

| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| F                | 21MAY2024 | CRM/DMS | PRN: P2024-0871 |

NOTES:

A. MATERIAL AND FINISH:

- TOP HOUSING - ALUMINUM
- BOTTOM HOUSING - DIE CAST ZINC
- CAM, TRIGGER - SINTERED METAL, STEEL, ZINC PLATED
- SPRINGS - STAINLESS STEEL, PASSIVATED
- TRIGGER INTERLOCK LEVER - GLASS FILLED NYLON
- BISTABLE SPRING RETAINER - DIE CAST ZINC
- DRIVE CAM - BLACK ACETAL
- OUTPUT CAM - WHITE ACETAL

B. ELECTRICAL SPECIFICATIONS:

- OPERATING VOLTAGE: 12-24 VDC NOMINAL
- TYPICAL OPERATING CURRENT: LESS THAN 500 mA AT 12 VDC
- PEAK / STALL OPERATING CURRENT: 1 A MAX (STALL LIMITED TO 1.4 SECONDS)
- TOTAL STANDBY CURRENT, LOCKED / UNLOCKED: 5 mA
- CONTROL SIGNAL HIGH (UNLOCK COMMAND): 6 VDC TO OPERATING VOLTAGE, 5.5 mA MAX
- CONTROL SIGNAL LOW (LATCHED COMMAND): 0 TO 1 VDC (OPEN)
- LATCH TRANSIT TIME TO RELEASE: 600 MILLISECONDS NO LOAD, 1.4 SECOND MAX
- OPERATING TEMPERATURE RANGE: -20C TO 50C

C. ELECTRICAL CONNECTIONS AND HOOKUP:

- A BASIC SWITCH CONTROL ELECTRICAL HOOKUP DIAGRAM IS PROVIDED FOR REFERENCE
- CONSULT WITH A SOUTHCO REPRESENTATIVE FOR ADDITIONAL ELECTRICAL HOOKUP INFORMATION
- CONNECT POWER, GROUND AND CONTROL SIGNAL WIRES TO AN APPROPRIATE DC POWER SUPPLY
- A DC POWER SUPPLY CAPABLE OF SUPPLYING 12-14 VDC AT 1 AMP MINIMUM PER LATCH IS RECOMMENDED
- POWER MUST BE AVAILABLE TO OPERATE THE LATCH AND MUST REMAIN AVAILABLE DURING THE FULL TRANSIT TIME OF THE LATCH DURING LOCKING OR UNLOCKING.

**CAUTION!** LATCH CAN BE DAMAGED IF WIRED INCORRECTLY, OR IF IMPROPER VOLTAGE IS APPLIED!  
 CONNECTOR PIN ASSIGNMENT: SEE CONNECTOR PINOUT TABLE AND PIN LOCATION DETAILS.  
 STATUS INDICATION: OPEN COLLECTOR OUTPUT. RATING 12-24 VDC. 50 mA MAX LOAD.

D. ELECTRICAL OPERATION:

- TO UNLOCK OR RELEASE THE LATCH:
  - PROVIDE THE FOLLOWING CONTROL SIGNAL TO CONNECTOR PIN 3
  - PROVIDE 12-24 VDC (CONTROL SIGNAL HIGH) FOR A MINIMUM OF 50 MILLISECONDS
  - THE CONTROL SIGNAL CAN REMAIN HIGH INDEFINITELY
  - THE DELAYED RE-LOCK LATCH WILL STAY UNLOCKED FOR A MINIMUM OF 1 MILLISECOND OR AS LONG AS THE CONTROL SIGNAL IS HIGH.
  - THE AUTO RE-LOCK LATCH WILL STAY UNLOCKED FOR A MINIMUM OF 1 MILLISECOND AND RE-LOCK IF THE CONTROL SIGNAL REMAINS HIGH.
- TO LOCK THE DELAYED RE-LOCK LATCH AND TO ENABLE THE AUTO RE-LOCK LATCH FOR A NEW OPENING CYCLE:
  - PROVIDE THE FOLLOWING CONTROL SIGNAL TO CONNECTOR PIN 3
  - PROVIDE CONTROL SIGNAL LOW FOR 50 MILLISECONDS. POWER MUST BE AVAILABLE DURING TRANSIT TO THE LOCKED POSITION.

E. OUTPUT FEEDBACK:

- OPEN COLLECTOR OUTPUT. RATING 12-14VDC. 50 mA MAX LOAD

**CAUTION!** TO PREVENT DAMAGE TO THE PRODUCT DO NOT EXCEED MAXIMUM LOADS STATED AND FOLLOW WIRING DIRECTIVES.

F. LATCH CONNECTOR:

- MANUFACTURER: MOLEX, SERIES: MICRO-FIT 3.0
- 3.0mm PITCH MICRO-FIT HEADER, DUAL ROW, 6 POSITIONS, MOLEX P/N: 43045-0606 OR EQUIVALENT.
- MATE CONNECTOR / WIRE HARNESS REQUIRED (NOT SUPPLIED)
- CONNECTOR: RECEPTACLE HOUSING, DUAL ROW, 6 POSITION 3mm: MOLEX P/N: 43025-0600
- CONTACTS: FEMALE CRIMP TERMINAL (SOCKET) MOLEX P/N 43030-0007

G. MOUNTING:

- MOUNT THE LATCH SECURELY USING TWO (2) SCREWS IN THE MOUNTING HOLES PROVIDED (SCREWS NOT PROVIDED)
- MOUNTING CONFIGURATIONS ARE AVAILABLE WITH THREADED OR THROUGH HOLES PER ASSEMBLY PART NUMBER SCHEME OUTLINED ON SHEET 2
- SEE SHEET 3 AND SHEET 4 FOR SUGGESTED MOUNTING CONFIGURATIONS AND HARDWARE REQUIREMENTS

H. MECHANICAL OPERATION:

THE LATCH IS PROVIDED WITH A MECHANICAL TRIGGER TO RELEASE THE LATCH. THE MINIMUM TRAVEL REQUIRED TO RELEASE THE LATCH IS SHOWN ON SHEET 2. THE TRIGGER MOVES THROUGH ITS FULL TRAVEL DURING ELECTRICAL OPERATION OF THE LATCH. ACCESSORIES ARE AVAILABLE (SOLD SEPARATELY) FOR REMOTE ACTUATOR CABLE INSTALLATION (SEE DRAWING J-R4-EM-952 FOR MANUAL OVERRIDE BRACKET).

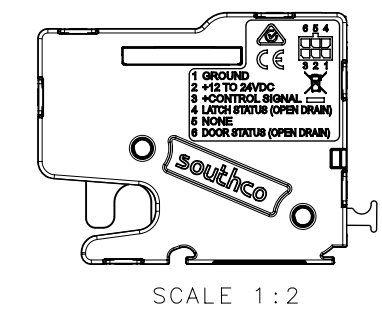
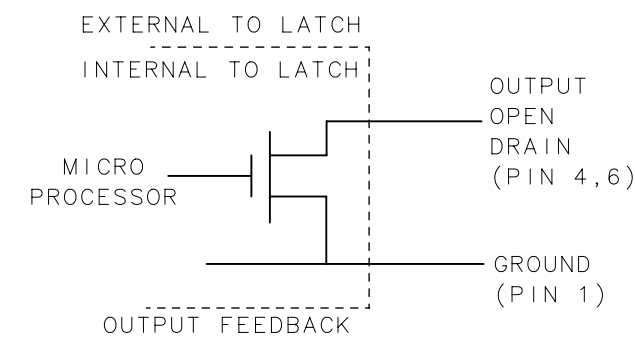
**CAUTION!** TO PREVENT LONG TERM DAMAGE OF ELECTRICAL COMPONENTS IN THE LATCH, DO NOT OBSTRUCT MOTION OF THE TRIGGER DURING ELECTRICAL OPERATION

I. STRIKER ASSEMBLY SOLD SEPARATELY

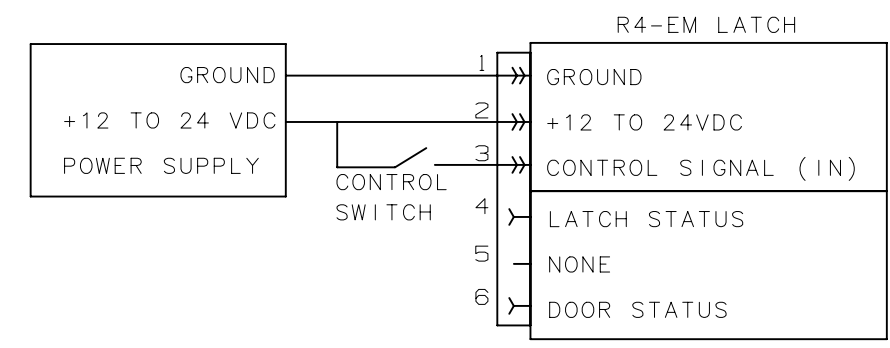
REFER TO J-R4-90-709-20 FOR ADDITIONAL INFORMATION ON STAINLESS STEEL STRIKER AND J-R4-90-804-10 FOR ADDITIONAL INFORMATION ON ZINC DIE CAST STRIKER ASSEMBLY.

- J. KICK OUT FORCE UPON UNLOCKING FROM CLOSED POSITION: (5N)
- HOLDING FORCE UPON UNLOCKING FOR PULL-TO-OPEN LATCH: (15N)

K. PACKAGED IN INDIVIDUAL BOXES. ADD -1 SUFFIX TO PART NUMBER FOR BULK PACKAGED OPTION.



SCALE 1:2



ELECTRICAL HOOKUP (OUTPUT/FEEDBACK)

| CONNECTOR PINOUT |                |
|------------------|----------------|
| PIN              | FUNCTION       |
| 1                | GROUND (-)     |
| 2                | POWER (+)      |
| 3                | CONTROL SIGNAL |
| 4                | LATCH STATUS   |
| 5                | NONE           |
| 6                | DOOR STATUS    |

| CONNECTOR PINOUT |              | OUTPUT         |          |
|------------------|--------------|----------------|----------|
| PIN              | FUNCTION     | OPEN           | GROUND   |
| 4                | LATCH STATUS | LOCKED         | UNLOCKED |
| 5                | NONE         | NOT APPLICABLE |          |
| 6                | DOOR STATUS  | CLOSED         | OPEN     |

SEE SHEET 2 OF 2 FOR LATCH PART NUMBERS AND INSTALLATION INFORMATION

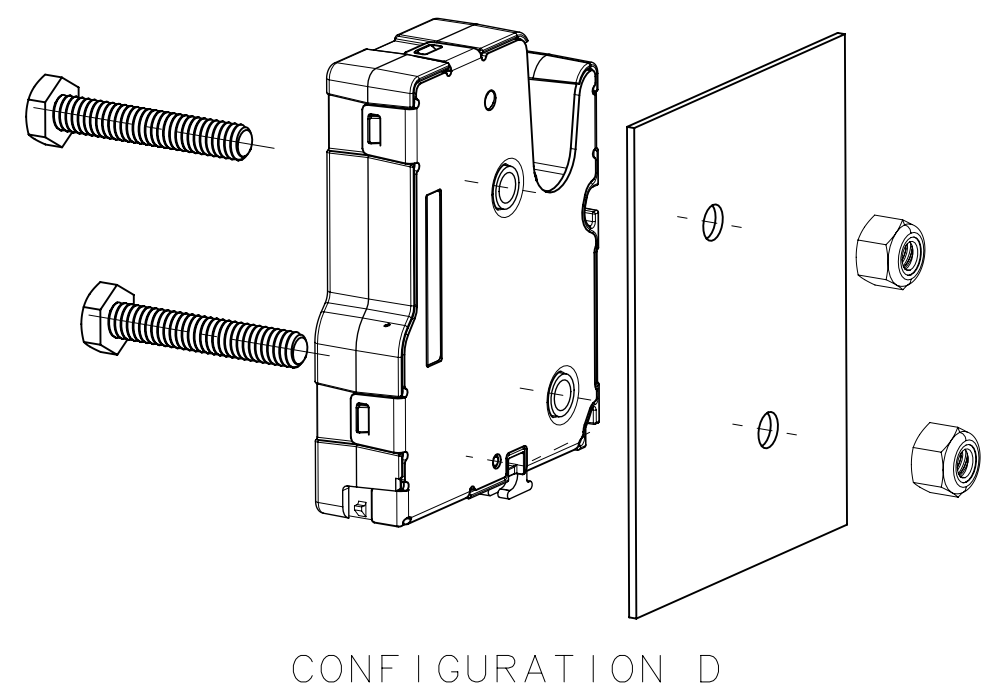
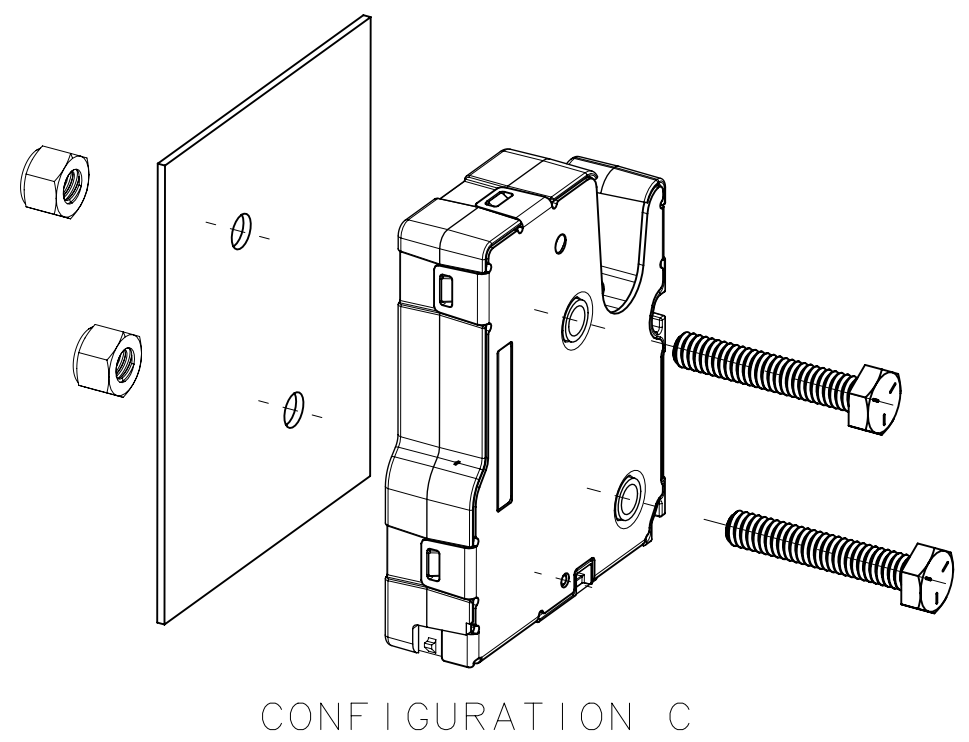
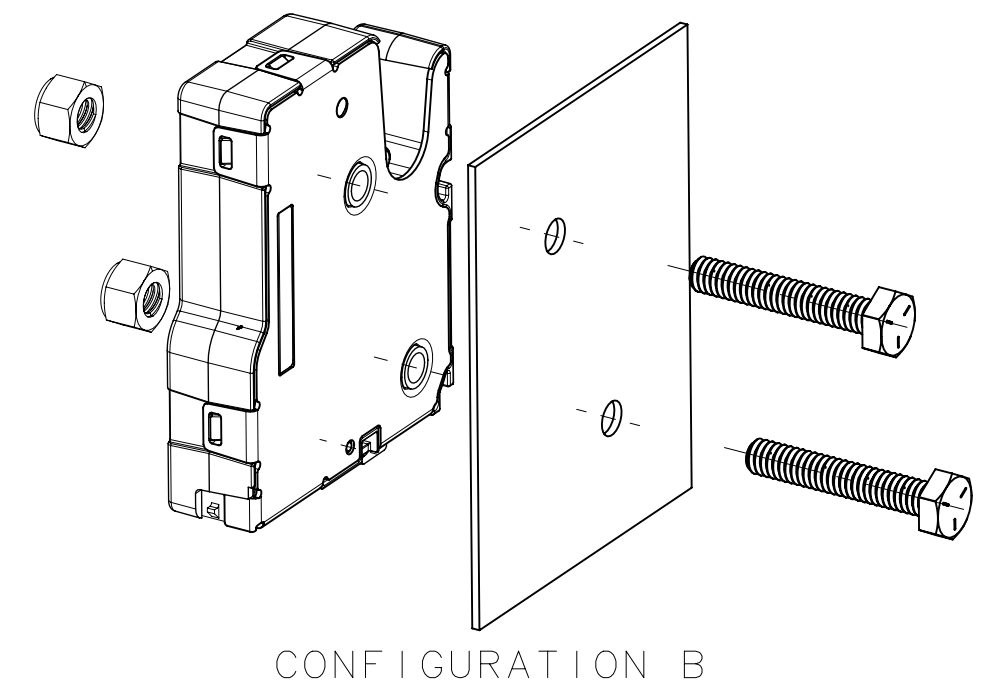
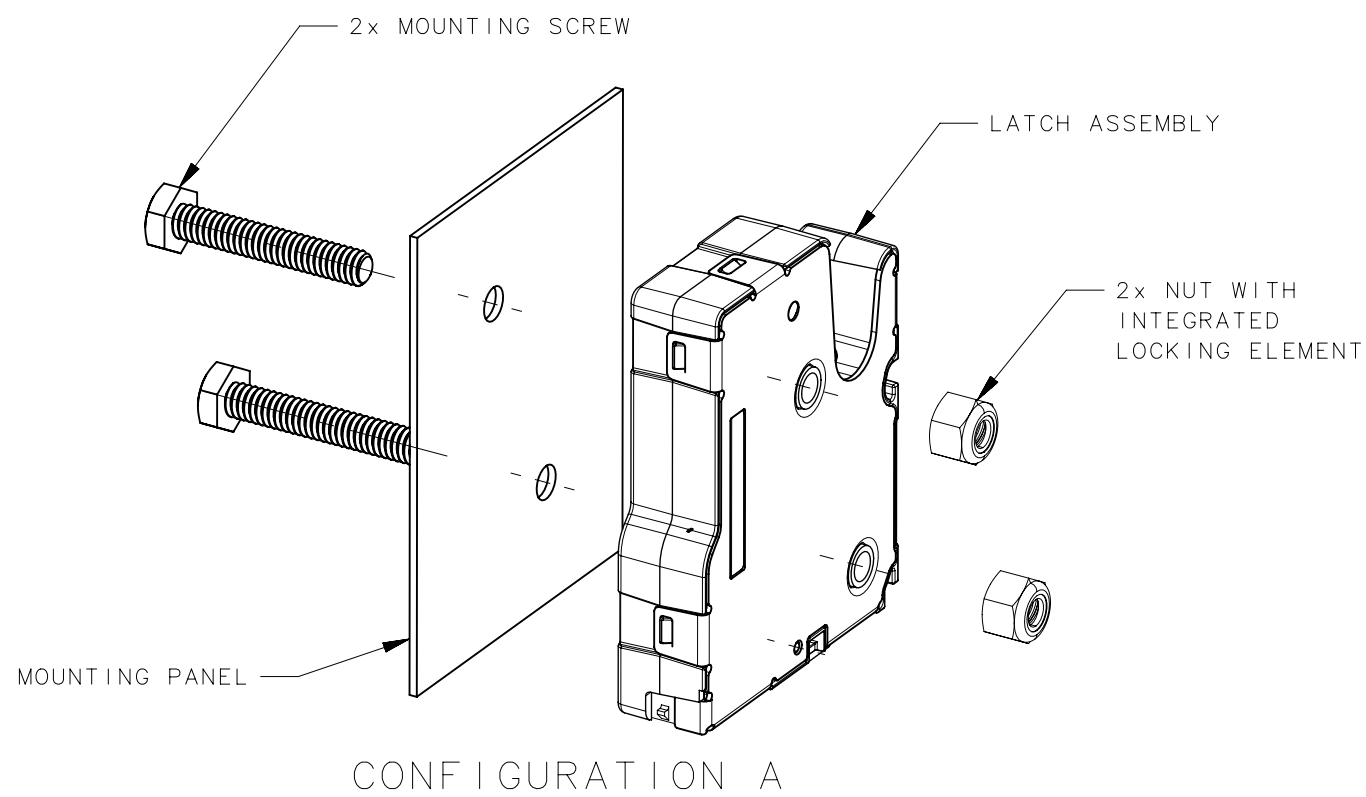
|  |  |                            |                |
|--|--|----------------------------|----------------|
| THIRD ANGLE PROJECTION   |  |                            |                |
| MILLIMETERS [IN]   |  |                            |                |
| TOLERANCES UNLESS OTHERWISE NOTED  |  | DESCRIPTION                |                |
| SURFACE AREA N/A mm <sup>2</sup>   |  | ELECTRONIC ACCESS SOLUTION |                |
| VOLUME N/A mm <sup>3</sup>   |  | R4-EM 9 SERIES DIE CAST    |                |
| PROPRIETARY ITEM   |  | SIZE A3                    | SYSTEM NX      |
| EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC. |  | DWG NO. J-R4-EM-9-2        |                |
| PER ASME Y14.5M-2009   |  | DRAWN BY BVH/              | DATE 06APR2017 |
|  |  | SCALE 1:1                  | SHEET 1 OF 4   |



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# MOUNTING CONFIGURATION

## R4-EM-T1A5-1SC-P



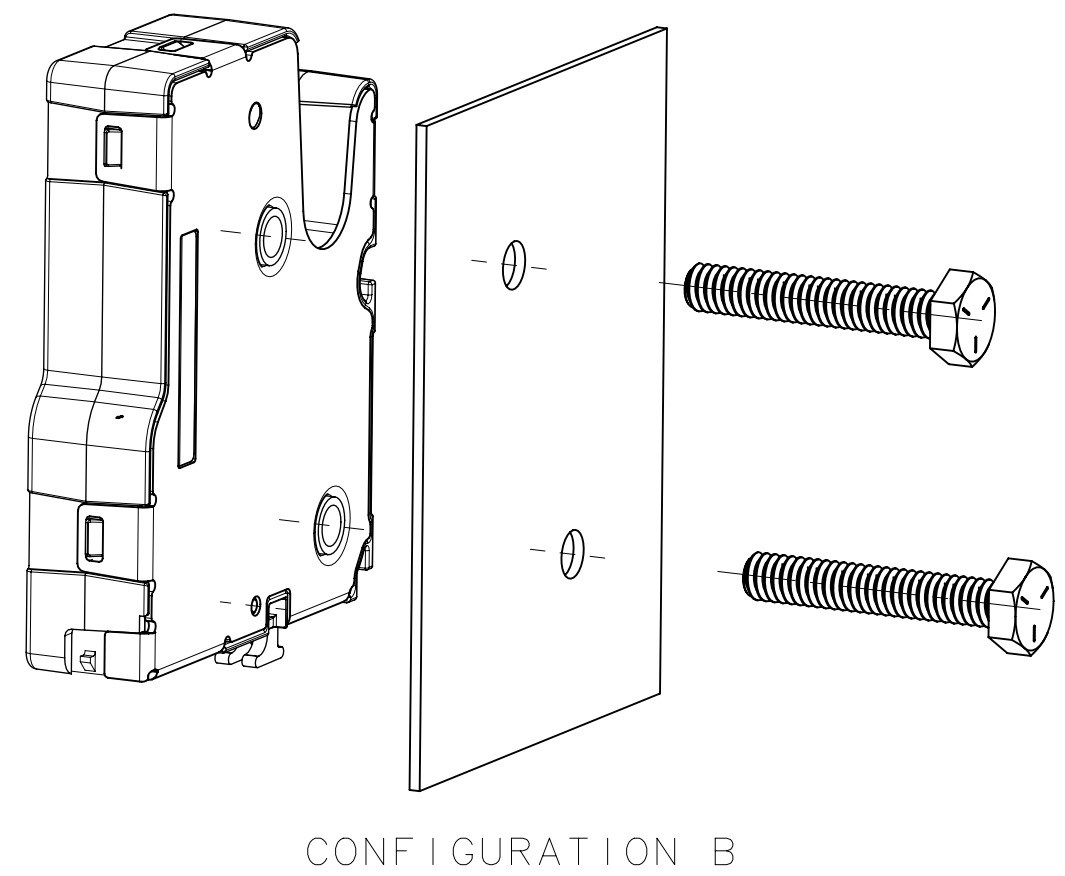
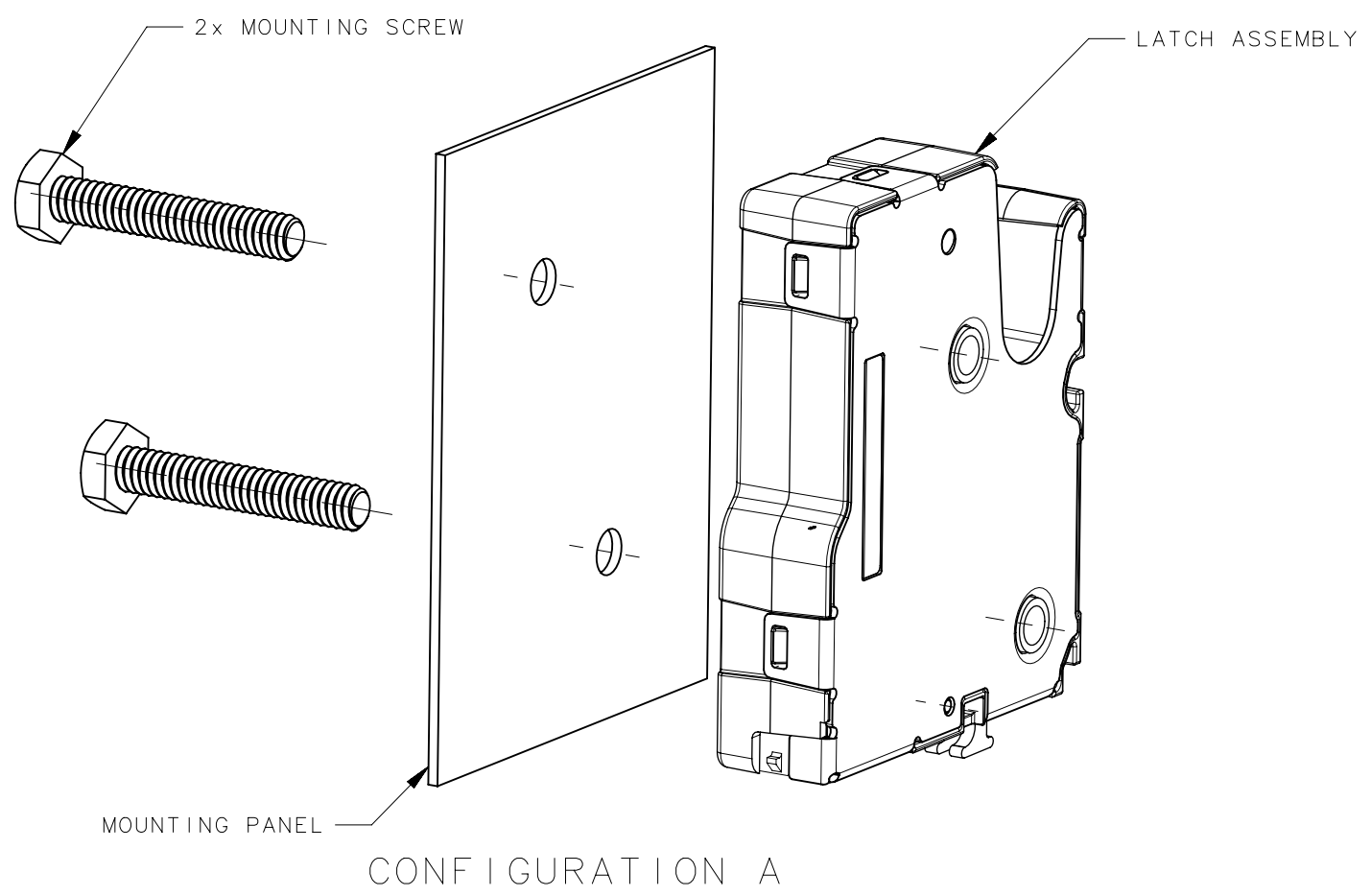
- NOTES:
- A. MAXIMUM RECOMMENDED FASTENER TORQUE, ALL CONFIGURATIONS: 5.0Nm.
  - B. CONFIGURATION A AND D: USE OF FLAT WASHERS IS NOT RECOMMENDED. IF REQUIRED BY APPLICATION, DO NOT EXCEED MOUNTING TORQUE OF 4.0Nm.

|   |   |  |                   |
|---|---|--|-------------------|
|   | THIRD ANGLE PROJECTION                                    | <b>southco</b> <sup>®</sup><br>CONNECT • CREATE • INNOVATE |                   |
|   | MILLIMETERS [IN]  | ELECTRONIC ACCESS SOLUTION<br>R4-EM 9-SERIES DIE CAST      |                   |
| SURFACE AREA<br>N/Amm <sup>2</sup>  | TOLERANCES UNLESS OTHERWISE NOTED                         | SIZE<br>A3   | SYSTEM<br>NX      |
| VOLUME<br>N/Amm <sup>3</sup>  | ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY. | DWG NO.<br>J-R4-EM-9-2                                     |                   |
| PROPRIETARY ITEM<br><small>EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.</small> | PER ASME Y14.5M-2009                                      | DRAWN BY<br>BVH  | DATE<br>06APR2017 |
|   |   | SCALE<br>3:4   | SHEET<br>3 OF 4   |

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# MOUNTING CONFIGURATION

## R4-EM-T2A5-1SC-P AND R4-EM-T3A5-1SC-P



NOTES:  
A. MAXIMUM RECOMMENDED FASTENER TORQUE, ALL CONFIGURATIONS: 5.0Nm.

|   |   |  |                   |
|---|---|--|-------------------|
| THIRD ANGLE PROJECTION  |   | <b>southco</b> <sup>®</sup><br>CONNECT • CREATE • INNOVATE |                   |
| MILLIMETERS [IN]  |   | DESCRIPTION  |                   |
| TOLERANCES UNLESS OTHERWISE NOTED   |   | ELECTRONIC ACCESS SOLUTION<br>R4-EM 9-SERIES DIE CAST      |                   |
| SURFACE AREA<br>N/Amm <sup>2</sup>  | ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY. | SIZE<br>A3   | SYSTEM<br>NX      |
| VOLUME<br>N/Amm <sup>3</sup>  |   | DWG NO.<br>J-R4-EM-9-2                                     |                   |
| PROPRIETARY ITEM<br><small>EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.</small> | PER ASME Y14.5M-2009                                      | DRAWN BY<br>BVH  | DATE<br>07SEP2018 |
|   |   | SCALE<br>1:1   | SHEET<br>4 OF 4   |