



samlexpower®

**Remote
Control**

SAM-RC

**Owner's
Manual**

Please read this
manual **BEFORE**
installing your
Remote Control.

OWNER'S MANUAL | Index

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SECTION 1 | Introduction

DESCRIPTION

The SAM-RC is a wired Remote Control used with selected models of SAM Series of Inverters to switch ON and switch OFF the Inverter from a remote location. It also displays the operational status of the Inverter using colored LEDs.

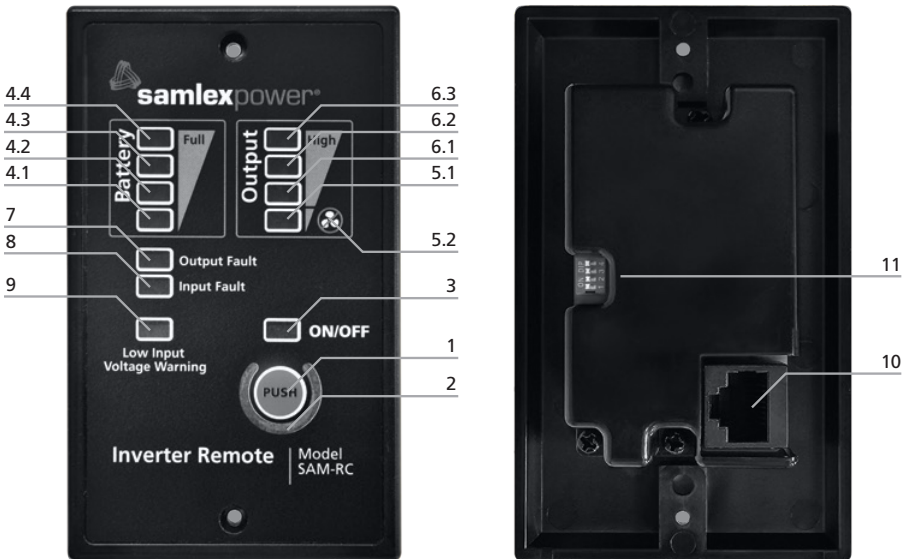
APPLICABLE MODELS OF SAM INVERTERS

The SAM-RC Remote Control is designed to work with the following models of the SAM Series:

- SAM-1000-12
- SAM-1500-12
- SAM-2000-12
- SAM-3000-12

SECTION 2 | General Information

LAYOUT AND OPERATION OF CONTROLS AND LED INDICATIONS



SECTION 2 | General Information

1. ON / OFF Push Button. Used to switch ON and switch OFF the Inverter.



NOTE: For switching ON and switching OFF the Inverter using this Remote Control, the Main ON / OFF Switch on the Inverter should be in the OFF position.

If the ON / OFF Switch on the Inverter is left in ON position, the Inverter cannot be switched OFF using this Remote Control. The Remote Control will, however, continue to display the status of operation.

2. Annular ring with White LED backlighting around the ON / OFF Push Button for assistance in identifying the location of the ON / OFF Push Button in dark conditions.



NOTE: The Annular Ring with white LED backlighting (2) will be ON even when the Main ON / OFF Button on the Inverter is in the OFF condition (Provided DC input voltage from the battery is available at the DC input terminals of the Inverter).

3. Green LED shows ON / OFF status of the Remote Control. Remote is ON when the LED is lighted. Note that this LED will take 30 to 45 sec to extinguish completely when the inverter is switched OFF in no load condition. If the inverter is switched OFF in loaded condition, this LED will extinguish faster (almost right away).

- 4.1 - 4.4 Bar Graph consisting of 4 Green LEDs shows the battery voltage seen at the DC input terminals of the Inverter as follows: (Voltages shown are for a 12 V Nominal Battery input)

- LED 4.1 is lighted Battery voltage is 11.1 to 11.6 VDC
- LED 4.1 and 4.2 are lighted: Battery voltage is 11.6 to 12.8 VDC
- LED 4.1, 4.2 and 4.3 are lighted: Battery voltage is 12.8 to 13.2 VDC
- LED 4.1, 4.2, 4.3 and 4.4 are lighted: Battery voltage is 13.2 to 15.3 VDC



NOTE: The battery voltage seen at the DC input terminals of the Inverter will be lower than the battery voltage at the battery terminal posts by the amount of voltage drop along the length of the wires connecting the battery and the Inverter. It is recommended that the voltage drop may be limited to 2% of the battery voltage by ensuring that the thickness of the connecting wires is selected appropriately based on the maximum current drawn by the Inverter from the battery and the distance between the battery and the Inverter.

- 5.1 - 5.2 Green LED (5.1) shows operation of the load controlled cooling fan.
 - Lighted LED (5.1) indicates that the power drawn by the load is less than 10% of the rated power output of the Inverter and that the load controlled fan of the Inverter is switched OFF to save power (The crossed out fan symbol (5.2) indicates that the fan is OFF).

SECTION 2 | General Information

- Extinguished LED (5.1) indicates the load is more than 10% of the rated output power of the Inverter and that the cooling fan inside the Inverter is ON.

6.1 - 6.3 Bar graph consisting of 3 Green LED shows percentage of the rated output power of the inverter being delivered to the load as follows:

- LED 6.1 is lighted: Power drawn by the load is 10% to 59% of the rated output power of the Inverter.
- LED 6.1 and 6.2 are lighted: Power drawn by the load is 60% to 79% the rated output power of the Inverter
- LED 6.1, 6.2 and 6.3 are lighted: Power drawn by the load is 80% to 100% of the rated output power of the Inverter



NOTE: When the Green LED 5.1 is lighted, it indicates that the power drawn by the load is less than 10% of the rated output power of the Inverter. As the load increases from 10% to 100% of the rated capacity of the Inverter, LED 5.1 extinguishes and LEDs 6.1 to 6.3 light up in succession. In a normal Bar Graph, LED 5.1 would have continued to be lighted for loads > 10%. However, as the lighted condition of LED 5.1 is also used to display the OFF status of the load controlled cooling fan inside the Inverter, it is extinguished when the load exceeds 10% of the rated output power of the Inverter indicating that the cooling fan is switched ON.

7. Red LED shows "Output Fault" due to one of the following reasons:
 - Overload / short circuit on the output side
8. Red LED shows "Input Fault" due to one of the following reasons:
 - Shut down due to input voltage from the battery seen at the DC input terminals of the Inverter is 10.5 or below
 - Shut down due to input voltage from the battery seen at the DC input terminals of the Inverter is 15.2 V or higher
 - Shut down due to over temperature
9. Amber LED marked "Low input Voltage Warning" indicates the following:
 - Warning that the input voltage from the battery seen at the DC input terminals of the Inverter is getting low i.e. below 11.6 VDC. The Inverter will shut down when the voltage drops down to 10.5 VDC
10. 8P8C (8 Position, 8 Conductor) Modular Connector Receptacle (also known as RJ-45 Receptacle) used for connecting the Remote Control to the Inverter.
11. DIP SWITCH for Low Voltage Shutdown and Buzzer Control (see Table 3.1 for operation)

SECTION 3 | Operation



NOTE: 3 m / 10 ft length of Cat 5, Networking Cable with 8P8C (8 Position, 8 Conductor) Modular Plugs (RJ-45) on the two ends is provided for connecting the Remote Control to the Inverter. The 2 plugs are wired as straight-through connection.

The Remote Control is provided with 3 meter length of Cat 5 Networking Cable with 8P8C (8 Position, 8 Conductor) Modular Plugs (RJ-45) on either ends (NOTE: straight-through wire connection of the 2 plugs). Plug one end of the cable to the receptacle on the Remote Control.

Locate the 8P8C (8 Position, 8 Conductor) Modular Receptacle (RJ-45) on the inverter and securely insert the other end of the plug on the Remote Control cable.

For switching on and switching off the Inverter using this Remote Control, the Main ON / OFF Switch on the Inverter should be in the Off condition.



CAUTION: If the ON / OFF Switch on the Inverter is left in ON position, the Inverter cannot be switched OFF using this Remote Control. The Remote Control will, however, continue to display the status of operation.

Please see under “Layout and Operation of Controls and LED Indications” for display information.

SELECTABLE LOW VOLTAGE SHUTDOWN AND ALARM

Using the SAM-RC, the SAM inverter can be shutdown at a voltage higher than the inverter default voltage. Shutting down the unit at a higher battery voltage will reduce wear and tear on the battery.

The DIP Switch on the rear of the SAM-RC controls the low voltage shutdown point and buzzer alarm.

Switch 1: Enables the Selectable Low Voltage Shutdown points programmed by Switches 3 and 4.

Switch 2: Turns the Buzzer on the Remote ON or OFF.

Switch 3 and 4: Controls the settings for the Low Voltage Shutdown.

SECTION 3 | Operation

Table: 3.1 Switch Settings for SAM-RC Low Voltage Shutdown and alarm function.

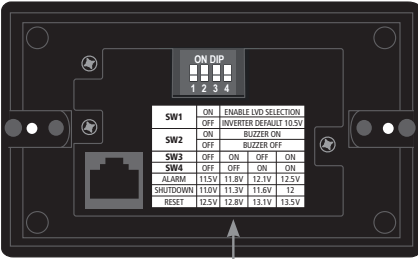


Table 3.1

SW1	ON	ENABLE LVD SELECTION		
	OFF	INVERTER DEFAULT 10.5V		
SW2	ON	BUZZER ON		
	OFF	BUZZER OFF		
SW3	OFF	ON	OFF	ON
SW4	OFF	OFF	ON	ON
ALARM	11.5V	11.8V	12.1V	12.5V
SHUTDOWN	11.0V	11.3V	11.6V	12
RESET	12.5V	12.8V	13.1V	13.5V

Table 3.1 (enlarged)

Note: Buzzer on the SAM Inverter is always enabled. Only the buzzer on the remote is controlled by the switch.

SECTION 4 | Specifications

MODEL NO.	SAM-RC
APPLICABLE MODELS OF INVERTERS	SAM-1000-12, SAM-1500-12, SAM-2000-12, SAM-3000-12
CONNECTING CABLE	RJ-45 (8P8C), straight-through cable; 16 ft/5 m
DIMENSIONS (WITHOUT CABLE),MM (L x W x H)	115 x 70 x 27
DIMENSIONS (WITHOUT CABLE), IN (L x W x H)	4.52 x 2.76 x 1.06
WEIGHT (WITHOUT CABLE), KG	0.056
WEIGHT (WITHOUT CABLE), LB	0.12

NOTE: Specifications are subject to change without notice

SECTION 5 | Warranty

2 YEAR LIMITED WARRANTY

The SAM-RC is manufactured by Samlex America, Inc. (the "Warrantor") is warranted to be SAM-RC manufactured by Samlex America, Inc. (the "Warrantor") is warranted to be free from defects in workmanship and materials under normal use and service. The warranty period is 2 years for the United States and Canada, and is in effect from the date of purchase by the user (the "Purchaser").

Warranty outside of the United States and Canada is limited to 6 months. For a warranty claim, the Purchaser should contact the place of purchase to obtain a Return Authorization Number.

The defective part or unit should be returned at the Purchaser's expense to the authorized location. A written statement describing the nature of the defect, the date of purchase, the place of purchase, and the Purchaser's name, address and telephone number should also be included.

If upon the Warrantor's examination, the defect proves to be the result of defective material or workmanship, the equipment will be repaired or replaced at the Warrantor's option without charge, and returned to the Purchaser at the Warrantor's expense. (Contiguous US and Canada only)

No refund of the purchase price will be granted to the Purchaser, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. Warranty service shall be performed only by the Warrantor. Any attempt to remedy the defect by anyone other than the Warrantor shall render this warranty void. There shall be no warranty for defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion.

No other express warranty is hereby given and there are no warranties which extend beyond those described herein. This warranty is expressly in lieu of any other expressed or implied warranties, including any implied warranty of merchantability, fitness for the ordinary purposes for which such goods are used, or fitness for a particular purpose, or any other obligations on the part of the Warrantor or its employees and representatives.

There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives for injury to any persons, or damage to person or persons, or damage to property, or loss of income or profit, or any other consequential or resulting damage which may be claimed to have been incurred through the use or sale of the equipment, including any possible failure of malfunction of the equipment, or part thereof. The Warrantor assumes no liability for incidental or consequential damages of any kind.

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