

# Product Specification Sheet



## ECB BOARD 070

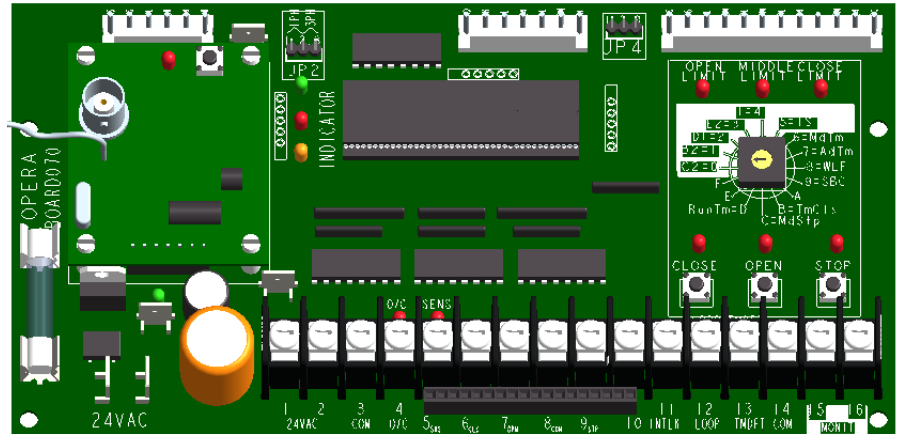
ELECTRONIC CONTROL BOARD

### ADVANCED AND INTELLIGENT DESIGN

- **Factory programmed microprocessor.**
- **Power and control boards** are separated for easy access and field maintenance. Linked together by a one-way quick-connect socket.
- **Non-volatile memory** to save all programming in case of power loss.
- **Centrifugal switch detecting circuit** insures that the motor has stopped before reversing.
- **Delay on reverse** incorporates a 1.5s delay before reversing the door, which extends the lifetime of the operator and the door.
- **Programmable maximum run timer.**
- **Reverse wiring detection** will sense if the door travel direction and the limit switch settings do not correlate, and will stop the door.
- **Timer-to-close.**
- **Programmable mid-stop.**
- **Independent input loop terminal.**
- **Advance close system** determines the point where the entrapment detection devices will be disabled before reaching the floor. Patented feature.
  - Protection against voltage spikes and transients.
- **2 amp fuse** protects the on-board 24Vdc and 24VAc for auxiliary control devices.
- **24Vdc relaying circuit with 40VA class II transformer.** Industrial type heavy-duty relays are robust for high intensity usage.
- **Door lock sensor** detects all engaged door locks. Automatically releases the tension on the door locks. A properly adjusted clutch is needed. An unbalanced door and broken spring can also be detected.
- **On-board radio receiver** (1 or 3-channel modes) included with ECB. **Single-channel transmitter** (sold separately) can be used as a Commercial application, as well as a Single Button Radio Control (SBC).

### EASY INSTALLATION

- **On-board open, close and stop test push-buttons** control the operator during installation directly at the control box.
- **Plug-in socket** for easy connection to limit switches. Plug-in socket for easy connection to the radio control receiver.
- **Easy to use rotary dial** for selection of operating modes.
- **24VAC output** is available on the terminal strip to power accessories.
- **Ready to receive optional universal auxiliary output module.** For example, optional red/green warning lights, can easily be connected to the outlet.
- **Extra auxiliary terminal** (consult inside sales).



### Monitoring Protection Input

Available for detection and monitoring of primary external entrapment protection devices as per UL325 (2010)

### Rotary-Type Selection Dial

With improved readability for ease of installation

### Informative Diagnostic LEDs

Improve the installation and troubleshooting processes

### Radio Receiver

Factory installed on the ECB and features Rolling Code Technology

### Robust Design

Improved protection against adverse field conditions

**The BOARD 070 is the evolution of Intelligent Engineering. Troubleshooting and maintenance are made easier due to a cleverly designed ergonomic interface and informative diagnostic LEDs. On-board push-buttons and a rotary selection dial simplify the process of programming and controlling the door.**

**The Electronic Control Board is available with or without the option of electrical control for MONITORED external entrapment protection devices (UL325-2010 compliant), it's your preference.**



When you think  
Commercial Door OPERATORS,  
**just think OPERA.**

800-361-2260  
info@manaras.com  
www.manaras.com

## STANDARD FEATURES

- 24Vdc relaying circuit, powered by an external 40VA class II transformer, non-volatile memory. Features available: 1.5s delay on reverse, programmable maximum run timer, mid-stop, timer to close (suspension possible from floor level), independent input loop terminal, advance close system, test buttons, reverse wiring detection and door lock sensor. Includes an on-board radio receiver with rolling code technology. Operating mode selectable on site: C2, B2, D1, E2, T or TS.

## YOUR PREFERENCE:

### • "M" Version:



#### (PRIMARY MONITORED ENTRAPMENT PROTECTION):

Provides the monitoring of Primary External Entrapment Protection Devices. Includes monitored photo cells (PHOTO 070 standard). In this mode, Ancillary Entrapment Protection Devices (optional) may be used to supplement primary entrapment protection, such as non-monitored photo cells, 2-wire non-monitored sensing edges and pneumatic sensing edges. Certifications: CSA C22.2-247.92 and UL325.

### • "E" Version:



No monitoring function. Regular, N.O. type, external entrapment protection devices such as non-monitored photo cells (reflective or Tx-Rx), non-monitored 2-wire sensing edges and pneumatic sensing edges. Certifications: CSA C22.2-247.92.

## CONTROL ACCESSORIES

### • The terminal allows for the connection of:

3-button stations, non-monitored sensing edges, non-monitored photo cells, one push-button radio control (external strip), ceiling pull switches, key switches, loop detectors, external interlocks, and universal auxiliary output module. 2A fuse protected 24Vdc output is available for accessory power supply.

## CONTROL AND POWER ALTERNATING ARCHITECTURES

### AVAILABLE CONFIGURATIONS:

- **BOARD 070 + BOARD066 (Power Board):** includes robust industrial-type heavy-duty relays for high-intensity usage.
- **BOARD 070 + Reversing Contactor:** reversing contactor is appropriately sized in accordance with HP, voltage and usage specifications. Consult inside sales.
- **BOARD 070 + DC Relays:** for light-duty type applications.

## ECB AVAILABILITY

- The ECB is available on almost all operator models.
- **Product Coding:** The letter **M** is added to the operator code for primary Monitored entrapment protection or the letter **E** is added for non-monitored entrapment protection.
- Custom functions for unique applications available, consult inside sales.

## OPERATING MODES

- **C2 Wiring (0):** Function: Momentary contact to open and stop, constant-pressure-to-close with a 3-push-button station. Activation of entrapment protection devices<sup>(1)</sup> will reverse the door while closing. Auxiliary devices function as an open control and will reverse the door while closing.

- **B2 Wiring (1):** Function: Momentary contact to open, close and stop, with a 3-push-button station. Activation of entrapment protection devices<sup>(1)</sup> will reverse the door while closing. Auxiliary devices function as open-close controls and will reverse the door while closing.<sup>(2)</sup>

- **D1 Wiring (2):** Function: Constant-pressure-to-open and constant-pressure-to-close. Activation of entrapment protection devices<sup>(1)</sup> will stop the door while closing.

- **E2 Wiring (3):** Function: Momentary contact to open and constant-pressure-to-close. Release of close button or activation of entrapment protection devices<sup>(1)</sup> will reverse the door to the fully opened position.

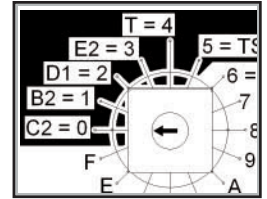
- **T Wiring (4):** Function: Momentary contact to open, close and stop. Only applicable with the timer to close. If the entrapment protection devices<sup>(1)</sup> are activated while the door is closing, the door will reverse and will not close by the timer to close (TTC). TTC will also be disabled if the chain hoist is engaged or if the stop is activated before the elapsed time. TTC will resume its normal operation only after the door is fully closed. During TTC timer counting down, any input from the radio, open, loop or a power outage will reset the timer. During TTC timer counting down, the close button or SBC will close the door immediately.<sup>(2)</sup>

- **TS Wiring (5):** Function: Momentary contact to open, close and stop. Only applicable with timer to close. If the entrapment protection devices<sup>(1)</sup> are activated while the door is closing, the door will reverse and will close by the timer to close (TTC). During TTC timer counting down, any input from the radio, open, loop, stop, entrapment device<sup>(1)</sup>, or chain hoist engagement, or a power outage will reset the timer. During TTC timer counting down, the close button or SBC will close the door immediately.<sup>(2)</sup>

<sup>(1)</sup> Applies to monitored or non-monitored entrapment protection devices.

<sup>(2)</sup> If the monitored entrapment protection device or loop input remains activated, the door can be closed by constant-pressure on the close button.

## Selection Switch Dial



## PROGRAMMING OPTIONS

- **Maximum Run Timer:** When programmed, this feature calculates the total time required for the door to travel from the fully closed to the fully opened position and adds 10s to this time. If the door is obstructed during its travel, this feature will stop the operator after the maximum run timer time has elapsed. Default time set = 90s.

- **Timer to Close:** When programmed, this feature will close the door from the fully opened and mid-stop positions after a factory pre-set time (5s). Programmable in increments of 1s or 15s. Maximum 4m.

- **Timer to Close User Suspension Feature:** This feature allows the timer to close to be enabled/disabled from the floor by using a wall push-button station. This feature allows the user to keep the door opened for one cycle only.

- **Mid-Stop:** When activated, this feature will allow the door to stop at a predetermined position when an open signal is given from the fully closed position. The radio control or close push-button will close the door from the mid-stop position. The door will open fully from the mid-stop position if the open button is activated.

- **Mid-Stop Timer:** This feature allows the timer to close to be enabled/disabled at the mid-stop position.

- **Single-Button Control:** With this feature, it is possible to use a single-channel transmitter for a commercial application, as well as a single-button control. The SBC provides the user with the possibility to open, stop or close the door by using a single-button radio transmitter (or a single push-button station).

- **Universal Auxiliary Output Module:** This module allows for the connection of external devices such as: red and green warning lights (custom sequences available), air curtains, horns, locks, etc...

