

INSTRUCTION MANUAL

AUTO CHARGE 1



**MODEL(S): 091-31-12-115
091-31-12-230**

OUTPUT: 13.25 VOLTS DC, 1 AMPERE.

**INPUT: 115VAC, 50/60HZ
or
230VAC, 50/60HZ**

3 YEAR WARRANTY



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INTRODUCTION

The Model 091-31-12-115/230 automatic battery charger is a completely automatic battery charger designed to charge small lead-acid batteries at a rate of 1 ampere or less.

The unit is current limited to 1 ampere and provides a low ripple charging current. The charger will charge the batteries whenever their float voltage drops. When the batteries are fully charged, all charging stops. Any load applied to the battery when the charger is connected and energized will automatically be supplied by the charger up to the maximum 1 ampere capacity.

The Model 091-31-12-115/230 is factory set for 115VAC or 230VAC primary power operation at time of order. Please verify that installation primary power and 091-31-12-115/230 input power requirements are correct prior to installation and operation.

SPECIFICATIONS:

Input: 115VAC or 230VAC +/- 10 volts, 50/60 Hertz. Factory Set

Output: DC, 13.25 Volts, Ripple: less than 100 mv Current: 0 to 1 amp depending on battery state of charge

Input Wiring: #18 AWG: Blue and Brown, Refer to Figure 1.

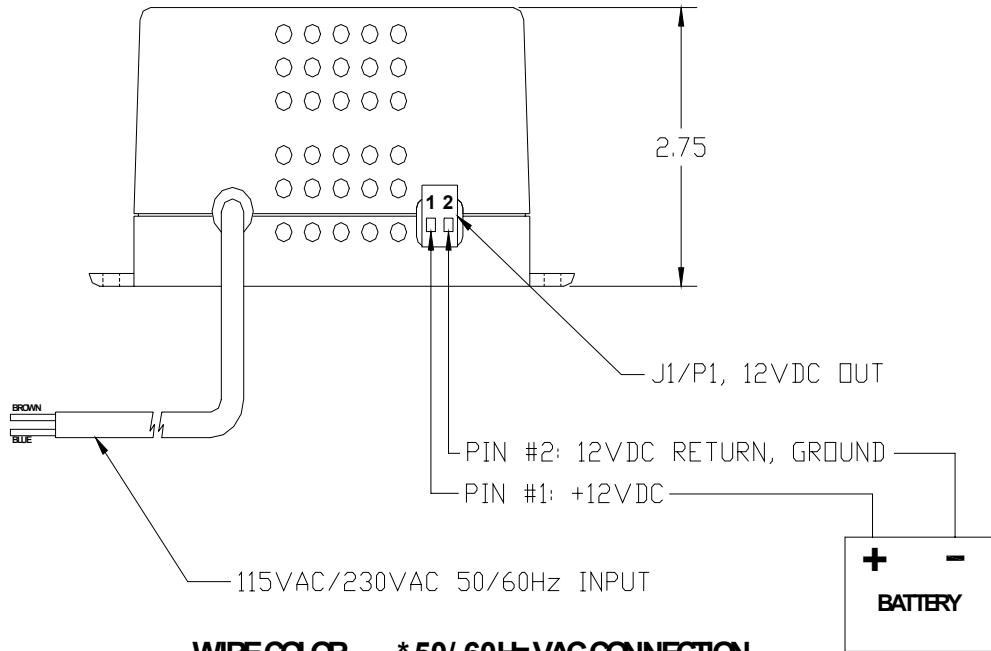
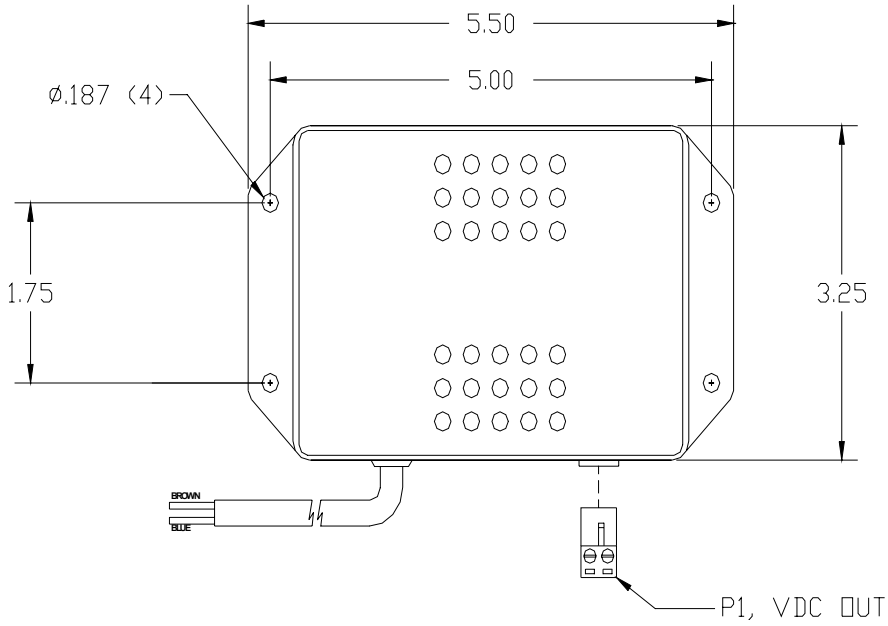
Output Wiring: Via P1/J1: Refer to Figure 1

Power Indicator: none

Weight: 19 ounces

FIGURE 1

INSTALLATION and WIRING



WIRE COLOR	* 50/ 60Hz VAC CONNECTION
BROWN	115/ 230VAC AC Line
BLUE	115/ 230VAC AC Return

* 115VAC OR 230VAC OPERATION SET AT FACTORY.

CHECK SERIAL NUMBER TAG FOR VAC INPUT SETTING BEFORE INSTALLATION.

INSTALLATION RECORD & WARRANTY

Date Installed _____

Installed By _____

Vehicle Identification _____

Vehicle Owner _____

WARRANTY

All products of Kussmaul 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.

Kussmaul Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmaul 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 others.