**SECTION 08 71 23 – COMMERICAL DOOR OPERATORS**

 GENERAL

 SUBMITTALS

 Action Submittals:

 Product Data: Manufacturer’s descriptive data and product attributes.

 Closeout Submittals:

 Operation and Maintenance Data.

 QUALITY ASSURANCE

 Installer Qualifications: Firm specializing in work of this Section, with minimum [2] [\_\_] years’ experience.

 WARRANTY

 Manufacturer’s 2 year warranty against material and manufacturing defects.

 PRODUCTS

 MANUFACTURERS

 Contract Documents are based on products by LiftMaster. [www.LiftMaster.com](http://www.liftmaster.com)

 Substitutions: [Refer to Division 01.] [Not permitted.]

 MANUFATURED UNITS

 Door Operators:

 Model: [HPH1.] [HPH2.]

 Operation: Direct drive.

 Motor design: 1.25 HP, [single phase and 3-phase, 120/230V.] [3-phase 460/575V, fully configured unit.]

 Rated duty cycle: Maximum 600 cycles per day.

 Meet UL 325.

 Motor: Listed by Underwriters Laboratories.

 Travel rate: 22 to 24 inches per second average; 45 inches per second maximum.

 Wall controller: Provide separation of low and high voltage wiring and include functionality of 3-button station; set door profile and programming limits, and performs diagnostics.

 Floor-level programming: Set limits, door profile, operating modes, and select photo entrapment devices.

 Display: Absolute cycle count, service cycle count, diagnostic messages, and door and operator status.

 Cycle counter: Resettable via wall controller or myQ technology.

 Limit setting: Electronic pushbutton via wall controller.

 Internet connectivity:

* + - * 1. Built-in Wi-Fi with myQ technology.
				2. Over-the-air updates.
				3. Service cycle count, lifetime cycle count, and remote diagnostics via wall controller or myQ technology.
			1. Control station: [One button type] [Three push button type] [Three position key operated type] [One button open-only NEMA 1 button] in NEMA [1] [4] [4X] [7/9] enclosure.
			2. Remote controls: [One button DIP.] [Three button DIP.] [Two button learning Security+ 2.0.] [Four button learning Security+ 2.0.] [Single button rolling code Security+ 2.0.] [Two button rolling code Security+ 2.0.] [Three button rolling code Security+ 2.0.] [Four button rolling code Security+ 2.0.]
			3. Primary monitored entrapment protection: [Photo eyes, rigid housing.] [Photo eyes, flexible housing.] [Light curtain.] [Retro-reflective sensor system.] [Sensing edge system.] [Optical edge sensing system.]

 Secondary non-monitored entrapment protection: [Photo eyes, rigid housing.] [Photo eyes, flexible housing.] [Light curtain.] [Retro-reflective sensor system.] [Sensing edge system.] [Optical edge sensing system.] [Pneumatic sensing edge.]

* + - 1. Accessories:
				1. Wi-Fi Bridge
				2. Internet Gateway.
				3. Door Monitor
				4. Red/green traffic light.
				5. Commercial/Industrial wireless keypad.
				6. Commercial access control receiver.
				7. Microwave motion detector

 EXECUTION

 INSTALLATION

 Install in accordance with manufacturer’s instructions.

 CLOSEOUT ACTIVITIES

 Test and adjust operators for proper operation.

 Demonstration: Demonstrate operation and programming of operators to Owner.

END OF SECTION