



## **FES112 HIGH SECURITY**

## **ELECTRIC CUSTODIAL STRIKE**

## **INSTALLATION MANUAL**

### **1. INTRODUCTION**

The FES112 High Security Electric Custodial Strike was purposely designed for heavy duty high security applications where superior holding strength is required, such as detention centers, correctional facilities and the like. The strike works in conjunction with a heavy duty double throw deadlock or any other mechanical lock with a deadbolt dimension of 33-36mm fully extended throw, 10-17mm width and 57-59mm height. With a holding force in excess of 1000kg, multiple monitoring functions and 12-30VDC multi-voltage operation, the FES112 is a viable solution for either new or retrofit high security projects. The device is manufactured in FSH's Sydney operation and received a recent face-lift with additional door monitoring functions as well as dip-switch selection for Revision (REV) 2 and Revision (REV) 3 field-select ability.

### **2. FEATURES**

Installed into the door frame, the FES112 operates in conjunction with a mechanical high security heavy duty Custodial type (or similar) deadlock. The extended dead bolt of the door lock is captured by the twin locking jaws of the FES112 Strike and is held securely until the strike receives an access or release signal from the access control system.

Monitoring functions include Door Position Reed Switch, Strike-Jaw/Lock Status monitoring and Strike Cover Plate Removed monitoring (Anti Tamper).

On operation of the FES112, the strike jaws are released through an Access Control signal and the door is ready to be pushed or pulled open with the mechanical door lock bolt still fully extended.

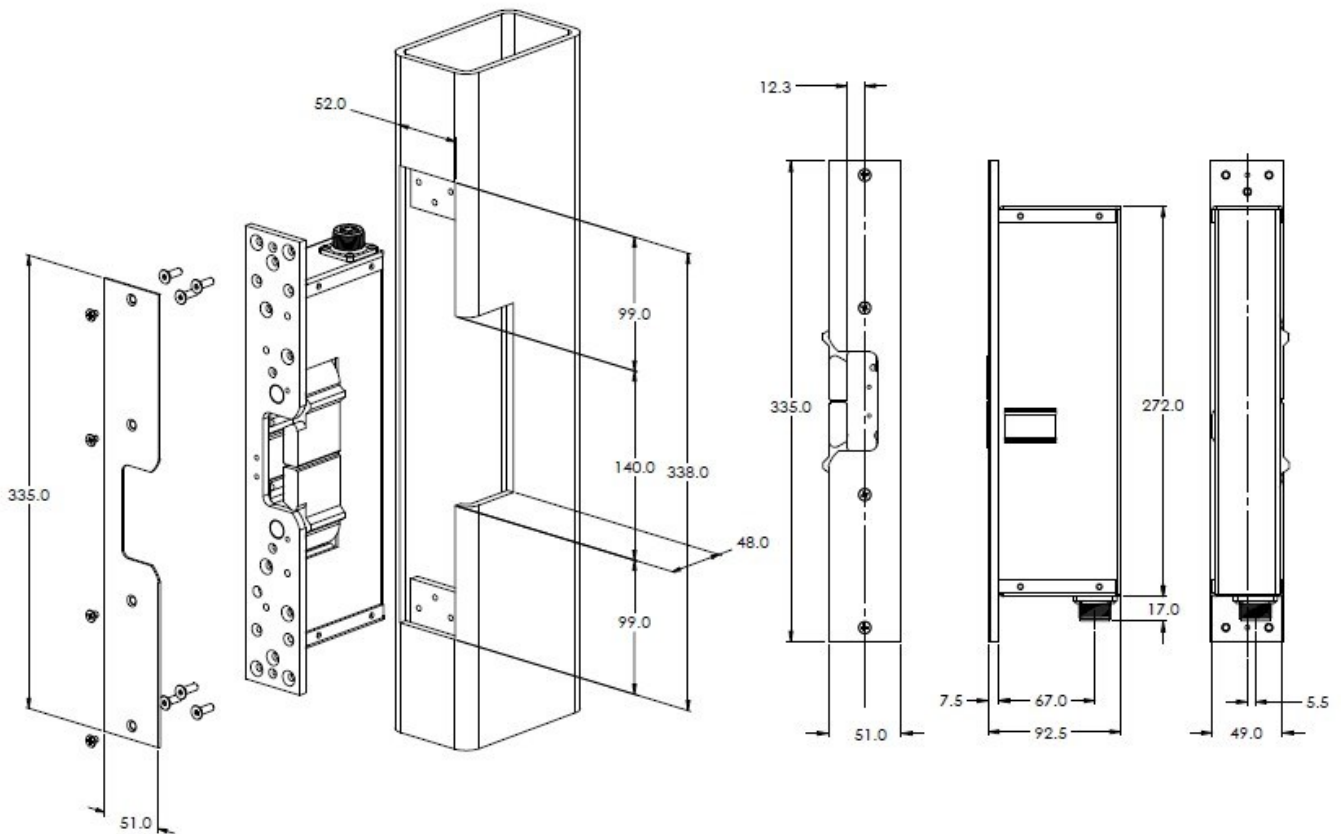
The redesigned FES112 can be wired in a way that the jaws remain in the open position until the door lock returns into the FES112 Strike, closing the jaws to re-lock the door.

The Strike-Jaws cannot be manually pushed back into locked position as long as the door remains open **(this feature relies on either the Bolt Sensor Microswitch or Door Position Reed Switch or both)**.

### 3. TECHNICAL DATA

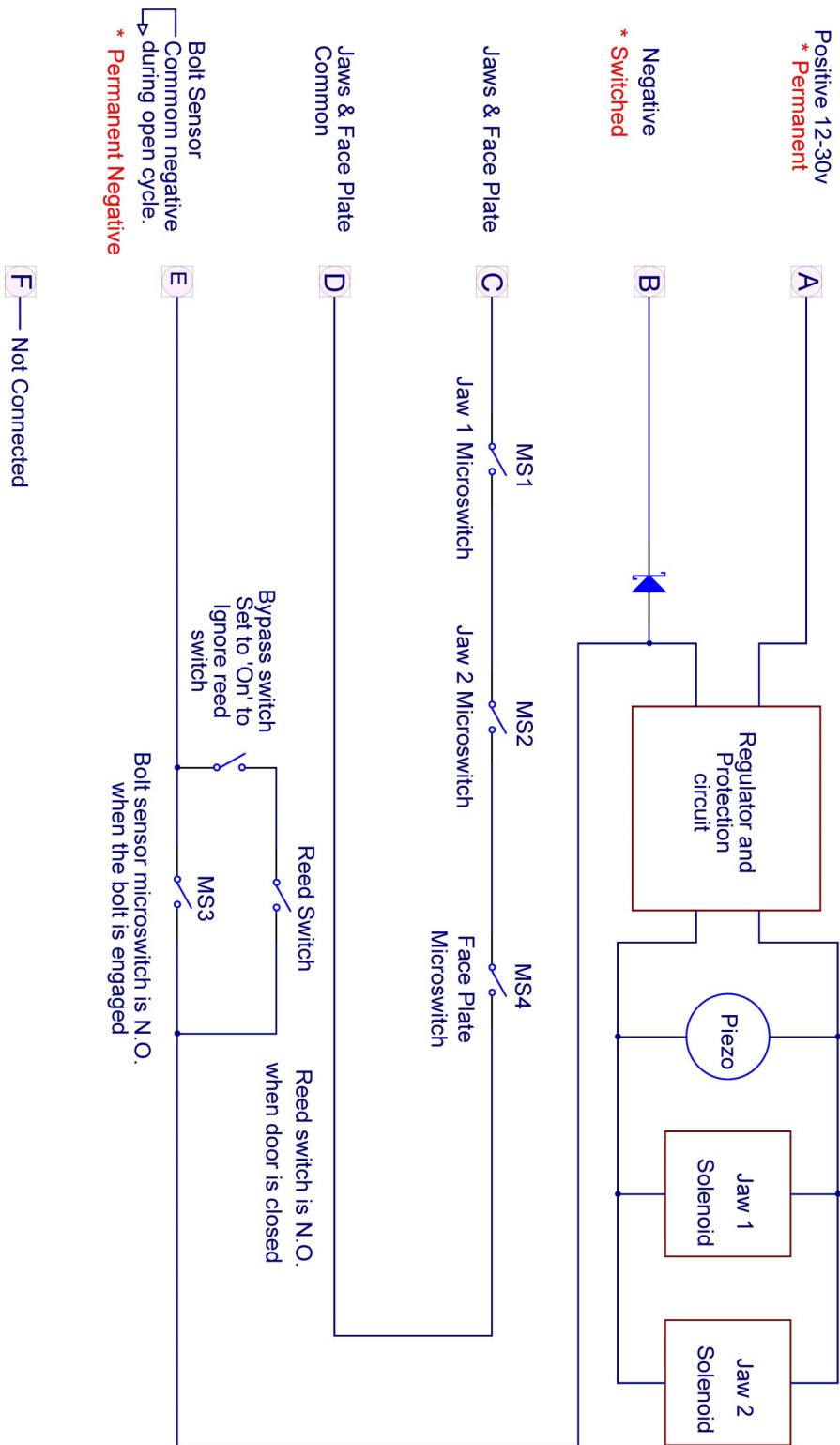
|                                 |  |
|---------------------------------|--|
| <b>PART NO.</b>                 | FES112   |
| <b>FUNCTION</b>                 | Power to Open (Fail Secure)  |
| <b>HOLDING FORCE</b>            | More than 1000kg   |
| <b>VOLTAGE/CURRENT</b>          | Multi Voltage 12-30VDC<br>12VDC, 1.5A current draw<br>24VDC, 0.75A current draw                                |
| <b>MONITORING</b>               | Strike Jaws<br>Door Lock Bolt Status Sensor<br>Door Position Reed Switch<br>Strike Plate Removed (Anti-Tamper) |
| <b>TEMPERATURE RANGE</b>        | -20C to +60C   |
| <b>LOCK DEAD BOLT DIMENSION</b> | Fully extended = 33-36mm<br>Width = 10-17mm<br>Height = 57-59mm  |

### 4. DIMENSIONS



# 5. WIRING DIAGRAMS

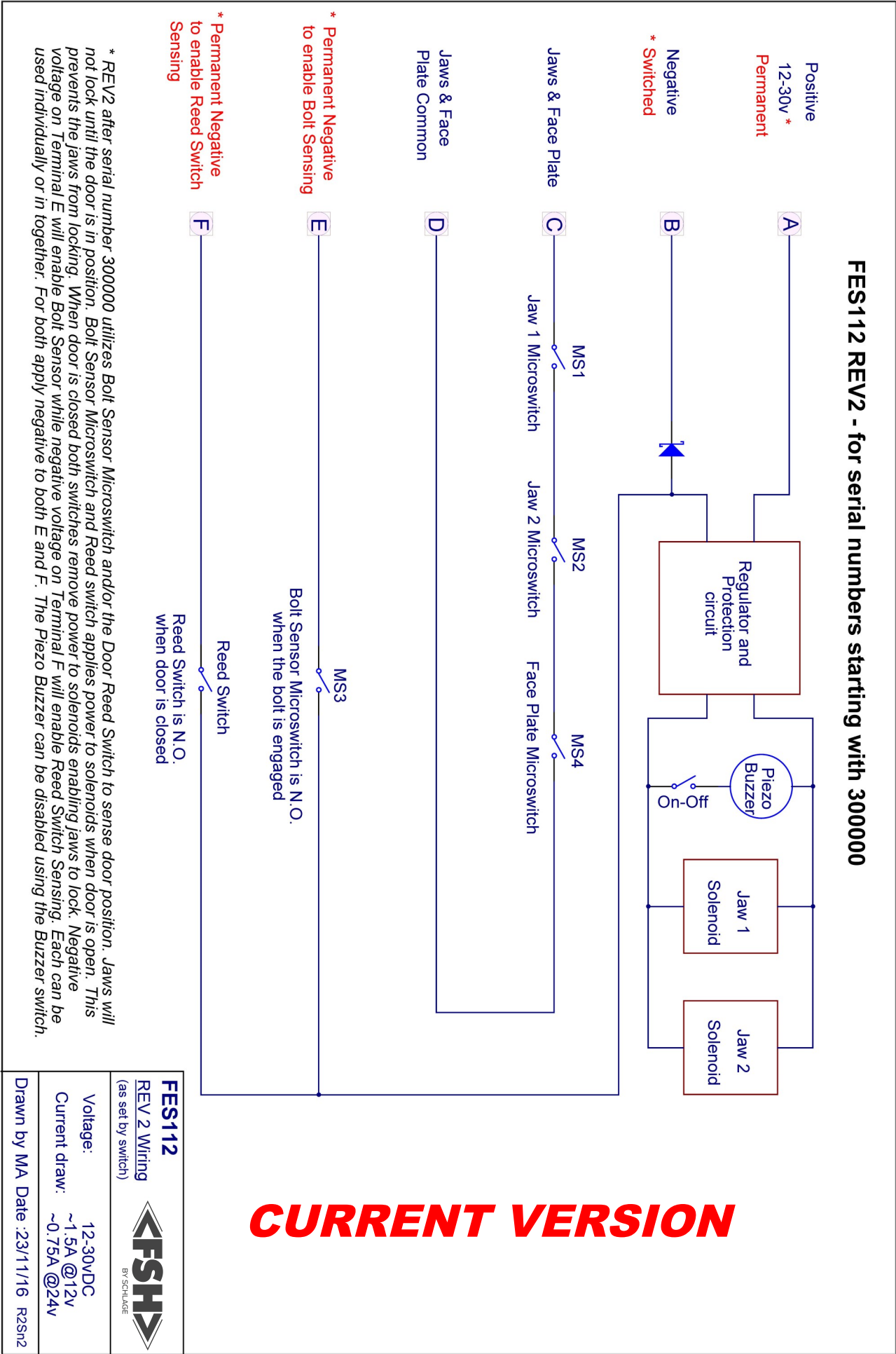
**FES112 REV2 - for serial numbers starting with 200000**



\* REV2 utilizes Bolt Sensor Microswitch and optionally the Door Reed Switch to sense door position. Jaws will not lock until the door is in position. Bolt Sensor Microswitch and Reed switch applies power to solenoids when door is open. This prevents the Jaws from locking. When door is closed both switches remove power to solenoids enabling jaws to lock. The Reed Switch can be disabled using the Bypass switch set to "ON".

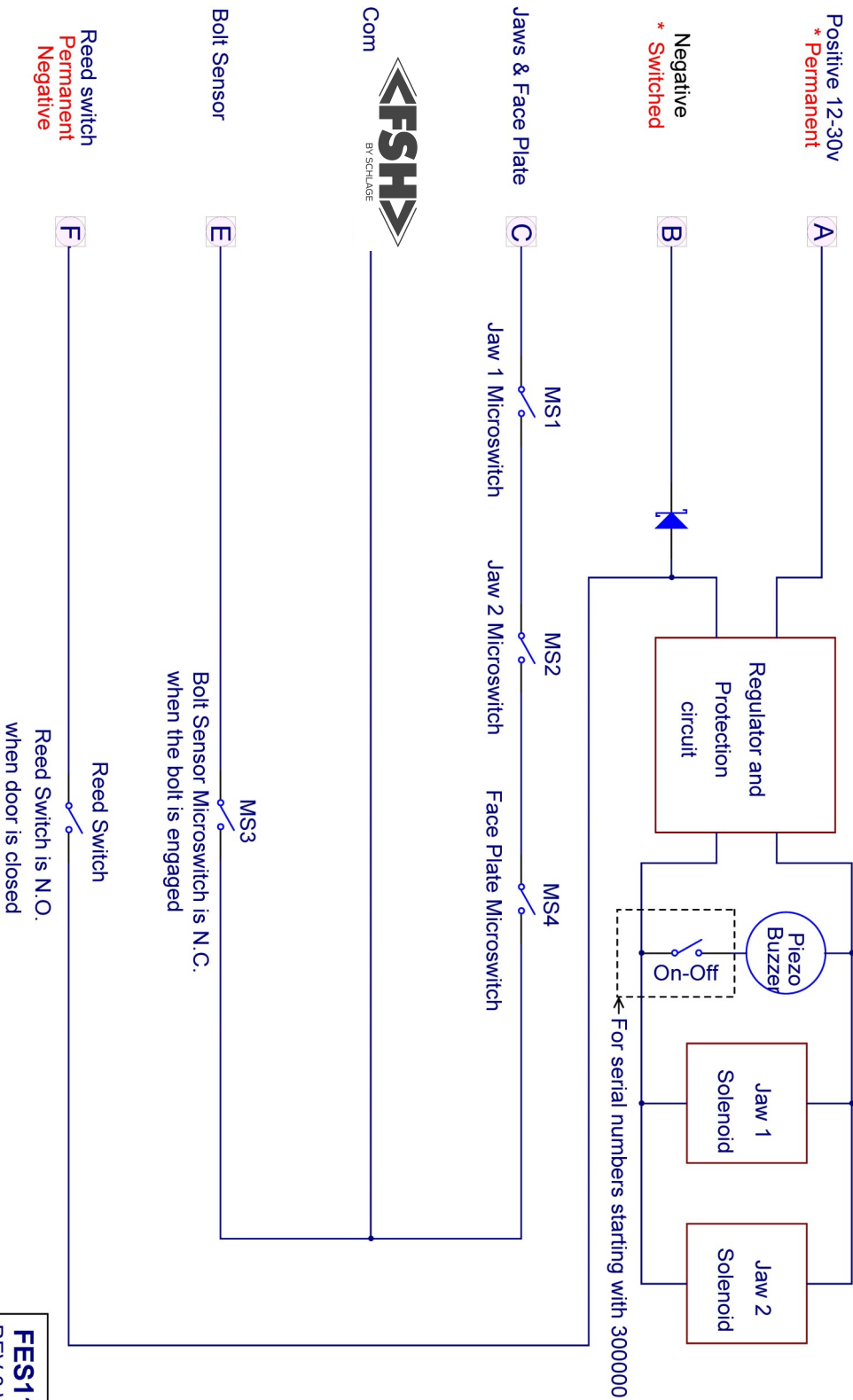
|  |                           |  |
|--|---------------------------|--|
| <b>FES112</b><br>REV2 Wiring<br>(as set by switch) |                           |  |
| Voltage:   | 12-30VDC                  |  |
| Current draw:                                      | ~1.5A @12v<br>~0.75A @24v |  |
| Drawn by MA Date : 23/11/16 R2                     |                           |  |

# 5. WIRING DIAGRAMS



## 5. WIRING DIAGRAMS (Continued)

**FES112 REV3**



\* REV3 utilizes door reed switch only to sense door position. Jaws will not lock until the door is in position. Reed switch applies power to solenoids when door is open. This prevents the jaws from locking. When door is closed reed switch removes power to solenoids enabling jaws to lock

**FES112**  
**REV 3 Wiring**  
 (as set by switch)

Voltage : 12-30VDC  
 ~1.5A @12V  
 ~0.75A @24V

Current :  
 Drawn by MA Date : 23/11/16 R3



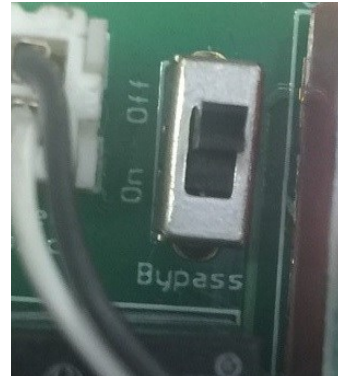
## 6. Revisions –what they do

### Revision 2 (REV2)

REV2 relies on the Bolt Sensor Microswitch to control whether the jaws relock. This prevents the jaws from being tampered with and being rotated to the closed position. An inmate may rotate the jaw/s which will prevent the door being closed until the lock is unlocked.

As an additional safeguard a Reed Switch (which is not normally visible) can also be used in conjunction with the Bolt Sensor Microswitch. In this state both the door must be closed (via the reed switch) and the lock tongue must be in the strike.

This reed switch is enabled or disabled via the small slide switch marked “Bypass” under the rubber grommet. Bypass ON means reed not in use.



Control Wiring A - Permanent +12 to 30VDC,

B - Control -VE

E - Permanent -VE

Outputs In REV2 (all versions) the jaw microswitches and faceplate tamper in series are available to be monitored.

### Revision 3 (REV3)

REV3 relies on the Reed Switch only to control whether the jaws relock. As in the REV2 this prevents the jaws from being tampered, but uses the Reed Switch only. The Reed Switch is always enabled in REV3, the “Bypass” switch has no function.

Control Wiring A - Permanent +12 to 30VDC,

B - Control -VE

F - Permanent -VE

Outputs In REV3 the Bolt Sensor Microswitch serves as an output. The jaw microswitches and faceplate tamper is a second output available to be monitored.

**The maximum door gap between the magnet and reed switch is 8mm.**

## 7. New Model (December 2016) Beyond Serial number 300000 Notes

This new model has some minor enhancements over the existing REV2 settings:

1. Ability to use either or both Bolt Sensor Microswitch and Reed Switch to prevent the jaws being relocked. Apply permanent negative power to:
  - Terminal E for Bolt Sensor Microswitch to operate
  - Terminal F for Reed Switch to operate
  - Terminal E and F for both to operate.
2. Slide switch to enable/disable piezo sounder

