



Holder/Release  
Devices with  
Integral Door Closers

# DORMA EMF/ EMR

## The DORMA EMR Series holder/release device incorporates a photoelectric detector and can control the spread of smoke and fire in a specific location or throughout the building if wired into a central alarm panel.

The EMR Series is designed to monitor and contain the spread of fire and smoke while allowing unimpeded, easy access throughout a building. The EMR Series includes three models for price and door closer feature/function considerations. The TS93 in Contur Design, with the extra efficient cam and roller technology, can be used on larger doors, while the 8900 rack and pinion closer offers a narrow projection for less cost. When value engineering is a concern, the 8600 meets the need.

These units are compatible with new or existing fire/smoke control systems. Integral features of the EMR models are the photoelectric detector and holder/release device. The EMR's integral detector offers an array of electrical and signaling features along with the capability of controlling a non-detected EMF unit for pairs of doors. The holder/release device holds a door open under normal conditions. However, if an alarm state or loss of electric current occurs, it permits the closing of the door from any angle of opening.

These units are particularly suited for use in hotels, hospitals, nursing homes, schools, and senior facilities — because they allow easy accessibility on a day-to-day basis, while quickly curtailing the spread of smoke and/or fire in an emergency.

In the case of an alarm state signaled by the central control system or main power failure, current to the electromagnetic hold open device is interrupted, thus allowing the door closing mechanism to take over and shut the door.

### Technical Details:

- Door closing control by the proven TS93, 8900, or 8600 Series closer with spring power adjustment and adjustable hydraulic backcheck.
- Patented hold open design prevents damage to the door, frame, holder/release device, or other installed hardware. This design enables initial hold while allowing the door to be manually opened beyond the hold open point.
- Detector can control one EMF unit for pairs of doors.
- Interfaces with new or existing smoke or fire control systems.
- Can be wired for concealed or surface wiring.
- HO can be released manually.
- HO – single point adjustable on pull side, push side, and double egress applications.
- Separate door stops recommended to limit maximum door swing.

### Certification:

The DORMA EMR Series is listed by U.L. and C.U.L under their continuing reinspection programs. The EMR Series is BHMA certified to conform to the requirements of ANSI 156.15. California State Fire Marshall (CSFM) approved.

### Operation:

24 V AC/DC at 165 mA (1 solenoid), 310 mA (2 solenoids). 120 VAC requires optional transformer (TRANSF). See accessories, page 4. (The EMR detector is capable of powering and controlling a non-detected EMF unit; the two solenoid value above represents an EMR/EMF combination).

The integral detector of the EMR can be powered by a 24 V input only. A built-in rectifier converts AC linevoltage to DC, allowing all EMR models to accommodate a 24 VDC or 24 VAC input. When using 120 V line voltage, a transformer external from the unit is required to step the voltage down from 120 V to 24 V.

### 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 amps 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:

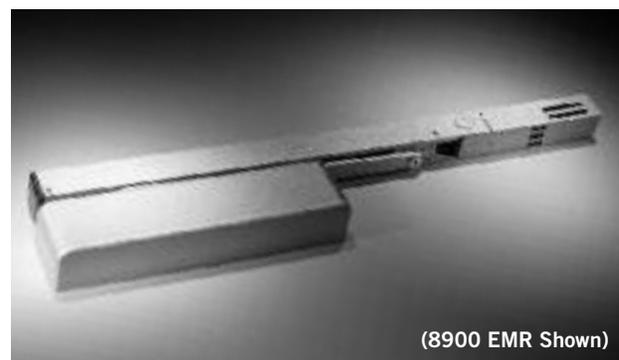
1. N.C. trouble contacts open upon loss of power.
2. Red LED stops flashing.

### Compatibility:

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

### Transient Protection:

To meet U.L. 268 Standard.



(8900 EMR Shown)

**Replaceability:**

Detector is field removable from unit. Return to factory for repair and/or replacement. Smoke chamber 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.

**Finishes:****Standard Sprayed Finishes:**

Primed for Painting: 600.

Aluminum: 689.

Bronze: 691 (Dull), 690 (Statuary), or 695 (Dark Durandic).

Gold: 696.

Black: 693.

**Optional DORMA Custom Color or Designer Color Finishes:**

Contact Customer Service.

**Warranty:**

Closer: 25 Years.

Electrical Components: 2 Years.

**Specification: (TS93 EMR)**

DORMA TS93 EMR electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. The closer must utilize cam and roller technology with greater efficiency than a typical rack and pinion track closer to allow use on wider doors. The closers will have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate doors ranging from 2'-8" to 5'-0". Door sizes vary depending on installation type. Devices must accept 24 VDC, 24 VAC, or 120 VAC with an external step-down transformer (120 VAC to 24 VAC). The TS93 EMR to have positive single point HO at any angle from 80° to 120° on **T** applications, 85° to 105° on **PT** applications, and 80° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or a manual pull on the door disengages the hold open function and the TS93 door closer closes the door. If the central control system goes into an "alarm condition," the door closer will close the door.

**Optional Specification: (TS93 EMR)**

All closers to have sex nuts when mounting on 1-3/4" thick composite or labeled fire doors (SN3). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

**Specification: (8900 EMR)**

DORMA 8900 EMR electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. The 8900 closer incorporates a rack and pinion design with a narrow

2-1/8" projection and sex nuts standard. The closers will have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate doors ranging from 2'-8" to 4'-0". Door sizes vary depending on installation type. Devices must accept 24 VDC, 24 VAC, or 120 VAC with an external step-down transformer (120 VAC to 24 VAC). The 8900 EMR to have positive single point HO at any angle from 80° to 120° on **T** applications, 80° to 105° on **PT** applications, and 80° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or a manual pull on the door disengages the hold open function and the 8900 door closer closes the door. If the central control system goes into an "alarm condition," the door closer takes over. All 8900 fully adjustable spring force door closers to include an integral design to positively stop adjustment of the spring at the minimum and maximum spring force settings.

**Optional Specification: (8900 EMR)**

Door closers to have full metal cover (FMC). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

**Specification: (8600 EMR)**

DORMA 8600 EMR Series electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. The 8600 closer incorporates a rack and pinion design with a slim cover and a narrow 2-1/8" projection. The closers will have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate door widths ranging from 2'-8" to 4'-0", door sizes vary depending on installation type. Devices must accept 24 VDC, 24 VAC, or 120 VAC with an external step-down transformer (120 VAC to 24 VAC). The 8600 EMR to have positive single point HO at any angle from 80° to 120° on **T** applications, 80° to 105° on **PT** applications, and 80° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or a manual pull on the door disengages the hold open function and the 8600 door closer closes the door. If the central control system goes into an "alarm condition," the door closer will be activated. All 8600 fully adjustable spring force door closers to include an integral design to positively stop adjustment of the spring at the minimum and maximum spring force settings.

**Optional Specification: (8600 EMR)**

Door closers to have full plastic cover (FC) or full metal cover (FMC). All closers to have sex nuts and machine screws when mounting on 1-3/4" thick composite or labeled fire doors (SNB1). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

How to Order EMR Series			Example
Closer	TS93-1 8916 TS93-5, 8956, 8656	Adjustable sizes 1-5 (see size selection chart) Adjustable sizes 1-6 (see size selection chart) Adjustable sizes 5-6 with 50% additional closing power over size 6 (see size selection chart)	TS93-1 8916 8656
Arm	T PT TDE	Pull side track Push side track Pull side track double egress (specify hand)	8656 EMR T 8656 EMR PT 8656 EMR TDE RH
Option/Accessory		Specify the option or accessory	8956 EMR × TRANSF
Finish		See DORMA finish chart or finish information in this brochure. Example: 689 – Aluminum	TS93-1 EMR 689

**Options/Accessories**

**TS93 EMR:**

**SN3** - Sex nuts (4) for 1-3/4" door

**8900 EMR:**

**FC** - Full plastic cover for door closer (standard with unit)

**FMC** - Full metal cover for door closer

**8600 EMR:**

**COV** - Slim plastic cover for door closer (standard with unit)

**FC** - Full plastic cover for door closer

**FMC** - Full metal cover for door closer

**SNB1** - Sex nuts w/machine screws (4) for 1-3/4" door

**All EMRs:**

**BYP** - Concealed switch to release hold open function

**TRANSF** - Transformer for 120 VAC applications (120 to 24 VAC).

One transformer per unit. Fits standard 4" × 4" electrical box.

**EXP** - Exposed wiring preparation for surface wiring

**DETECTOR** - Replacement detector module

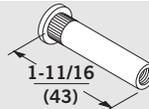
**600 RFR 24** - Radio frequency receiver for wireless release of hold open

**800 HH/RFT 1** - Hand held transmitter, transmits signal to the 600 RFR 24 receiver

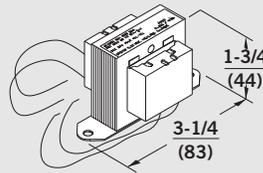
**General Information:**

When using the EMR or EMF unit with wide throw or swing clear hinges, consult factory for details.

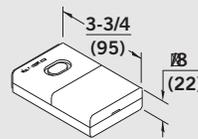
**Sex Nuts**



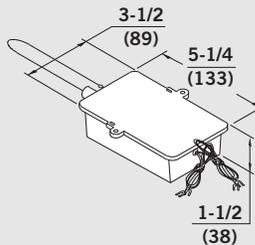
**Transformer**



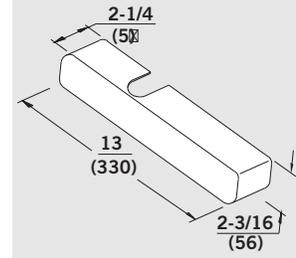
**Hand Held Transmitter**



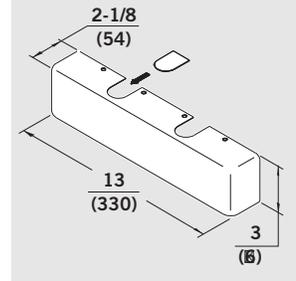
**Radio Frequency Receiver**



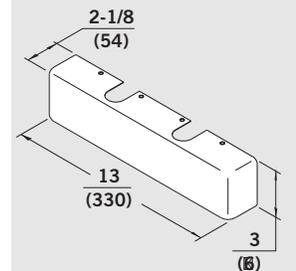
**COV**



**FC**



**FMC**



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



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

### TS93 EMR T (Pull Side Installation)

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH					
		2'-9" min.	3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMR T	INTERIOR	•	•	•	•	N/A	N/A
TS93-5 EMR T	INTERIOR	N/A	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 2-1/2" top door rail required for closer.

Maximum door swing 170°.

Hold open range 80°–120°.

### TS93 EMR PT (Push Side Installation)

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH					
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMR PT	INTERIOR	•	•	•	•	N/A	N/A
TS93-5 EMR PT	INTERIOR	N/A	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 4-1/4" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 85°–105°.

### TS93 EMR TDE (Double Egress Installation)

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH				
		3'-0" min.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMR TDE	INTERIOR	•	•	•	N/A	N/A
TS93-5 EMR TDE	INTERIOR	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3" top door rail required for closer.

Maximum door swing 130°.

Hold open range 80°–115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance required between door face and wall for 90° opening.

Minimum double door width 72" (36" single door).

### 8900 EMR T (Pull Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-9" min.	3'-0" max.	3'-6" max.	4'-0" max.
8916 EMR T	INTERIOR	•	•	•	N/A
8956 EMR T	INTERIOR	N/A	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3" door rail required for mounting closer.

Maximum door swing 170°.

Hold open range 80°–120°.

### 8900 EMR PT (Push Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.
8916 EMR PT	INTERIOR	•	•	•	N/A
8956 EMR PT	INTERIOR	N/A	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 6" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 80°–105°.

### 8900 EMR TDE (Double Egress Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH		
		3'-0" min.	3'-6" max.	4'-0" max.
8916 EMR TDE	INTERIOR	•	•	N/A
8956 EMR TDE	INTERIOR	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3-1/2" top door rail required for closer.

Maximum door swing 130°.

Hold open range 80°–115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance required between door face and wall for 90° opening.

Minimum double door width 72" (36" single door).

### 8600 EMR T (Pull Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-9" min.	3'-0" max.	3'-6" max.	4'-0" max.
8656 EMR T	INTERIOR	•	•	•	•

• – Recommended application

Minimum 2" overhead clearance required for track assembly.

Minimum 2-1/2" top door rail required for closer.

Maximum door swing 170°.

Hold open range 80°–120°.

### 8600 EMR PT (Push Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.
8656 EMR PT	INTERIOR	•	•	•	•

• – Recommended application

Minimum 5-1/2" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 80°–105°.

### 8600 EMR TDE (Double Egress Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH		
		3'-0" min.	3'-6" max.	4'-0" max.
8656 EMR TDE	INTERIOR	•	•	•

• – Recommended application

Minimum 2" overhead clearance required for track assembly.

Minimum 3" top door rail required for closer.

Maximum door swing 130°.

Hold open range 80°–115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance required between door face and wall for 90° opening.

Minimum double door width 72" (36" single door).

NOTE: Consult DORMA Technical Services for door sizes other than shown.

## The DORMA EMF Series is an electromagnetically controlled, frame-mounted, track hold open door closer for use on fire and/or smoke barrier doors. The EMF can be interconnected with an EMR to control pairs of doors.

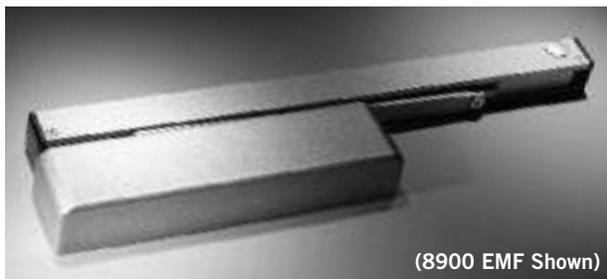
Like the EMR, the non-detected EMF Series is designed to contain the spread of fire and smoke. Three models are also available for price and door closer feature/function considerations. When using an EMF and EMR on a pair of doors, models with matching closers can be used. The TS93 in Contur Design, 8900, and 8600 Series closers offer the same features and functions as with the EMR models.

These units are compatible with new or existing fire/smoke control systems. An integral feature of the EMF is the holder/release device. It acts as a hold open unit in normal conditions. However, in an alarm state or loss of electric current, it permits the closing of the door from any angle of opening.

In the case of an alarm state signaled by the central control system or main power failure, current to the electromagnetic hold open device is interrupted, thus allowing the door closing mechanism to take over and shut the door.

### Technical Details:

- Door closing control by the proven TS93, 8900, or 8600 Series closer with spring power adjustment and adjustable hydraulic backcheck.
- Patented hold open design prevents damage to the door, frame, holder/release device, or other installed hardware. This design enables initial hold while allowing the door to be manually opened beyond the hold open point.
- Interfaces with new or existing smoke or fire control systems.
- Can be wired for concealed or surface wiring.
- HO can be released manually.
- HO – single point adjustable on pull side, push side, and double egress applications.
- Can be used as companion unit to detected EMR unit for cross corridor door application (24 VDC only).
- Separate door stops recommended to limit maximum door swing.



### Certification:

The DORMA EMF Series is listed by U.L. and C.U.L. under their continuing reinspection programs. The EMF Series is BHMA certified to conform to the requirements of ANSI 156.15. California State Fire Marshall (CSFM) approved.

### Operation:

24 V AC/DC at 150 mA, 120 VAC at 30 mA (specify).

The 24 VDC unit utilizes a 24 VDC solenoid. A 24 VAC unit utilizes a 24 VDC solenoid with an in-line rectifier to convert line voltage from AC to DC. The 120 VAC unit utilizes a 120 VAC solenoid (specify voltage when ordering).

A feature of the EMR detector is an auxiliary 24 VDC output. This output can be used to power and control an EMF unit for pairs of doors. When using an EMF unit as a companion to an EMR, specify the 24 VDC unit.

### Finishes:

#### Standard Sprayed Finishes:

Primed for Painting: 600.

Aluminum: 689.

Bronze: 691 (Dull), 690 (Statuary), or 695 (Dark Duranodic).

Gold: 696.

Black: 693.

#### Optional DORMA Custom Color or Designer Color Finishes:

Contact Customer Service.

### Warranty:

Closer: 25 Years.

Electrical Components: 2 Years.

### Specification: (TS93 EMF)

DORMA TS93 EMF electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. Closer to use cam and roller technology with greater efficiency for use on wider doors than a typical rack and pinion track closer. Closers to have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate doors ranging from 2'-4" to 5'-0". Door sizes vary depending on installation type. A 24 VDC, 24 VAC, and 120 VAC device to be available. Specify voltage. The TS93 EMF to have positive single point HO at any angle from 80° to 120° on **T** applications, 85° to 105° on **PT** applications, and 85° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or manual pull on the door disengages hold open function and the TS93 closes the door. If central control system goes into an "alarm condition," door closer will close the door.

### Optional Specification: (TS93 EMF)

All closers to have sex nuts when mounting on 1-3/4" thick composite or labeled fire doors (SN3). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

**Specification: (8900 EMF)**

DORMA 8900 EMF electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. Closer incorporates rack and pinion design with a narrow 2-1/8" projection. Closers to have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate doors ranging from 2'-4" to 4'-0". Door sizes vary depending on installation type. A 24 VDC, 24 VAC, and 120 VAC device to be available. Specify voltage. The 8900 EMF to have positive single point HO at any angle from 80° to 120° on **T** applications, 80° to 105° on **PT** applications, and 80° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or manual pull on door disengages hold open function and the 8900 closes the door. If central control system goes into "alarm condition," door closer will close the door. All 8900 fully adjustable spring force door closers to include an integral design to positively stop adjustment of the spring at the minimum and maximum spring force settings.

**Optional Specification: (8900 EMF)**

Closers to have full metal cover (FMC). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

**Specification: (8600 EMF)**

DORMA 8600 EMF electromagnetic surface applied fire/life safety hydraulic door closer to suit hold open specification. Closer incorporates rack and pinion design with slim cover and a narrow 2-1/8" projection. Closers will have hydraulic backcheck to prevent uncontrolled opening of the door. Devices to accommodate doors ranging from 2'-4" to 4'-0". Door sizes vary depending on installation type. A 24 VDC, 24 VAC, and 120 VAC device to be available. Specify voltage. The 8600 EMF to have positive single point HO at any angle from 80° to 120° on **T** applications, 80° to 105° on **PT** applications, and 80° to 115° on **TDE** applications when current is applied. Degree of hold open range will vary for doors hung on sizes other than 4-1/2" x 4-1/2" hinges or 3/4" offset pivots. Separate door stops recommended to limit maximum door swing. Loss of electric current or manual pull on door disengages the hold

open function and the 8600 closes the door. If central control system goes into "alarm condition," door closer will close the door. All 8600 fully adjustable spring force door closers to include an integral design to positively stop adjustment of the spring at the minimum and maximum spring force settings.

**Optional Specification: (8600 EMF)**

Door closers to have full plastic cover (FC) or full metal cover (FMC). All closers to have sex nuts when mounting on 1-3/4" thick composite or labeled fire doors (SNB1). All devices to have exposed wiring (EXP). All devices to have wireless release of hold open with radio frequency receiver (600 RFR 24) and hand held transmitter (800 HH/RFT 1).

**Options/Accessories**

**TS93 EMF:**

**SN3** - Sex nuts (4) for 1-3/4" door

**8900 EMF:**

**FC** - Full plastic cover for door closer (standard with unit)

**FMC** - Full metal cover for door closer

**8600 EMF:**

**COV** - Slim plastic cover for door closer (standard with unit)

**FC** - Full plastic cover for door closer

**FMC** - Full metal cover for door closer

**SNB1** - Sex nuts w/machine screws (4) for 1-3/4" door

**All EMFs:**

**BYP** - Concealed switch to release hold open function

**EXP** - Exposed wiring preparation for surface wiring

**600 RFR 24** - Radio frequency receiver for wireless release of hold open

**800 HH/RFT 1** - Hand held transmitter, transmits signal to the 600 RFR 24 receiver



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



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

How to Order EMF Series		Example
Closer	TS93-1 8916 TS93-5, 8956, 8656	Adjustable sizes 1–5 (see size selection chart) Adjustable sizes 1–6 (see size selection chart) Adjustable sizes 5–6 with 50% additional closing power over size 6 (see size selection chart)
Arm	T PT TDE	Pull side track Push side track Pull side track double egress (specify hand)
Voltage	24 V, 120 V	Specify 24 VDC, 24 VAC, or 120 VAC
Option/Accessory		Specify the option or accessory
Finish		See DORMA finish chart or finish information in this brochure. Example: 689 – Aluminum

### TS93 EMF T (Pull Side Installation)

Technical drawing showing dimensions for TS93 EMF T (Pull Side Installation). Dimensions include 4-1/4 (108), 23 (584), 4-3/16 (106), 10-15/16 (28), 1-1/2 (38), 5 (12), 2-1/8 (54), and Incoming Power. A detail view shows the door assembly with a 2-1/8 (54) door rail and a 1-1/2 (38) track assembly. The drawing is labeled '4-1/2" x 4-1/2" Butt Hinges'.

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH						
		2'-4" min.	2'-6" max.	3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMF T	INTERIOR	•	•	•	•	•	N/A	N/A
TS93-5 EMF T	INTERIOR	N/A	N/A	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 2-1/2" door rail required for closer.

Maximum door swing 170°.

Hold open range 80°–120°.

### TS93 EMF PT (Push Side Installation)

Technical drawing showing dimensions for TS93 EMF PT (Push Side Installation). Dimensions include 23 (584), 6-1/16 (154), 10-15/16 (28), 1-1/2 (38), 5 (12), 2-1/8 (54), and Incoming Power. A detail view shows the door assembly with a 2-1/8 (54) door rail and a 1-1/2 (38) track assembly. The drawing is labeled '4-1/2" x 4-1/2" Butt Hinges'.

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH					
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMF PT	INTERIOR	•	•	•	•	N/A	N/A
TS93-5 EMF PT	INTERIOR	N/A	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 4-1/4" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 85°–105°.

### TS93 EMF TDE (Double Egress Installation)

Technical drawing showing dimensions for TS93 EMF TDE (Double Egress Installation). Dimensions include 6-3/8 (162), 23 (584), 4-3/16 (106), 10-15/16 (28), 3-1/2 (89), 1-1/2 (38), 5-5/8 (143), 2-1/8 (54), Incoming Power, and Reveal 2 (51) Min. A detail view shows the door assembly with a 2-1/8 (54) door rail, a 3-1/2 (89) track assembly, and a 2 (51) Min. reveal. The drawing is labeled '4-1/2" x 4-1/2" Butt Hinges'.

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH					
		2'-6" min.	3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS93-1 EMF TDE	INTERIOR	•	•	•	•	N/A	N/A
TS93-5 EMF TDE	INTERIOR	N/A	N/A	N/A	•	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3" top door rail required for closer.

Maximum door swing 130°.

Hold open range 85°–115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance required between door face and wall for 90° opening.

Minimum double door width 60" (30" single door).

### 8900 EMF T (Pull Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH				
		2'-4" min.	2'-6" max.	3'-0" max.	3'-6" max.	4'-0" max.
8916 EMF T	INTERIOR	•	•	•	•	N/A
8956 EMF T	INTERIOR	N/A	N/A	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3" top door rail required for closer.

Maximum door swing 170°.

Hold open range 80°–120°.

### 8900 EMF PT (Push Side Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.
8916 EMF PT	INTERIOR	•	•	•	N/A
8956 EMF PT	INTERIOR	N/A	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 6" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 80°–105°.

### 8900 EMF TDE (Double Egress Installation)

4-1/2" x 4-1/2" Butt Hinges

**Size Selection Chart**

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-6" min.	3'-0" max.	3'-6" max.	4'-0" max.
8916 EMF TDE	INTERIOR	•	•	•	N/A
8956 EMF TDE	INTERIOR	N/A	N/A	•	•

- – Recommended application
- N/A – Not applicable/Application not recommended

Minimum 2" overhead clearance required for track assembly.

Minimum 3-1/2" top door rail required for closer.

Maximum door swing 130°.

Hold open range 80°–115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance between door face and wall for 90° opening.

Minimum double door width 60" (30" single door).

### 8600 EMF T (Pull Side Installation)

4-1/2" x 4-1/2" Butt Hinges

Size Selection Chart

- Recommended application

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH				
		2'-4" min.	2'-6" max.	3'-0" max.	3'-6" max.	4'-0" max.
8656 EMF T	INTERIOR	•	•	•	•	•

Minimum 2" overhead clearance required for track assembly.

Minimum 2-1/2" door rail required for closer.

Maximum door swing 170°.

Hold open range 80°-120°.

### 8600 EMF PT (Push Side Installation)

4-1/2" x 4-1/2" Butt Hinges

Size Selection Chart

- Recommended application

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-8" min.	3'-0" max.	3'-6" max.	4'-0" max.
8656 EMF PT	INTERIOR	•	•	•	•

Minimum 5-1/2" top door rail required for closer (5/8" stop).

Maximum door swing 120°.

Hold open range 80°-105°.

### 8600 EMF TDE (Double Egress Installation)

4-1/2" x 4-1/2" Butt Hinges

Size Selection Chart

- Recommended application

MODEL	INTERIOR/ EXTERIOR	DOOR WIDTH			
		2'-6" min.	3'-0" max.	3'-6" max.	4'-0" max.
8656 EMF TDE	INTERIOR	•	•	•	•

Minimum 2" overhead clearance required for track assembly.

Minimum 3" top door rail required for closer.

Maximum door swing 130°.

Hold open range 80°-115°.

Accommodates 3-1/2" reveal. Consult factory for others.

Minimum 4-1/2" arm clearance required between door face and wall for 90° opening.

Minimum double door width 60" (30" single door).

**NOTE:** Consult DORMA Technical Services for door sizes other than shown.

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