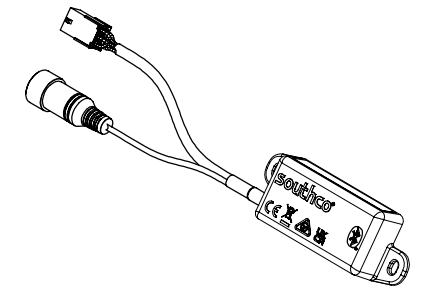


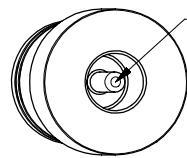
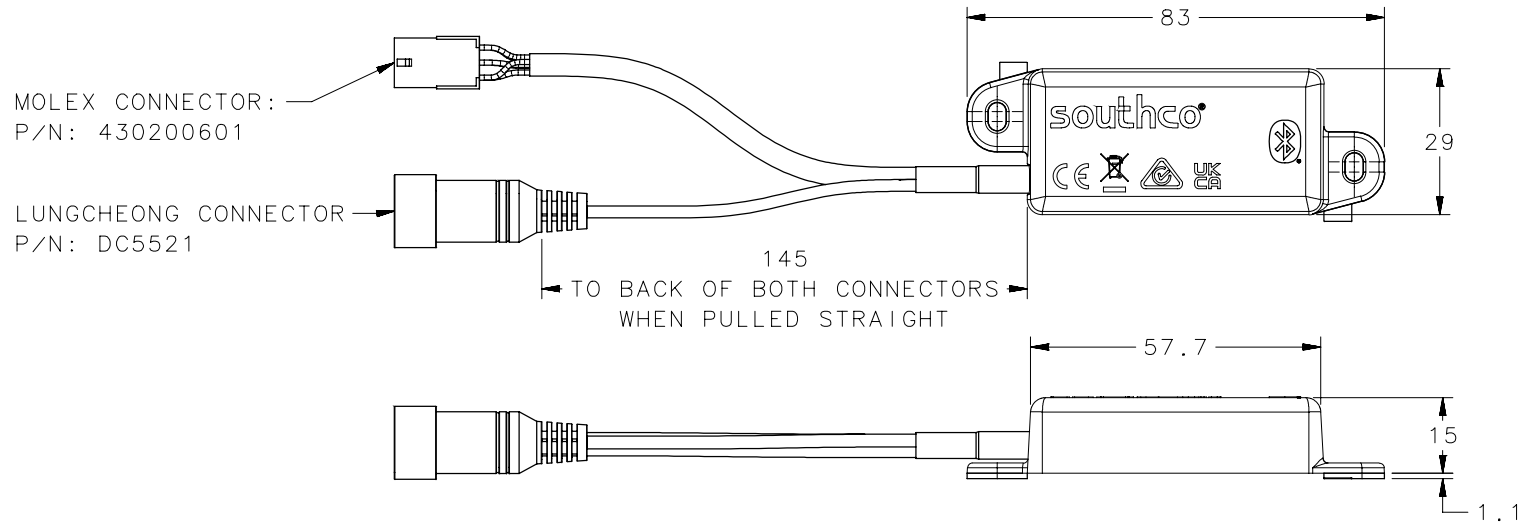
| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| M                | 05SEP2024 | MDW/ZAM | PRN: P2024-1525 |

NOTES:

- PRODUCT DESCRIPTION: A DEVICE FOR CONTROLLING ACCESS TO SOUTHCO ELECTRONIC LOCKS AND LATCHES VIA BLUETOOTH®. COMPATIBLE WITH THE *KEYPANION™* APP AND SOUTHCO SOFTWARE DEVELOPMENT KIT (SDK). VISIT [WWW.SOUTHCO.COM/KEYPANION](http://WWW.SOUTHCO.COM/KEYPANION) FOR MORE INFORMATION. FOR ANY OTHER USE CASE CONTACT SOUTHCO FOR COMPATIBILITY.
- MATERIAL:
  - HOUSING: PC/ABS
  - PRESSURE SENSITIVE ADHESIVE: ACRYLIC FOAM CORE
  - WIRE: UL 1007 UNSHIELDED, 24AWG, STRANDED, TINNED COPPER
  - POTTING MATERIAL: EPOXY BASED
- CONNECTOR TYPE
  - CONNECTOR MOLEX: (P1) FEMALE, DUAL ROW, 6 PIN, P/N: 430200601 OR EQUIVALENT
  - CONTACT MOLEX: (P1) MALE, P/N: 430310001 OR EQUIVALENT
  - CONNECTOR (J1) LUNGCHEONG P/N: DC5521 OR EQUIVALENT
  - MATING CONNECTOR AND HARNESES NOT INCLUDED
  - SEE PAGES 4 AND 5 FOR MATING WIRE HARNESES AND LATCHES
- ENVIRONMENTAL
  - ALL ITEMS COMPLY WITH RoHS DIRECTIVE AND REACH REGULATION
  - IP67 RATED ENCLOSURE



SCALE 1:2



SCALE 2:1  
CONNECTOR J1

POS (+)  
PIN DIAMETER: 2.1mm  
PIN DEPTH: 9.3mm  
INNER DIAMETER: 5.6mm  
CHECK INTENDED MATING  
CONNECTOR BEFORE DESIGNING IN

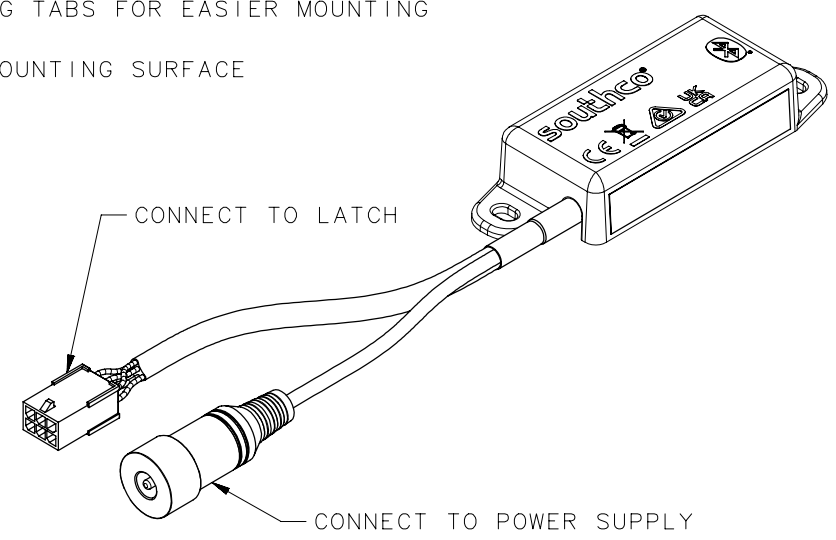
THE BLUETOOTH® WORD MARK AND LOGOS ARE REGISTERED TRADEMARKS OWNED BY BLUETOOTH SIG, INC. AND USE IS UNDER LICENSE

|  |   |  |   |                                 |                      |
|--|---|--|---|---------------------------------|----------------------|
| CPB NUMBER<br>2017-0837  | THIRD ANGLE PROJECTION                                    |  |   | <br>CONNECT • CREATE • INNOVATE |                      |
|  | MILLIMETERS [IN]  |  |   |                                 |                      |
| SURFACE AREA   | TOLERANCES UNLESS OTHERWISE NOTED                         |  | DESCRIPTION<br>SINGLE OUTPUT<br>BLUETOOTH® CONTROLLER |                                 |                      |
| VOLUME   | ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY. |  | SIZE<br>A3  | SYSTEM<br>NX                    | DWG NO.<br>J-EA-BT-4 |
| PROPRIETARY ITEM   | PER ASME Y14.5M-2009                                      |  | DRAWN BY<br>ZAM/MLL                                   | DATE<br>05MAY2021               | SCALE<br>NONE        |
| EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC. |   |  | SHEET 1 OF 6  |                                 |                      |

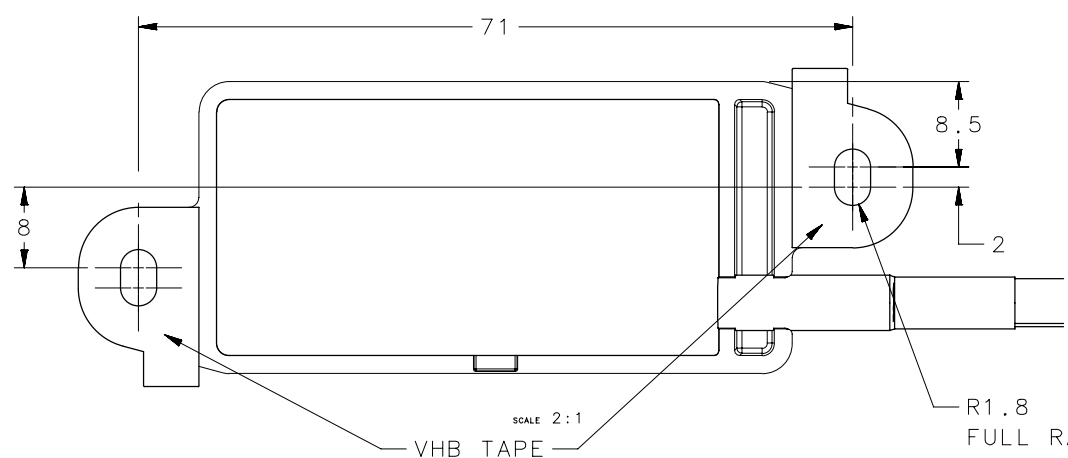
| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| M                | 05SEP2024 | MDW/ZAM | PRN: P2024-1525 |

ASSEMBLY NOTES AND INSTRUCTIONS:

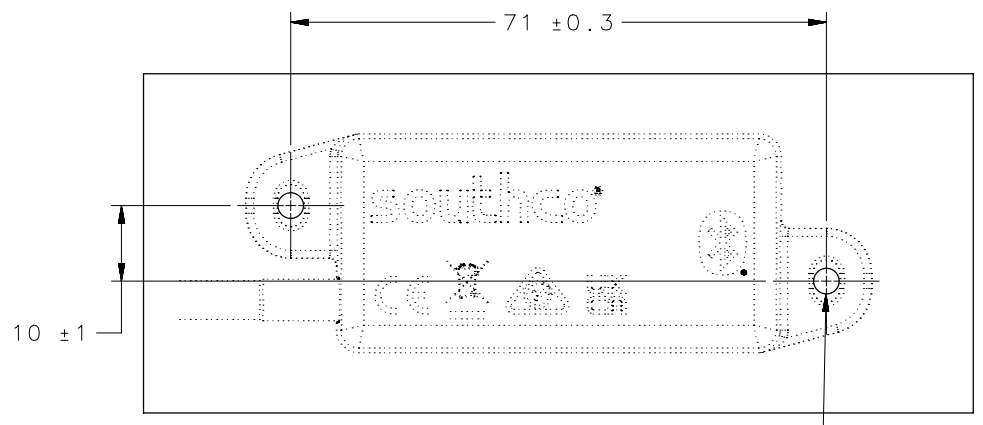
- PRESSURE SENSITIVE ADHESIVE IS PRE-INSTALLED ON CONTROLLER MOUNTING TABS FOR EASIER MOUNTING TO APPLICATION SURFACE
- ENSURE MOUNTING SURFACE IS CLEAN BEFORE INSTALLING CONTROLLER TO MOUNTING SURFACE
- MOUNTING SLOTS CAN BE USED WITH AN M3 OR #4-40 SCREW
- REMOVE BACKING FROM TAPE TO EXPOSE ADHESIVE SURFACE  
LOCATE UNIT TO DESIRED LOCATION  
GENTLY PRESS UNIT WITH EXPOSED TAPE INTO POSITION TO ACTIVATE ADHESIVE  
OPTIONALLY INSTALL MOUNTING SCREWS
- ANTENNA IS LOCATED UNDERNEATH BLUETOOTH® SYMBOL  
SURROUNDING MATERIAL CAN AFFECT SIGNAL RANGE AND QUALITY



SCALE 1:1



R1.8  
FULL RADIUS TYPICAL



SCALE 3:2  
PANEL PREP

2X Ø3.4 ± 0.1

NOTE: NO MOUNTING HARDWARE IS PROVIDED  
NOTE: ONLY ONE USER CAN BE CONNECTED AT A TIME

|  |   |                     |   |               |                      |
|--|---|---------------------|---|---------------|----------------------|
| CPB NUMBER<br>2017-0837  | THIRD ANGLE PROJECTION                                    |                     | <b>southco</b><br>CONNECT • CREATE • INNOVATE         |               |                      |
|  | MILLIMETERS [IN]  |                     |   |               |                      |
| SURFACE AREA   | TOLERANCES UNLESS OTHERWISE NOTED                         |                     | DESCRIPTION<br>SINGLE OUTPUT<br>BLUETOOTH® CONTROLLER |               |                      |
| VOLUME   | ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY. |                     | SIZE<br>A3  | SYSTEM<br>NX  | DWG NO.<br>J-EA-BT-4 |
| PROPRIETARY ITEM   | PER ASME Y14.5M-2009                                      | DRAWN BY<br>ZAM/MLL | DATE<br>07MAY2021                                     | SCALE<br>NONE | SHEET<br>2 OF 6      |
| <small>EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, CONFIDENTIALITY AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.</small> |   |                     |   |               |                      |

| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| M                | 05SEP2024 | MDW/ZAM | PRN: P2024-1525 |

NOTES:

10. POWER SOURCE SHOULD BE SIZED BASED ON THE REQUIREMENTS OF THIS CONTROLLER AND THE CONNECTED LATCH

11. SEE SOUTHCO P/N EA-A02-002 FOR SUGGESTED POWER SUPPLY

ELECTRICAL SPECIFICATIONS:

| SYMBOL       | PARAMETER                     | MIN | NOM  | MAX  | UNITS |
|--------------|-------------------------------|-----|------|------|-------|
| $V_{SUPPLY}$ | SUPPLY VOLTAGE                | 8.0 | 12   | 13.8 | VDC   |
| $I_{SUPPLY}$ | SUPPLY CURRENT - AVERAGE IDLE | -   | 0.12 | -    | mA    |
|              | SUPPLY CURRENT - OPERATING*   | -   | 2.6  | -    |       |
| $I_{OUTPUT}$ | STEADY STATE OUTPUT CURRENT   | -   | -    | 2.5  | A     |
| T            | OPERATING TEMPERATURE         | -40 | -    | 80   | ° C   |
| RANGE        | SIGNAL RANGE**                | -   | 10   | -    | m     |



EA-BT-4043-10-BB

| "BB" DENOTES LATCH CONFIGURATIONS |                   |          |              |              |         |
|-----------------------------------|-------------------|----------|--------------|--------------|---------|
| CONFIGURATION                     | LATCH SERIES      |          |              |              |         |
| A1                                | R4-EM-2           | R4-EM-6  | R4-EM-7      | EM-05-1      | EM-05-2 |
| B1                                | R4-EM-9D          | R4-EM-9P | R4-EM-05     |              |         |
| C1                                | H3-EM-60          | H3-EM-80 | EM-10-XX-310 | EM-10-XX-410 |         |
| D1                                | R4-EM-8X6-340     |          |              |              |         |
| E1                                | R4-50-XX-1EX-10   |          |              |              |         |
| F1                                | R4-25-2XX-51BX-XX |          |              |              |         |
| F2                                | AC-EM-102-1042    |          |              |              |         |

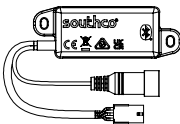
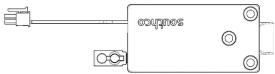
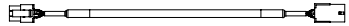
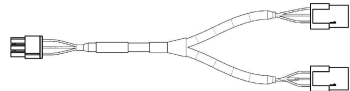
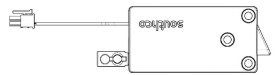
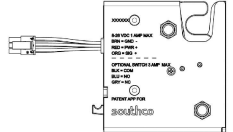
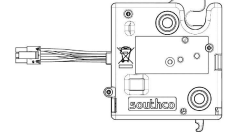
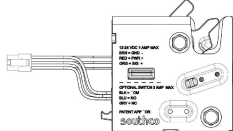
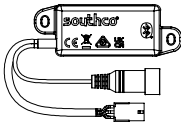
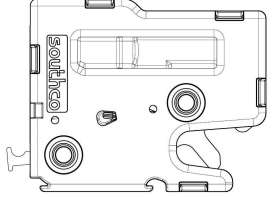

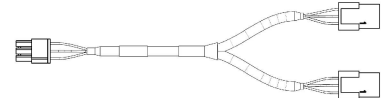
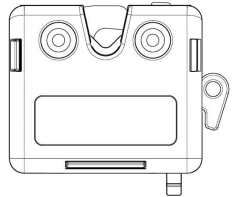
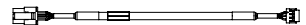
NOTE:

\*WHEN THE OUTPUTS ARE BEING DRIVEN HIGH BUT NO LATCH IS CONNECTED

\*\* IN OPEN AIR

|   |  |  |
|---|--|--|
| CPB NUMBER<br>2017-0837   | THIRD ANGLE PROJECTION  | <br>CONNECT • CREATE • INNOVATE |
|   | MILLIMETERS [IN]   |  |
| SURFACE AREA  | TOLERANCES UNLESS OTHERWISE NOTED  | DESCRIPTION<br>SINGLE OUTPUT<br>BLUETOOTH® CONTROLLER  |
| VOLUME  | ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.  | SIZE SYSTEM<br>A3 NX   |
| PROPRIETARY ITEM<br><small>EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREIN IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.</small> | PER ASME Y14.5M-2009   | DWG NO.<br>J-EA-BT-4   |
|   |  | DRAWN BY ZAM/MLL DATE 07MAY2021 SCALE 1:1 SHEET 3 OF 6   |

| REVISION HISTORY |           |                  |
|------------------|-----------|------------------|
| REV              | DATE      | DESCRIPTION      |
| 1                | 10SEP2024 | NEW/ZZM          |
| 2                |           | PRNT: P2024-1520 |

| BLUETOOTH CONTROLLER   | SOUTHCO LATCH SERIES   | INTERCONNECT HARNESS<br>PART NUMBER   | Y SPLITTER HARNESS<br>PART NUMBER   |
|--|--|---|---|
|  <p>EA-BT-4043-10-A1<br/>OPTIMIZED FOR BATTERY USAGE</p>                  |  <p>EM-05-11</p>                                      | <p>EA-W20-X01-21<br/>(OPTIONAL -<br/>EXTENSION ONLY)</p>  | <p>EA-W21-20-X17-20<br/>(Y SPLITTER HARNESS,<br/>OPERATE 2 LATCHES)</p>    |
|  |  <p>EM-05-21</p>                                      |   |   |
|  |  <p>R4-EM-2</p>                                       |   |   |
|  |  <p>R4-EM-6</p>                                       |   |   |
|  |  <p>R4-EM-7</p>                                       |   |   |
|  <p>EA-BT-4043-10-B1<br/>NOT RECOMMENDED FOR<br/>USE WITH BATTERIES</p> |  <p>R4-EM-9<br/>DOOR &amp; LATCH SENSOR VERSIONS</p> | <p>EA-W21-X25-21</p>                                    | <p>EA-W21-20-X01-20<br/>(Y SPLITTER HARNESS,<br/>OPERATE 2 LATCHES)</p>  |
|  |  <p>R4-EM-05<br/>DOOR &amp; LATCH SENSOR</p>        | <p>EA-W01-X17-21</p>                                    |   |

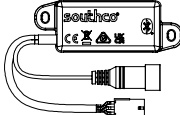
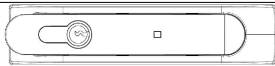
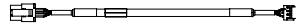
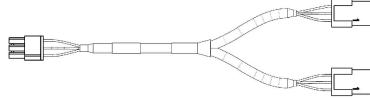


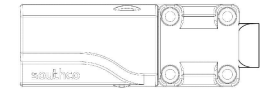

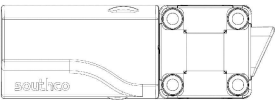
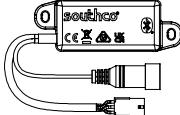
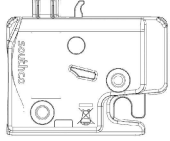

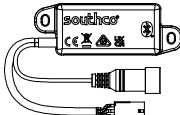
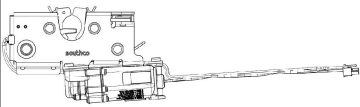

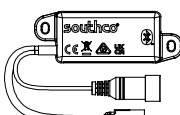
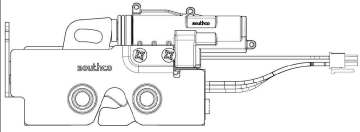
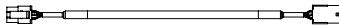
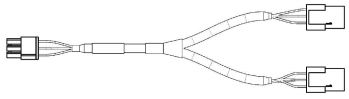
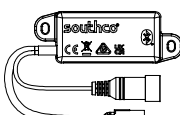
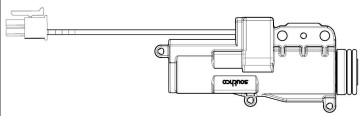

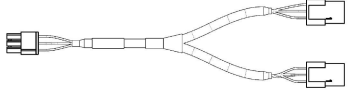
**HOW TO ORDER:**

1. ORDER A CONTROLLER CONFIGURED TO WORK WITH THE APPROPRIATE ELECTROMECHANICAL LATCH.
2. ORDER THE INTERCONNECT HARNESS TO CONNECT THE ELECTROMECHANICAL LATCH TO THE CONTROLLER (IF REQUIRED).
3. ORDER THE Y SPLITTER HARNESS TO OPERATE TWO ELECTROMECHANICAL DEVICES FROM ONE BLUETOOTH CONTROLLER (IF REQUIRED). THE TWO CAN BE A DIFFERENT LATCH SERIES OR PRODUCT CLASS BUT MUST BE THE SAME \*BB\* CONFIGURATION. SEE PAGE 3.
4. ORDER SOUTHCO POWER SUPPLY EA-A02-002 AND SELECT THE APPROPRIATE PLUG ADAPTER (IF NEEDED). SEE DRAWING J-EA-A02-002 FOR MORE INFORMATION.

| "X" | WIRE LENGTH (mm) |
|-----|------------------|
| A   | 150              |
| 1   | 1000             |
| 2   | 2000             |

|  |   |
|--|---|
| <p>2017-0837</p> <p>THIRD ANGLE PROJECTION</p> <p>MILLIMETERS [IN]</p> <p>UNLESS OTHERWISE SPECIFIED</p> <p>ALL DIMENSIONS ARE WITHOUT TOLERANCES ARE FOR REFERENCE ONLY</p> <p>PER ASME Y14.5M-2009</p> | <p><b>southco</b><br/>CONNECT-CREATE-INNOVATE</p> <p>SINGLE OUTPUT<br/>BLUETOOTH CONTROLLER</p> <p>J-EA-BT-4</p> <p>2MM/ML 31MAY2022 1:1 4 OF 6</p> |
|--|---|


| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| 1                | 10SEP2024 | NEW/ZAM | PRY: P0224-1520 |

| BLUETOOTH CONTROLLER  | SOUTHCO LATCH SERIES   | INTERCONNECT HARNESS PART NUMBER   | Y SPLITTER HARNESS PART NUMBER   |
|---|--|--|--|
| <br>EA-BT-4043-10-C1<br>NOT RECOMMENDED FOR USE WITH BATTERIES | <br>H3-EM-60 SERIES   | EA-W01-X23-21<br>                                  | EA-W21-20-X01-20<br>(Y SPLITTER HARNESS, OPERATE 2 LATCHES)<br>   |
|   | <br>H3-EM-80 SERIES   | EA-W01-X17-21<br>                                  |  |
|   | <br>EM-10-1X-310 AND EM-10-1X-410                             | EA-W21-X03-02<br>                                  |  |
|   | <br>EM-10-2X-310, EM-10-3X-310, EM-10-2X-410, EM-10-3X-410    |  |  |
| <br>EA-BT-4043-10-D1<br>OPTIMIZED FOR BATTERY USAGE            | <br>R4-EM-8<br>12 VDC VERSION WITH LATCH AND DOOR SENSOR ONLY | EA-W24-X03-21<br>                                  | NOT COMPATIBLE WITH Y SPLITTER HARNESS   |
| <br>EA-BT-4043-10-E1<br>OPTIMIZED FOR BATTERY USAGE            | <br>R4-50   | EA-W20-X01-21<br>(OPTIONAL - EXTENSION ONLY)<br>   | NOT COMPATIBLE WITH Y SPLITTER HARNESS   |
| <br>EA-BT-4043-10-F1<br>OPTIMIZED FOR BATTERY USAGE          | <br>R4-25<br>12 VDC VERSION ONLY                            | EA-W20-X01-21<br>(OPTIONAL - EXTENSION ONLY)<br> | EA-W21-20-X17-20<br>(Y SPLITTER HARNESS, OPERATE 2 LATCHES)<br> |
| <br>EA-BT-4043-10-F2<br>OPTIMIZED FOR BATTERY USAGE          | <br>AC-EM-102-1042  | EA-W20-X01-21<br>(OPTIONAL - EXTENSION ONLY)<br> | EA-W21-20-X17-20<br>(Y SPLITTER HARNESS, OPERATE 2 LATCHES)<br> |

**HOW TO ORDER:**

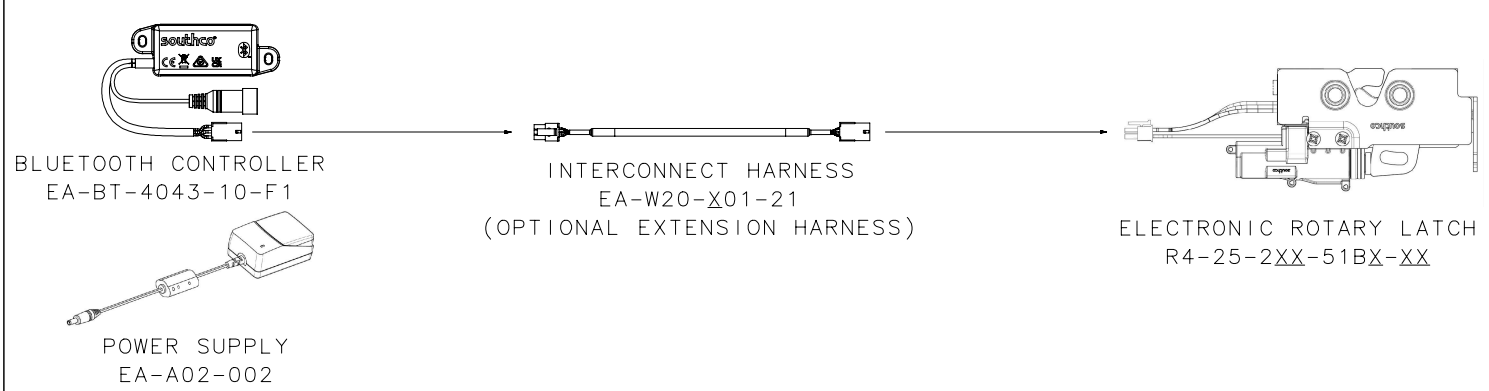
1. ORDER A CONTROLLER CONFIGURED TO WORK WITH THE APPROPRIATE ELECTROMECHANICAL LATCH.
2. ORDER THE INTERCONNECT HARNESS TO CONNECT THE ELECTROMECHANICAL LATCH TO THE CONTROLLER (IF REQUIRED).
3. ORDER THE Y SPLITTER HARNESS TO OPERATE TWO ELECTROMECHANICAL DEVICES FROM ONE BLUETOOTH CONTROLLER (IF REQUIRED). THE TWO CAN BE A DIFFERENT LATCH SERIES OR PRODUCT CLASS BUT MUST BE THE SAME "BB" CONFIGURATION. (SEE PAGE 3).
4. ORDER SOUTHCO POWER SUPPLY EA-A02-002 AND SELECT THE APPROPRIATE PLUG ADAPTER (IF NEEDED). SEE DRAWING J-EA-A02-002 FOR MORE INFORMATION.

| WIRE LENGTH TABLE |                  |
|-------------------|------------------|
| "X" WIRE          | WIRE LENGTH (mm) |
| A                 | 150              |
| 1                 | 1000             |
| 2                 | 2000             |

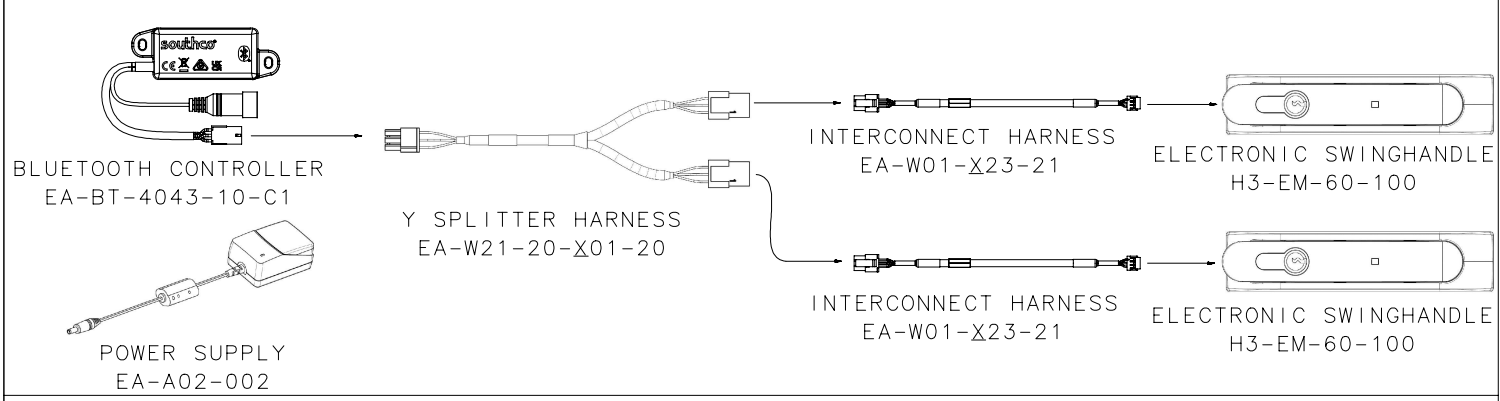
|   |   |
|---|---|
| 2017-0837<br>THIRD ANGLE PROJECTION<br>MILLIMETERS [IN]                                       | <br>CONNECT-CREATE-INNOVATE<br>SINGLE OUTPUT<br>BLUETOOTH® CONTROLLER<br>J-EA-BT-4 |
| DIMENSIONS UNLESS OTHERWISE NOTED<br>ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY | PER ASME Y14.5M-2009<br>2AM/MLL<br>31MAY2022<br>1:1 5 OF 6  |

| REVISION HISTORY |           |         |                 |
|------------------|-----------|---------|-----------------|
| REV              | DATE      | BY      | DESCRIPTION     |
| 1                | 10SEP2024 | MOH/ZAM | PRY: P0224-1520 |

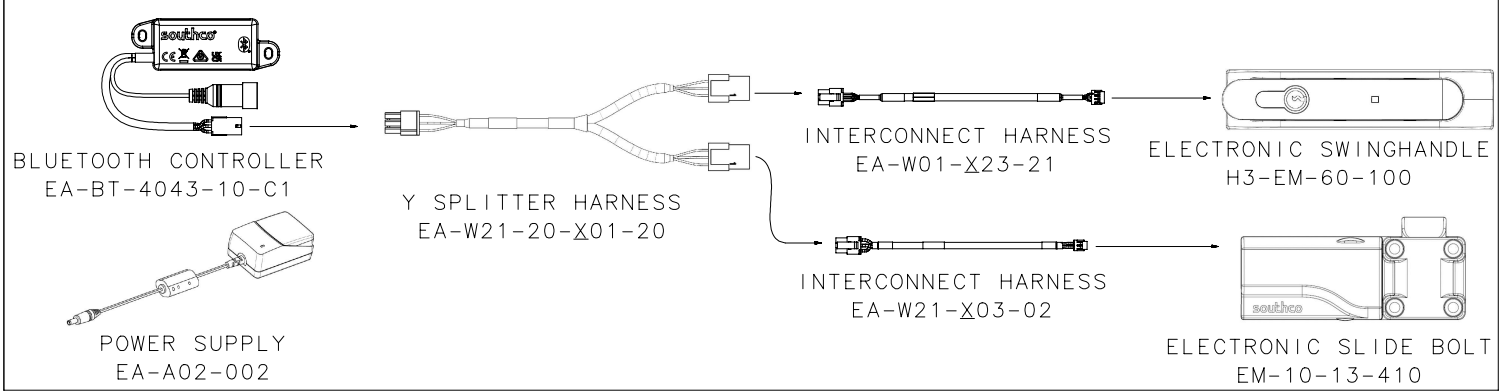
EXAMPLE: SYSTEM WITH R4-25 ELECTRONIC ROTARY LATCH



EXAMPLE: SYSTEM WITH TWO H3-EM-60 ELECTRONIC SWINGHANDLES



EXAMPLE: SYSTEM WITH H3-EM-60 ELECTRONIC SWINGHANDLE AND EM-10 ELECTRONIC SLIDE BOLT LATCH



| WIRE LENGTH TABLE |                  |
|-------------------|------------------|
| "X"               | WIRE LENGTH (mm) |
| A                 | 150              |
| 1                 | 1000             |
| 2                 | 2000             |

|  |                        |                             |
|--|------------------------|-----------------------------|
| 2017-0837  | THIRD ANGLE PROJECTION | <br>CONNECT-CREATE-INNOVATE |
|  | MILLIMETERS [IN]       |                             |
| TOLERANCES UNLESS OTHERWISE NOTED                    |                        | ELECTRONIC ACCESS SOLUTION  |
| ALL DIMENSIONS UNLESS OTHERWISE NOTED                |                        |                             |
| TOLERANCES ARE FOR REFERENCE ONLY                    |                        |                             |
| PER ASME Y14.5M-2009<br>MOW/ZAM 23MAY2024 1:1 6 OF 6 | J-EA-BT-4<br>NX<br>AO  |                             |