proof up to 45°:** thanks to its sealed lid with labyrinth design

M4 SLI lead-acid leisure battery

Product details

For reliable starting power: the conventional Bosch M4 SLI two-wheeler starter battery is suitable for every-day applications



Advantages at a glance

- ▶ **Reliable start-ups even in extreme weather conditions:** the grid design ensures excellent conductivity
- ▶ **Suitable for a large number of motorcycles:** different 6V and 12V types available
- ▶ **Resilient and durable:** the grid design is very robust
- ▶ **Quickly ready for use – everything included:** the battery comes with an acid pack and a filling aid for initial filling



Workshop tip

Professional diagnoses with ESI[tronic] Bike & KTS

The ESI[tronic] Bike workshop software covers all common European and Asian motorcycle makes and works on Bosch KTS-line diagnostic testers.



Leisure and Off-Highway Batteries (OPTIMA®)

Product range



	OPTIMA® BlueTop®	OPTIMA® YellowTop®	OPTIMA® RedTop®
	Ideal for marine applications – copes with extended operating times and a large number of charge cycles	Ideal for industrial applications – high power density and deep-cycle resistance	Ideal for starter applications – top ignition power ensures reliable engine start
Technology	AGM – Absorbent Glass Mat ⁽²⁾ SpiralCell® ⁽¹⁾	AGM – Absorbent Glass Mat ⁽²⁾ SpiralCell® ⁽¹⁾	AGM – Absorbent Glass Mat ⁽²⁾ SpiralCell® ⁽¹⁾
Scope of application	 Mobile homes with many electrical consumers and marine applications such as boats	 Mobile homes with many electrical consumers, industrial applications and professional off-highway applications	 Mobile homes, commercial and off-road vehicles, construction and agricultural machinery, rescue and emergency vehicles, generators and trolley cars
Maintenance	Absolutely maintenance-free	Absolutely maintenance-free	Absolutely maintenance-free
Installation inside the vehicle	Yes	Yes	Yes
Cold starting performance	● ●	● ●	● ● ●
Number of electrical consumers	● ●	● ● ●	● ●
Deep-cycle resistance	● ●	● ● ●	● ●
Suitability as supply battery	● ●	● ● ●	● ●
Vibration resistance	● ● ●	● ● ●	● ● ●
Installation angle	Up to 90°	Up to 90°	Up to 90°

(1) SpiralCell®: extremely vibration-resistant and suitable for marine applications thanks to stable construction with spiral technology

(2) AGM (Absorbent Glass Mat): acid absorbed by micro-fiberglass mats allows higher amounts of energy to pass through

AGM and SpiralCell® Technology

Solid-cast cell connections
For increased durability.

Safety valve
Self-sealing.

Impact-resistant
Polypropylene case.

High-purity lead grids
For an extended
service life.



Terminals
Corrosion-resistant.

**SpiralCell® –
robust specialcell design**
For maximum vibration
resistance and an extended
service life.

**AGM – acid absorbed
by micro-fiberglass mats**
Separators out of micro-
fiberglass mats absorb the
electrolyte like a sponge
thus preventing any leakage
and allowing higher amounts
of energy to pass. This
increases the battery
performance.



Did you know?

**OPTIMA® BlueTop® batteries
are specially designed for
marine applications.**

Dynamic conditions on the water require reliable batteries that are able to adapt to a moving water surface. Therefore, the OPTIMA® BlueTop® batteries are equipped with an AGM Technology and a robust Spiral-Cell design that increases the batteries performance, the service life and makes them very resistant to vibrations.



Driven by efficiency

Bosch technologies are used worldwide in almost all vehicles. People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated the last 125 years of pioneering spirit and expertise in research and manufacturing to achieving this.

We continue to work on our unique combination of solutions for spare parts, diagnostic devices, workshop equipment and services:

- ▶ Solutions for efficient vehicle repairs
- ▶ Innovative workshop equipment and software
- ▶ One of the world's most comprehensive range of new and replacement parts
- ▶ Large network of wholesale customers, for quick and reliable parts supply
- ▶ Competent hotline support
- ▶ Comprehensive educational and training offers
- ▶ Targeted sales and marketing support

For additional information, please visit:

bosch-automotive-aftermarket.com

What drives you, drives us

Robert Bosch GmbH
Automotive Aftermarket

Auf der Breit 4
76227 Karlsruhe
Germany

www.bosch-workshop-world.com



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