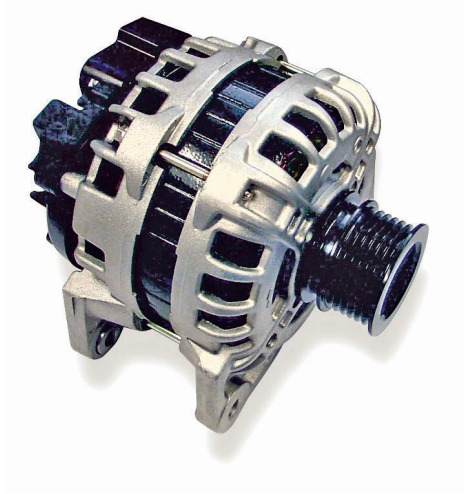


Alternator B3 LIN

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

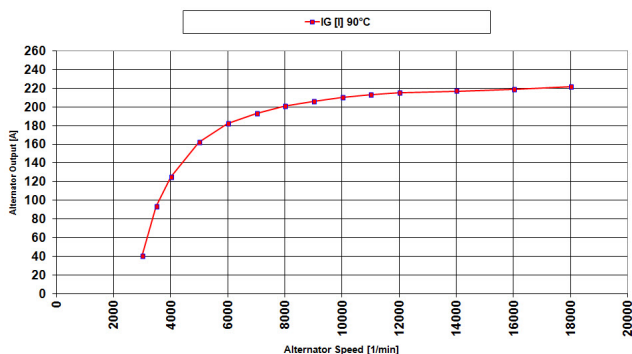
Electrical Data

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.

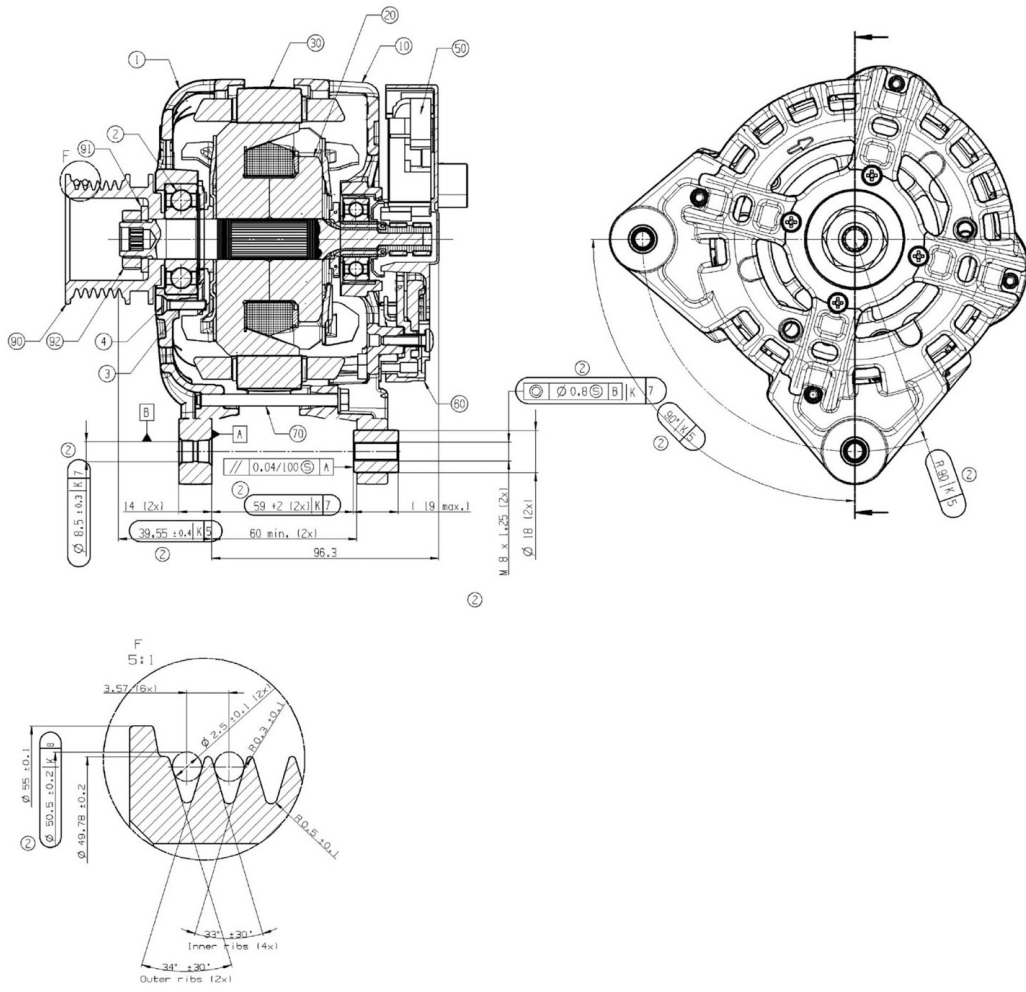
Rectifier diodes are designed and proved for B+ continuous output current of 210 A. The alternator is able to support more current, but this must be restricted for short time to prevent the destroying of rectifier diodes.

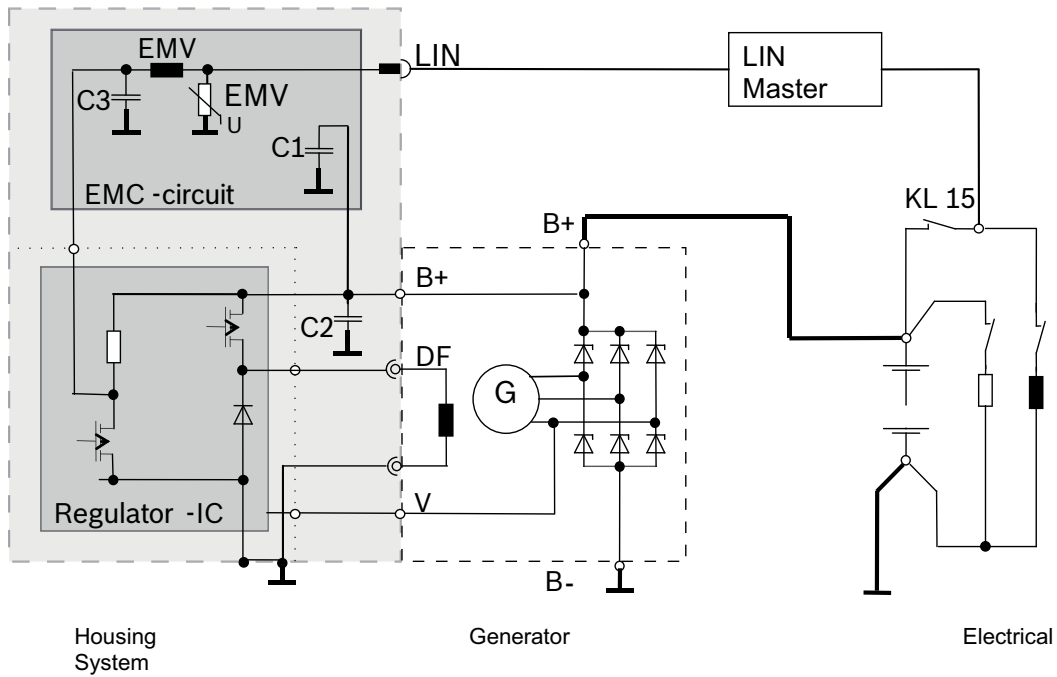
Ordering Information

Alternator B3 LIN

Order number **F 02U V01 188-04**

Dimensions





Schematic Diagram

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