

INSTRUCTION MANUAL

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# Auto Charge 24/12

AUTOMATIC BATTERY CHARGER  
24 VOLT TO 12 VOLT CONVERTER



MODEL #O91-126

**Input: 24 Volts, DC**  
**Output: 12 Volt, 3 Amps DC**

**3 YEAR WARRANTY**

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## INTRODUCTION

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The Model 091-126, 24/12 battery charger is a completely automatic unit designed to charge a small to medium size 12 volt lead acid battery. The unit has a float voltage of 13.25 volts with a current limited charging rate of 3 amperes. Either a 24 volt battery or a 24 volt Battery Saver can power it.

Figure 1 depicts a block diagram of the unit. The input of the unit has a peak rectifier, which converts the full wave rectified waveform of the Battery Saver to 40 volts DC. The rectifier not only produces filtered DC to the switching regulator, it also isolates the 40 volt filtered DC from other loads being served by the battery saver. A switching regulator reduces the 40 volt DC to a regulated 13.25 volts DC for charging a 12 volt lead acid battery. An output current sensor limits the output to 3 amperes.

## INSTALLATION

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Mount the Model 091-126 Battery Charger in a convenient location with 4 screws in the mounting holes provided. Be certain that adequate ventilation is available, and that the unit is in a sheltered environment protected from rain, snow, water, etc.

Connect the unit as shown in Figure 2 or 2A. Use 16 AWG wire for the connections to the Model 091-126, 24/12 Battery Charger.

## ADJUSTMENT

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1. Measure the DC Input voltage at J1.  
Obtain 22 to 28 VDC.
2. Measure the output voltage at J2 without the 12 volt battery connected.  
Obtain 13.2 to 13.3 VDC.
3. Connect the battery. Obtain 13.25 VDC for a fully charged battery, or 11 to 13 VDC for a discharged Battery.

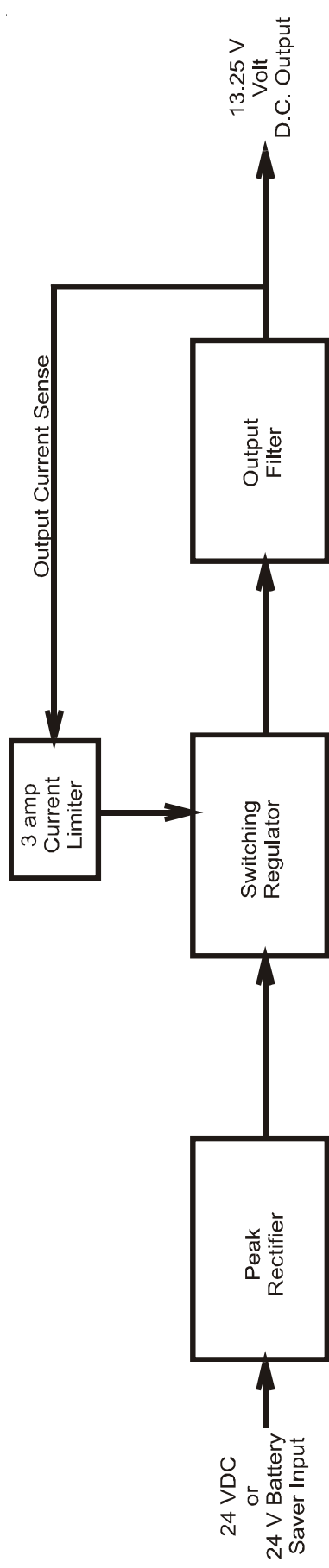


Figure 1

# BLOCK DIAGRAM

Model 091-126

Automatic Battery Charger

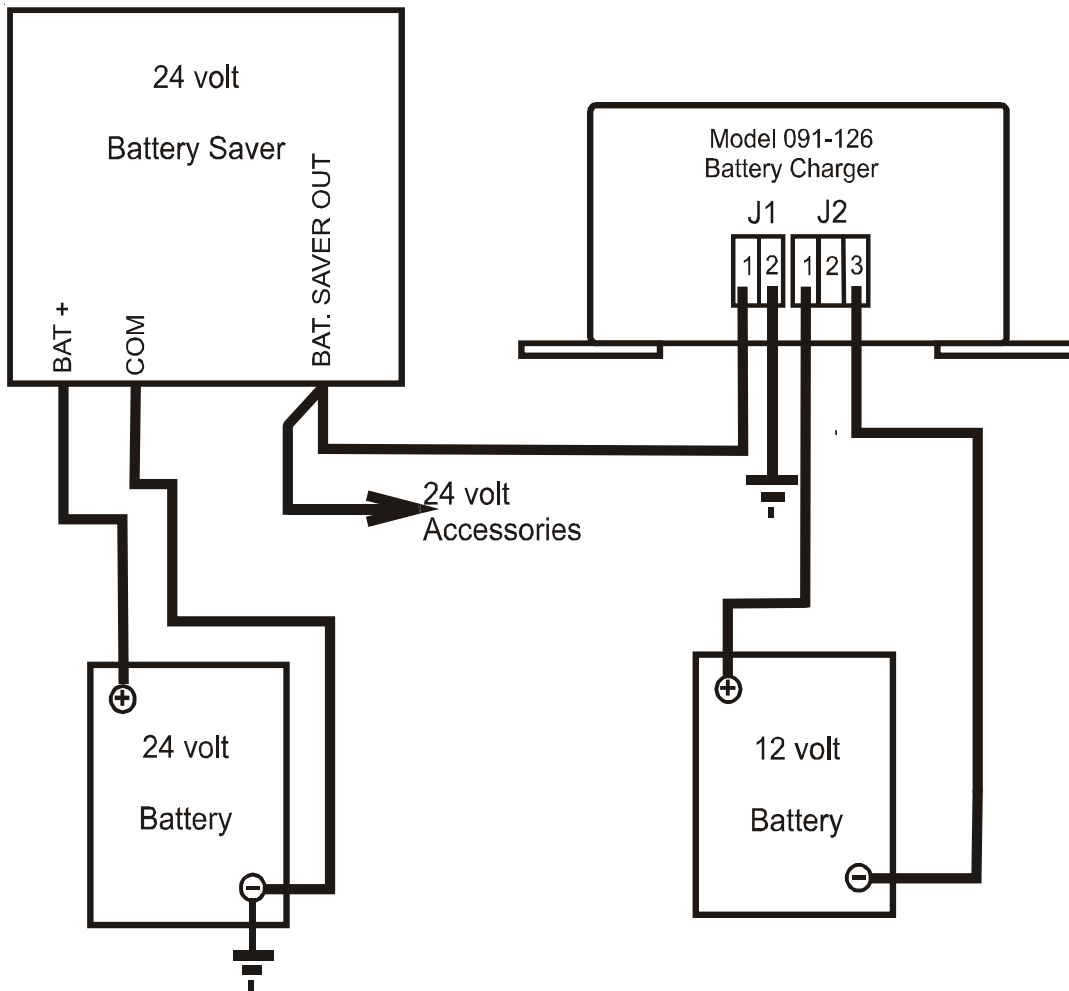


Figure 2

Model 091-126

INSTALLATION WIRING WITH BATTERY SAVER

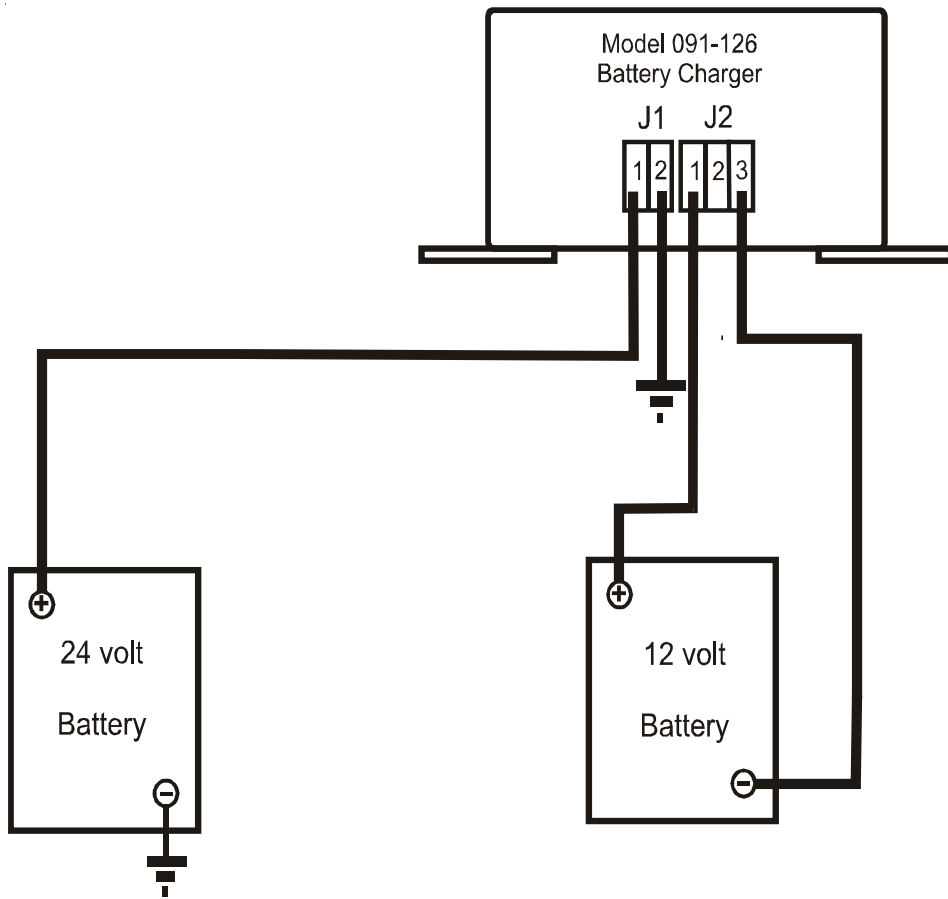


Figure 2A

Model 091-126

INSTALLATION WIRING WITHOUT BATTERY SAVER

## SPECIFICATIONS

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**Input Voltage:** 24 volt DC battery or a 24 volt DC Battery Saver

**Input Current with 24 VDC Battery:** 2.1 amperes DC

**Input Current with 24 VDC Battery Saver:** 2.75 amperes rms

**Input Fuse (internal to unit):** 5 ampere slow blow

**Output Voltage:** 13.25volts DC

**Output Current:** 3 amperes DC

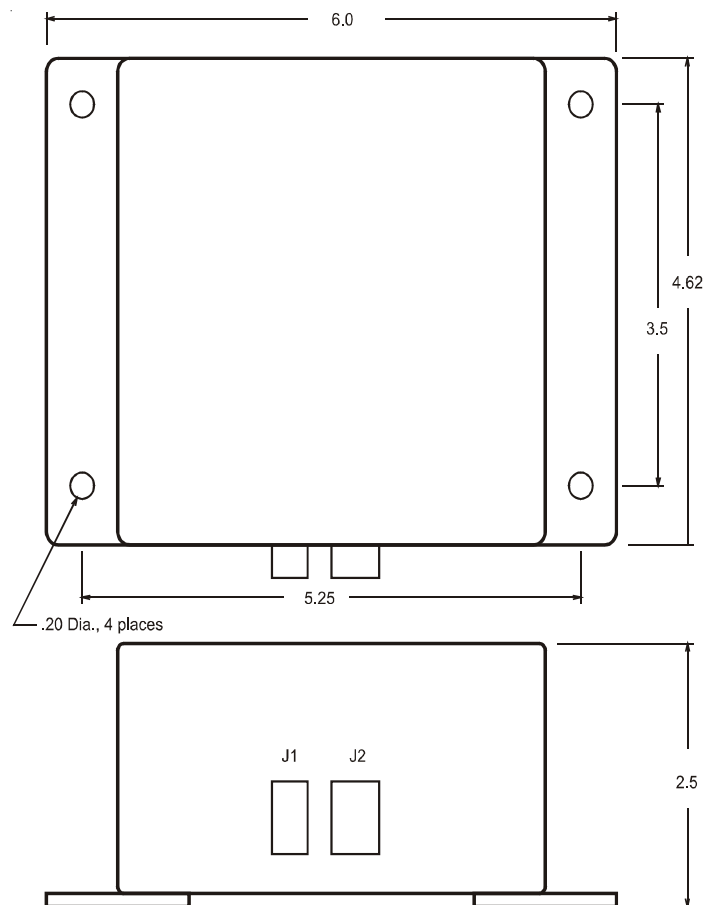
**Output Fuse (internal to unit):** 7 1/2 ampere fast blow automotive fuse

**Output Current Limit:** 3 amperes

**Input Wiring:** J1 screw terminals accommodate 16-20 AWG wire

**Output Wiring:** J2 screw terminals accommodate 16-20 AWG wire

**Weight:** 1 lb.



OUTLINE DIMENSIONS  
Model 091-126

# INSTALLATION RECORD & WARRANTY

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Date Installed \_\_\_\_\_

Installed By \_\_\_\_\_

Vehicle Identification \_\_\_\_\_

Vehicle Owner \_\_\_\_\_

## WARRANTY

All products of Kussmal Electronics Company Inc. are warranted to be free of defects of material or workmanship. Liability is limited to repairing or replacing at our factory, without charge, any material or defects which become apparent in normal use within 3 years from the date the equipment was shipped. Equipment is to be returned, shipping charges prepaid and will be returned, after repair, shipping charges paid.

Kussmal Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmal Electronics Company, Inc. products. The purchaser, by the acceptance of the equipment, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or its employees or others.