

SYNCHRONOUS ECO-GENERATOR FOR DEVICES COOPERATED WITH RENEWABLE ENERGY SOURCES

Synchronous Eco-Generator with permanent magnets is produced in Electrotechnical Institute in Warsaw (Poland). It has rated power 1 kW, rated voltage 3 x 53 V, rated speed 100 RPM and weight 51 kg. This generator is designed for devices cooperated with **renewable energy sources such as wind and water**. Because of low rated speed **it perfectly suits for direct drive** (without mechanical gear) by wind or water turbine. Additionally, **low voltage gets up the using safety**. Because of using innovative construction solutions the generator stands out from similar devices on the market of **lower weight** (about 50 %) with the same energetic parameters. Lower weight has a big significance when the generator has to be placed on the top of mast (in case of wind turbine) or on the swimming platform (in case of swimming water turbine).

Eco-generator can work with the higher speed, too. Then the ratings are depended on the speed as shown in the table below.

RATED SPEED [1/min]	100	150	200	250
RATED POWER [kW]	1	1.6	2.2	2.8
RATED VOLTAGE [V]	3x53.1	3x81.4	3x113.3	3x143.3
RATED CURRENT [A]	11.1	11.5	11.3	11.3
NUMBER OF PHASES	3	3	3	3
FREQUENCY [Hz]	20	30	40	50
FRAME SIZE	180	180	180	180
EFFICIENCY [%]	84.5	88.4	90.7	92.2
MOTOR TYPE	GM	GM	GM	GM
POWER FACTOR	1.00	1.00	1.00	1.00
INSULATION CLASS	F	F	F	F
DUTY	continuous	continuous	continuous	continuous
AMBIENT TEMP. [°C]	40	40	40	40
BEARINGS	6009	6009	6009	6009
WEIGHT [kg]	51	51	51	51



Fot. Synchronous Eco-Generator for Devices Cooperated with Renewable Energy Sources

Output voltage can be different from 3x53.1 V and depends on the customer wish.

Cooperation offer:

- Device was designed, check and tested in Electrotechnical Institute in Warsaw, POLAND
- We would like to sell full project or license for manufacturing