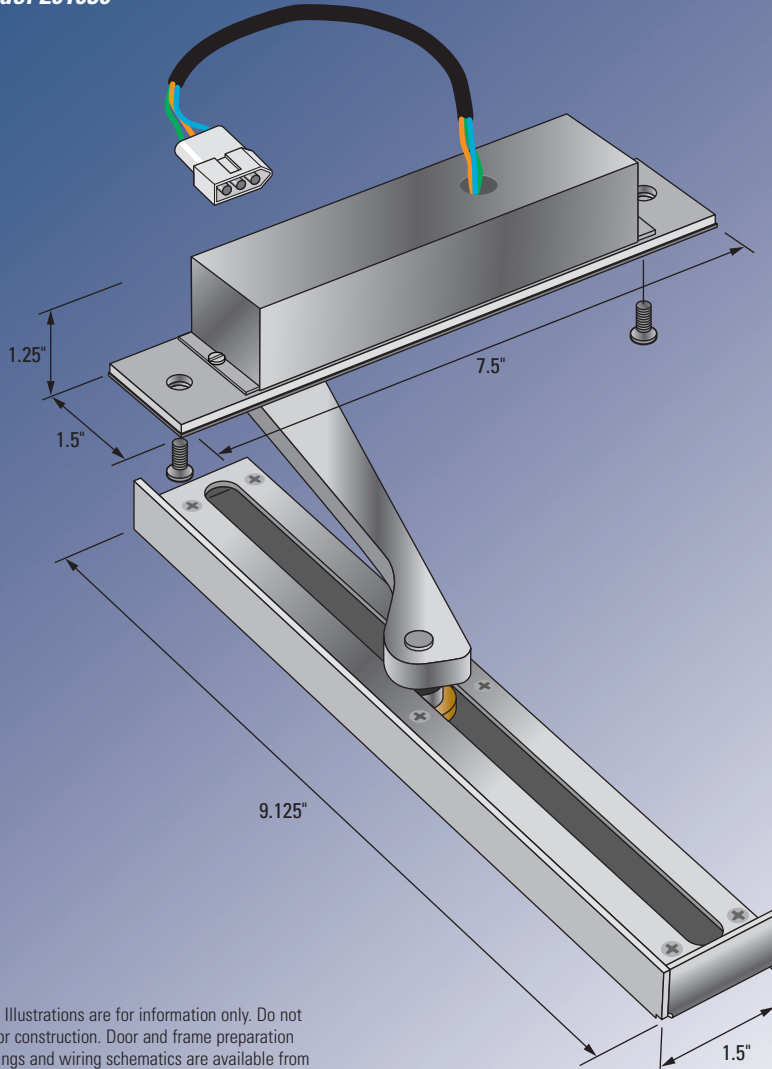


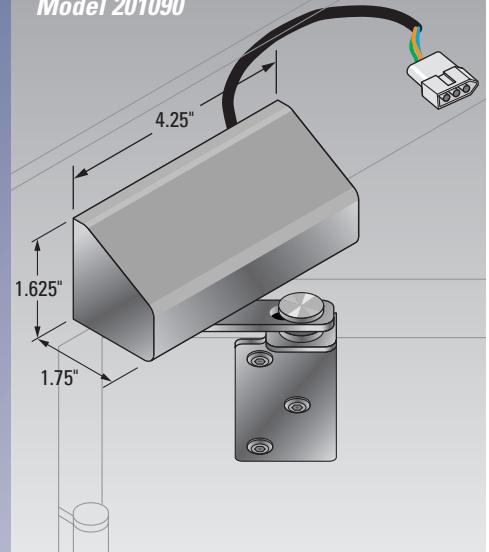
# Door Position Switches

- 201030 – Mechanically actuated, mortise mounted.
- 201090 – Mechanically actuated, surface mounted.
- 201020 – Magnetically actuated, mortise mounted.
- 201023 – Triple Biased, magnetically actuated, mortise mounted.

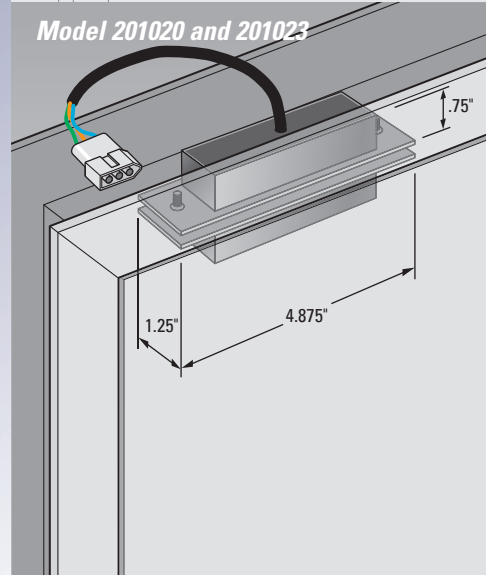
**Model 201030**



**Model 201090**



**Model 201020 and 201023**



**R.R. BRINK LOCKING SYSTEMS, INC.**  
500 Earl Road • Shorewood, IL 60404  
Tel: 815-744-7000 • Fax: 815-744-7020  
www.rrbrink.com

## The purpose and importance of a Door Position Switch

A typical lock control panel monitor light and/or door interlock circuit is actuated by a "lock status switch" (LSS) and a "door position switch" (DPS). The LSS signals a deadlocked latch bolt and the DPS a closed door. When properly wired together, these switches control indicator lights to signal a secure door (i.e. closed and deadlocked) and/or control an interlock which prevents a door(s) from being electrically unlocked if another door in the group is unlocked.

In the absence of a DPS, the aforesaid circuits are controlled only by the LSS within the lock case. Normally, the LSS is tripped when a door is closed and the

latch bolt is deadlocked by depression of the auxiliary latch (a.k.a. roller or trigger bolt). (When depressed, the auxiliary latch serves to automatically deadlock the latch bolt.) However, an indication/interlock circuit controlled by the LSS only can be compromised easily. That is, when a door is open, the auxiliary latch can be depressed manually which wrongly signals a secure condition. On the other hand, with the LSS/DPS combination, a door must be closed **and** deadlocked to obtain a secure signal. Thus, for positive control of door monitor and/or interlock circuits, a DPS is a requirement.

# Door Position Switches

Available in four different models, the RR Brink door position switches (DPS) provide sensitive door position monitoring.

## 201030 – Mortise Mounted, Mechanical Door Position Switch (DPS)

The Model 201030 DPS is actuated mechanically by movement of the door. With a 2'-8" or narrower door, the switch will trip when the leading edge of the door is within 3/4" of the door stop. It is recommended that the Model 201030 be wired in combination with a lock bolt status switch (LSS) to provide a reliable, tamper resistant control panel monitor (e.g., closed and deadlocked green light) and/or interlock circuit.

The 201030 has two components: 1) a switch unit that mortise mounts in the door frame header with an arm that is connected in the field to, 2) a track that mortises into the upper door edge. When the door is closed and locked, all components are concealed which eliminates the possibility of tampering. A door can be opened to a full 180°. The 201030 has an automatic switch adjustment feature that compensates for differing door and frame alignments without the need for tools or trial and error procedures. Simply closing a door adjusts the switch setting.

UNDERWRITERS LABORATORIES, INC. ®  
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7R32

## 201090 – Surface Mounted, Mechanical Door Position Switch (DPS)

The Model 201090 DPS is actuated mechanically by movement of the door. With a 2'-8" or narrower door, the switch will trip when the leading edge of the door is within 3/4" of the door stop. It is recommended that the Model 201090 be wired in combination with a lock bolt status switch (LSS) to provide a reliable, tamper resistant control panel

monitor (e.g., closed and deadlocked green light) and/or interlock circuit.

The 201090 is comprised of two components: 1) a switch housing that is surface mounted on the frame header face and, 2) a switch actuator arm that is surface applied to the hinge side of the door face. A door can be opened to a full 180°. The 201090 has an automatic switch adjustment feature that compensates for differing door and frame alignments without the need for tools or trial and error procedures. Simply closing a door adjusts the switch setting.

### Materials of Construction 201030 and 201090

- Structural and working parts of brass and zinc electroplated steel. (exposed finish ANSI 603, US2G)
- SPDT (Form C) switch – 10 amps @ 250V
- Color coded 7 ft. lead wire harness with quick disconnect at switch unit for ease in installation

## 201020 and 201023 – Magnetic Door Position Switches (DPS) for Mortise Installation

These DPS's employ a reed switch(es) actuated magnetically by movement of the door. It is recommended that the 201020 and 201023 be wired in combination with a lock bolt status switch (LSS) to control a panel monitor (e.g., closed and deadlocked).

The 201020 and 201023 are comprised of two components: 1) a magnet unit that is mortise mounted into the door edge (preferably the top edge adjacent to the lock stile); and, 2) a reed switch unit that is mortised into the door frame opposite and on the same centerlines as the magnet. For proper operation, it is important that the magnet and switch units

align when the door is closed and that the gap between the two units does not exceed 1/4".

The Model 201020 is a single magnet and reed switch unit. When the magnet and switch components are installed as recommended (see installation drawing), the switch will trip when the leading edge of the door is within 1-1/4" of the door stop. The 201020 is subject to compromise with a hand held magnet when the door is open. Thus, it is not recommended for use in door openings subject to inmate tampering.

The Model 201023 is a triple-biased design employing three reed switches connected in series that are actuated by three magnets in a matched pair configuration. This configuration practically eliminates the possibility of compromise with an external magnet. When the magnet and switch components are installed as recommended (see installation drawing), the switch will trip when the leading edge of the door is within 1/2" of the door stop.

### 201020 Materials of Construction

- Magnet and switch body – Die cast zinc
- Face plates – Clear satin anodized aluminum (ANSI 628, US28)
- SPDT (Form C) switch – 0.5 amps @ 24 V maximum
- Color coded 6 ft. lead wire harness with quick disconnect at switch unit for ease in installation

### 201023 Materials of Construction

- Magnet and switch body – Formed stainless steel
- Face plates – Satin stainless steel (ANSI 630, US32D)
- SPDT (Form C) switch – 5VA, Non-inductive
- Color coded 6 ft. lead wire harness with quick disconnect at switch unit for ease in installation

### Ordering Information

Model	Switch Actuation	Mounting	Switch Type
201030	Mechanical	Mortise	SPDT (Form C) – 10 amps @ 250 VAC
201090	Mechanical	Surface	SPDT (Form C) – 10 amps @ 250 VAC
201020	Magnetic	Mortise	SPDT (Form C) – 0.5 amps @ 24 V maximum
201023	Magenetic	Mortise	SPDT (Form C) – 5VA, Non-inductive

Note: Refer to the R.R. Brink "Hand of Locks Reference Guide" when ordering models 201030 or 201090.

Consult with our technical service personnel regarding custom applications such as retrofits to existing lock installations and special mounting situations.



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