



SECTION 08734  
COMMERCIAL DOOR OPERATORS  
CDX™ OVERHEAD COILING COUNTER DOOR OPERATOR

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**PART 1 GENERAL**

1.1 SECTION INCLUDES

- A. Overhead Counter Door Openers.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
- C. Section 08332 – Overhead Coiling Counter Doors.
- D. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- E. Section 09900 - Painting: Field applied finish.
- F. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator and from door operator to control station.
- G. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES

- A. [NEMA 250](#) - Enclosures for Electrical Equipment (1000 Volts Maximum).
- B. [NEMA ICS 6](#) - Enclosures for Industrial Controls and Systems.
- C. [NEMA MG 1](#) - Motors and Generators.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.
- B. Electric Motors shall be alternating-current squirrel-cage motors conforming with NEMA MG 1.
- C. Wiring Connections: Requirements for electrical characteristics.
  - 1. 115 volts, 60 Hz single phase.
  - 2. 208 volts, 60 Hz single phase or three phase.
  - 3. 230 volts, 60 Hz single phase or three phase.
  - 4. 460 volts, 60 Hz three phase.

5. 575 volts, 60 Hz three phase.

## 1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Details of construction and fabrication.
  4. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, required clearances and accessories. Include relationship with adjacent construction.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Operation and Maintenance Data: Submit lubrication requirements and frequency, and periodic adjustments required.

## 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified with minimum of five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  1. Install in areas designated by Architect.
  2. Do not proceed with remaining work until workmanship and installation is approved by Architect.
  3. Refinish mock-up area as required to produce acceptable work.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
- C. Store materials in a dry, warm, ventilated weathertight location.

## 1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## 1.9 WARRANTY

- A. Provide operators with a 2 year or 20,000 cycle limited warranty on motor and parts.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: [www.overheaddoor.com](http://www.overheaddoor.com). E-mail: [sales@overheaddoor.com](mailto:sales@overheaddoor.com).
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

### 2.2 OVERHEAD COILING COUNTER DOORS

- A. Counter Door Operator: Model CDX Counter Door Operator:
  - 1. Electric Motor: Intermittent-duty, with instant reverse and automatic reset thermal overload. UL listed.
    - a. Rating:
      - 1) 1/2 horsepower single phase.
      - 2) 115 V.
    - b. Motor frame comply with:
      - 1) NEMA 42 for 1/2 hp single phase.
    - c. Construction:
      - 1) Open drip-proof construction.
    - d. Reduction: Helical gear primary reduction and hardened bevel gear secondary reduction.
    - e. Duty cycle: Accommodate light duty usage, up to 4 cycles per hour.
      - 1) Limit System: LimitLock limit system, magnetic type providing absolute positioning with push to set and remote setting capabilities. Limit System shall remain synchronized with the door during manual operation and supply power interruptions.
  - 2. Control System: Microprocessor based with relay motor controls on a single board. System incorporates a 16 character Liquid Crystal Display (LCD) to display the system status. System shall include the following:
    - a. A delay-on-reverse operating protocol.
    - b. Maximum run timers in both directions of travel that limit motor run time in the event a problem occurs.
    - c. Provisions for the connection of a 2-wire monitored photo-eye or a 2-wire monitored edge sensor, as well as non-monitored 2-wire sensing edges, photo-eyes or other entrapment protection devices.
    - d. Control action will be constant contact close until a monitored entrapment device is installed, allowing for selection of momentary contact.
    - e. Provisions for connection of single and/or 3-button control stations.
    - f. On board open, close and stop control keys for local operation.
  - 3. Mounting:
    - a. Counter doors:
      - 1) Front of hood and chain/sprocket coupling to door.
  - 4. Release:
    - a. Release shall be a pull and hold type mechanism with single cable operation and an integrated interlock switch on hoist units.
  - 5. Hand Crank: Hand crank for manual door control.
  - 6. Entrapment Protection:

- a. Control system shall have provisions to connect monitored entrapment protection devices such as monitored electric sensing edge, or monitored photo-eye and to provide constant contact close control operation in lieu of such devices.
7. Control accessories:
- a. Operator Controls:
    - 1) Push-button operated control stations with open, close, and stop buttons.
    - 2) Key operation with open, close, and stop controls.
    - 3) Push-button and key operated control stations with open, close, and stop buttons.
    - 4) Controls for interior location.
    - 5) Controls for exterior location.
    - 6) Controls for both interior and exterior location.
    - 7) Controls surface mounted.
    - 8) Controls flush mounted.
  - b. Special Operation:
    - 1) Radio control operation.
    - 2) OHD monitored photo-eyes.
    - 3) Commercial photo-eyes.
    - 4) Fire Sentinel/Time Delay Release.
    - 5) Timer Close Module for unattended timed door closing. Auxiliary control inputs, safety inputs, timer hold input and automatic door closing feature with selectable time delay. Safety inputs can be configured using on board keypad.
    - 6) Auxiliary Output Module for up, down, and mid-stop limit status via several auxiliary sets of dry contacts that are microprocessor controlled. ADA compliant outputs that activate when door is moving up, down, or both directions and can be configured using the on board keypad.
8. Automatic Closure:
- a. Fire Sentinel time-relay release mechanism with motor close option provides an added measure of safety to control the doors' closure.
    - 1) Voltage: 120 VAC
    - 2) Voltage output 24 VDC
    - 3) Release time delay: Factory set at 10 seconds can be field adjusted by dipswitch settings to 20, 30 and 60 seconds.
    - 4) Must use normally open proximity switch to detect door is closed.
    - 5) Can support 2 or 4 wire smoke detector system (maximum of 4 Class B Style A detectors. Release devices are normally open contacts. Provided with 4 wire detectors when detectors are specified with an end of line relay.
    - 6) Unit has two 12 VDC batteries 24 VDC output.
    - 7) Power Loss Time delay: 48 hours.
    - 8) Unit can power an optional ADA horn / strobe 24 VDC.
    - 9) Load Rating: Support and Release 40 lbs. maximum.
    - 10) Auxiliary output module must be installed to accept wiring from Fire Sentinel.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify door sizes, configuration, tolerances and conditions are acceptable.

- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly without distortion or stress.
- C. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- D. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.

### 3.4 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

### 3.5 CLEANING

- A. Clean components using non-abrasive materials and methods recommended by manufacturer.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

### 3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

### 3.7 SCHEDULES

- A. :
  - 1.
  - 2.
  - 3.
- B. :
  - 1.
  - 2.
  - 3.

END OF SECTION