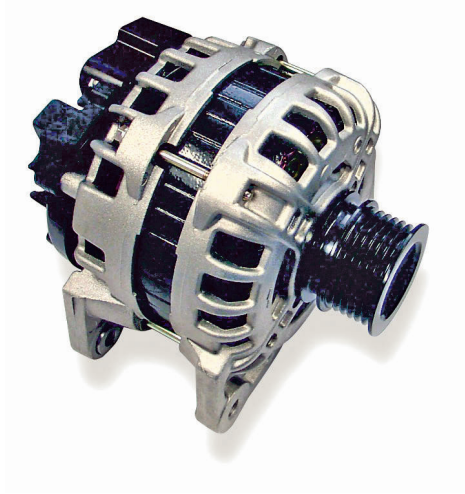


Alternator B3 LIN

www.bosch-motorsport.com



BOSCH
Invented for life



- ▶ Electrically and mechanically identical with B3
- ▶ Motorsport optimized LIN2.1 regulator with latest ASIC technology
- ▶ 4,800 g
- ▶ 210 A
- ▶ Clockwise rotation

The B3 LIN is a powerful 12 V motorsport alternator. It has an optimized hand wound stator winding (3 phase triangle), high current diodes (special Zener diode chips from Bosch production to retain load-dumps) and an extra fine balanced rotor with double impregnated winding.

The LIN regulator (special Bosch developed ASIC) controls the alternator output voltage at B+ connection. The main benefit of this alternator is the high power output in a small low weight package. Furthermore it is optimized concerning vibration endurance.

Application

Application	210 A at 10,000 rpm/90°C
Max. ambient temperature	105°C, high current only with supported cooling air
Max. ambient temperature (short-term)	120°C, high current only with supported cooling air
Rotating direction	Clockwise
Fixed frequency regulation with pulse width modulation	
Stand-by-mode	
Switching-on via LIN interface	

High side output stage with defined ramp steepness and FET as free-wheeling „diode“

Emergency start and default mode

Adjustable set values via LIN interface

Outputs of status information via LIN interface

Technical Specifications

Mechanical Data

Body material	Cast aluminum
Weight w/o pulley	4.8 kg
Max. rotations	18,000 x 1/min
Moment of inertia	22 kg*cm ²
Outer diameter w/o screw	136 mm
Length w/o pulley	117 mm
Battery B+ connection	M8x1.25
Tightening torque at B+	22 Nm

Electrical Data

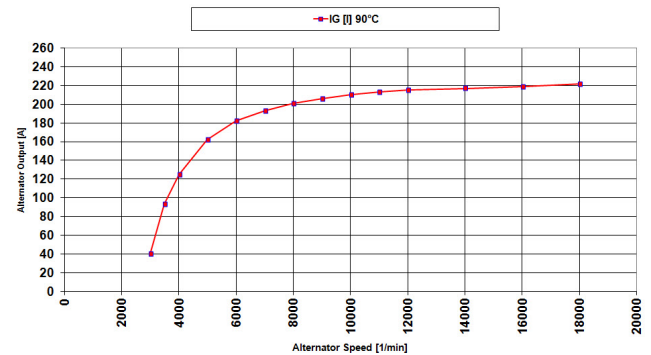
Regulating voltage	14.2 V
Temperature compensation	-10 mV/K
High temperature cut off derating	-250 mV/K
Excitation resistor (L)	Internal (external on request)
Cut-in-speed	3,000 x 1/min

Characteristic

Rpm [1/min]	I_G [A] at 90°C
3,000	40
3,500	93
4,000	125
5,000	162
6,000	182
7,000	193
8,000	201
9,000	206
10,000	210
11,000	213
12,000	215
14,000	217
16,000	219

18,000

222

Please note: Measured with $U=13.1$ V and $t=20$ min**Installation Notes**

Ground connection for power and regulator is through the case. Ensure that the case has a high current, low electrical resistance connection to vehicle ground.

Operating the alternator is only permitted with the installed regulator and a connected 12 V battery (Lithium battery not proved).

The excitation current can also be realized by an external lamp (on request).

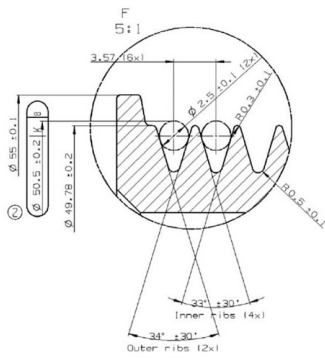
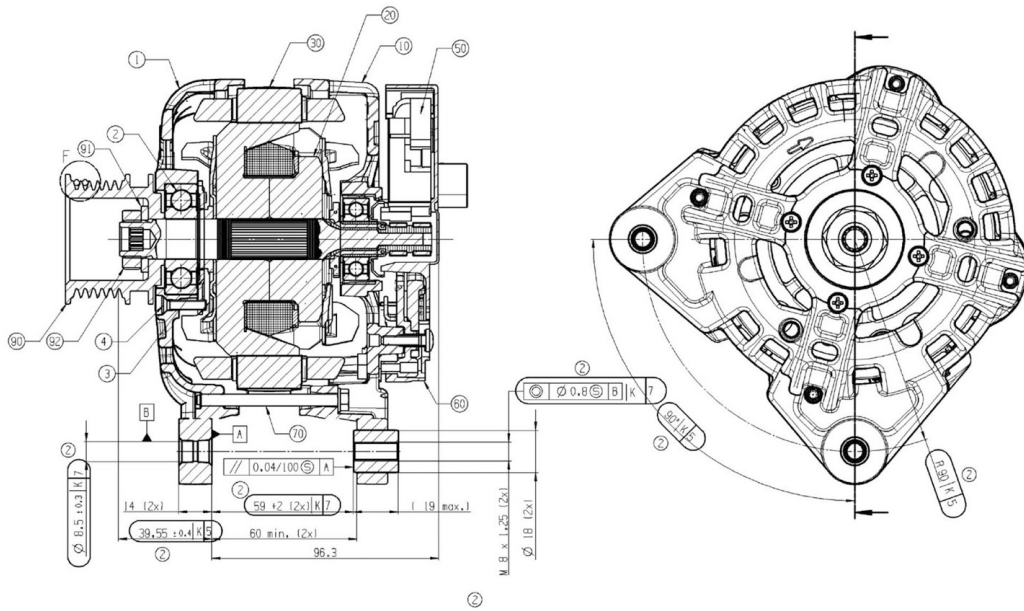
Please find further application hints at our homepage.

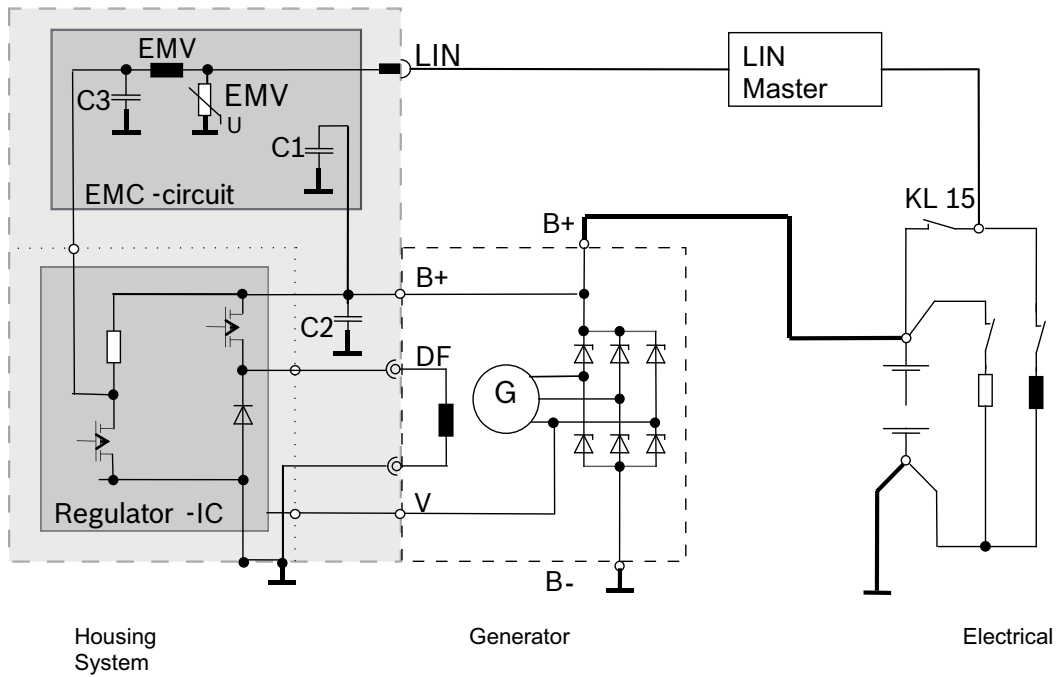
Rectifier diodes are designed and proved for B+ continuous output current of 210 A. The alternator is able to support more current, but this must be restricted for short time to prevent the destroying of rectifier diodes.

Ordering Information**Alternator B3 LIN**

Order number **on request**

Dimensions





Schematic Diagram

Represented by:

Europe:
 Bosch Engineering GmbH
 Motorsport
 Robert-Bosch-Allee 1
 74232 Abstatt
 Germany
 Tel.: +49 7062 911 9101
 Fax: +49 7062 911 79104
 motorsport@bosch.com
 www.bosch-motorsport.de

North America:
 Bosch Engineering North America
 Motorsport
 38000 Hills Tech Drive
 Farmington Hills, MI 48331-3417
 United States of America
 Tel.: +1 248 876 2977
 Fax: +1 248 876 7373
 motorsport@bosch.com
 www.bosch-motorsport.com

Latin America:
 Robert Bosch Ltda
 Motorsport
 Av Juscelino Kubitscheck de
 Oliveira 11800
 Zip code 81460-900
 Curitiba - Parana
 Brasilia
 Tel.: +55 41 3341 2057
 Fax: +55 41 3341 2779

Asia-Pacific:
 Bosch Engineering Japan K.K.
 Motorsport
 18F Queen's Tower C, 2-3-5 Minato Mirai
 Nishi-ku, Yokohama-shi
 Kanagawa 220-6218
 Japan
 Tel.: +81 45 650 5610
 Fax: +81 45 650 5611
 www.bosch-motorsport.jp

Australia, New Zealand and South Africa:
 Robert Bosch Pty. Ltd
 Motorsport
 1555 Centre Road
 Clayton, Victoria, 3168
 Australia
 Tel.: +61 (3) 9541 3901
 motor.sport@au.bosch.com