

## Technical Bulletin

### iBSG - Starter Alternator

#### Vehicle Type

Passenger Car



## iBSG - Integrated Belt Starter Generator - Basics

Valeo 48V iBSG system – Starter-alternator with integrated electronics

An IBSG is an alternator that has to **generate 48V** in the generator, or **put in motion** like a starter to start the engine but not only this, other functions can be added :

**Regen** : regulate the voltage at iBSG power terminals

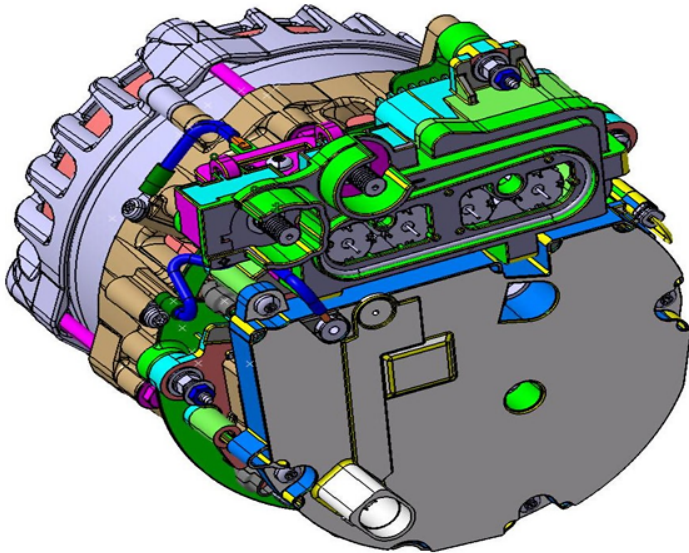
**Boost** : can drive the belt to help the engine in take off phase

**Coasting** : can drive the belt to help the engine on a fix rpm to reduce fuel consumption

**Electric drive** : drive the engine via the belt , the combustion



engine is off



Power modules with MOSFETs

Double  
three-  
phase full  
bridge  
three  
power  
modules

Excitation module

MOSFETs full bridge

Aluminium heat sink

Brush holder specific part

Supply the rotor

Input filtering capacitors

Ensure network quality during  
operation

Rotor position Hall effect sensor

Control board with microcontroller on  
PCB