



24/48 VDC alternators for telecoms, lighting towers and extra-low voltage DC applications

Sincro offers a complete range of DC alternators from 60A to 800A, working at variable speed, supplied with integrated rectifier and digital AVR. The turnkey solution for DC gen-sets, ensuring high performances and supreme strength.

WE, FIRST ONES IN DC SOLUTIONS

In the world of power generation, **Sincro has been one of the first Europe-based manufacturers in developing a dedicated range of DC alternators specifically made for DC gen-sets. It was 2012.**

Since then, we have been working to keep improving technology, performances and our product offering, in terms of number of models.

THE RANGE: 28 MODELS

Sincro DC range includes today **28 models Made in Italy**, working at **24 VDC or 48 VDC**, in **2 or 4 pole** version (when considering constant speed), brushless or brushes, supplying reliable and efficient energy **from 60A to 800Amps**.

DC alternators derive from the basic AC three-phase synchronous versions (E3, FT, FB, IB).

DC APPLICATIONS, INCLUDING HYBRID

DC gen-sets are used in direct-current applications.

These include **telecommunications, lighting towers and all kinds of extra-low voltage (ELV) systems** used in industrial equipment, construction, military and transportation, such as: APU (auxiliary power units), LED lighting

towers (Light Emitting Diode lamps), battery chargers, emergency power back up units, power supply for monitoring of safety warnings, alarms and control devices (railways, traffic-lights etc).

Hybrid power systems are also included (reducing CO2 and heat emissions, fossil fuel consumption, and noise), more and more common in supplying everyday's life.

HIGH STABILITY OF VOLTAGE

Our DC alternators are equipped with a dedicated **DBC1 Digital AVR** specifically designed to:

- **Protect the gen-sets** against any current overload
- **Maintain a constant output voltage of 24 VDC or 48 VDC** within a large operating speed range (**variable speed**).

The voltage is adjustable over a wide scale every time the alternator is working at variable speed. Therefore:

- Nominal speed: 1500 (4 poles/50Hz) or 3000 RPM (2 poles/50Hz)
- Variable speed working: 1400÷2300 RPM (4 pole models), 2900÷4200 RPM (2 pole models).

LOW RIPPLE

Sincro DC alternators ensure **very low ripple levels**, in accordance with those standards requiring low line disturbance on the equipment.

ALL-INCLUSIVE EXECUTION

In Sincro DC alternators, **the rectifier is directly integrated in the alternator**, offering the gen-set OEMs a turnkey solution **with no need for an external rectifier**. This can contribute to reduce the investments on the gen-sets production and their mobile transportation (full optimization). The diodes rectifier bridge is self-ventilated thanks to the specific design applied on the alternator itself.

SPECIAL VERSIONS

Thanks to our R&D's team and factories' flexibility, all our DC models can be realized in customized version:

- **9-phase execution for better ripple performances**
- Executions at 12V, 36V, 60V etc
- Battery charger module to set different charging cycles depending by the type and temperature of the batteries.