

起动机和发电机

高比功型发电机 – 体积小、重量轻、结构紧凑、高比功

Starter Motors and Generators

Power Density Line generators – small, light, and compact thanks to high power density



BOSCH

博世 科技成就生活之美



产品介绍

Product description

为应对全球汽车市场小型化，轻量化趋势，博世开发出全新一代发电机：高比功型发电机。该发电机平台设计可靠，技术创新，坚固耐用，可满足客户的严苛要求。高比功型发电机功率范围涵盖1.5到3千瓦，能满足乘用车中高级乃至豪华级车型的需求。

Following the global trend to reduce size and weight of the components for automotive use Bosch has developed the next generator generation: Power Density Line generators. With a combination of a well known and proven design and highly innovative components a very robust generator catching the highest requirements in the market was created. The Power Density Line (PL) generator is developed to cover the comfort and luxury segment of passenger cars (A type) with high output requirements from 1.5 kW up to 3.0 kW.

安装空间紧凑

Perfect for packed engine compartments

高比功型发电机适合安装在空间紧凑的发动机舱中。PL3Q发电机的输出可达150A，外径为134mm，PL7Q发电机的输出可达250A，外径为144mm。

With the high power density the PL generator can be used within very small spaces in engine compartment. With a diameter of only 134 mm the PL 3Q can cover up to 150 Ampere output and with the 144 mm the PL 7Q provides output up to 250 Ampere.

性能优化，有效降低油耗和CO₂排放

Optimized for low fuel consumption and CO₂ emissions

高比功型发电机和高效型发电机的效率处于同等水平，通过使用高效二极管（HED）和同步整流器（SAR）可将效率提高到76%到80%，同时也可以减少发电机工作所需能耗。高比功型发电机效率提高，本体重量减轻10%，这些将有助汽车厂商进一步降低油耗和CO₂排放。

The efficiency of the new PL generators was maintained at the high level of Efficiency Line generators and can be increased still further to 76% or 80% through the use of high efficiency diodes (HED) or a synchronous active rectifier (SAR). This reduces the mechanical force needed to drive the generator in order to generate energy for the electrical consumers in the vehicle. The generator's improved efficiency and 10% lower weight will help vehicle manufacturers to achieve further reductions in fuel consumption and CO₂ emissions.

低噪音

Extremely low noise levels

降低车内噪音对于高档汽车尤为重要。高比功型发电机整体性能优于前代产品。五相绕组技术能有效降低电磁噪音，尤其是发动机在低转速时，例如挂空档时，通过优化发电机冷却风扇，发动机高速运转时，发电机的机械噪音可降低约50%。

Reducing the noise transmitted to the interior of the vehicle is a particularly important concern in the high-end segment. Here too, the performance of the new range of PL generators has been optimized compared with its predecessors. The use of a five-phase technology significantly reduces induced magnetic noise, especially when the engine is running at low speed, for instance with the gears in neutral. Aerodynamic noise at high engine speeds has been almost halved by modifying the design of the generator cooling fan.

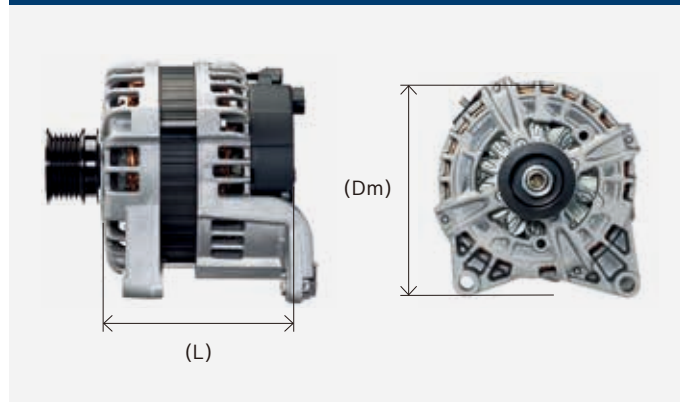
全球通用

Worldwide availability

为应对不断深化的汽车市场全球化趋势，高比功型发电机将在欧洲，中国和美洲生产。博世的各个分公司负责产品的本地应用。因此，博世不仅向全球客户提供高质量的产品，同时也可满足不同市场的特殊需求。

Following the further advancing globalization of the automotive market, the PL generator is manufactured in 3 regions of the world: Europe, China and America. Similarly, the complete application is made by the Bosch associates in the region locally. This approach enables Bosch to offer high-quality products to customers throughout the world that meet the highest quality standards and at the same time can be adapted to the needs and requests of specific regional markets.

高比功型发电机 Power Density Line generator



产品参数 Technical data of Volt version	下限/from	上限/to
额定电流 (A) at 1,800 rpm (A) Rated current at 1,800 rpm (A)	75	150
额定电流 (A) at 6,000 rpm (A) Rated current at 6,000 rpm (A)	130	250
VDA效率 (%) Efficiency, VDA (%) Efficiency, VDA (%)	72	80
3,500rpm下的电磁噪声 (dB) Magnetic noise (dB) up to 3,500 rpm	64	64
10,000rpm下的机械噪声 (dB) Aerodynamic noise (dB) at 10,000 rpm	90	93
不含皮带轮的长度 (mm) Length (L) without pulley (mm)	125	138
不含螺栓的外径 (mm) Diameter (Dm) without bolts (mm)	134	144
不含皮带轮的重量 (kg) Weight without pulley (kg)	5.6	7.2
转动惯量 (kg/cm ² , 不含皮带轮) Inertia (kg/cm ² , without pulley)	25.5	39

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SG-201403-CNEN