

# 3-Part Architectural Specifications

## Electric Door Operator

### Model: MLT

#### Part 1 General

##### 1.01 Description

**A. Work Included:** supply and installation of a medium-duty V-belt drive Trolley type electric door operator, as specified; as well as the necessary driving hardware and control accessories necessary for proper operation.

##### 1.02 Related Work

**A.** Door preparation, miscellaneous or structural metal work, field electrical wiring, wires, disconnect switches, fuses and conduit are in the scope of work of other sections or trades.

##### 1.03 Submittals

**A.** Submit manufacturer's product data and installation instructions for each type of operator. Include both published data and any specific data prepared for this project.

##### 1.04 Delivery, Storage and Handling

**A.** Product shall be delivered to the project site in manufacturer's original packaging.

**B.** Product shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.

##### 1.05 Warranty

**A.** Operator shall be warranted to be free from defects in material and workmanship for a period of 2 years.

#### Part 2 Product

##### 2.01 Manufacturer

**A. Acceptable Product:** Operator model MLT as manufactured by Manaras-Opera, part of the Canimex Group.

##### 2.02 Operator

**A. Motor:** to be rated 1/2 Hp, 115 Volts, 1 Phase, instant reverse, intermittent duty motor, protected against overload by a built-in thermal protection with automatic reset. Also available with 50Hz motor. Motor shall be separate from reduction mechanism for ease of maintenance.

**B. Reduction:** first step in reduction to be 4L/A V-belt drive, additional step by #410 chain and sprocket giving a door speed of 11"/second. Input steel shaft to be a minimum of 5/8" (15.875mm) in diameter and supported by ball bearings. Output steel shaft to be a minimum of 1" (25.4mm) in diameter and supported by ball bearings.

**C. Drive and Trolley Assembly:** door to be driven by a #48 (#410) full roller chain, supported by dual, 12 gauge, pre-drilled galvanized tracks for 14' doors maximum. Track spacers to be 3/4" steel shaft. Trolley to be cast aluminum alloy with possibility of chain tension adjustment.

**D. Clutch:** to be friction type, adjustable from outside.

**E. Manual Operation:** to be by a quick release disconnect arm for manual push up operation.

**F. Electrical Enclosure:** all electrical components to be in a NEMA 1 enclosure.

**G. Limit Switches:** to be rotary-type limit switch with oil-impregnated steel cams, commercial grade switches. Systems to be enclosed in electrical control box, and limit shaft to be supported in frame by self-lubricating bronze bushing for increased precision. Limit switches to remain in time when there is a manual

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operation or after the motor as been removed. Designed to prevent any lever breakage when limits have been exceeded during manual operation.

**H. Corrosion Protection:** Frame and control enclosure to be protected by a long lasting enamel finish. All shafts to be protected by yellow chromate coating.

**I. Motor Control:** to be 24V<sub>AC</sub> control circuit, 40VA class II transformer, fuse protected on output. Pre-wired for connection of 3-button stations (one supplied with the operator), sensing edges, photo cells, one push button radio control (external strip), ceiling pull and key switches, loop detectors, external interlocks. Fuse protected 24V<sub>AC</sub> output is available for accessory power supply.

**J. Operating mode:** to be C2 (or B2 or D1 see appendix for description).

**Note to architects:**

*Motorized doors can cause serious injuries or death. Manaras-Opera strongly recommends the use of entrapment protection systems, especially in case of momentary contact to close as in B2 operating mode.*

**K. Control Accessories to be supplied:** 3 push-button stations, open close key switch, one button radio control, electric sensing edge, pneumatic sensing edge, through beam photo cell.

**L. Standards:** operator to be certified UL 325 or CSA22.2/247 by a National Recognized Testing Laboratory such as UL or CSA.

### Part 3 Execution

#### **3.01 Installation**

**A. Installation:** to be in accordance with Manaras-Opera instructions and in compliance with federal, state or local regulations.

### Appendix: WIRING TYPE Descriptions

**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.