

# 7200 SERIES

Electromechanical  
Closer/Holder



**Norton**<sup>®</sup>  
**ASSA ABLOY**

ASSA ABLOY, the global leader  
in door opening solutions

INTRODUCTION

The 7200 Series Electromechanical Closer/Holder combines the functions of an electromechanical door holder with the 7700 series door closer. The 7200 features a choice of two types of hold open functions:

**Selective Hold Open (Standard):** The door will hold open at any degree of opening beyond a pre-set hold open point, up to 175°, with a maximum allowable door opening of 180° (the exception is series 7250 which opens to 110°).

**Infinite Hold Open:** The door will hold open at any degree of opening up to 175° with a maximum allowable door opening of 180° (the exception is series 7250 which opens to 110°). Infinite Hold Open can be set in the field by turning the cam.



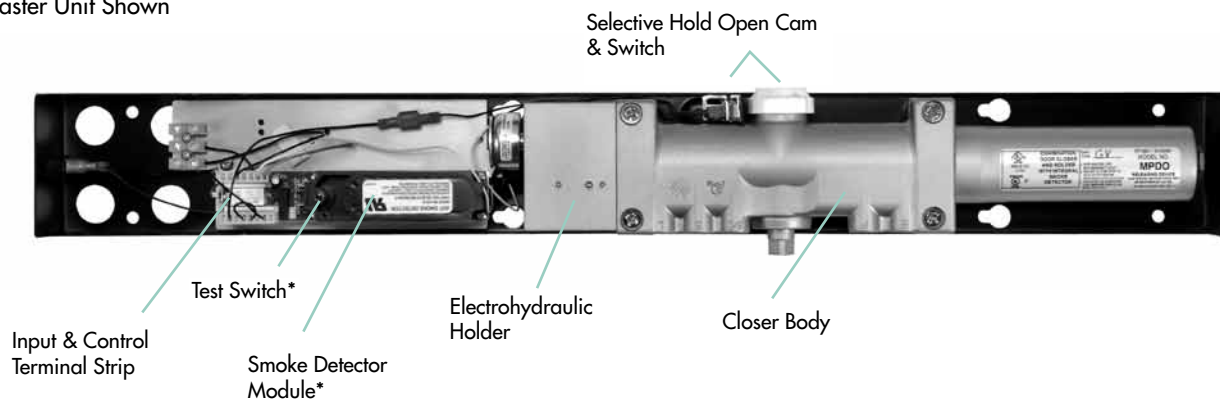
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# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## OVERVIEW

### Master Unit Shown



\*Master Unit Only

## BASIC UNITS

### Master Unit: 7200MPDO

Consists of an on-board power supply (for 120VAC input option) or a terminal strip (for 24VDC input option), an integral smoke detector module and a door closer assembly with internal electro-hydraulic holder capability. A Master Unit can control a single door or one leaf of a pair of doors. A 24VDC Slave/Support Unit is required on the opposite door leaf.

### Slave/Support Units: 7200MPSO

Identical in size to the Master Unit, the Slave/Support Unit consists of an on-board power supply (for 120VAC input option) or a terminal strip (for 24VDC input option) and a door closer assembly with internal electro-hydraulic holder capability. This unit (120VAC or 24VDC) is intended to control a single door or a pair of doors where the building's alarm system monitors the power to the Slave/Support Unit (24VDC input) or to control the inactive leaf of a pair of doors where the active leaf is controlled by a Master Unit.

### Executive™ Unit: RFS Suffix

Identical in size and appearance to a Master Unit, the Executive Unit consists of an on-board power supply (for 120VAC input option) or a terminal strip (for 24VDC input option), a 433MHz radio frequency receiver and a door closer assembly with internal electro-hydraulic holder capability. Unit is intended to provide remote wireless release of a door that has been manually placed into the electrified hold open position. Not intended for use in life safety applications.

## SPECIFICATIONS

Closer for \_\_\_\_\_ doors shall be electromechanical (with integral smoke detector) and completely enclosed in a metal cover. Units shall be surface mounted to the frame face [on the pull (hinge side) or the push (opposite hinge side)] of the door [and shall project no more than 2-11/16" (68mm) from the surface of the frame]. (Closer shall be installed in the header of the frame, and the slide track mortised into the door's top rail). Closer unit shall be hydraulic, full rack and pinion type with a cast aluminum alloy shell. Hydraulic fluid shall be non-gumming and non-freezing. Closer unit shall have two non-critical valves to independently regulate closing and latch speed. It shall also have an adjustable backcheck with a hex-key. Closer unit shall have spring power adjustment to permit a 50% increase in closing power over the minimum closing force for any size. Electromechanical Closer shall have (Infinite) (Selective) Hold Open (Free Swing Operation) and shall be able to attain a maximum opening of 180° (with hold open to 175°). Unit to be fail safe and must close the door during any electrical power interruption to the unit. (Closer/Holder to be Executive Door Holder/Release with release actuated by battery operated hand-held controller). Unit(s) to operate on (120VAC, 60Hz) (24VDC) and will accept (surface) (concealed) wiring. Amperage draw shall not exceed (.105 Amps for 24VDC) (0.46 Amps for 115VAC) units. Supplier to coordinate electrical requirements with electrical and alarm system engineers. Wiring (and conduit) by others.

Electromechanical Units to be Norton® Series 7200 (Closer/Holder) (Free Swing Releasing Device), (Executive Door Holder/Release).

## FEATURES

### Aluminum Alloy Housing

Closer bodies are constructed of a special aluminum alloy, carefully selected to accommodate interactive steel components and operating conditions.

### Rack & Pinion Operation

Provides a smooth constant control of the door through its full opening and closing cycle.

### Spring Sizes

Specify closer size 3, 4 or 5. Size 6 available with 7290 overhead concealed units.

### Sweep Speed Control Valve

Allows adjustment of door speed from the door's full open position down to approximately 10° from the closed position.

### Latch Speed Control Valve

Allows adjustment of door speed from approximately 10° down to the door's fully closed position.

### Adjustable Backcheck Cushioning

Provides control of the door in the opening cycle, beginning at approximately 75° of door opening. It slows/cushions the door opening, when the door is forcibly opened beyond its pre-adjusted limits.

### Adjustable Backcheck Position Valve

Allows the door opening position, where backcheck cushioning begins, to be adjusted to a greater door angle, up to a maximum of 20° farther (approximately 95°).

### Handed

Specify right or left hand when ordering.

### Selective Hold Open (Standard)

The door will hold open at any degree of opening beyond a pre-set hold open point, up to 175°, with a maximum allowable door opening of 180° (exception series 7250 at 110°).

### Infinite Hold Open

The door will hold open at any degree of opening up to 175°, with a maximum allowable door opening of 180° (exception series 7250 at 110°). Can be set in the field by turning cam.

### Fail Safe

In the event of a power failure, the solenoid will de-energize and the closer/holder will then operate as a normal door closer.

### Wiring Option

All 7200 Series Electromechanical Closer/holders will accommodate either concealed or surface wiring.

### Selective Hold Open Switch and Cam:

The Selective Hold Open starting point is determined by a switch and adjustment cam assembly. The cam is attached to the upper pinion shaft by means of a machine screw. As the door is opened, the pinion shaft will rotate the cam and operate the switch to the "on" position to initiate hold open. When the door is closed, the pinion cam will operate the switch to the "off" position. The cam is factory set to operate at 80° of door opening. The cam can be easily field adjusted to operate at virtually any degree of door opening.

## UNITS WITH DETECTORS

### Fire/Smoke Control Circuit:

Interprets the signal from the detector and provides switching contacts to interrupt hold open solenoid, to sound alarms, etc.

### Alarm (Relay) Contacts:

Normally open in standby condition (operating and sensing for smoke condition). These contacts close during an alarm condition (smoke detected) and may be used to switch power from the solenoid to an optional local alarm.

### Trouble (Relay) Contacts:

Normally closed in standby condition, these supervisory contacts monitor the continuity of power within the detector circuit. Any power interruption within the detector circuit will open these contacts. They can then be used to simultaneously indicate a Trouble Condition to the Alarm Panel on a separate trouble circuit.

### Locked-In Alarm:

The unit which alarms must be manually reset. This can be accomplished by remote control from the alarm system panel or by the reset switch in the smoke detector module. Reset switch is accessible through the center louver in the cover. Reset by rotating LED chambers using small flat blade screwdriver.

### Indicator Lights:

Normal Mode: A red LED flashes once every eight (8) seconds.

Clean Mode: A red LED flashes once every second.

Alarm Mode: A red LED illuminates continuously.

### Test Switch:

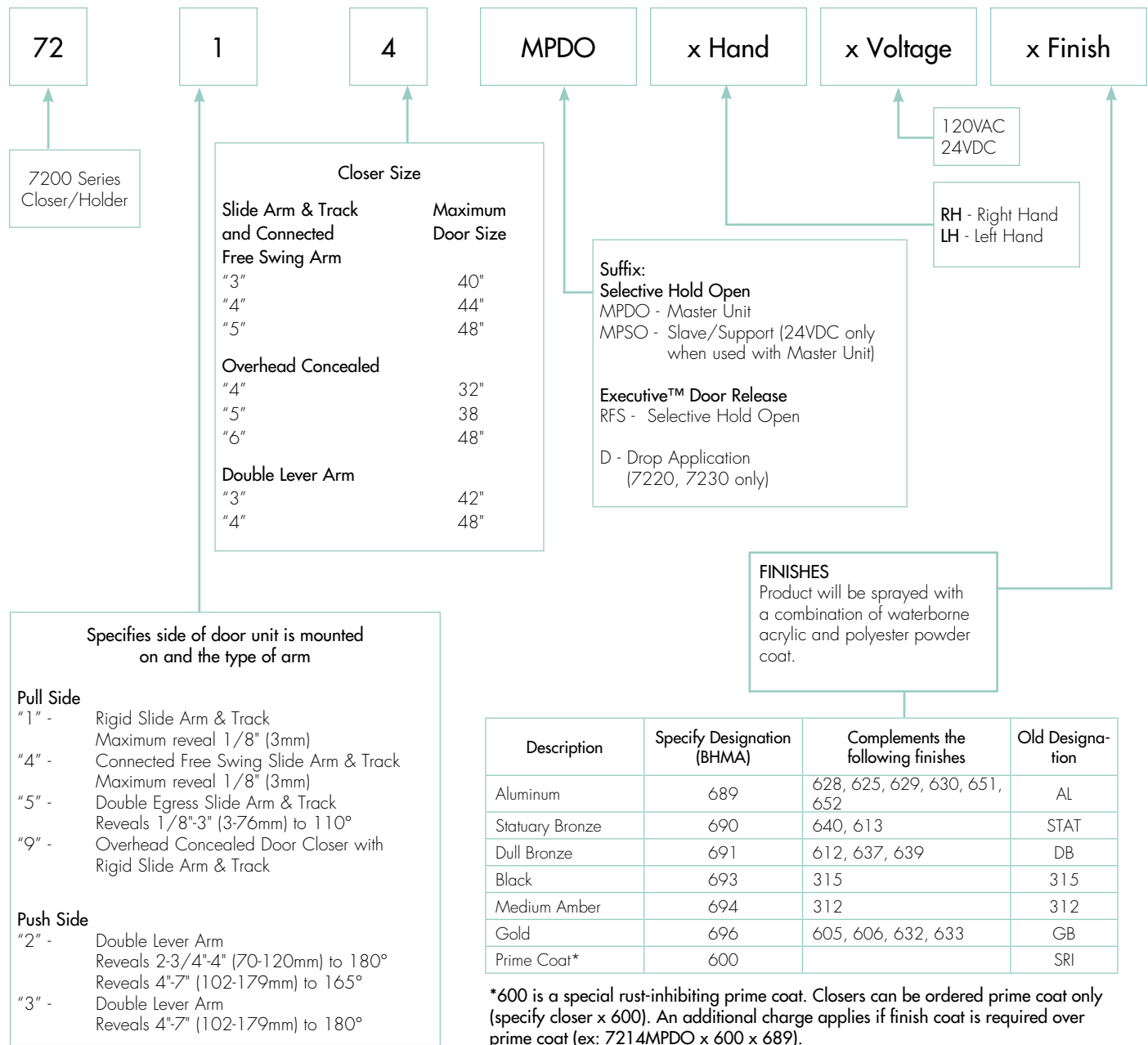
Permits door to be released from hold open without causing a "trouble condition" at the alarm panel. Allows for periodic testing of the automatic door release function.

# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## COMPLIANCE STANDARDS

- ANSI/BHMA A156.15 certified **BHMA** CERTIFIED
- UL / cUL listed for use on fire rated doors **UL**
- UL10C listed for positive pressure fire test
- This product is manufactured in an ISO 9001 facility

## HOW TO ORDER



MASTER UNITS

7210/7250

- Surface mounted to the pull (hinge) side frame face
- Slide track mounts directly to door
- Minimum 4" ceiling clearance required
- 1/8" (3mm) – standard frame reveal. For deeper reveals, a special slide arm is required (see chart on page 7).
- Handed
- Standard units accommodate doors opening 180°; maximum 175° hold open
- Buffer block assembly in the track will accommodate doors opening to 125°
- Auxiliary door stop is required for doors opening beyond 125°
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.
- Fail Safe – solenoid will de-energize in the event of power failure
- Accommodates either concealed or surface wiring



7210MPDO Shown

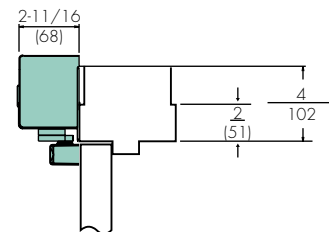
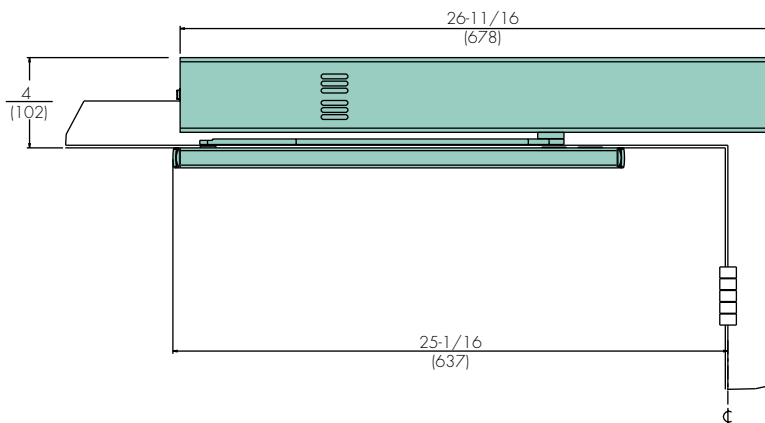
Single Doors:

- **Master Units with Integral Smoke Detector:**  
 Both Series 7210MPDO or 7250MPDO are self-contained and can be installed to control a single door.
- **Executive™ Door Holder/Release:**  
 Both Series 7210RFS or 7250RFS are self-contained and can be installed to control a single door.

Pair of Doors:

- **Master Unit x Slave/Support Unit:** Smoke Detector in the Master Unit controls the Closer/Holder solenoid in both the Master Unit and the Slave/Support Unit.

MASTER UNITS



# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## DOOR SIZE

Maximum Door Size	Model Number	
	Standard Reveal (to 1/8" (3mm) reveal)	Deep Reveal (see note below)
40" (102cm)	7213MPDO	7253MPDO
44" (112cm)	7214MPDO	7254MPDO
48" (122cm)	7215MPDO	7255MPDO

Minimum door size = 28" (71 cm)

Note: **Deep Reveals**

- Special slide arm is available for reveals in excess of 1/8" (3mm) up to 3" (76mm) 7250MPDO series
- 110° maximum door swing

Contact factory if door weight exceeds 250 lbs.

## ELECTRICAL DATA

Master Units							
Model Number	Suffix	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw			(Can be) Used with Slave Unit
				Smoke Detector		Solenoid Coil	
				Standby	Alarm		
7210 7250	MPDO	24VDC	1	.016@ 24VDC	.035@ 24VDC	.070@ 24VDC	7210MPSO-24 7250MPSO-24
		120VAC					

Executive™ Door Holder Release			
Model Number	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw
			Solenoid Coil
7210RFS	120VAC	1	.070@ 24VDC
	24VDC		

\*Max/Min Operating Voltage Parameters +10% / -15%

SLAVE/SUPPORT UNITS

7210/7250

- Surface mounted to the pull (hinge) side frame face
- Slide track mounts directly to door
- Minimum 4" ceiling clearance required
- 1/8" (3mm) – standard frame reveal. For deeper reveals, a special slide arm is required (see below).
- Handed
- Standard units accommodate doors opening 180°; maximum 175° hold open
- Buffer block assembly in the track will accommodate doors opening to 125°
- Auxiliary door stop is required for doors opening beyond 125°
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.
- Fail Safe – solenoid will de-energize in the event of power failure
- Accommodates either concealed or surface wiring

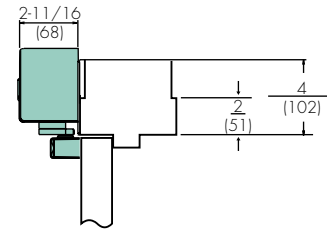
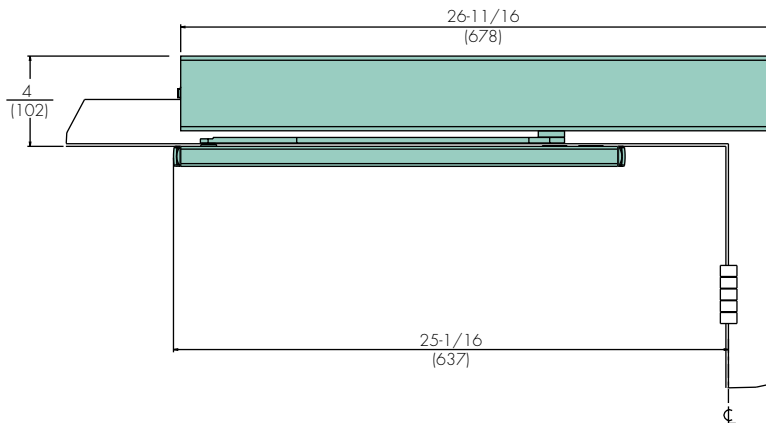


7210MPSO Shown

Pairs of Doors:

- **Master Unit x Slave/Support Unit:** Smoke Detector in the Master Unit controls the Closer/Holder solenoid in both the Master Unit and the Slave/Support Unit.

TECHNICAL DETAILS



Maximum Door Size (cm)	Model Number	
	Standard Reveal (to 1/8" (3mm) reveal)	Deep Reveal (see note)
40" (102)	7213MPSO	7253MPSO
44" (112)	7214MPSO	7254MPSO
48" (122)	7215MPSO	7255MPSO

Note: Deep Reveals

- Special slide arm is available for reveals in excess of 1/8" (3mm) up to 3" (76mm), 7250MPSO series
- 110° maximum door swing

Contact factory if door weight exceeds 250 lbs.

ELECTRICAL DATA

Series Number	Suffix	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw	(Can be) Used with Master Unit
				Solenoid Coil	
7210	MPSO	24VDC (only)	1	.070@ 24VDC	7210MPDO-24
7250		24VDC supplied from Master Unit			7250MPDO-24
					7210MPDO-120
					7250MPDO-120

\*Max/Min Operating Voltage Parameters +10% / -15%



# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## MASTER UNITS

### 7220/7230

- Surface mounted to the push (stop) frame face
- Double lever arm mounts directly to the door
- Minimum 4" (102mm) ceiling clearance required
- Handed
- Standard units accommodate doors opening 180°; maximum 175° hold open
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.
- Fail Safe – solenoid will de-energize in the event of power failure
- Accommodates either concealed or surface wiring



7220MPDO Shown

### Single Doors:

#### • Master Units with Integral Smoke Detector:

Both Series 7220MPDO, 7230MPDO are self-contained and can be installed to control a single door.

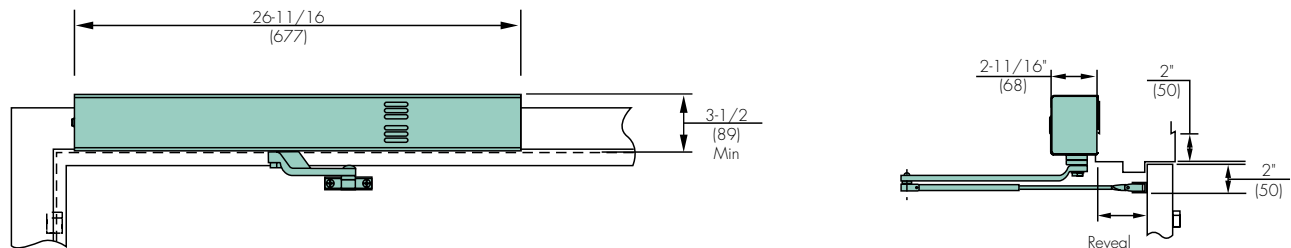
#### • Executive™ Door Holder/Release:

Both Series 7220RFS, 7230RFS are self-contained and can be installed to control a single door.

### Pairs of Doors:

- **Master Unit x Slave/Support Unit:** Smoke Detector in the Master Unit controls the Closer/Holder in both the Master Unit and the Slave/Support Unit.

## TECHNICAL DETAILS



Note: For applications with narrow top rails or limited ceiling clearance, a special drop angle bracket is required. See page 15.

DOOR SIZE

Maximum Door Size (cm)	Model Number		Maximum Degree of Opening	Reveal Range (Inches/mm)
	Closer/Holder	Executive™ Door/Release		
42" (107)	7223MPDO	7223RFS	180°	2-3/4" - 4" (70 - 102)
			165°	4" - 7" (102 - 178)
	7233MPDO	7233RFS	180°	
48" (122)	7224MPDO	7224RFS	180°	2-3/4" - 4" (70 - 102)
			165°	4" - 7" (102-178)
	7234MPDO	7234RFS	180°	

Note: Contact factory if door weight exceeds 250 lbs.

ELECTRICAL DATA

Master Units							
Series Number	Suffix	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw			(Can be) Used with Master Unit
				Smoke Detector		Solenoid Coil	
				Standby	Alarm		
7220 7230	MPDO	24VDC 120VAC	1	.016@ 24VDC	.035@ 24VDC	.070@ 24VDC	7220MPSO 7230MPSO

Executive™ Door Holder Release			
Series Number	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw
			Solenoid Coil
7220RFS 7230RFS	120VAC	1	.070@ 24VDC
	24VDC		

\*Max/Min Operating Voltage Parameters +10%/-15%

# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## SLAVE/SUPPORT UNITS

### 7220/7230

- Surface mounted to the push (stop) frame face
- Double lever arm mounts directly to the door
- Minimum 4" (102mm) ceiling clearance required
- Handed
- Standard units accommodate doors opening 180°; maximum 175° hold open
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.
- Fail Safe – solenoid will de-energize in the event of power failure
- Accommodates either concealed or surface wiring

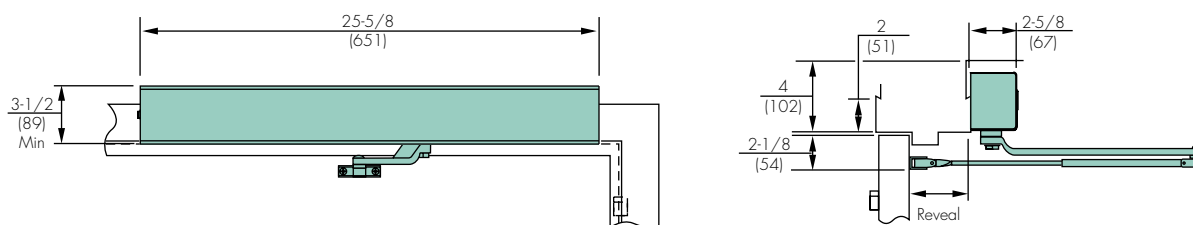


7220MPSO Shown

#### Pairs of Doors:

- **Master Unit x Slave/Support Unit:** Smoke Detector in the Master Unit controls the Closer/Holder in both the Master Unit and the Slave/Support Unit.

## TECHNICAL DETAILS



Note: For applications with narrow top rails or limited ceiling clearance, a special drop angle bracket is required. See page 15.

## DOOR SIZE

Maximum Door Size (cm)	Model Number	Maximum Degree of Opening	Reveal Range (Inches/mm)
42" (107)	7223MPSO	180°	2-3/4" - 4" (70-102)
		165°	4"-7" (102-178)
48" (122)	7224MPSO	180°	2-3/4" - 4" (70-102)
		165°	4"-7" (102-178)
	7234MPSO	180°	4"-7" (102-178)

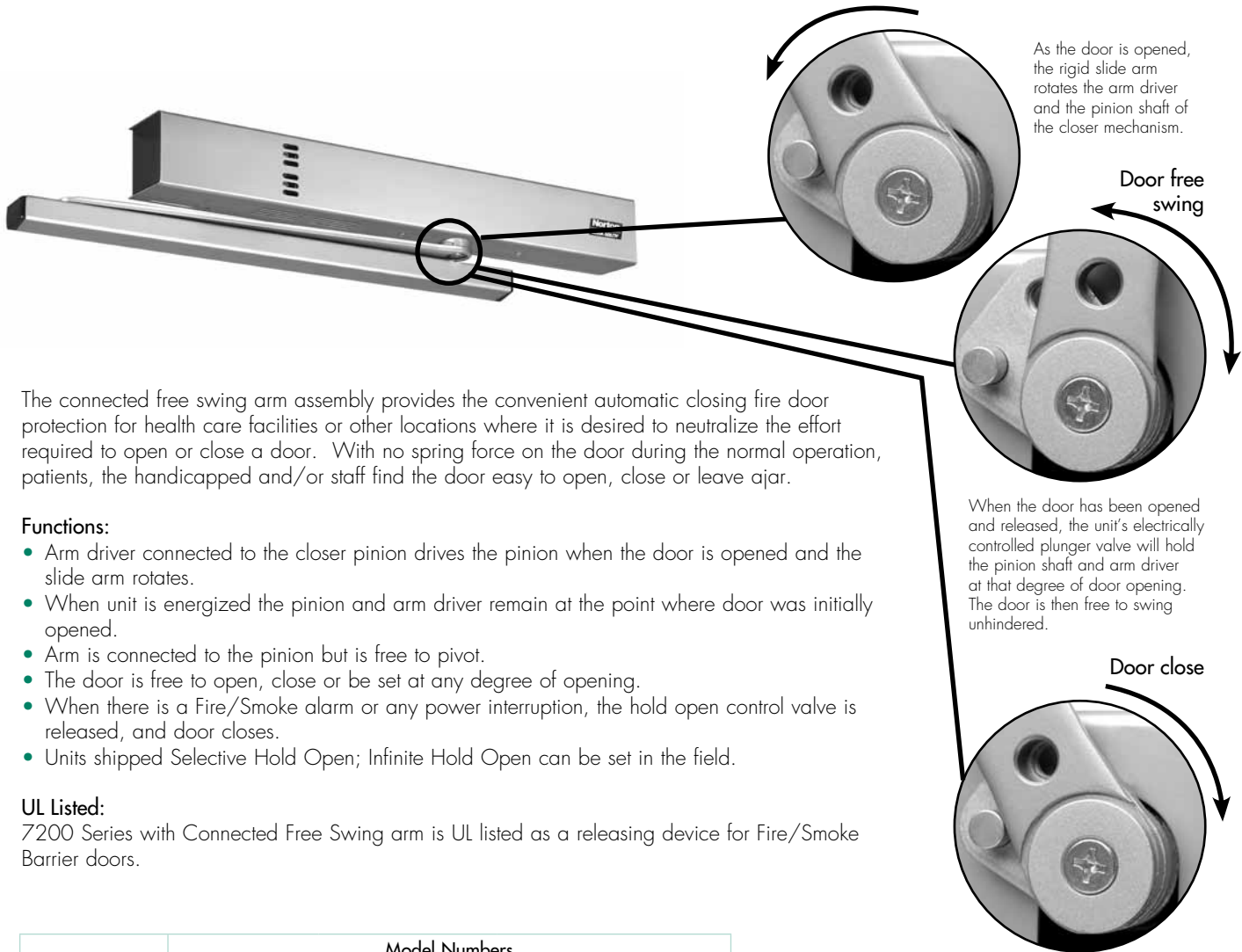
Note: Contact factory if door weight exceeds 250 lbs.

## ELECTRICAL DATA

Model Number	Suffix	Operating Voltage (Input)	No. Power Input Lines* (Pairs)	Amperage Draw	(Can be) Used with Master Unit
				Solenoid Coil	
7220	MPSO	24VDC (only)	1	.070@ 24VDC	7220MPDO-24
7230		24VDC Supplied from Master Unit			7230MPDO-24
					7220MPDO-120
					7230MPDO-120

\*Max/Min Operating Voltage Parameters +10%/-15%

7240 CONNECTED FREE SWING ARM



As the door is opened, the rigid slide arm rotates the arm driver and the pinion shaft of the closer mechanism.

Door free swing

When the door has been opened and released, the unit's electrically controlled plunger valve will hold the pinion shaft and arm driver at that degree of door opening. The door is then free to swing unhindered.

Door close

After Fire/Smoke detection alarm or any power interruption to the control, the pinion shaft and arm driver are released to close the door.

The connected free swing arm assembly provides the convenient automatic closing fire door protection for health care facilities or other locations where it is desired to neutralize the effort required to open or close a door. With no spring force on the door during the normal operation, patients, the handicapped and/or staff find the door easy to open, close or leave ajar.

**Functions:**

- Arm driver connected to the closer pinion drives the pinion when the door is opened and the slide arm rotates.
- When unit is energized the pinion and arm driver remain at the point where door was initially opened.
- Arm is connected to the pinion but is free to pivot.
- The door is free to open, close or be set at any degree of opening.
- When there is a Fire/Smoke alarm or any power interruption, the hold open control valve is released, and door closes.
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.

**UL Listed:**

7200 Series with Connected Free Swing arm is UL listed as a releasing device for Fire/Smoke Barrier doors.

Maximum Door Size (cm)	Model Numbers		
	Master	Slave/Support	Executive™ Door Release
	Selective Hold Open		
40" (102)	7243MPDO	7243MPSO	7243RFS
44" (112)	7244MPDO	7244MPSO	7244RFS
48" (122)	7245MPDO	7245MPSO	7245RFS

Specify voltage and hand of door when ordering

Note: Contact factory if door weight exceeds 250 lbs.

# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

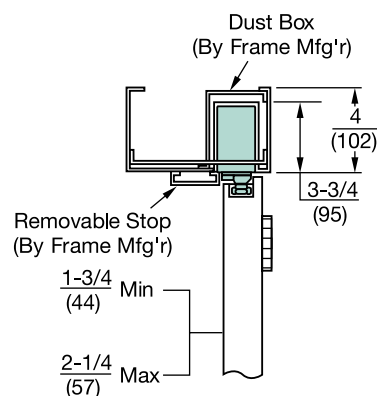
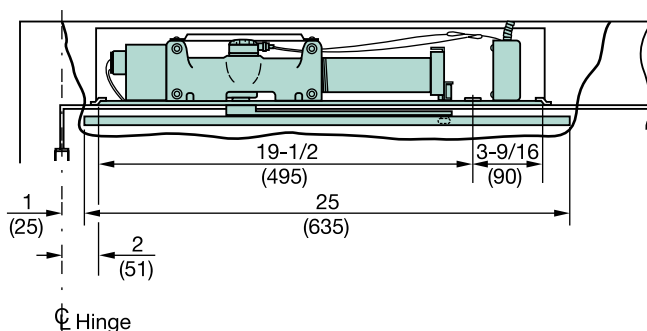
## 7290 OVERHEAD CONCEALED SUPPORT UNIT

### Controlled Remotely by Area/Ceiling Detectors

- Handed
- Unit concealed in the header of the frame
- Installation requires a 4" (102mm) high frame header
- A 2" x 4" (51 x 102mm) dust/grout box and a removable frame stop (provided by the door and frame supplier) are required.
- Slide track is mortised in the door's top rail
- Standard units accommodate doors opening 180°; maximum 175° hold open
- Buffer block assembly in the track will accommodate doors opening to 125°
- Auxiliary door stop is required for doors opening beyond 125°
- Units shipped Selective Hold Open; Infinite Hold Open can be set in the field.
- Intended for use with compatible UL listed ceiling alarm detection equipment.
- Fail Safe – solenoid will de-energize in the event of power failure



### TECHNICAL DETAILS



### DOOR SIZE

Maximum Door Size (cm)	Selective Hold Open
32" (81)	7294MPS
38" (97)	7295MPS
48" (122)	7296MPS

Note: Contact factory if door weight exceeds 250 lbs.

### ELECTRICAL DATA

Support Unit				
Model Number	Suffix	Number power Input Lines* (pairs)	Operating Voltage (input)	Amperage Draw Solenoid Coil (ampreses)
7290	MPS	1	24VAC/DC	.070@24VAC/DC
			120VAC	.035@120VAC

\* Max/Min Operating Voltage Parameters +10%/-15%

CLOSER BODIES

Description	Mounting	Voltage	Hand	Part Number
Closer/Holder Assembly	Push or Pull	24VDC	Left	720XLAPS24L
			Right	720XLAPS24R

ARM & TRACK ASSEMBLIES

Description	For Series	Part Number
Slide Track	7210, 7240, 7250	7100-IT
Slide Arm	7210	7110-1A
Connected Free Swing Arm	7240	7140-1A
Double Egress Arm - Right Hand	7250	7150-1R
Double Egress Arm - Left Hand		7150-1L
Double Lever Arm	7220	7701-1A
Double Lever Arm	7230	7701-1B
Arm Assembly NHO - Right Hand	7290	7950-1R
Arm Assembly NHO - Left Hand		7950-1L
Track Assembly NHO		7950ST

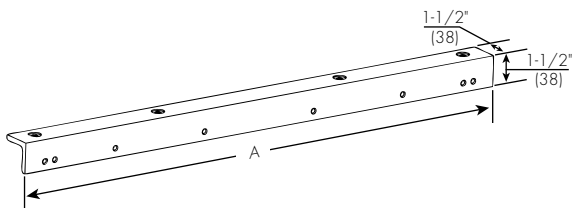
# 7200 SERIES ELECTROMECHANICAL CLOSER/HOLDER

## TRACK & ARM PARTS

Description	Part Number
Cushion Block (part of slide track assembly)	7100CB
Screw Pack for CFS Arm	7240SP

## MISCELLANEOUS PARTS

Description	Part Number
Smoke Detector Board	MPDOSD24
Cover (Slave/Support Unit)	MPSOCOV
Cover (Master Units)	MPDOCOV
Selective Hold Open Switch Assembly 24V	SHOK
Switch 24V	SHO



Description	Part Number	A (Length)
Drop Angle Bracket	7100DAB	29-9/16" (675)
	7100DAB-180	24-9/16" (621)

CONTACT US AT:

Norton Door Controls  
3000 Highway 74 East  
Monroe, NC 28112  
Tel: 877-974-2255  
Fax: 800-338-0965

ASSA ABLOY Door Security Solutions Canada  
160 Four Valley Drive  
Vaughan, Ontario, L4K 4T9 Canada  
Tel: 800-461-3007  
Fax: 905-738-2478

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