



Doc. code

# AVR BL4

STEN08AVR4BL.DOC

Technical specification

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## 1. INTRODUCTION

The Sincro AVR BL4 Voltage Regulators are designed for use on 50/60Hz brush less generators. Regulator includes Frequency Compensation.

## 2. GENERAL CHARACTERISTICS

- Fuse included.
- Fuse protection in case of missing or wrong sensing connection.
- Under frequency selection and adjustment.

## 3. ELECTRICAL SPECIFICATIONS

### DC Output Power:

4 Adc at 63 Vdc maximum continuous,  
8 Adc at 120 Vdc forcing one minute.

### Exciter Field Dc Resistance:

10 ohms, minimum; 100 ohms maximum.

### AC Power Input:

Operating range: 120 Vac or 240 Vac, Single phase, 50/60 Hz.

### Sensing Input:

100-130 Vac, single phase, 50/60 Hz or 200-280 Vac, single phase, 50/60 Hz.

### Voltage Adjust Range:

95-140 Vac or 190-285Vac.

### Regulation Accuracy:

Better than  $\pm 1\%$  no load to full load ( $\cos \varphi = 0,8$ ).

## 4. PHYSICAL SPECIFICATIONS

### Operating Temperature:

-25 °C to +60 °C.

### Storage Temperature:

-40 °C to +85 °C.

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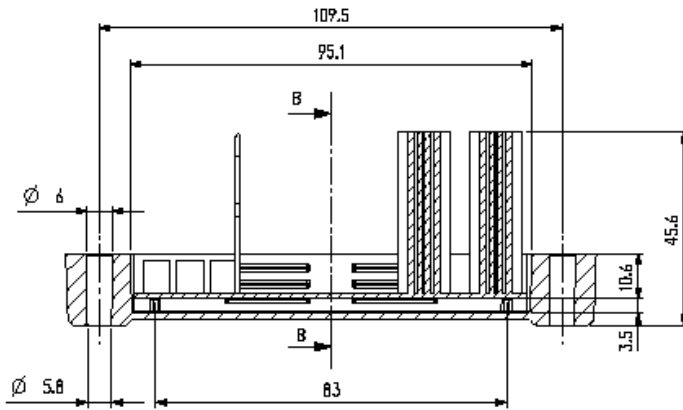
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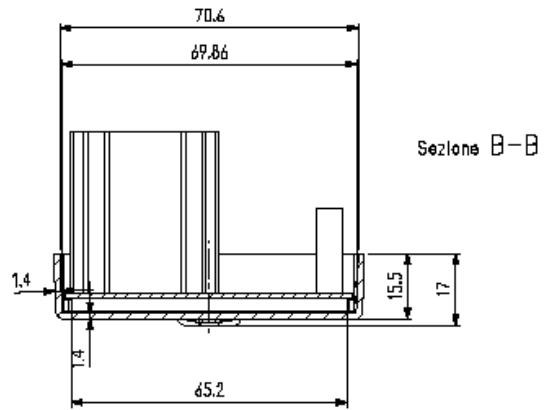
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## Dimensions and connection:

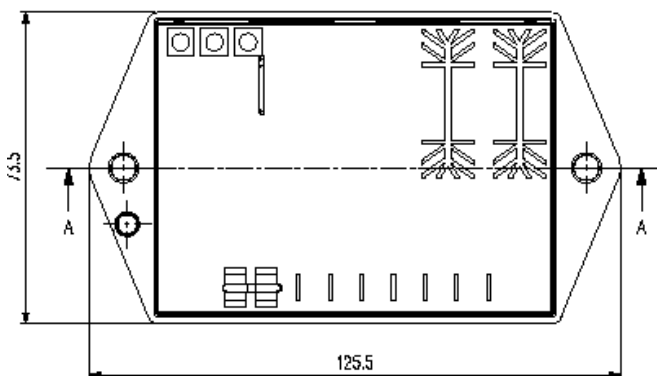
Max dimensions = 125,5 X 75,5 X 45,6 mm



Sezione A-A



Sezione B-B



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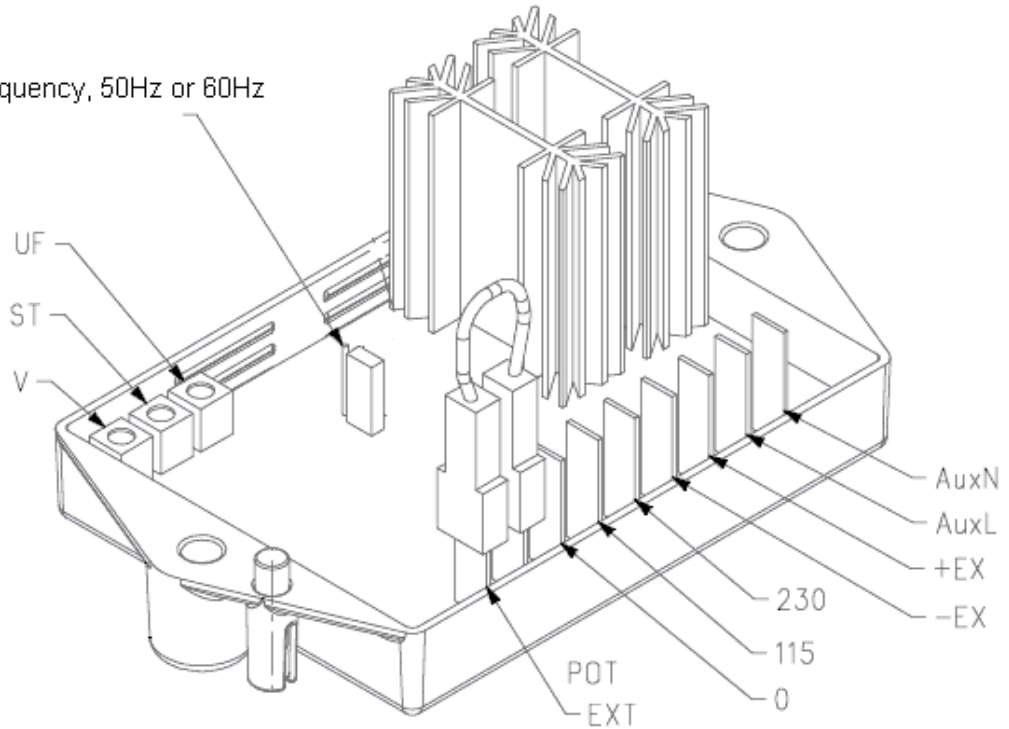
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HZ jumper for set frequency, 50Hz or 60Hz



### Trimmers:

V – Voltage Adjustment

ST – Stability

UF – Under Frequency

### Jumpers:

Hz – for set frequency, 50Hz or 60Hz

EXT, POT – closed when use trimmer V for voltage adjustment, 5Kohm (1/2W).

**NOTE:** on the figure is default configuration, for AC Power Input of 230V, 50Hz and use trimmer V for voltage adjustment.

### Connections:

EXT, POT – External potentiometer

0, 115 – Sensing 115V

0, 230 – Sensing 230V

AuxL, AuxN – AC Power Input

-EX, +EX - Field Output

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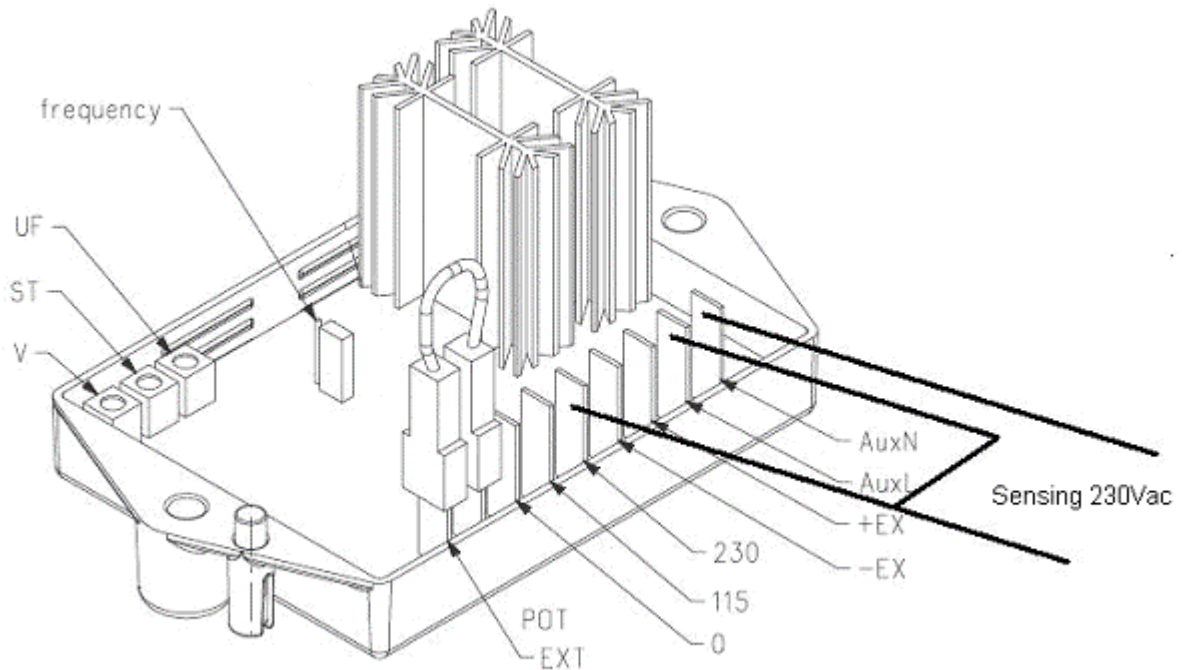
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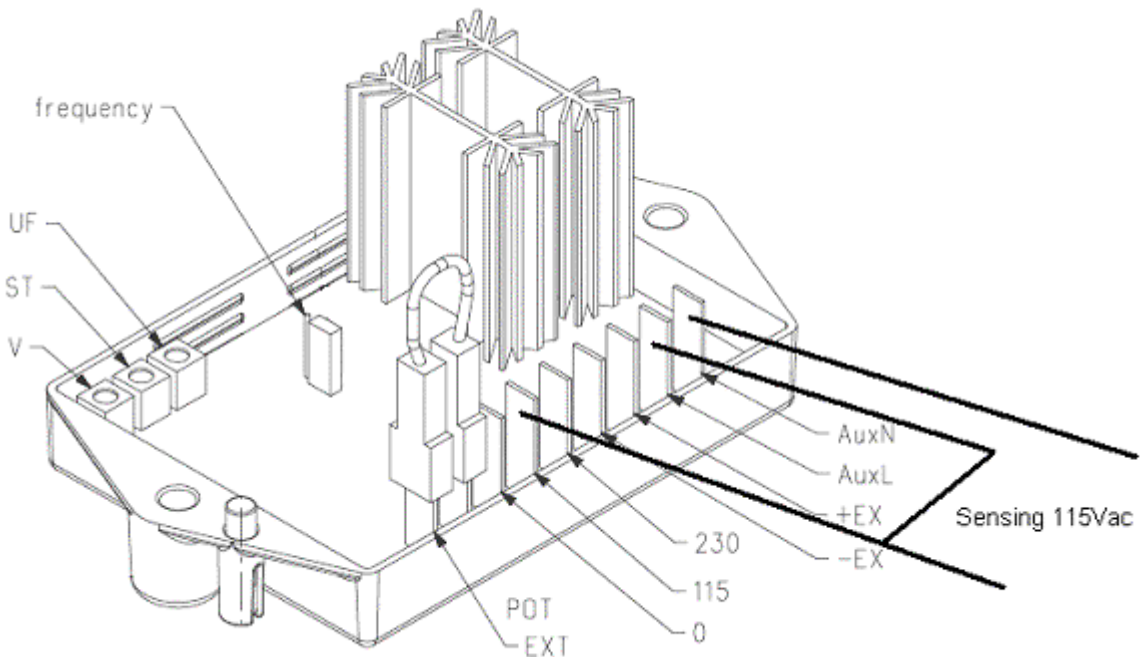
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## Connections for alternators without auxiliary supply:

### a) sensing 230Vac, 50Hz:



### b) sensing 115Vac, 50Hz:



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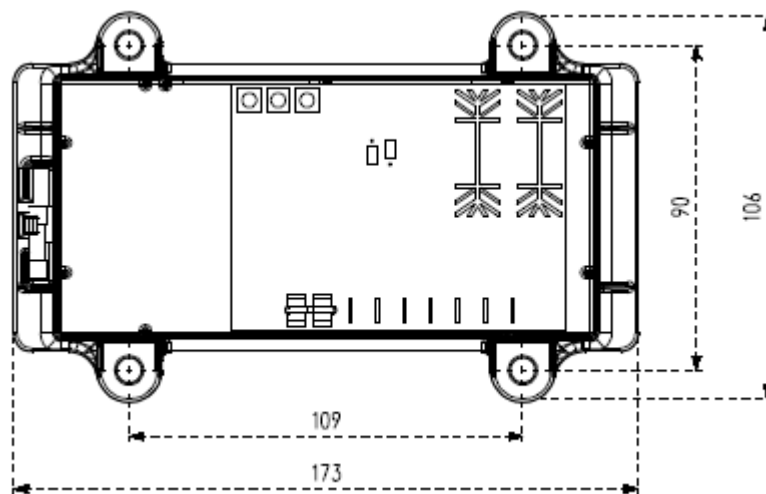
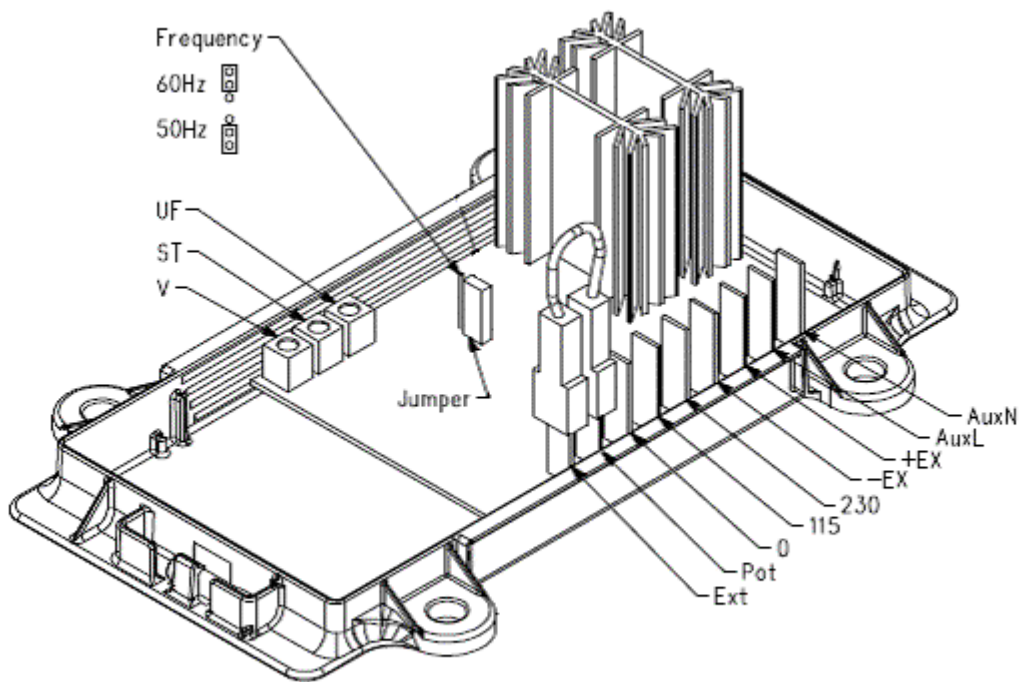
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## 5. BL4 B

The Sincro AVR BL4 B Voltage Regulators is BL4 AVR placed in bigger case for mechanical compatibility with different alternators.



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## 6. BL4 C

The Sincro AVR BL4 C Voltage Regulators is BL4 AVR with different sensing inputs:

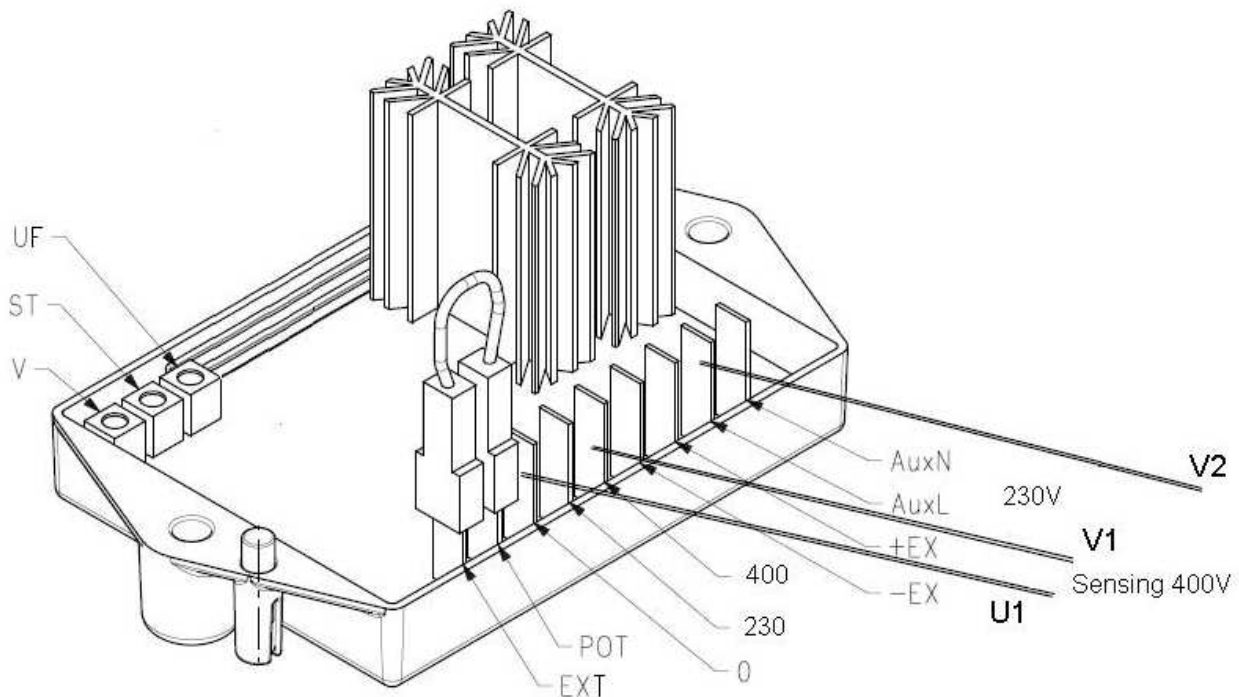
### Sensing Input:

200-280 Vac, single phase, 50/60 Hz or 380-480 Vac, single phase, 50/60 Hz.

### Voltage Adjust Range:

190-285Vac or 360-500Vac.

**Example with connections for BL4 C and alternators without auxiliary supply with sensing of 400V:**



## 7. Conclusions

	Sincro code	Used with Alternators	Description
BL4	3008025	SK160, SK200, SK225, IB4	Standard
BL4 B	300802502	HB4, HB2, JB4	Bigger case
BL4 C	300802503	SK160, IB2, FB2, FB4	Sensing 230 / 400Vac
BL4 D	300802504	Low voltage BL	Sensing 48Vac

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