

# MS4209F/MS4309F/ MS4709F/MS4809F/ MS8209F/MS8309F

Fast-Acting, Fire/Smoke Control, Spring Return, On-Off type  
Direct-Coupled Damper Actuators

Fire/Smoke 전용 2위치 파이어 댐퍼 조작기(9Nm)



## 개요

파이어 전용 고속 스프링 리턴 타입 직결형 댐퍼 조작기는 다음과 같은 분야에 2위치 제어에 사용됩니다.

- UL555 화재 인증에 준한 파이어 댐퍼 조작
- Shut-Off 기능을 포함한 통합본전반의 고속 댐퍼 조작
- 에어 핸들러
- 환기 플랩
- 통풍 구멍
- 9Nm의 댐퍼 지원
- 신뢰성 높은 제어동작

## 특징

- 파이어 댐퍼용으로 사용되며 176°C에서 9Nm로 동작
- 2위치 고속 제어 가능한 댐퍼 조작기(동작시간:15초)
- 저소음, 고속운전 가능
- 다이캐스트 알루미늄 사용으로 강한 내구성
- 스테인레스스틸 재질의 내부 스프링
- 고온사용 가능한 인디케이터 내장
- 결선 용이(Wiring Box 분리 가능)
- UL 및 CE 인증

## 모델

Model	Spring Return Direction	Voltage in Vac	Torque in lb-in. (N · m)
MS4209F	CW	120	80 (9)
MS4309F	CCW		
MS4709F	CW	230	
MS4809F	CCW		
MS8209F	CW	24	
MS8309F	CCW		

## 특성 및 규격

### Electrical Ratings I

Power Input:

- MS4209, MS4309: 120 Vac +10%, -15%, 60 Hz.
- MS4709, MS4809: 230 Vac ±10%, 50/60 Hz.
- MS8209, MS8309: 24 Vac +20%, -10%, 50/60 Hz.

Power Consumption (at Rated Voltage):

- MS4209, MS4309: Holding: 0.13A, 7W.  
Running (at 80 lb-in.): 0.25A, 23W.
- MS4709, MS4809: Holding: 0.09A, 7W.  
Running (at 80 lb-in.): 0.13A, 23W.
- MS8209, MS8309: Holding: 7 VA.  
Running (at 80 lb-in.): 23 VA.

**Electrical Connections I**

MS4209, MS4309, MS8209, MS8309: Two color coded 16 in. leads.

MS4709, MS4809: 1m appliance cable.

Ground screw.

Three 7/8 in. conduit connection holes (fittings not included).

**Controller Type I**

MS4209, MS4309: Line voltage (120 Vac), two-position, spst (Series 40).

MS4709, MS4809: Line voltage (230 Vac), two-position, spst (Series 40).

MS8209, MS8309: Low voltage (24 Vac), two-position, spst (Series 80).

**Device Weight I** | 5 lb (2,3 kg).

**Temperature Ratings I**

Ambient: 0°F to 130°F (-18°C to 55°C).

Shipping and Storage: -40°F to 140°F (-40°C to 60°C).

**Humidity Rating I** | 5% to 95% RH noncondensing.

**Stroke I** | 95° ± 3°, mechanically limited.

**Torque Rating (at Rated Voltage) I**

Typical Holding (0°F to 350°F): 80 lb-in. (9 N?m).

Typical Driving (0°F to 350°F): 80 lb-in. (9 N?m).

Spring Return: 80 lb-in. (9 N?m).

Stall Maximum: 240 lb-in. (27 N?m).

**Noise Ratings (Maximum) I**

Driving Open: 80 dBA at 1m.

Holding: 20 dBA at 1m (no audible noise).

**Timing (at Rated Torque and Voltage) I**

Drive Open:

Ambient Conditions: 25 sec maximum, 14 sec typical.

At 350°F: 75 sec maximum.

Spring Close: 20 sec maximum.

**Design Life (at Rated Voltage) I** | 60,000 full stroke cycles.

**Minimum Damper Shaft Length I** | 1-1/2 in. (38 mm).

**보호등급 및 인증현황**

**Environmental Protection Ratings**

	MS4209, MS4309	MS4709, MS4809, MS8209, MS8309
NEMA1	○	○
IP54		○

**Approvals**

	MS4209, MS4309	MS4709, MS4809, MS8209, MS8309
UL/cUL	○	○
UL873 Plenum Rating, File No. E4436	○	○
CE		○
C-TICK		○

**결선도**

