



Model 825-3 Torsion Shaft Mounted DC Commercial Sectional Door Operator  
Commercial Operators that use **SafetySense™**

**What is SafetySense™?**

SafetySense™ is a product design concept used to reduce a technicians exposure to the hazards that exist during the installation and maintenance process.

SafetySense™ is also the technology used to provide the advanced safety functions included in all ZAP Series 3 Commercial Operators.

**Why SafetySense™**

Promotes safe work practices through product design to reduce the exposure to potential injury during the installation and maintenance process by reducing the time, materials, and equipment required to install and maintain a commercial sectional door operator by up to 75%.

Provides the industry's most advanced obstruction detection system which turns every edge of the door into an actively monitored contact safety edge that detects obstructions on any part of the door, in any direction of travel.

Provides an active monitoring system at start up that detects and prevents the operation of the door when an unsafe service condition exists anywhere on the door system.

Prevents thrown torsion cables on sectional doors that have closed onto dock equipment, debris, snow, and ice left in the door opening, saving companies thousands of dollars annually on unnecessary service costs.

Reduces the mechanical components that are used in traditional commercial operators, reducing the cost of their associated maintenance.

Provides universal mounting configurations on sectional doors regardless of the lift configuration or the limitations of space reducing installation costs.

Provides simple plug-in modules and ease of wiring to achieve various interlock scenarios to eliminate external limit relays and their required wiring.

Lowers electrical construction costs by reducing the number of circuits required to power a commercial operator by lowering the amp draw on a 115VAC single phase supply by up to 80%.

ZAP Series 3 Commercial Operators are by design  
**Simply Logical**

**ZAP Controls**  
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Not For Use In Residential Applications

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**Standard features of the ZAP 825-3 Commercial Operator SafetySense™ Door safety monitoring system**

The industry's most advanced sectional door monitoring system. It turns every edge of the door into a contact safety edge and also monitors the entire door system for unsafe operational and service conditions.

**NEMA4 Motor drive system**

Continuous duty, gear reduced DC Motor, for use in both normal and wet locations. A motor cover is provided with all 825-3 ZAP Operators.

**NEMA 4X rated controller case with push button controls**

Provides a powerful soft start/soft stop output of 650 Newtons of force to drive our commercial operator motor system. Designed for safety and convenience, it provides ground level serviceability to the operator control system and provides 3-button open/close/stop control to motor. It is designed to accept either a 115VAC or 208-230VAC single phase power supply wired directly to the controller. A 24' low voltage motor cable is supplied for easy wiring of the motor. If used in a wet location, watertight connections are required on wiring introduced into the controller.

**Auto-Close Timer**

Fully programmable auto-close timer. Requires photo cell.

**Prevent door operation interlock**

Built in interlock to prevent door operation, used with truck restraint systems, shared track applications or pass doors.

**Manual Operation Release Lever**

An easy to use manual override release lever is provided. When released it allows easy hand operation of the door. It also provides ground level access to maintaining the operators drive belt adjustment.

**Radio Control Connections**

Wiring terminals are provided inside the controller for adding external radio control receivers from any desired manufacturer.

# ZAP Controls

## Model 825-3 DC Commercial Sectional Door Operator

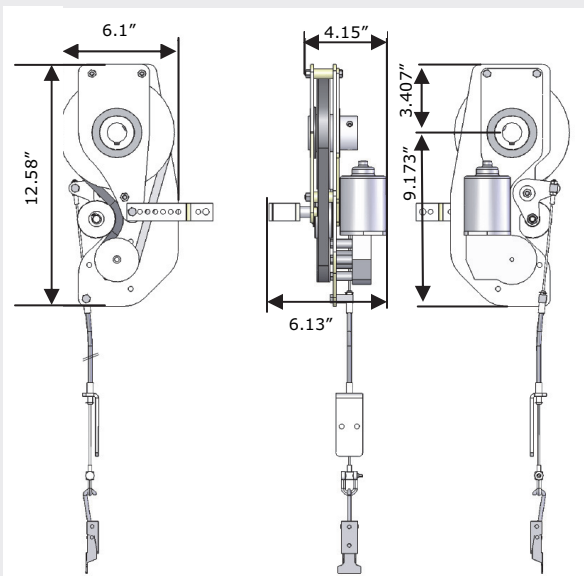
Commercial Operators that use **SafetySense™**

| Lift Requirement     | Low Headroom | Standard Lift | High Lift to 54" | High Lift above 54" | Vertical Lift |
|----------------------|--------------|---------------|------------------|---------------------|---------------|
| Door Size W X H      |              |               |                  |                     |               |
| 8'-20'W X 6'-8'6" H  | 825-3V-B     | 825-3V-B      | 825-3V-C         | 825-3V-D            | 825-3V-D      |
| 8'-10'W X 8'6"-10' H | 825-3V-B     | 825-3V-B      | 825-3V-C         | 825-3V-D            | See 8825-3V-D |

Please read the instructions fully or attend training online before installation. Consult factory for door sizes beyond scope provided above. The maximum door weight for sizes listed above is 600 Lbs. The minimum door height is 6'.

### Technical information for the 825 Series 3

|                                |   |
|--------------------------------|---|
| Controller case rating:        | NEMA 4X/IP66  |
| Controller dimensions:         | 8.7"H X 6.5"W X 4.7"D   |
| Single phase voltage:          | 115V US, 208-230V US, 208-230V EU                                       |
| Amp draw:                      | 2.8A  |
| Control circuit voltage:       | 6VDC  |
| Power rating                   | 650 Newtons Equiv. 1/2 HP   |
| Operator Motor Head Rating:    | NEMA 4 *  |
| Motor type:                    | DC Gear Reduced   |
| Motor cover dimensions:        | 13.25"H X 6.5"W X 6.25"D  |
| Motor Voltage:                 | 48-54 VDC   |
| Limits determination:          | Physical/Self Calibrating   |
| Duty cycle rating:             | Continuous  |
| Operating temp range:          | -22 deg F to 212 deg F  |
| Overload protection:           | Inherent motor current sensing  |
| Torsion shaft type required:   | Solid w/keyway or hollow tube   |
| Fits torsion shafts diameter:  | 1"  |
| Torsion shaft length required: | 4.5" beyond outer edge of track   |
| Side clearance required:       | 4.5" min for motor only   |
| Side clearance required:       | 7" with motor cover applied   |
| Replacement motor PN           | 600805  |
| Replacement belt PN/size       | 825-B PN600612 (AX22)<br>825-C PN600615 (AX25)<br>825-D PN600615 (AX25) |



825-3 USA

### Options and Accessories

#### Fraba Optoeye

##### UL 325 Compliant Monitored Entrapment Protection Device

The Opto Eye is a Nema 4X, UL 325 compliant monitored entrapment device designed for durability in all commercial applications. ZAP Part# 401002

#### Integrated Auto-Lock

The Auto-Lock provides integrated security with an electronic solenoid locking system that releases a shoot bolt above a roller when door is stopped and withdraws prior to door operation. ZAP Part# 8070

#### Rear torsion mounting kit

Provides a long Bowden cable to enable the belt tensioning system to reach rear torsion mounted operators. ZAP Part# 501262 5.5m Bowden Cable ZAP Part# 401002 large offset torque arm.

#### Battery Back Up

The battery back-up system provides safety and security for you and your commercial sectional door during power outages. ZAP Part# 8830

#### Auxiliary Input Expansion Module

The Input Expansion module for the expansion of input functions beyond the available connections on the main control board. It provides additional open, stop, close and cyclic operation input connections as well as an additional 24VDC supply. ZAP Part# 871

#### Fire Station module

The Fire Station module allows the incorporation of a second set of photo cells above man traffic height that will prevent the auto-close timer from timing out and closing a door before the vehicle has departed the facility. Once the vehicle has departed the opening fully, the timer is released to count down and close the door. ZAP Part# 871FS requires also Part# 401001 Photo Cells

#### Auxiliary modules

Various modules are available to facilitate interlock and accessory functions. Dock leveler interlock, door open interlock, door closed interlock, traffic light control, driver communication light control, warning devices, and accessory controls can be achieved by adding the appropriate module.

#### Action required

| Action required   | Module used     |
|---|-----------------|
| Truck restraint interlock   |                 |
| Requires external N/O relay to close when restraint is engaged  | None            |
| Dock leveler interlock to a prevent operation relay on the dock leveler control panel   | 82DTLM          |
| Dock leveler interlock to a live voltage control circuit 120VAC-240VAC less than 5amp   | 82DTLM          |
| Dock leveler interlock to a live voltage control circuit 120VAC-240VAC in excess of 5amp  | 82DTLM & ZA0192 |
| Driver communication light control (Requires Red Green Traffic Light)   | 82DTLM          |
| Door open interlock (Used for bug screen doors that use a shared track system)  | 82DTLM          |
| Above functions but with advance closure warning (Requires setting close delay programming function) (Requires Warning Device) Substitute 82DTLM with | 822             |
| Sally Port (Interlock 2 doors requiring 1 door is closed before other can open)   | 82TLM           |
| Through traffic light control (Door Open-green light/Any other position-red light)  | 82TLM           |
| Above functions but with advance closure warning (Requires setting close delay programming function) (Requires Warning Device) Substitute 82TLM with  | 821             |

#### Accessory Control Functions

##### 82DTLM

|   |             |
|---|-------------|
| Accessory on/ door fully open/ off any other position   | I-lock      |
| Accessory on/ door start open/ off when fully closed    | Red light   |
| Accessory on/ door fully closed/ off any other position | Green light |

##### 82TLM

|  |             |
|--|-------------|
| Accessory on/ door fully closed / off any other position | I-lock      |
| Accessory on/ door fully open/ off any other position    | Green light |
| Accessory off/ door fully open / on any other position   | Red light   |