

Holder/Release Device with Integral Door Closer, with or without Smoke Detector

# DORMA 1800

# The DORMA 1800 Series is an electromagnetically controlled door closer, available with or without integral smoke detector for use on fire and/or smoke barrier doors.

The 1800 Series has been developed to inexpensively guard a single door opening from smoke and fire, in place of an array of expensive products. In addition, it will allow unimpeded, easy access throughout a building while not affecting its integrity to control the spread of smoke and/or fire.

Upon interruption or loss of current in either the H or SF specification, the unit will automatically close the door from any angle of opening. This is caused by release of the electromagnetic solenoid, thus allowing the door closer to perform its function.

The DORMA 1800 Series Hold Open (H) function is designed for buildings where it is desirable to have smoke/fire doors in the open position under normal circumstances, but which must close upon loss of current. These units will operate as a standard door control, whether or not power is applied.

The DORMA 1800 Series Swing Free (SF) function is designed for buildings where it is desirable to have fire/smoke doors operating as if there were no closing device fitted under normal circumstances, but must be self-closing under alarm or loss of current.

**Technical Details:**

- Door closing control by the proven DORMA 8600 Series door closer with spring power adjustment and adjustable hydraulic backcheck.
- Two noncritical adjusting valves (sweep and latch) work to provide consistent closing speeds under a wide variety of temperature changes.
- Interfaces with new or existing smoke/fire control systems.
- Handed with full cover.
- Can be connected to main electrical current 24 VDC, 24 VAC, or 120 VAC. Specify only on units without detector.
- H – Single point 20° to 180°.
- H can be manually released.
- SF – Swing Free, 0° to 180°.
- Optional concealed on/off push switch to bypass hold open feature. Specify BYP.
- Concealed wiring application standard. Surface wiring option available if specified. Specify EXP.
- Fail-safe type design releases hold open/swing free and closes door when input current is interrupted or alarm state is signaled.
- Both H and SF units function as standard door closers when there is no current applied.
- Models without detectors can be powered directly by models with detectors, in which case solenoids from both models de-energize under loss of power or an alarm condition.

**1800 SD Models (with detectors) Only:**

- Unit can stand alone, independent of other systems.
- LED blinks red every 15 seconds showing that the unit is on guard. When in alarm, the LED glows red constantly.
- Detector LED and hold solenoid latch in alarm mode and require manual reset.
- Test feature and alarm reset built into LED indicator light pipe.
- Detector module has connections for paired doors, remote detector, monitoring and line supervision at no extra cost.
- Stand alone features allowed by interconnected systems of up to five units with detectors or five pairs of units both with and without detectors.
- Normally open alarm contacts.
- Normally closed trouble contacts open with power interruption.
- Field sensitivity measurement of detector possible.

**Certification:**
The DORMA 1800 Series is listed by UL and CUL under their continuing reinspection programs. The DORMA 1800 Series is certified to conform to the requirements of ANSI/BHMA A156.15. California State Fire Marshall (CSFM) approved.

**Specification:**
DORMA 1800 Series electromagnetic surface applied, fire/life safety, hydraulic door closer with or without integral smoke detector – power supply to suit hold open (H) or swing free (SF) specification. The H model to have positive single-point hold open at any angle between 20° and 180° when current is applied. The SF model to operate without any closing force between 0° and 180° when current is applied. (4°–6° fall away may occur.)

When the smoke density in the chamber of the 1800 detector exceeds the fixed threshold value, the alarm is given, the LED turns red, the circuit for the hold open device is cut off and the door closer immediately shuts the door.

**Optional Specification:**
The 1800 Series will have manual on/off switch to bypass hold open function. All 1800 devices will have exposed wiring bracket for surface wiring.

**Installation:**
Top Jamb or Track.

**Finishes:**

**Standard Sprayed Finishes:**
Primed for Painting: 600.
Aluminum: 689.
Bronze: 691 (Dull), 690 (Statuary), 695 (Dark Duranodic).
Gold: 696.
Black: 693.

**Optional DORMA Custom Color or Designer Color Finishes:**
Contact Customer Service.

**Warranty:**
For details, refer to **Limited Warranty Policy** in the current DORMA Price List.

**Options:**
**(BYP)** - Concealed manual on/off switch to bypass hold open function. Access hole is drilled in the cover.
**(EXP)** - Exposed wiring bracket

**Electrical Specifications:**
Operational Voltage:
Models with Detector:
24 V AC/DC 150 mA
120 VAC 50/60 HZ - 150 mA

Models without Detector:
24 V AC/DC 125 mA
120 VAC 50/60 HZ - 125 mA

**1800 SD Models (with detectors) Only:**
Smoke Detector:
Contact Ratings: Alarm and/or accessory contacts (resistive load) 1.25 A max. at 24 VDC, 0.3 A max. at 120 VAC. Trouble contact (resistive load): 0.5 A max. at 24 VDC.

Maximum remote alarm indicator lamp output: 0.3 A at 24 VDC. Provides power to operate remote LED.

Alarm Indications:
1. Red LED "on" in alarm.
2. Alarm relay contacts transfer.

Trouble Indications:
1. N.C. trouble contacts open upon loss of power.
2. Red LED stops flashing.

Compatibility:
Connects to one area detector for remote sensing. Interfaces with five alarm systems using N.C. or N.O. alarm contacts and N.C. (under power) trouble contacts. Five detectors may be interconnected for zone control of doors or pairs of doors.

Transient Protection:
To meet U.L. 268 Standard.

Replaceability:
Field-removable from door closer housing. Return to factory for repair and/or replacement. Swirl is field-removable for cleaning.

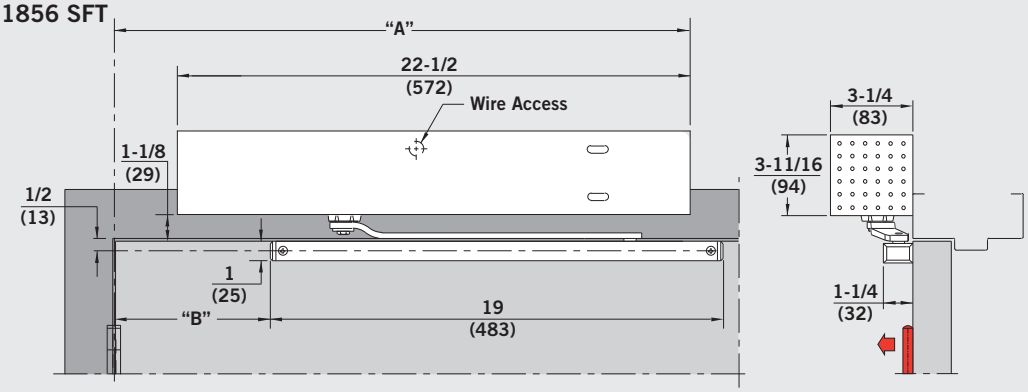
**NOTE:** In applications requiring the 4-wire alarm initiating loop, the installing company will be responsible for placing the appropriate value resistor as required for use with the control panel.

The quality management system at the Reamstown, PA facility is certified to ISO 9001:2008.*

*DORMA Door Controls Inc., dba: DORMA Architectural Hardware

# Track Installation

**1856 HT SD/1856 SFT SD**
**1856 HT/1856 SFT**




**Size Selection Chart**

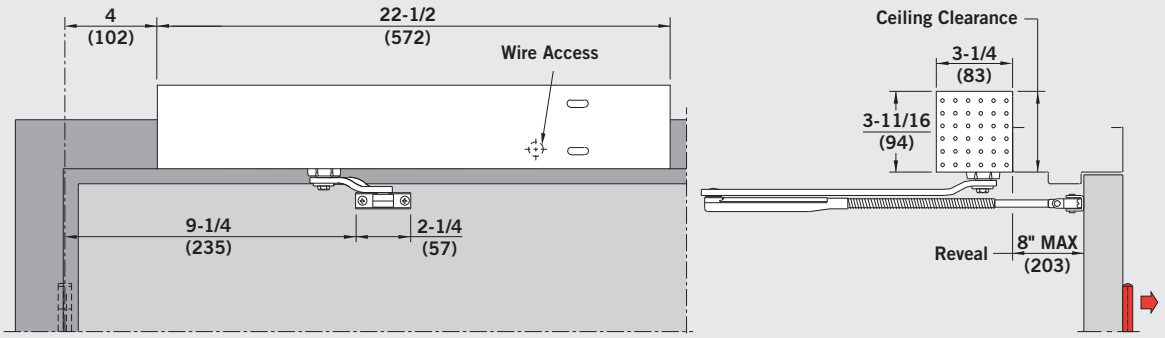
| DEVICE | DOOR WIDTH |
|---|---|
| 1856 HT SD<br>1856 SFT SD<br>1856 HT<br>1856 SFT | 2'-6" to 4'-0" |

| TEMPLATE REFERENCE | DIM "A" | DIM "B" |
|---|---|---|
| 85° | 22-1/2" (572) | 8-1/8" (206) |
| 90° | 22-1/2" (572) | 7" (178) |
| 110° | 21" (533) | 6-3/8" (162) |
| 180° | 20-1/2" (521) | 3-7/8" (98) |

**Specify:** If the unit is to be used on a frame face less than 2" (50 mm).

# Top Jamb Installation

**1816 HJ SD/1816 SFJ SD**
**1816 HJ/1816 SFJ**



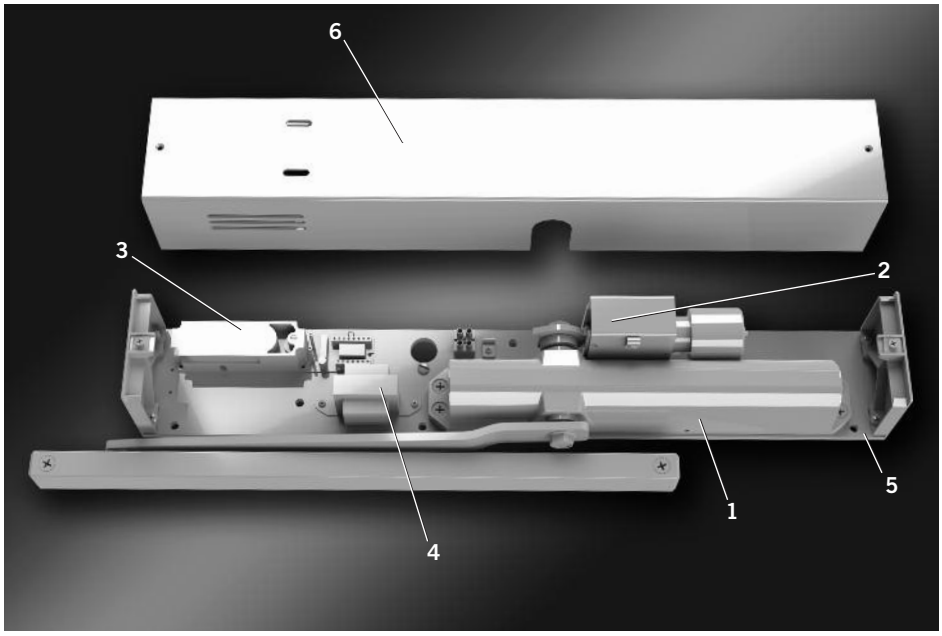

## Size Selection Chart

| DEVICE | DOOR WIDTH |
|---|---|
| 1816 HJ SD<br>1816 SFJ SD<br>1816 HJ<br>1816 SFJ | 2'-0" to 4'-0" |

**Standard:** SR48: 4" to 8" reveal
**Specify:** SR04: 0" to 4" reveal

**Specify:** Top Jamb Drop Plate if the ceiling clearance is less than 3-5/8" (92 mm).

- The standard arm will accommodate 4"–8" (102–203 mm) reveals.
- Maximum reveal is 4-1/2" for 180° opening.




1. 8600 Series Door Closer
2. Electromagnetic Hold Open Device
3. Photoelectric Detector Module
4. Step Down Transformer (used when incoming power is 120 volts )
5. Base Plate
6. Cover

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