

Specification Sheet

ECB Board 060



- Separate Power and Control boards attached by a one-way quick-connecting socket
- Simplified configuration of on-board diagnostic LEDs
- Industrial type heavy duty relays
- Easy access to voltage and motor terminals
- Rotary-type programmable selection switch dial

The Manaras-Opera Electronic Control Board is the evolution of Intelligent Engineering. For easy access and field maintenance, the ECB has been divided into two separate boards; one for Power and the other for Control. Troubleshooting and maintenance are made easier due to a redesigned ergonomic interface, fewer wire connections and additional diagnostic LEDs. On-board push-buttons and a rotary selection switch dial simplify the process of programming and controlling the door.



Advanced and Intelligent Design

- Factory programmed microprocessor.
- Power and control boards are separated for easy access and safe field maintenance. Attached to each other by a one-way quick-connecting 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 (1.5s) allows the door to pause before reversing and extends the lifetime of the operator and the door.
- Reverse wiring detection will sense if the door travel direction and the limit switch settings do not correlate, and will stop the door.
- Programmable advance close system allows for easy adjustment of the point where the entrapment detection devices will be disabled before reaching the floor. Patent pending feature.
- Protection against to voltage spikes and transients.
- 2 amp fuse protects the on-board 24VDC and 24VAC for auxiliary control devices.
- 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 with use of an ECB.

Control Inputs

The ECB terminal strip is ready to receive various control devices: 3-button control stations, entrapment detection devices such as sensing edges or photo cells, open/close controls (including radio receivers), pull switches, ceiling switches, loop detectors and external interlocks.

Easy Installation

- On-board open, close and stop push-buttons control the operator during installation directly at the control box.
- Plug-in socket for easy connection to limit switches and radio control devices.
- Easy to use rotary switch dial for selection of operating modes. Now includes supplementary information.
- 5Vdc logic circuit allows for longer control distances.
- 24VAC output is available on the terminal strip to power accessories.
- Ready to receive optional output module. (Optional red and green warning lights, for example, can easily be connected to the outlet).

Easy Diagnostic

Simple configuration of monitoring LEDs help with wiring and diagnostic:

- 24Vdc LED (green): when ON indicates the presence of 24Vdc power on the logic board.
- 5Vdc LED (green): when ON indicates the presence of 5Vdc power in the control circuit.
- "Open Limit" LED (red): when ON indicates door position, completely open.
- "Close Limit" LED (red): when ON indicates door position, completely closed.
- "Open" LED (red): when ON indicates that the open relay is activated.
- "Close" LED (red): when ON indicates that the close relay is activated.
- "Safety" LED (red): when ON indicates that an entrapment detection device is activated.
- "Indicator" LED (red): (a) when ON indicates that the centrifugal switch is open (1 phase). (b) when FLASHING indicates that the wrong limit switch was activated during the door travel.
- "Stop" LED (yellow): when OFF indicates that the stop button has been pressed or if the hoist switch is activated. Stays ON under normal conditions.

Programming Options

- The Run Timer automatically stops the operator from travelling upwards/downwards after an adjustable time delay. It is designed to protect the door and the operator by preventing the motor from over running.
- Mid-Stop function, when set, will move the door from the down position to a predetermined mid-stop position when the open button or open/close device is activated. Once at mid-stop, subsequent open/close commands will close the door. To move the door to the fully open position, the open button has to be pressed again.
- Timer to Close, when set, is a function that will close the door after an adjustable time delay once the door has reached its fully open or mid-stop positions. TTC can be activated/deactivated from floor level using a 3 push-button station. Works on T and TS wiring modes (dial 4,5).
- Timer to Close from Fully Open Position is used in conjunction with the mid-stop function. When set, the TTC is only active from the fully open position and not from the mid-stop position.
- Advance Closed Time allows for the adjustment of the entrapment detection device's disabling point and determines the door's final stopping point once the close limit switch is activated (patent pending feature). An advance close limit switch is not needed with this feature.

Operating Modes

- C2 Wiring (0): Factory preset as per UL325. Momentary contact to open/stop, constant pressure to close with a 3 push-button station. Activation of entrapment detection devices will reverse the door during closing. Auxiliary devices function as an open control and to reverse the door during closing.
- B2 Wiring (1): Momentary contact to open/close/stop with a 3 push-button station. Activation of entrapment detection devices will reverse the door during closing. Auxiliary devices function as open/close control and reverse the door during closing.
- D1 Wiring (2): Constant pressure to open/close. Activation of entrapment detection devices will stop the door during closing.
- E2 Wiring (3): Momentary contact to open, constant pressure to close. Release of close button activates the door upwards. Activation of entrapment detection devices will reverse door motion to its fully open position.
- T Wiring (4): Momentary contact to open/close/stop. The door will close when the timer is expired. If the entrapment detection devices reverse upon activation, the TTC will be deactivated. When the door is at its open limit, if the entrapment detection devices are activated, or if the chain hoist is engaged, or if the stop button is pushed before time-out, it will deactivate the TTC. The TTC will get refreshed if there is a power outage, or if the radio control device is activated, or if the open button is activated. The TTC resumes its normal operation once the close cycle is completed.
- TS Wiring (5): Momentary contact to open/close/stop. The door will close when the timer is expired. If the entrapment detection devices reverse upon activation, it will refresh the TTC. When the door is at its open limit, the TTC will also get refreshed if there is a power outage, or if the chain hoist is engaged, or if the radio control device is activated, or if the open button is activated, or if the stop button is pushed before time-out.

ECB Availability

OPJ, OPH, OSH, OGH, MGH, MTH, MTBH, MGT, MSLD, MGSLD. Standard with OHJ.

HP limitations: 1HP on 115V-1Ph; 1.5HP on 230V-1Ph/3Ph; 460V-3Ph and 575V-3Ph. For other requirements, please consult inside sales.

Product Coding: The letter E is added to the operator code (ex: OPH-6112-0E00).