



# MinEB installation and users manual

Rev: 602140

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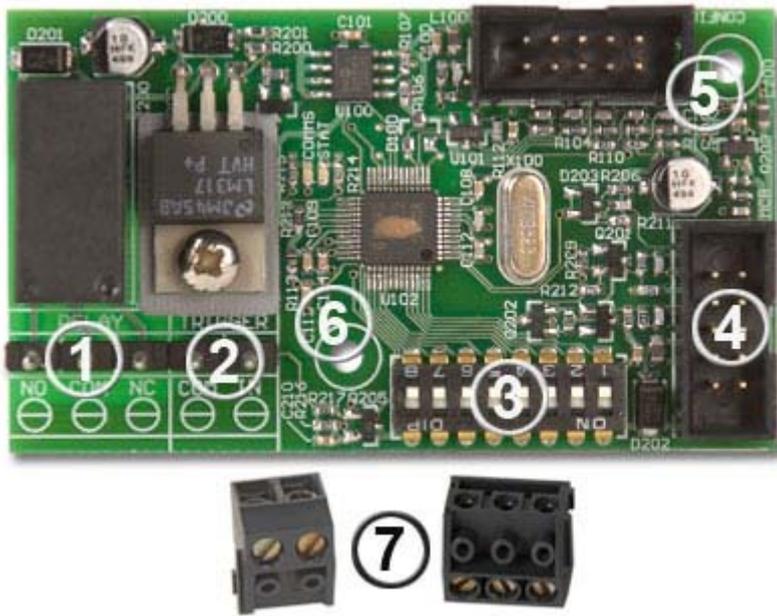
<b>Introduction</b>	Page 1	<p align="center"><b>Grifco Advanced Users QUICK START GUIDE</b></p> <p><u>INSTALLING</u></p> <ul style="list-style-type: none"> <li>• Remove power</li> <li>• Remove lid</li> <li>• Install MinEB into EXPANSION socket on MCB</li> <li>• Adjust dipswitches</li> <li>• Replace lid and resume power</li> </ul> <p><u>DIPSWITCHES</u> Trigger Input Functions:</p> <table border="1"> <thead> <tr> <th>Dipswitch 1</th> <th>Dipswitch 8</th> <th>Trigger Action</th> </tr> </thead> <tbody> <tr> <td>OFF</td> <td>OFF</td> <td>Operator closes to closed limit</td> </tr> <tr> <td><b>ON</b></td> <td>OFF</td> <td>Operator opens to open limit</td> </tr> <tr> <td>OFF</td> <td><b>ON</b></td> <td>Operator is isolated if 24V is applied to the trigger</td> </tr> <tr> <td><b>ON</b></td> <td><b>ON</b></td> <td>Operator is isolated when no voltage is applied.</td> </tr> </tbody> </table> <p>Relay Settings:</p> <table border="1"> <thead> <tr> <th>SW2</th> <th>SW3</th> <th>SW4</th> <th>SW5</th> <th>SW6</th> <th>SW7</th> <th>Relay Behaviour</th> </tr> </thead> <tbody> <tr> <td><b>ON</b></td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Closed position</td> </tr> <tr> <td>OFF</td> <td><b>ON</b></td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Opened more then 50%</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td><b>ON</b></td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>When not closed</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td><b>ON</b></td> <td>OFF</td> <td>OFF</td> <td>While running</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td><b>ON</b></td> <td>OFF</td> <td>While running +1 min</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td><b>ON</b></td> <td>While running 1Hz</td> </tr> </tbody> </table> <p>For a more detailed explanation on installation, setup, and operation please read booklet</p>	Dipswitch 1	Dipswitch 8	Trigger Action	OFF	OFF	Operator closes to closed limit	<b>ON</b>	OFF	Operator opens to open limit	OFF	<b>ON</b>	Operator is isolated if 24V is applied to the trigger	<b>ON</b>	<b>ON</b>	Operator is isolated when no voltage is applied.	SW2	SW3	SW4	SW5	SW6	SW7	Relay Behaviour	<b>ON</b>	OFF	OFF	OFF	OFF	OFF	Closed position	OFF	<b>ON</b>	OFF	OFF	OFF	OFF	Opened more then 50%	OFF	OFF	<b>ON</b>	OFF	OFF	OFF	When not closed	OFF	OFF	OFF	<b>ON</b>	OFF	OFF	While running	OFF	OFF	OFF	OFF	<b>ON</b>	OFF	While running +1 min	OFF	OFF	OFF	OFF	OFF	<b>ON</b>	While running 1Hz
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## Introduction

Congratulations on your purchase of the Grifco MinEB. The MinEB is a low cost logic upgrade designed to easily provide extra features to the Maestro Operator. Its features include a relay output with adjustable behaviours, and an auxiliary OPEN\CLOSE trigger input.

It is the perfect solution for connecting a simple peripheral device to the Maestro operator, such as a dock leveller, alarm switchboard, hazard lights, and many more.

## MinEB layout



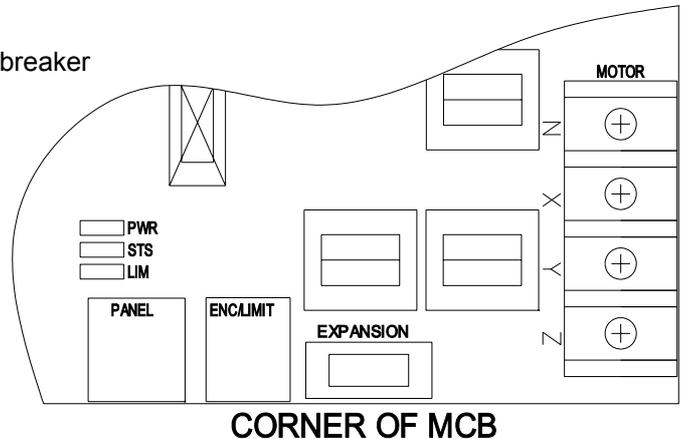
- 1 – Output relay terminal pins
- 2 – Trigger input terminal pins
- 3 – Dipswitches
- 4 – Cable socket
- 5 & 6 – Mounting holes
- 7 – Terminal blocks for terminal pins

## Installation

### Installing the MinEB

Installation of the MinEB is as follows:

- Turn off power to the Maestro operator via isolator or breaker
- Remove Maestro lid exposing the main circuit board (MCB)
- Plug the free end of the MinEB cable into the EXPANSION socket on the MCB as shown
- Mount the MinEB to the MCB with the support posts supplied into the mounting holes (on earlier models of the Maestro, alternative mounting may be required)
- Adjust dipswitches to suit intended use
- Replace the lid and resume power to the operator



**NOTE: MAKE SURE YOU HAVE READ THIS MANUAL AND UNDERSTAND THE FUNCTIONS OF THE UNIT BEFORE POWERING UP WITH ANY PERIPHERAL DEVICES INSTALLED. POWERING UP WITH INCORRECT SETTINGS MAY CAUSE UNEXPECTED BEHAVIOUR**

On the initial power up, the MinEB will light up signifying connection with the operator.

**Please read and understand instructions before attempting installation**

**Trigger input**

When Dipswitch 8 is **OFF**, the Trigger input is used to cause either an open or close action on the operator from a 24VDC input across the “Trigger” terminals. Selection between open or close is made via dipswitch 1 on the MinEB. When Dipswitch 8 is **ON**, the Trigger input becomes an isolator switch.

Dipswitch 8	Dipswitch 1	Trigger Action
OFF	OFF	Operator closes to closed limit
OFF	ON	Operator opens to open limit
ON	OFF	Operator is isolated if 24V is applied to the trigger
ON	ON	Operator is isolated when no voltage is applied.

**NOTE: THE “OPERATOR CLOSURES TO CLOSED LIMIT” ACTION CAN ONLY BE USED IF A PHOTO BEAM OR BUMPER STRIP ARE INSTALLED TO ENSURE SAFE AUTOMATIC CLOSING**

**Relay output**

The relay output can be used to wire into a large range of peripheral devices such as lights, sirens, solenoids, and dock levellers. Connection to the relay is made via a common pin (COM), a normally open pin (NO) and normally closed pin (NC). Different behaviours of the relay are set via dipswitches 2 through to 7. Settings are shown below:

SW2	SW3	SW4	SW5	SW6	SW7	Relay Behaviour
ON	OFF	OFF	OFF	OFF	OFF	Energised when operator in closed position
OFF	ON	OFF	OFF	OFF	OFF	Energised when operator opened more then 50%
OFF	OFF	ON	OFF	OFF	OFF	Energised when operator not closed
OFF	OFF	OFF	ON	OFF	OFF	Energised when running
OFF	OFF	OFF	OFF	ON	OFF	Energised while running with 1 min time extension
OFF	OFF	OFF	OFF	OFF	ON	Energised while running with 1Hz oscillation

**NOTE: PLEASE ENSURE MinEB DIPSWITCHES ARE SET CORRECTLY TO PREVENT UNEXPECTED BEHAVIOUR**

**Installation Examples**

**Dock Leveller**

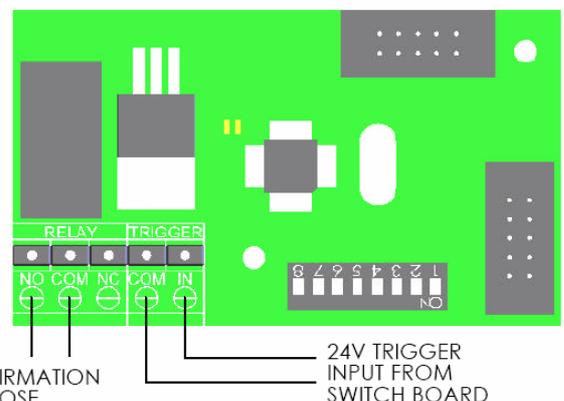
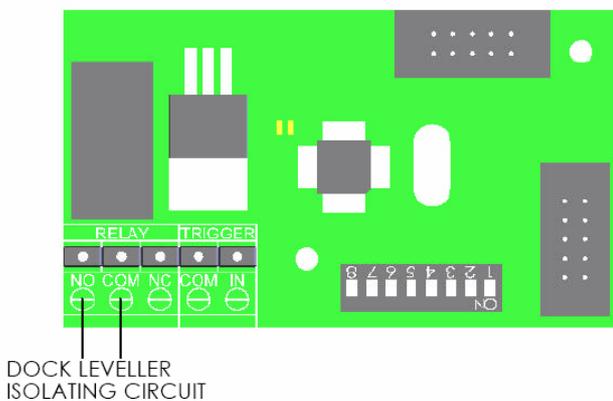


Dipswitches (off off on off off off off off)

**Alarm system emergency close**



Dipswitches (off on off off off off off off)



**STANDARD GRIFCO WARRANTY CONDITIONS APPLY TO ALL PRODUCTS**

## WARRANTY / GUARANTEE

Chamberlain Australia Pty Ltd herein referred to as "The Company"

- (a) The Company shall guarantee the goods for a period of two years from the date of invoice against any defects in construction or operation arising solely from faulty design, materials or workmanship subject to the following clauses.
- (b) The Company shall at its option, repair, modify or replace defective parts or units at its own expense and within a reasonable time but the Company shall not unless otherwise agreed in writing be liable for costs associated with removal, replacement, transport or travelling expenses incurred by the Purchaser in obtaining the goods and returning them to the Company.
- (c) The Company does not guarantee the goods where:-
  - (i) the defect rises from materials supplied by the Purchaser or a design requested by the purchaser; or
  - (ii) the defect arises from ordinary wear and tear, neglect or misuse by the Purchaser, accident, lack of care, insufficient maintenance, incorrect installation or improper use of the goods; or
  - (iii) the defect arises from force majeure; or
  - (iv) the Purchaser has in any way modified or repaired the goods without the Company's prior written consent; or
  - (v) the Purchaser has not complied with any written or oral instructions concerning the operation and maintenance of the goods; or
  - (vi) the Purchaser is in default in the observance or performance of any other provisions of the contract; or
  - (vii) The Grifco electric motors are used in conjunction with controls other than those assembled and supplied by the Company.
- (d) Where warranty is approved for goods in a used condition, such goods will be repaired or replaced and returned to the purchaser as the Company sees fit. Refunds or credits will only be considered for goods not used and in new, undamaged condition.
- (e) The Company's liability under this guarantee will be strictly limited to repairing or replacing a defective product at the Company's premises, as it may elect.
- (f) The provision of sub-clauses (a) and (b) are stipulated for the benefit of the Purchaser only and are not intended for the benefit of any third party.
- (g) Save for sub-clauses (a) and (b) the Company does not give any warranty or guarantee or make representations whatever in respect of the goods or the fitness of the goods or any part thereof or any particular purposes (whether or not that purpose is known to the Company).

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