



GSM

Hybrid Generator/Motor

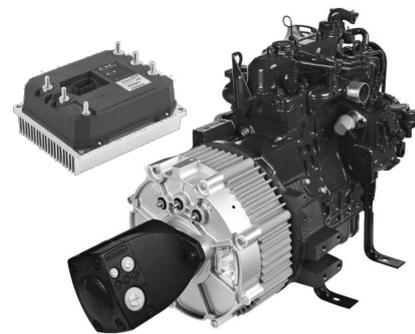


The GSM is a family of permanent magnet synchronous AC Generators with continuous **power levels from 14kW to 24kW** developed primarily for use in battery hybrid applications with nominal battery voltages **between 24V and 80V**. Other than the configurations listed in this datasheet the GSM can also be customized for other speed, power and voltage levels.

The generator family is designed for engine flywheel mounting for seamless integration in the hybrid vehicle system. It also comes with an optional hydraulic pump interface (SAE J744).

The GSM combined with the **ACS motor controller** forms a complete generator package, with built-in DC-voltage control, speed control and cranking functionality. Either as a stand-alone system or integrated into a larger system through CANopen (optional j1939) or through i/o-control.

The generator packages are an ideal choice for most types of industrial and off-highway hybrid vehicle applications.



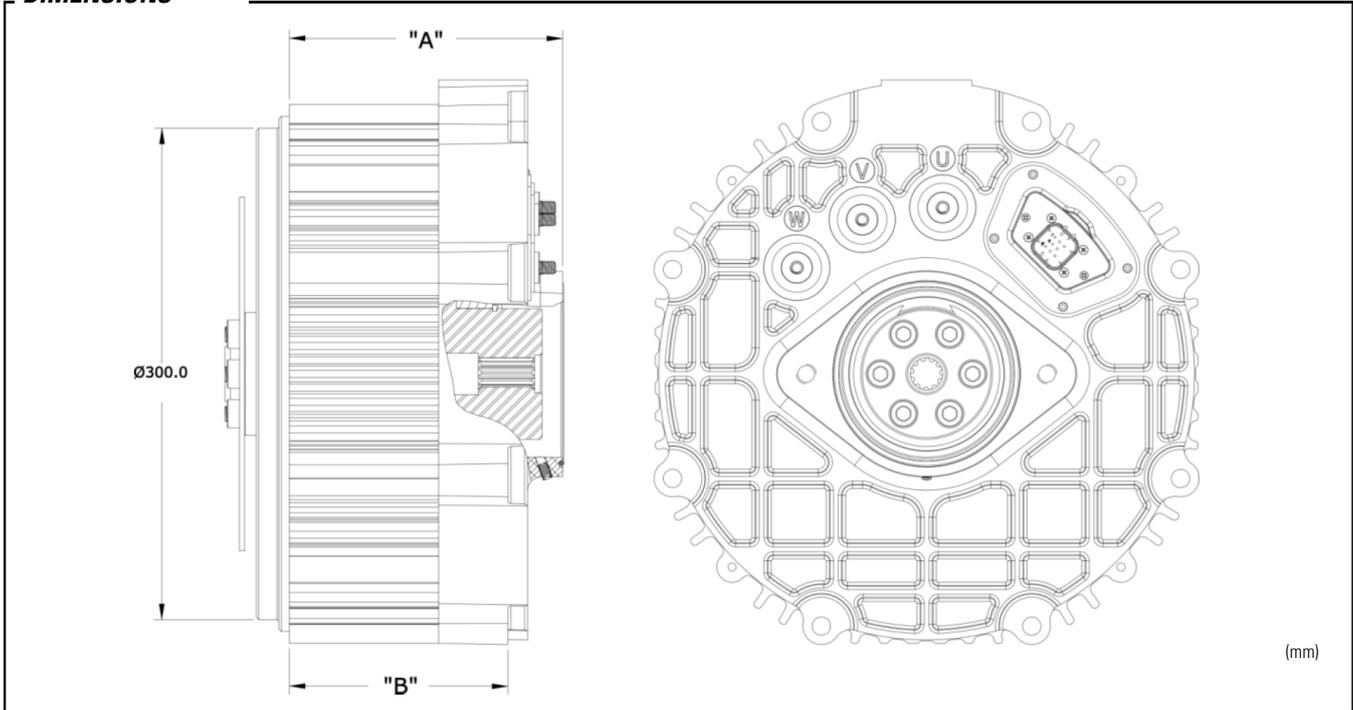
Power and efficiency ratings

GSM Model	Rated Power (S2-60min)	Efficiency (%)	Peak Power (S2-2min)	Efficiency (%)
800 rpm				
GSM 306	5,2 kW	89,5 %	8,2 kW	83,3 %
GSM 309	7,8 kW	91,1 %	12 kW	85,7 %
GSM 312	10,0 kW	91,9 %	16 kW	87,4 %
1800 rpm				
GSM 306	11 kW	93,7 %	20 kW	91,2 %
GSM 309	16 kW	94,4 %	30 kW	92,3 %
GSM 312	20 kW	94,7 %	40 kW	93,0 %
2800 rpm				
GSM 306	14 kW	93,8 %	32 kW	93,0 %
GSM 309	20 kW	94,6 %	45 kW	94,1 %
GSM 312	24 kW	94,7 %	57 kW	94,6 %

GSM

- **PMAC** technology for highest possible efficiency.
- **Reliable and maintenance free** design
- **Integrated sensors** for rotor position and temperature for control and supervision
- Designed primarily for **24-80V** battery applications
- Designed to fit **SAE 5** flywheel housing
- Optional **SAE J744 hydraulic pump** interface at the rear cover

DIMENSIONS



Length

GSM Model	"A" dimension (mm)	"B" dimension (mm)
GSM 306	135,8	102,5
GSM 309	165,8	132,5
GSM 312	195,8	162,5

Cranking torque

GSM Model	Torque (Nm)
GSM 306	115
GSM 309	175
GSM 312	230

Footprint

The GSM design is modular with a flange diameter of 300mm and 30mm increments in length. The smallest version, GSM306, has a total length of just under 136mm.

Cranking

The GSM can provide substantial cranking torque. The cranking/start sequence is another useful function built in to the ACS controller which further reduces the development time and effort for the OEM.