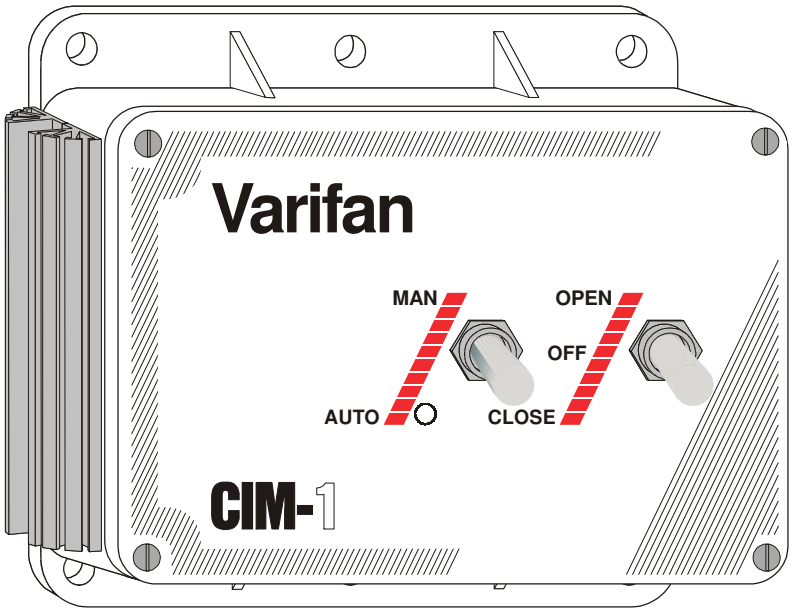
CIM-1

User's Manual



Although the manufacturer has made every effort to ensure the accuracy of the information contained herein, this document is subject to change without notice due to ongoing product development.

WARNING AND PRECAUTIONS

Equipment, probe failure, blown fuses and/or tripped breakers may prove harmful to the contents of the building. Therefore it is strongly recommended to install backup devices and alarm or warning devices. Spare equipment should also be available at the owner's site. Equipment manufactured by the manufacturer is protected against normal line surges. High surges caused by thunder storms or power supply equipment may damage this equipment. For added security against line voltage surges it is recommended that surge and noise suppression devices be installed at the electrical distribution panel. Use of shielded cable for probes is recommended for protection against lightning. These devices are available from most electrical supply distributors.

RECOMMENDATIONS

The manufacturer recommends that all installation procedures described herein be performed by a qualified electrician or installation technician. Further more the manufacturer recommends to test all the functions and equipment connected to the CIM-1, including the alarm system and backup devices, after installation, after changes to the installation and every month after that.

Fuse verification and replacement, as well as the proper setting of control values shall be the responsibility of the owner of this equipment.

INTRODUCTION

INSTALLATION

APPENDIX

1. GENERAL

This document provides a description of the CIM-1 control module. This document is organized as follows:

- Introduction
- Installation
- User's Guide
- Appendix

1.1 DESCRIPTION

The CIM-1 is designed to operate an air inlet baffle board or air inlet curtain via an actuator motor which operates under the control of a MSC-10 or MSC-20 control system resulting in a clean air environment for your livestock.

The CIM-1 provides you with automated control over its two stages via the use of the MSC, or alternatively by manual switch control on the CIM-1 front panel.

Under MSC control, the CIM-1 keeps you constantly informed of its two stages via LED indications.

The manufacturer recommends that the installation instructions which follow be adhered to as closely as possible, and all work be performed by a certified electrician. Failure to do so may void the warranty!

2.1 UNPACKING

Unpack the CIM-1 from its box and inspect contents for damage. Should the contents appear to be damaged, contact your local distributor for return material procedures.

The package should contain the following standard items:

- 1 CIM-1 control panel identified by CIM-1 printed on the faceplate of the unit
- 2 cable fasteners or fuses

2.2 MOUNTING

To limit the unit's exposure to noxious gases install the unit in a hallway.

Make certain that the unit is mounted right side up with the cable entry holes facing down.

The CIM-1 will operate in a temperature range of 32ºF - 120ºF (0ºC - 50ºC).

The enclosure is watertight, is not splash proof or immersion proof. DO NOT WATER the control. Cover the control carefully with plastic when you are cleaning the room.
***It is prohibited to use overhead cables outside the building.**

Mount the control panel to the wall using the mounting holes located on the flange of the control housing.
Once the CIM-1 is in place, use a screwdriver to remove the four screws holding the faceplate to the housing.

2.3 CONNECTION PROCEDURE

For the connection procedures which follow refer to Figures 1 and 2.

2.3.1 - Cabling

Use a screwdriver to remove cable knock-outs for the installation of cabling to the control panel.

Do not apply power to the control panel until all connections have been completed!

2.3.2 - Connecting a 115VAC Actuator Motor

Refer to figure 1.

- Connect L1 of the power source to terminal 1 and terminal 3.
- Connect the ground wire of the power source to the ground wire in the housing of the unit.
- Connect the neutral side of the power source to the neutral of the actuator motor.
- Connect the lead of the actuator motor associated with opening the air inlet to terminal 2.
- Connect the lead of the actuator motor associated with closing the air inlet to terminal 4.

2.3.3 - Connecting a 230VAC Actuator Motor

Refer to figure 2.

- Connect L1 of the power source to terminal 1 and terminal 3.
- Connect the ground wire of the power source to the ground wire in the housing of the unit.
- Connect L2 of the power source to the neutral of the actuator motor.
- Connect the lead of the actuator motor associated with opening the air inlet to terminal 2.
- Connect the lead of the actuator motor associated with closing the air inlet to terminal 4.

2.3.4 - Connecting to the MSC or an IC control

- Install an 18 AWG cable pair between the CIM-1 and the MSC. The cable can extend to a maximum length of 500 feet (150m).

- Connect one end of the cable to the (+) and (-) terminals of the CIM-1 low voltage terminal block. Refer to the bottom left corner of figures 1 or 2.

Refer to your MSC manual for further connection procedures.

2.4 POWERING UP

Before powering up the CIM-1, attach the faceplate to the casing of the control panel using the four screws previously removed.

To test the unit independently of the MSC-20, set the leftmost toggle switch to (**MANUAL**). Use the rightmost toggle switch to open or close the air inlet. If the air inlet does not operate, refer to the Trouble Shooting section in the appendix of this document.

When you have completed verifying the actuator motor operation set the leftmost toggle switch to **AUTO**.

Fig. 1
Main Board: Connection of 115 VAC actuator motor

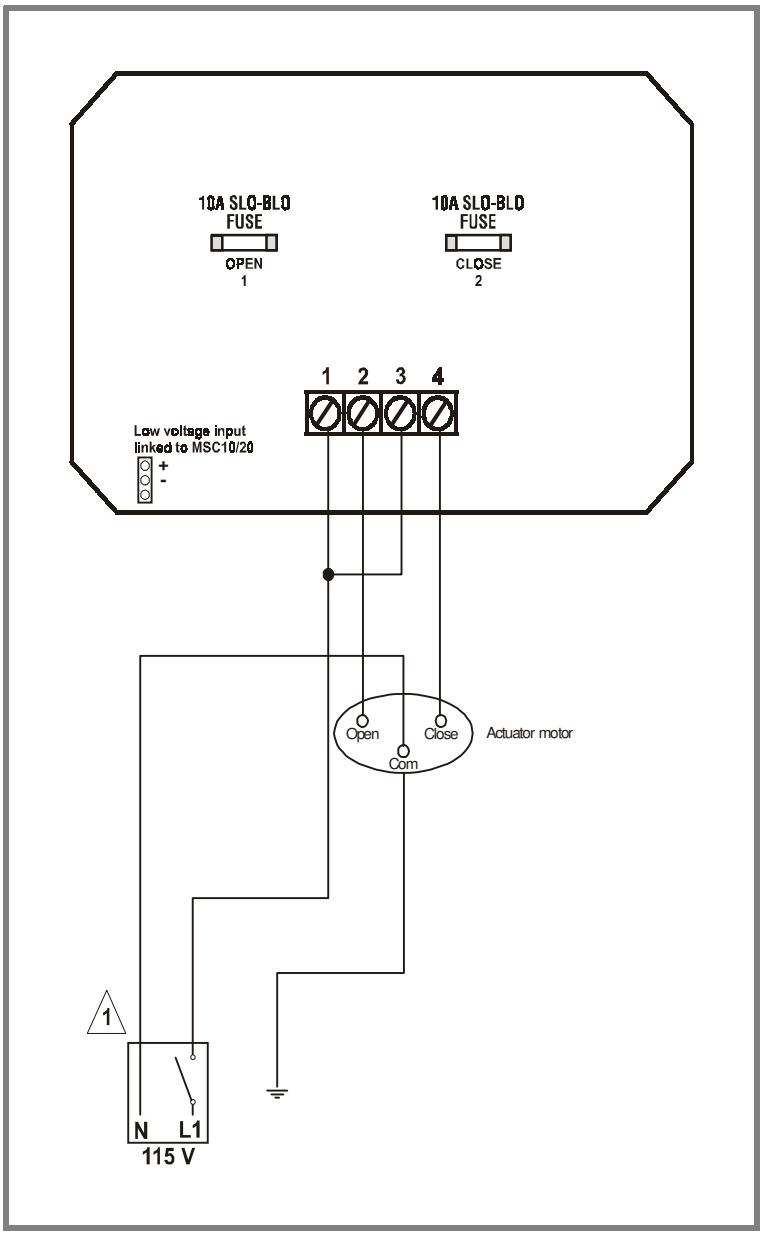
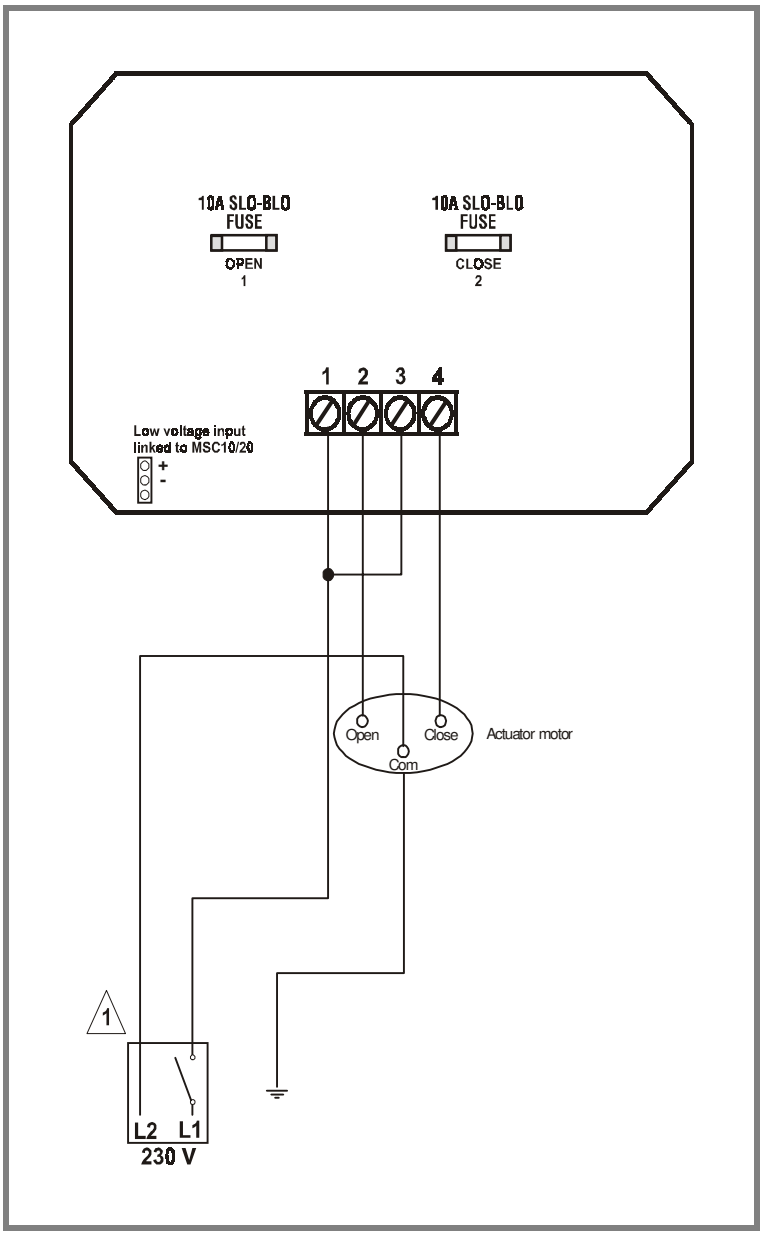
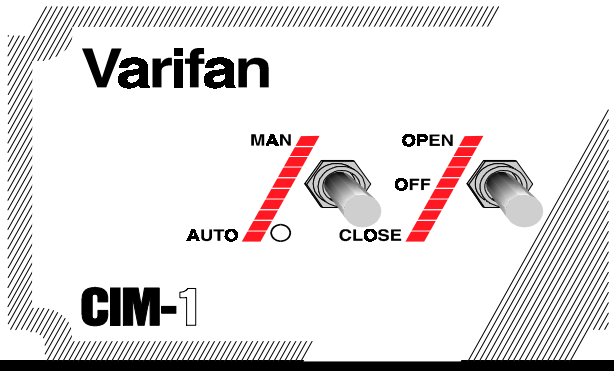


Fig. 2
Main Board: Connection of 230 VAC actuator motor



Notes for Figures 1, and 2

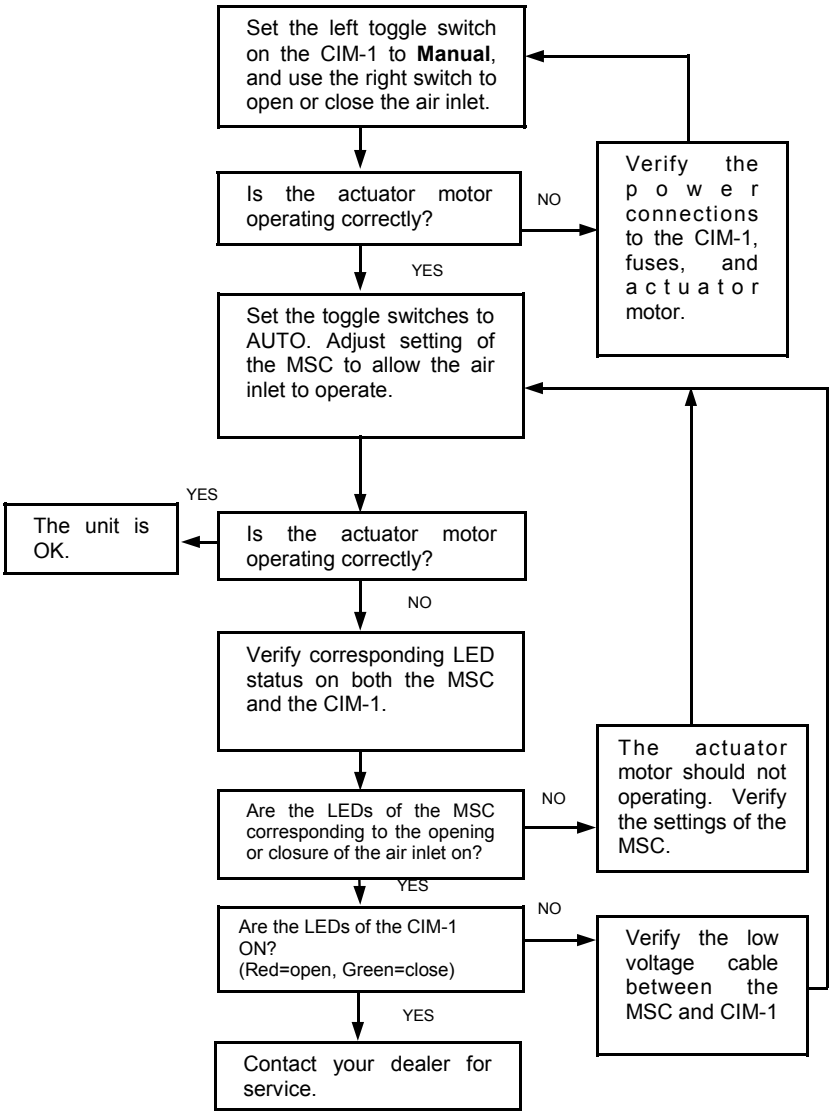
⚠1 Power cut and protection devices in case of overload.



The CIM-1 front panel (shown above) features two toggle switches and one status LED. The left toggle switch is used to select whether the actuator motor operates in auto mode or under manual control. The right toggle switch is used to manually control the air inlet by selecting between **OPEN**, **OFF**, and **CLOSE**. A status LED located beneath the left toggle switch indicates the Open (Red LED), OFF (LED not lit), and Close (Green LED) status of the actuator motor as controlled by the MSC. This status LED is unaffected by the position of the toggle switch. For example, when the MSC sends a command to the CIM-1 for the actuator motor to open or close an air inlet, the LED will turn ON red or green even if the toggle switch is the manual position.

CLOSE	To manually close the air inlet, set the left toggle switch to **MANUAL** and the right toggle switch to **CLOSE**.
OPEN	To manually open the air inlet, set the left toggle switch to **MANUAL** and the right toggle switch to **OPEN**.
OFF	To turn off the air inlet, set the left toggle switch to **MANUAL** and the right toggle switch to **OFF**.
AUTO under toggle	To allow the actuator motor to operate the control of the MSC, set the left switch to **AUTO**.

TROUBLESHOOTING



NOTE: When calling for service take note of the LED status of the MSC and the CIM-1.

SPECIFICATIONS

Description	Value
STAGE 1 (Solid state relay)	– 4 AMP 115/230 VAC – 50/60 Hz – Min. rating 10mA @ 230V – Min. rating 5mA @ 115V – Fuse 10A
STAGE 2 (Solid state relay)	– 4 AMP 115/230 VAC – 50/60 Hz – Min. rating 10mA @ 230V – Min. rating 5mA @ 115V – Fuse 10A

Storage Temperature:	32 to 158°F (0 to 70°C)
Operation temperature:	32 to 122°F (0 to 50°C)
Weight:	2.2 pounds (1Kg)
Dimension:	3.80”x6.40”x5.70” (97x163x145mm)

Limited Warranty

The manufacturered equipment and supplied components have gone through rigorous inspection to assure optimal quality of product and reliability. Individual controls are factory tested under load, however the possibility of equipment failure and/or malfunction may still exist.

For service, contact your local retailer or supplier. The warranty period shall be for two years from manufacturing date. Proof of purchase is required for warranty validation.

In all cases, the warranty shall apply only to defects in workmanship and specifically exclude any damage caused by over-voltage, short circuit, misuse, acts of vandalism, fortuitous events, acts of God, flood, fire, hail, lightning or any other natural disaster. Any unauthorized work, modification or repair on this product automatically voids the warranty and disclaims the manufacturer from all responsibility.

The manufacturer assumes only those obligations set forth herein, excluding all other warranties or obligations. This warranty stipulates that in all cases the manufacturer shall be liable only for the supply of replacement parts or goods and shall not be liable for any personal injury, damages, loss of profits, interrupted operations, fine contravention of the law or damages to the production of the PURCHASER and the PURCHASER shall take up the defense and hold the manufacturer faultless regarding any legal or extra legal proceedings, notice, or claim by the customer or by a third party, and regarding any legal and extra legal expenses and fees brought forward on by such damages.

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