

## INTEGRATED STARTER MOTOR GENERATORS

### T Y P E S

DC INTEGRATED  
FLYWHEEL  
GENERATORS

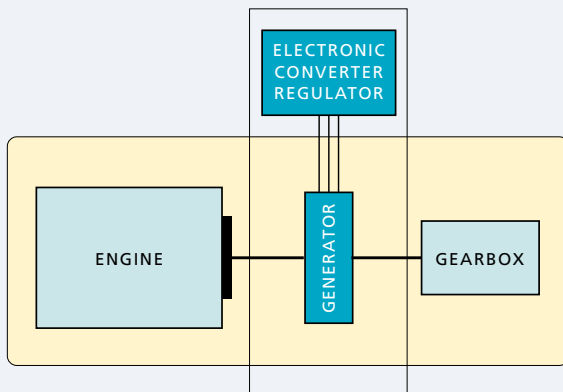
AC INTEGRATED  
FLYWHEEL  
GENERATORS

DC INTEGRATED FLYWHEEL  
STARTER MOTOR GENERATORS  
FOR HYBRID DRIVES



**Iskra**

Iskra Avtoelektrika d.d.



AIZ integrated generator

## APPLICATIONS

Iskra 230 V 50 Hz or 110 V 60 Hz AC generators are intended for applications in the systems with high AC electric energy requirements. Generators are primarily designed to be built on the flywheel of the internal combustion engine as compact integrated flywheel generator. For the use in the renewable energy sources through water or wind turbines, the autonomous AC generators can be built. Iskra AC generators are of high quality. They are designed and built according to the customer needs for stationary, portable or mobile applications. Integrated or autonomous AC generators are mainly suitable for:

- Boats and other marine applications
- Special needs on road vehicles
- Special needs on off-road vehicles
- Stationary or portable electric power sets
- As emergency power supply

The generator is designed to be built on the engine between the engine and the gearbox.

## FEATURES

- High efficiency (>85%)
- High specific power
- Constant output voltage 230 V 50 Hz or 110 V 60 Hz in wide range of speed of rotation
- Separate electronic converter regulator
- Very stable and low harmonics sine wave voltage on generator output
- Electronics regulator with communication and remote control options
- Maintenance free solution
- Over-current and temperature protection
- Compact design
- EMC compatible

## DESIGN

Iskra's integrated 230 V 50 Hz or 110 V 60 Hz generator is based on a three-phase brushless permanent magnet synchronous generator. The system includes a stator, rotor, housing and separate electronic converter regulator enabling a constant output independent of the variable engine speed. The output enables alternative 230 V 50 Hz or 110 V 60 Hz output voltage for power up to 4 kW continuously. The compact construction and the mode of mounting make it possible to reduce the mounting space at high output power. Carefully selected materials assure improved technical characteristics, long life and maintenance free operation even under harshest conditions.

### Stator

The stator is a three-phase winding on the laminated pack. Construction and high filling factor of the stator windings provide high power output. For nominal output power, adequate water-cooling must be provided through the flywheel housing defined by the customer.

### Rotor

The rotor is designed with high-energy rare earth permanent magnets and no wearing parts, what assures long life and maintenance free operation.

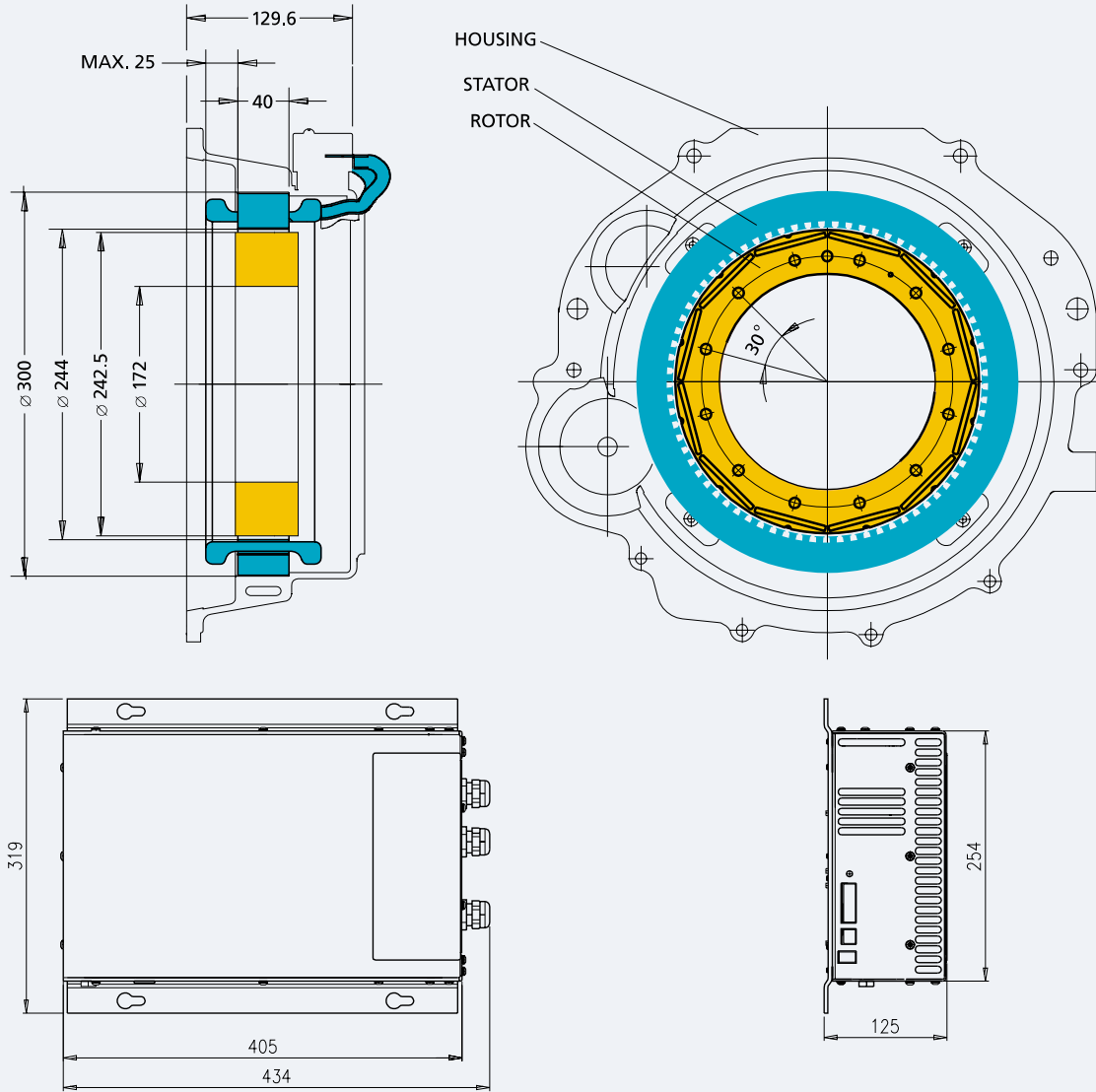
### Electronic converter regulator

The separate electronic converter regulator provides a stable 230 V 50 Hz or 110 V 60 Hz output independent of the rotor speed and the electric output loads. Electric system is not sensitive to sudden and short time overloads. This electronic converter regulator has internally controlled air-cooling; therefore no additional cooling installation is required.

## MAIN TECHNICAL DATA

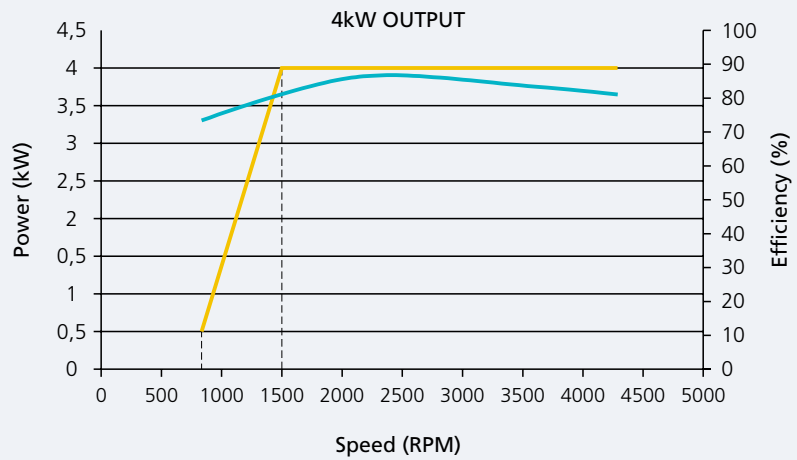
Type	AIZ 230 V 50Hz	AIZ 110 V 60Hz
Nominal voltage (V)	230	110
Frequency (Hz)	50	60
Short time output power (kW)	6	6
Continuous output power (kW)	4	4
Stator diameter (mm)	300	300
Stator weight (kg)	8.5	8.5
Rotor weight (kg)	7.5	7.5
Max speed (rpm)	4700	4700
Stator cooling	Liquid	Liquid
Electronic converter regulator cooling	Air	Air
Electronic converter regulator dimensions (mm)	434 x 319 x 125	434 x 319 x 125
Electronic converter regulator weight (kg)	9.4	9.4

GENERATOR AND REGULATOR DIMENSIONS

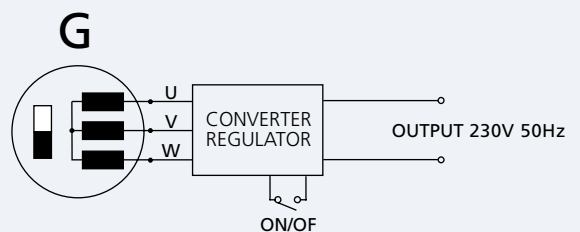


CHARACTERISTIC

- Output power
- Efficiency



CONNECTION DIAGRAM



NOTE: For installation details see special instructions or contact us.

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