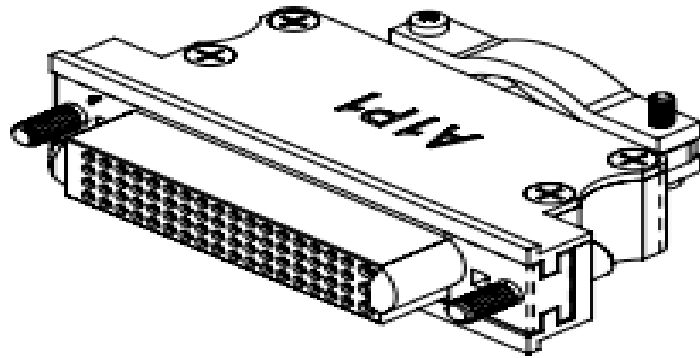


# ASTRONICS COREPOWER ECBU CABLE CONNECTORS

USER GUIDE



**Positronic**<sup>®</sup>  
an Amphenol company

---


THE SCIENCE OF CERTAINTY<sup>®</sup>

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### CONTENTS


|  |       |
|--|-------|
| 1.0 SCOPE.....                           | 3     |
| 2.0 TECHNICAL CHARACTERISTICS.....       | 3-4   |
| 3.0 CONNECTORS - 28VDC ECBU LRU.....     | 5-7   |
| 4.0 CONNECTORS - 115VAC ECBU LRU.....    | 8-9   |
| 5.0 CONNECTORS - 270VDC ECBU LRU.....    | 10-11 |
| 6.0 CONNECTORS - SCM ECBU LRU.....       | 12-13 |
| 7.0 CONNECTORS - GCU ECBU LRU.....       | 14-15 |
| 8.0 BACKSHELLS - ALL ECBU/LRU.....       | 16    |
| 9.0 COMBINED CONTACT/TOOLING MATRIX..... | 17-18 |
| 10.0 ASSEMBLY INSTRUCTIONS.....          | 19    |
| 11.0 RESOURCES.....                      | 20    |
| 12.0 DRAWINGS.....                       | 21-59 |
| FC112P2/AA-PA907.....                    | 21    |
| FC114P2/AA-PA907.....                    | 22    |
| FC0404N2S/AA-14-1882.35.....             | 23    |
| FC422P9/AA.....                          | 24    |
| FC4008DS/AA.....                         | 25    |
| FC1816P2/AA.....                         | 26    |
| MC112NS/AA.....                          | 27    |
| MC114N/AA.....                           | 28    |
| MC422N9/AA-1127.11.....                  | 29    |
| MC1210NS/AA.....                         | 30    |
| MC1816N/AA.....                          | 31    |
| MC1816NS/AA.....                         | 32    |
| SK18444-1-2K1.....                       | 33    |

|  |                 |          |              |
|--|-----------------|----------|--------------|
| <br>Positronic®<br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER  |
|  | AES-ECBU        | A        | Page 1 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

|                     |    |
|---------------------|----|
| SK18444-2-2K1 ..... | 34 |
| SK18444-K .....     | 35 |
| SK18445-1-1K1 ..... | 36 |
| SK18445-2-1K1 ..... | 37 |
| SK18445-K .....     | 38 |
| SK21801-1-1K1 ..... | 39 |
| SK21801-2-1K1 ..... | 40 |
| SK21801-K .....     | 41 |
| SK21804-1-2K1 ..... | 42 |
| SK21804-2-2K1 ..... | 43 |
| SK21804-K .....     | 44 |
| SK25115-K .....     | 45 |
| SK25117-K .....     | 46 |
| SK25166-K .....     | 47 |
| SK25168-K .....     | 48 |
| SK25170-K .....     | 49 |
| SK25172-K .....     | 50 |
| SK25174-K .....     | 51 |
| SK25202-1 .....     | 52 |
| SK25202-2 .....     | 53 |
| SK25202-3 .....     | 54 |
| SK25203-1 .....     | 55 |
| SK25203-2 .....     | 56 |
| SK25203-3 .....     | 57 |
| SK25204-1 .....     | 58 |
| SK25204-2 .....     | 59 |

|  |                 |          |              |
|--|-----------------|----------|--------------|
| <br>Positronic®<br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER  |
|  | AES-ECBU        | A        | Page 2 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### 1.0 SCOPE

This document describes the Positronic cable connectors used on the Astronics CorePower ECBUs and Control LRUs. Characteristics of the connectors, required tooling and termination instructions will be covered.


### 2.0 TECHNICAL CHARACTERISTICS

#### MATERIALS AND FINISHES

|                                    |  |
|------------------------------------|--|
| <b>Insulator material</b>          | Glass-filled LCP, UL 94V-O, grey color                                       |
| <b>Contact material</b>            | Copper alloy   |
| <b>Contact plating</b>             | Gold flash over nickel<br>30 µin gold over nickel.                           |
| <b>Backshell material</b>          | Aluminum   |
| <b>Backshell plating</b>           | Yellow chromate conversion   |
| <b>Backshell hardware material</b> | Stainless steel with thread locking patch<br>Steel with thread locking patch |
| <b>Backshell hardware plating</b>  | Passivation<br>Nickel plating  |
| <b>Interfacial seal material</b>   | Flourosilicone sponge, MIL-R- 6130 type II                                   |

#### ELECTRICAL

|   |                                   |                                 |
|---|-----------------------------------|---------------------------------|
|   | <b>Working voltage (rms)</b>      | 100v to 1000v                   |
| I | <b>Initial contact resistance</b> | Power - 0.2 mΩ<br>Signal - 5 mΩ |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br>Positronic®<br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 3 of 59       |



# ASTRONICS ECBU CABLE CONNECTORS


## USER GUIDE

### 3.0 CONNECTORS – 28VDC – ECBU LRU

#### 28VDC connectors with backshells

|                       |   |   |
|-----------------------|---|---|
| <b>Part number</b>    | <b>SK18444-1-2K1</b>  | <b>SK18444-2-2K1</b>  |
| <b>Position</b>       | P1  | P1  |
| <b>Gender</b>         | Female  | Female  |
| <b>Keyed</b>          | No  | Yes   |
| <b>Kitted Contact</b> | FC0404N2S/AA-14-1882.35<br>Size 4 - qty 1<br>For 4 awg wire | FC0404N2S/AA-14-1882.35<br>Size 4 - qty 1<br>For 4 awg wire |
| <b>Kitted Contact</b> | FC114P2/AA-PA907<br>Size 16 - qty4<br>For 14 to 16 awg wire | FC114P2/AA-PA907<br>Size 16 - qty4<br>For 14 to 16 awg wire |
| <b>Kitted Contact</b> | FC1816P2/AA<br>Size 18 - qty3<br>For 16 to 18 awg wire      | FC1816P2/AA<br>Size 18 - qty3<br>For 16 to 18 awg wire      |
| <b>Kitted Contact</b> | FC422P9/AA<br>Size 22 - qty 28<br>For 22 to 26 awg wire     | FC422P9/AA<br>Size 22 - qty 28<br>For 22 to 26 awg wire     |

|                       |   |   |
|-----------------------|---|---|
| <b>Part number</b>    | <b>SK18445-1-1K1</b>                                    | <b>SK18445-2-1K1</b>                                    |
| <b>Position</b>       | P2  | P2  |
| <b>Gender</b>         | Male  | Male  |
| <b>Keyed</b>          | No  | Yes   |
| <b>Kitted Contact</b> | MC112NS/AA<br>Size 16 - qty 4<br>For 12 awg wire        | MC112NS/AA<br>Size 16 - qty 4<br>For 12 awg wire        |
| <b>Kitted Contact</b> | MC114N/AA<br>Size 16 - qty 4<br>For 14 to 16 awg wire   | MC114N/AA<br>Size 16 - qty 4<br>For 14 to 16 awg wire   |
| <b>Kitted Contact</b> | FC1816N/AA<br>Size 18 - qty 12<br>For 16 to 18 awg wire | FC1816N/AA<br>Size 18 - qty 12<br>For 16 to 18 awg wire |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 5 of 59       |

# ASTRONICS ECBU CABLE CONNECTORS


## USER GUIDE

### 28VDC connectors

|                       |   |   |
|-----------------------|---|---|
| <b>Part number</b>    | <b>SK18444-K</b>  | <b>SK18445-K</b>  |
| <b>Position</b>       | P1  | P2  |
| <b>Gender</b>         | Female  | Male  |
| <b>Keyed</b>          | NA  | NA  |
| <b>Kitted Contact</b> | FC0404N2S/AA-14-1882.35<br>Size 4 - qty 1<br>For 4 awg wire | MC112NS/AA<br>Size 16 - qty 4<br>For 12 awg wire        |
| <b>Kitted Contact</b> | FC114P2/AA-PA907<br>Size 16 - qty4<br>For 14 to 16 awg wire | MC114N/AA<br>Size 16 - qty 4<br>For 14 to 16 awg wire   |
| <b>Kitted Contact</b> | FC1816P2/AA<br>Size 18 - qty3<br>For 16 to 18 awg wire      | FC1816N/AA<br>Size 18 - qty 12<br>For 16 to 18 awg wire |
| <b>Kitted Contact</b> | FC422P9/AA<br>Size 22 - qty 28<br>For 22 to 26 awg wire     |   |

### 28VDC crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools              |                |                              | Positioner                 |                |                |
|--------------------------------|-----------------------------|--------------------------|----------------|------------------------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN            | DMC Equivalent | Mil Equivalent               | Positronic PN              | DMC Equivalent | Mil Equivalent |
| MC1816N/AA                     | .230±.020<br>(5.84±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-32-0-0<br>9502-18-0-0 | K1202          | -              |
| MC114N/AA                      | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9502-1-0-0                 | TH4            | M22520/1-03    |
| MC112NS/AA                     | .230±.020<br>(5.84±.51)     | 9509-4-0-0               | GS222          | -                            | 9509-5-0-0                 | TP1366         | -              |
| FC1816P2/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-30-0-0<br>9502-18-0-0 | K1202          | -              |
| FC114P2/AA-PA907               | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9502-1-0-0                 | TH4            | M22520/1-03    |
| FC0404N2S/AA-14-1882.35        | .460±.020<br>(11.68±.51)    | 9503-2-1-0<br>9503-2-2-0 | WA23<br>WA23-4 | M22520/23-01<br>M22520/23-04 | 9503-2-4-0                 | WA23-458L      | -              |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 6 of 59       |


# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

|            |                         |            |      |             |             |      |   |
|------------|-------------------------|------------|------|-------------|-------------|------|---|
| FC422P9/AA | .125±.020<br>(3.18±.51) | 9507-0-0-0 | AFM8 | M22520/2-01 | 9502-13-0-0 | K280 | - |
|------------|-------------------------|------------|------|-------------|-------------|------|---|

### 28VDC insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| MC1816N/AA                     | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| MC114N/AA                      | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| MC112NS/AA                     | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| FC1816P2/AA                    | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| FC114P2/AA-PA907               | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| FC0404N2S/AA-14-1882.35        | N/A            |                            |                |                | N/A           |                            |                |                |
| FC422P9/AA                     | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG-2103                   | -              | -              |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 7 of 59       |



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### 4.0 CONNECTORS – 115VAC – ECBU LRU


#### 115VAC ECBU connectors with backshells

|                       |   |   |
|-----------------------|---|---|
| <b>Part number</b>    | SK21801-1-1K1   | SK21801-2-1K1   |
| <b>Position</b>       | P1  | P1  |
| <b>Gender</b>         | Male  | Male  |
| <b>Keyed</b>          | No  | Yes   |
| <b>Kitted Contact</b> | MC1210NS/AA<br>Size 12 - qty 1<br>For 10 awg wire               | MC1210NS/AA<br>Size 12 - qty 1<br>For 10 awg wire               |
| <b>Kitted Contact</b> | MC114N/AA<br>Size 16 - qty 4<br>For 14 - 16 awg wire            | MC114N/AA<br>Size 16 - qty 4<br>For 14 - 16 awg wire            |
| <b>Kitted Contact</b> | MC1816NS/AA<br>Size 18 - qty3<br>For 16 – 18 awg wire           | MC1816NS/AA<br>Size 18 - qty3<br>For 16 – 18 awg wire           |
| <b>Kitted Contact</b> | MC422N9/AA-1127.11<br>Size 22 - qty 28<br>For 22 to 26 awg wire | MC422N9/AA-1127.11<br>Size 22 - qty 28<br>For 22 to 26 awg wire |

|                       |  |  |
|-----------------------|--|--|
| <b>Part number</b>    | SK21804-1-2K1  | SK21804-2-2K1  |
| <b>Position</b>       | P2   | P2   |
| <b>Gender</b>         | Female   | Female   |
| <b>Keyed</b>          | No   | Yes  |
| <b>Kitted Contact</b> | MC4008DS/AA<br>Size 12 - qty 3<br>For 8 awg wire             | MC4008DS/AA<br>Size 12 - qty 3<br>For 8 awg wire             |
| <b>Kitted Contact</b> | FC112P2/AA-PA907<br>Size 16 - qty 2<br>For 12 to 12 awg wire | FC112P2/AA-PA907<br>Size 16 - qty 2<br>For 12 to 12 awg wire |

#### 115VAC ECBU connectors

|                       |   |  |
|-----------------------|---|--|
| <b>Part number</b>    | SK21801-K   | SK21804-K  |
| <b>Position</b>       | P1  | P2   |
| <b>Gender</b>         | Male  | Female   |
| <b>Keyed</b>          | NA  | NA   |
| <b>Kitted Contact</b> | MC1210NS/AA<br>Size 12 - qty 1<br>For 10 awg wire     | MC4008DS/AA<br>Size 12 - qty 3<br>For 8 awg wire             |
| <b>Kitted Contact</b> | MC114N/AA<br>Size 16 - qty 4<br>For 14 - 16 awg wire  | FC112P2/AA-PA907<br>Size 16 - qty 2<br>For 12 to 12 awg wire |
| <b>Kitted Contact</b> | MC1816NS/AA<br>Size 18 - qty3<br>For 16 – 18 awg wire |  |
| <b>Kitted Contact</b> | MC422N9/AA-1127.11                                    |  |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br>Positronic®<br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 8 of 59       |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE


|   |
|---|
| Size 22 - qty 28<br>For 22 to 26 awg wire |
|---|

### 115VAC crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools   |                |                | Positioner                 |                |                |
|--------------------------------|-----------------------------|---------------|----------------|----------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN | DMC Equivalent | Mil Equivalent | Positronic PN              | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | .125±.020<br>(3.18±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-13-0-0                | K280           | -              |
| MC1816NS/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-32-0-0<br>9502-18-0-0 | K1202          | -              |
| MC114N/AA                      | .230±.020<br>(5.84±.51)     | 9501-0-0-0    | AF8            | M22520/1-01    | 9502-1-0-0                 | TH4            | M22520/1-03    |
| MC112NS/AA                     | .230±.020<br>(5.84±.51)     | 9509-4-0-0    | GS222          | -              | 9509-5-0-0                 | TP1366         | -              |
| MC1210NS/AA                    | .230±.020<br>(5.84±.51)     | 9501-0-0-0    | AF8            | M22520/1-01    | 9509-6-2-0                 | TP1386         | -              |
| FC114P2/AA-PA907               | .230±.020<br>(5.84±.51)     | 9501-0-0-0    | AF8            | M22520/1-01    | 9502-1-0-0                 | TH4            | M22520/1-03    |
| FC4008DS/AA                    | .350±.020<br>(8.89±.51)     | 9504-1-0-0    | HX-4           | M22520/5-01    | 9504-19-1-0                | Y524           | -              |

### 115VAC insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG2103                    | -              | -              |
| MC1816NS/AA                    | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| MC114N/AA                      | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| MC112NS/AA                     | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| MC1210NS/AA                    | 9099-3-0-0     | ITP 1168                   | -              | -              | 2711-0-0-0    | -                          | -              | -              |
| FC114P2/AA-PA907               | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| FC4008DS/AA                    | -              | -                          | -              | -              | 4311-0-0-0    | -                          | -              | -              |

|   |                 |          |              |
|---|-----------------|----------|--------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER  |
|   | AES-ECBU        | A        | Page 9 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS


## USER GUIDE

### 5.0 CONNECTORS – 270VDC – ECBU LRU

#### 270VDC ECBU connectors

|                              |   |   |
|------------------------------|---|---|
| <b>Part number</b>           | SK25170-K   | SK25172-K   |
| <b>Position</b>              |   |   |
| <b>Gender</b>                | Male  | Female  |
| <b>Associated back shell</b> | SK25204-*   | SK25203-*   |
| <b>Keyed</b>                 | NA  | NA  |
| <b>Kitted Contact</b>        | MC1816N/AA<br>Size 18 - qty 5<br>For 16 – 18 awg wire | FC0404N2S/AA-14-1882.35<br>Size 4 - qty 1<br>For 4 awg wire |
| <b>Kitted Contact</b>        |   | FC422P9/AA<br>Size 22 - qty 36<br>For 22-26 awg wire        |

|                              |   |
|------------------------------|---|
| <b>Part number</b>           | SK25174-K   |
| <b>Position</b>              |   |
| <b>Gender</b>                | Male  |
| <b>Associated back shell</b> | SK25204-*   |
| <b>Keyed</b>                 | NA  |
| <b>Kitted Contact</b>        | MC1816N/AA<br>Size 18 - qty 5<br>For 16 – 18 awg wire |

|   |                        |                 |                    |
|---|------------------------|-----------------|--------------------|
| <br><b>Positronic*</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|   | AES-ECBU               | A               | Page 10 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS


## USER GUIDE

### 270VDC crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools   |                |                | Positioner                 |                |                |
|--------------------------------|-----------------------------|---------------|----------------|----------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN | DMC Equivalent | Mil Equivalent | Positronic PN              | DMC Equivalent | Mil Equivalent |
| MC1816N/AA                     | .230±.020<br>(5.84±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-32-0-0<br>9502-18-0-0 | K1202          | -              |
| FC4008DS/AA                    | .350±.020<br>(8.89±.51)     | 9504-1-0-0    | HX-4           | M22520/5-01    | 9504-19-1-0                | Y524           | -              |
| FC422P9/AA                     | .125±.020<br>(3.18±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-13-0-0                | K280           | -              |

### 270VDC insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| MC1816N/AA                     | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| FC0404N2S/AA-14-1882.35        | N/A            |                            |                |                | N/A           |                            |                |                |
| FC422P9/AA                     | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG-2103                   | -              | -              |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 11 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE


### 6.0 CONNECTORS - SCM - ECBU LRU

#### SCM connectors

|                              |   |   |
|------------------------------|---|---|
| <b>Part number</b>           | SK25115-K   | SK25117-K   |
| <b>Position</b>              |   |   |
| <b>Gender</b>                | Male  | Female  |
| <b>Associated back shell</b> | SK25203-*   | SK25203-*   |
| <b>Keyed</b>                 | NA  | NA  |
| <b>Kitted Contact</b>        | MC422N9/AA-1127.11<br>Size 22 - qty 72<br>For 22 to 26 awg wire | FC1816P2/AA<br>Size 22 - qty 3<br>For 16 to 18 awg wire |
| <b>Kitted Contact</b>        |   | FC422P9/AA<br>Size 22 - qty 68<br>For 22 to 26 awg wire |

#### SCM crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools   |                |                | Positioner                 |                |                |
|--------------------------------|-----------------------------|---------------|----------------|----------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN | DMC Equivalent | Mil Equivalent | Positronic PN              | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | .125±.020<br>(3.18±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-13-0-0                | K280           | -              |
| FC1816P2/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-30-0-0<br>9502-18-0-0 | K1202          | -              |
| FC422P9/AA                     | .125±.020<br>(3.18±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-13-0-0                | K280           | -              |


|   |                        |                 |                    |
|---|------------------------|-----------------|--------------------|
| <br><b>Positronic*</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|   | AES-ECBU               | A               | Page 12 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### SCM insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG2103                    | -              | -              |
| FC1816P2/AA                    | 9099-6-0-0     |                            |                |                | -             |                            |                |                |
| FC422P9/AA                     | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG-2103                   | -              | -              |

|   |                        |                 |                    |
|---|------------------------|-----------------|--------------------|
| <br><b>Positronic</b> <sup>®</sup><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|   | AES-ECBU               | A               | Page 13 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE


### 7.0 CONNECTORS – GCU – ECBU LRU

#### GCU connectors

|                              |   |   |
|------------------------------|---|---|
| <b>Part number</b>           | <b>SK25166-K</b>  | <b>SK25168-K</b>  |
| <b>Position</b>              |   |   |
| <b>Gender</b>                | Female  | Female  |
| <b>Associated back shell</b> | SK25202-*   | SK25203-*   |
| <b>Keyed</b>                 | NA  | NA  |
| <b>Kitted Contact</b>        | FC1816P2/AA<br>Size 22 - qty 6<br>For 16 to 18 awg wire | FC1816P2/AA<br>Size 22 - qty 6<br>For 16 to 18 awg wire |
| <b>Kitted Contact</b>        | FC422P9/AA<br>Size 22 - qty 36<br>For 22 to 26 awg wire | FC422P9/AA<br>Size 22 - qty 20<br>For 22 to 26 awg wire |

#### GCU crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools   |                |                | Positioner                 |                |                |
|--------------------------------|-----------------------------|---------------|----------------|----------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN | DMC Equivalent | Mil Equivalent | Positronic PN              | DMC Equivalent | Mil Equivalent |
| FC1816P2/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-30-0-0<br>9502-18-0-0 | K1202          | -              |
| FC422P9/AA                     | .125±.020<br>(3.18±.51)     | 9507-0-0-0    | AFM8           | M22520/2-01    | 9502-13-0-0                | K280           | -              |


|   |                        |                 |                    |
|---|------------------------|-----------------|--------------------|
| <br><b>Positronic*</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|   | AES-ECBU               | A               | Page 14 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### GCU insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| FC1816P2/AA                    | 9099-6-0-0     |                            |                |                | -             |                            |                |                |
| FC422P9/AA                     | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG-2103                   | -              | -              |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 15 of 59      |



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE


### 8.0 BACKSHELLS – ALL ECBU/LRU

#### Backshells

|                       |                 |                 |                 |
|-----------------------|-----------------|-----------------|-----------------|
| Part number           | SK25202-1       | SK25202-2       | SK25202-3       |
| Keying position       | Neutral         | Left            | Right           |
| Center to center dim. | 2.65" [67.31mm] | 2.65" [67.31mm] | 2.65" [67.31mm] |

|                       |                 |                 |                 |
|-----------------------|-----------------|-----------------|-----------------|
| Part number           | SK25203-1       | SK25203-2       | SK25203-3       |
| Keying position       | Neutral         | Left            | Right           |
| Center to center dim. | 2.86" [72.62mm] | 2.86" [72.62mm] | 2.86" [72.62mm] |

|                       |                 |                 |
|-----------------------|-----------------|-----------------|
| Part number           | SK25204-1       | SK25204-2       |
| Keying position       | Neutral         | Left            |
| Center to center dim. | 2.24" [28.52mm] | 2.24" [28.52mm] |

|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic®<br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 16 of 59 |


# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### 9.0 COMBINED CONTACT/TOOLING MATRIX

#### Crimp tooling

| Positronic Contact Part Number | Strip Wire Length [in (mm)] | Crimp Tools              |                |                              | Positioner                 |                |                |
|--------------------------------|-----------------------------|--------------------------|----------------|------------------------------|----------------------------|----------------|----------------|
|                                |                             | Positronic PN            | DMC Equivalent | Mil Equivalent               | Positronic PN              | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | .125±.020<br>(3.18±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-13-0-0                | K280           | -              |
| MC1816N/AA                     | .230±.020<br>(5.84±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-32-0-0<br>9502-18-0-0 | K1202          | -              |
| MC1816NS/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-32-0-0<br>9502-18-0-0 | K1202          | -              |
| MC114N/AA                      | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9502-1-0-0                 | TH4            | M22520/1-03    |
| MC112NS/AA                     | .230±.020<br>(5.84±.51)     | 9509-4-0-0               | GS222          | -                            | 9509-5-0-0                 | TP1366         | -              |
| MC1210NS/AA                    | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9509-6-2-0                 | TP1386         | -              |
| FC1816P2/AA                    | .230±.020<br>(5.84±.51)     | 9507-0-0-0               | AFM8           | M22520/2-01                  | 9502-30-0-0<br>9502-18-0-0 | K1202          | -              |
| FC112P2/AA-P907                | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9502-1-0-0                 | TH4            | M22520/1-03    |
| FC114P2/AA-PA907               | .230±.020<br>(5.84±.51)     | 9501-0-0-0               | AF8            | M22520/1-01                  | 9502-1-0-0                 | TH4            | M22520/1-03    |
| FC0404N2S/AA-14-1882.35        | .460±.020<br>(11.68±.51)    | 9503-2-1-0<br>9503-2-2-0 | WA23<br>WA23-4 | M22520/23-01<br>M22520/23-04 | 9503-2-4-0                 | WA23-458L      | -              |
| FC4008DS/AA                    | .350±.020<br>(8.89±.51)     | 9504-1-0-0               | HX-4           | M22520/5-01                  | 9504-19-1-0                | Y524           | -              |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 17 of 59      |


# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

|            |                         |            |      |             |             |      |   |
|------------|-------------------------|------------|------|-------------|-------------|------|---|
| FC422P9/AA | .125±.020<br>(3.18±.51) | 9507-0-0-0 | AFM8 | M22520/2-01 | 9502-13-0-0 | K280 | - |
|------------|-------------------------|------------|------|-------------|-------------|------|---|

### Insertion/ removal tooling

| Positronic Contact Part Number | Insertion Tool |                            |                |                | Removal Tool  |                            |                |                |
|--------------------------------|----------------|----------------------------|----------------|----------------|---------------|----------------------------|----------------|----------------|
|                                | Positronic PN  | Contact Service Equivalent | DMC Equivalent | Mil Equivalent | Positronic PN | Contact Service Equivalent | DMC Equivalent | Mil Equivalent |
| MC422N9/AA-1127.11             | 9099-7-0-0     | -                          | -              | -              | 9081-3-0-0    | RNG2103                    | -              | -              |
| MC1816N/AA                     | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| MC1816NS/AA                    | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| MC114N/AA                      | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| MC112NS/AA                     | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| MC1210NS/AA                    | 9099-3-0-0     | ITP 1168                   | -              | -              | 2711-0-0-0    | -                          | -              | -              |
| FC1816P2/AA                    | 9099-6-0-0     | -                          | -              | -              | 9081-9-0-0    | -                          | -              | -              |
| FC112P2/AA-P907                | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| FC114P2/AA-PA907               | 9099-0-0-0     | ITH 1094                   | DAK123A        | M81969/18-01   | 9081-0-0-0    | RTG 2103                   | DRK124A        | M81969/20-01   |
| FC4008DS/AA                    |                |                            |                |                | 4311-0-0-0    | -                          | -              | -              |
| FC0404N2S/AA-14-1882.35        | N/A            |                            |                |                | N/A           |                            |                |                |

|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 18 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

### 10.0 ASSEMBLY INSTRUCTIONS

#### **ASSEMBLY INSTRUCTIONS**

##### **Terminate contacts**


- Use the tooling guide to determine the correct crimp tooling.
- Use the tooling guide to determine the correct insulation strip length on the conductors to be terminated.
- Crimp contacts and inspect using your internal inspection criteria.

##### **Load Contacts**

- Load contacts into the desired pinout positions.
- All contacts, except for the large size 4 power contact use AS39029 style retention. The contacts should “click” into place.
- Check that the contact are fully seated for applying a gentle force, pulling backward on the conductor.
- The size 4 power contact should be fully inserted into the connector body. The “u-shaped” clipped is then inserted into the connector body locking the contact into place. The clip is fully seated when it is flush with the connector body.

##### **Assemble backshell**

- After completing the contact loading, place the connector into the backshell.
- Terminate ground pigtailed to the two grounding positions in the backshell.
- Dress the harness bundle per preferred workmanship standards.
- Build up the harness bundle if necessary, and install the cable clamps.
- Install backshell cover.
- Install jackscrews into back shell by threading them through the backshell until they pass all the way through the threads and are “free to spin”.

| <br>Positronic®<br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|--|-----------------|----------|---------------|
|  | AES-ECBU        | A        | Page 19 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

- Install the interfacial seal on the mating face of male connectors by carefully lining up the through holes with the contacts and gently pushing the seal down until it is seated against the connector body at the base of the contacts.

## 11.0 RESOURCES

### Technical resources


Technical inquiries should be directed to the resources listed. Our team offers immediate responses to your questions. We can answer your questions in real time communication and provide technical drawing in PDF and Stp formats.

- Positronic point of contact:
  - Eric Eike
  - [eeike@connectpositronic.com](mailto:eeike@connectpositronic.com)
  - 334.390.9365
- Positronic Field Application Engineers:
  - [Posilive@connectpositronic.com](mailto:Posilive@connectpositronic.com)
  - 417.855.2030
  - Live web chat [www.connectpositronc.com](http://www.connectpositronc.com)

### Purchasing resources

Purchasing inquires for quote and order placement can be directed direct to Positronic or one of our authorized distributors.

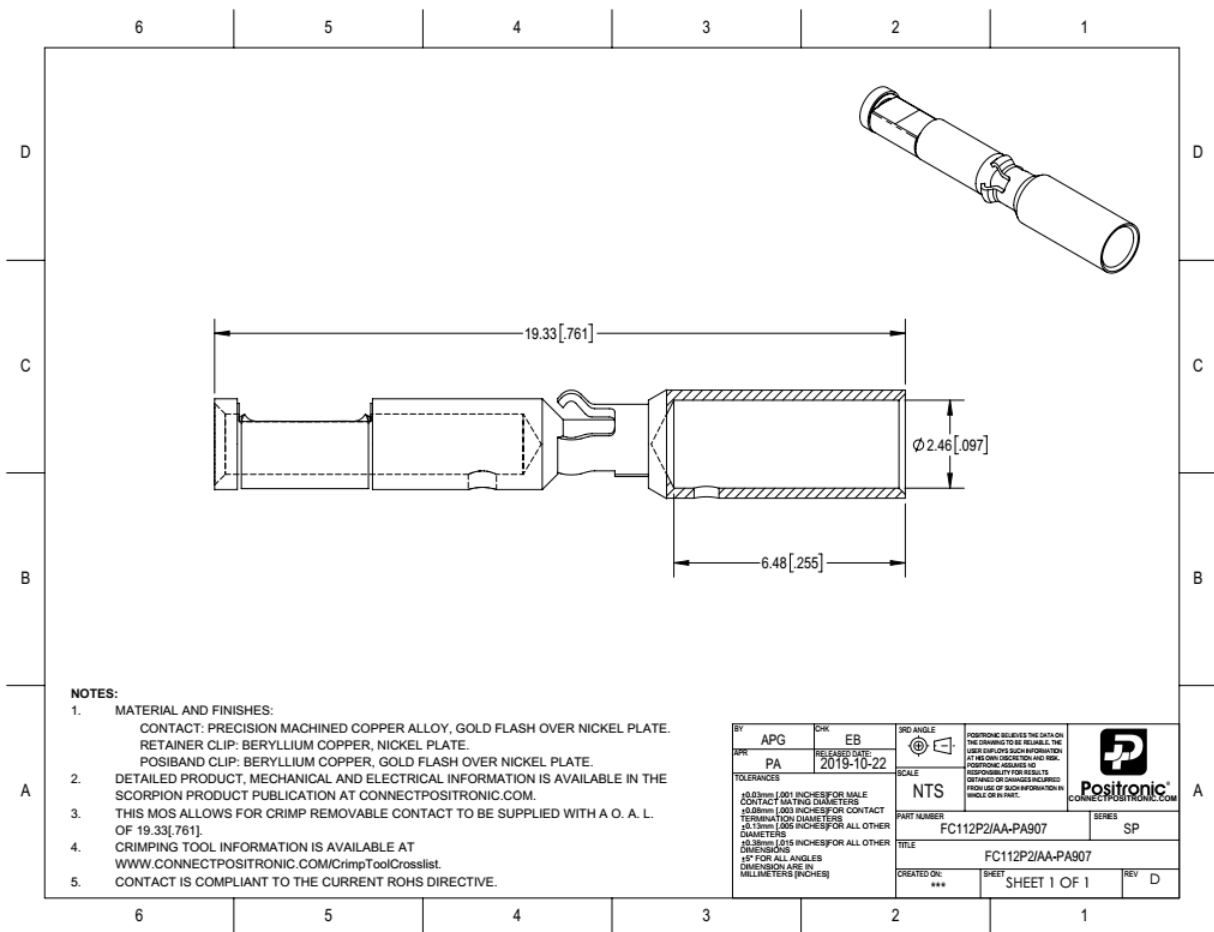
- Positronic direct communication:
  - Inside sales team
  - [Insidesales@connectpositronic.com](mailto:Insidesales@connectpositronic.com)
  - 417.866.2322
- Authorized distributors
  - Distributors: <https://www.connectpositronic.com/en/channel-partners/>

|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic®<br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 20 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

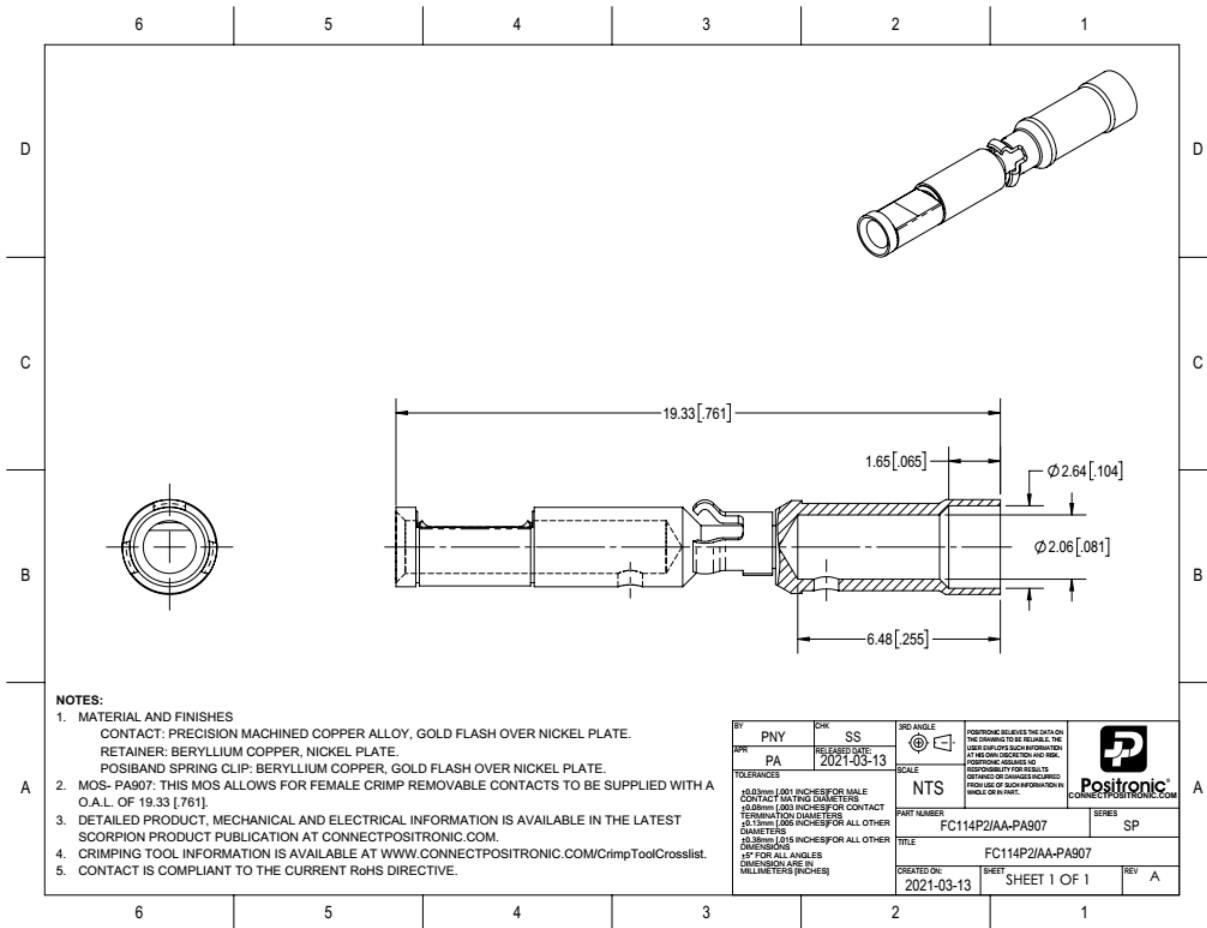
### 12.0 DRAWINGS – CONTACTS - CONNECTORS - BACKSHELLS



|  |                 |          |               |
|--|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 21 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

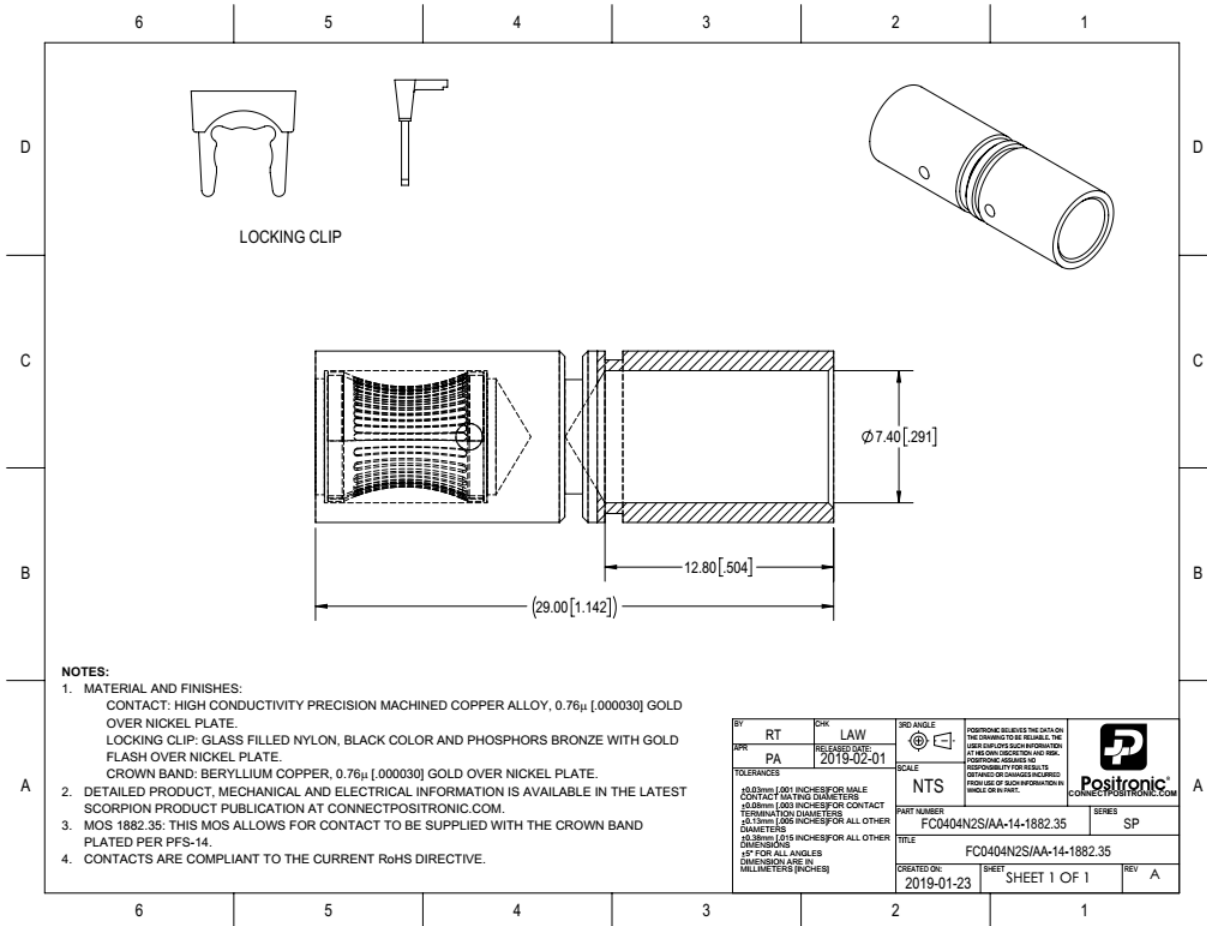
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic®<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 22 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

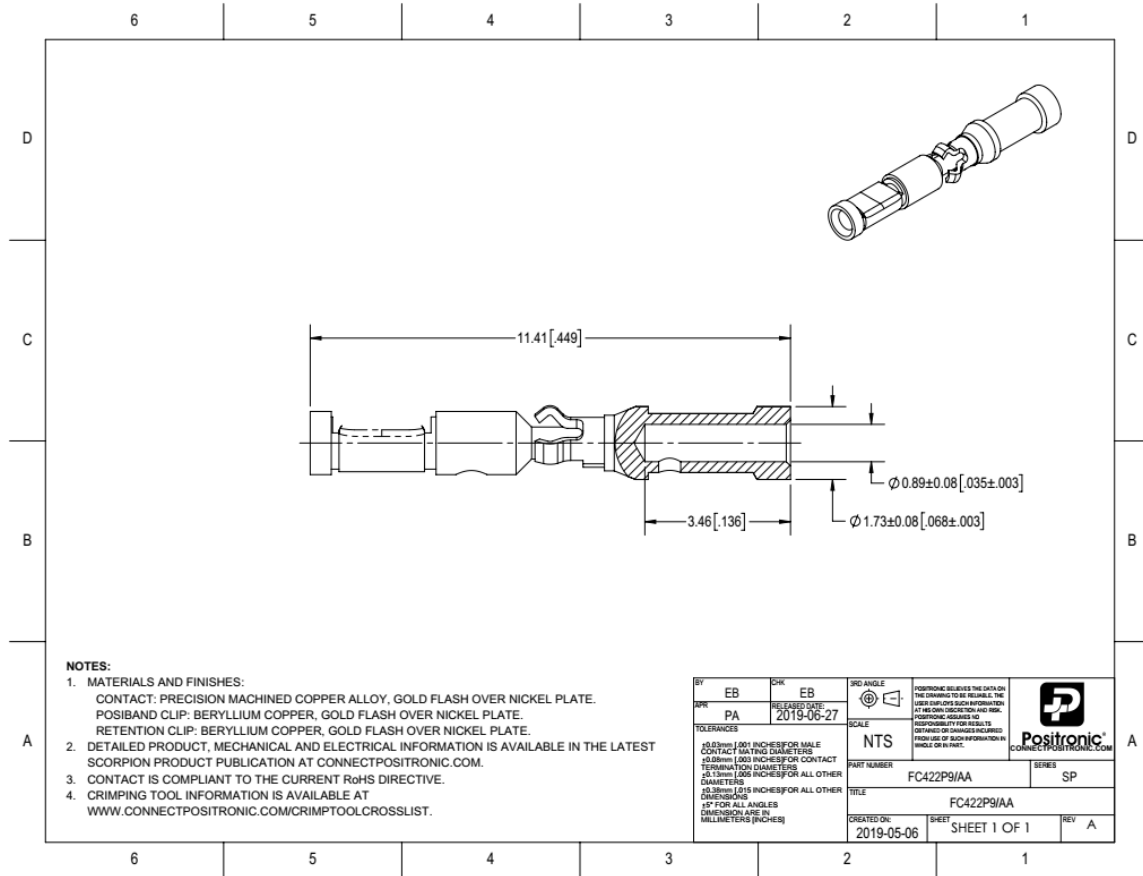



|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 23 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



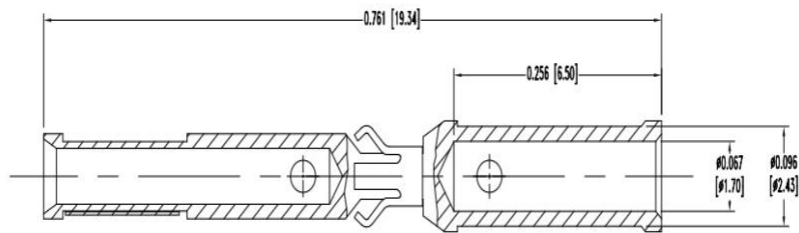
|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br>Positronic <sup>®</sup><br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 24 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO POSITRONIC AND ITS SUBSIDIARIES. POSITRONIC BELIEVES THE DATA ON THIS DRAWING TO BE RELIABLE, SINCE THE TECHNICAL INFORMATION IS GIVEN FREE OF CHARGE, THE USER EMPLOYS SUCH INFORMATION AT HIS OWN DISCRETION AND RISK. POSITRONIC ASSUMES NO RESPONSIBILITY FOR RESULTS OBTAINED OR DAMAGES INCURRED FROM USE OF SUCH INFORMATION IN WHOLE OR IN PART.

|             |                 |     |                |
|-------------|-----------------|-----|----------------|
| FC1816P2/AA |                 |     |                |
| DATE/REV    | REVISION RECORD | APP | DR CK          |
| 06-16-20    | A               | ECO | 75191 PA AB MS |



**NOTES:**

**1. MATERIAL AND FINISHES:**

CONTACT: PRECISION MACHINED COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.

RETENTION RING: BERYLLIUM COPPER, GOLD FLASH OVER NICKEL PLATE.

SPRING CLIP: BERYLLIUM COPPER, GOLD FLASH OVER NICKEL PLATE.

**2. DETAILED PRODUCT, MECHANICAL AND ELECTRICAL INFORMATION IS AVAILABLE IN THE LATEST**

SCORPION SERIES. PRODUCT PUBLICATION AT [CONNECTPOSITRONIC.COM](http://CONNECTPOSITRONIC.COM).

**3. CONTACTS ARE COMPLIANT TO THE CURRENT RoHS DIRECTIVE.**

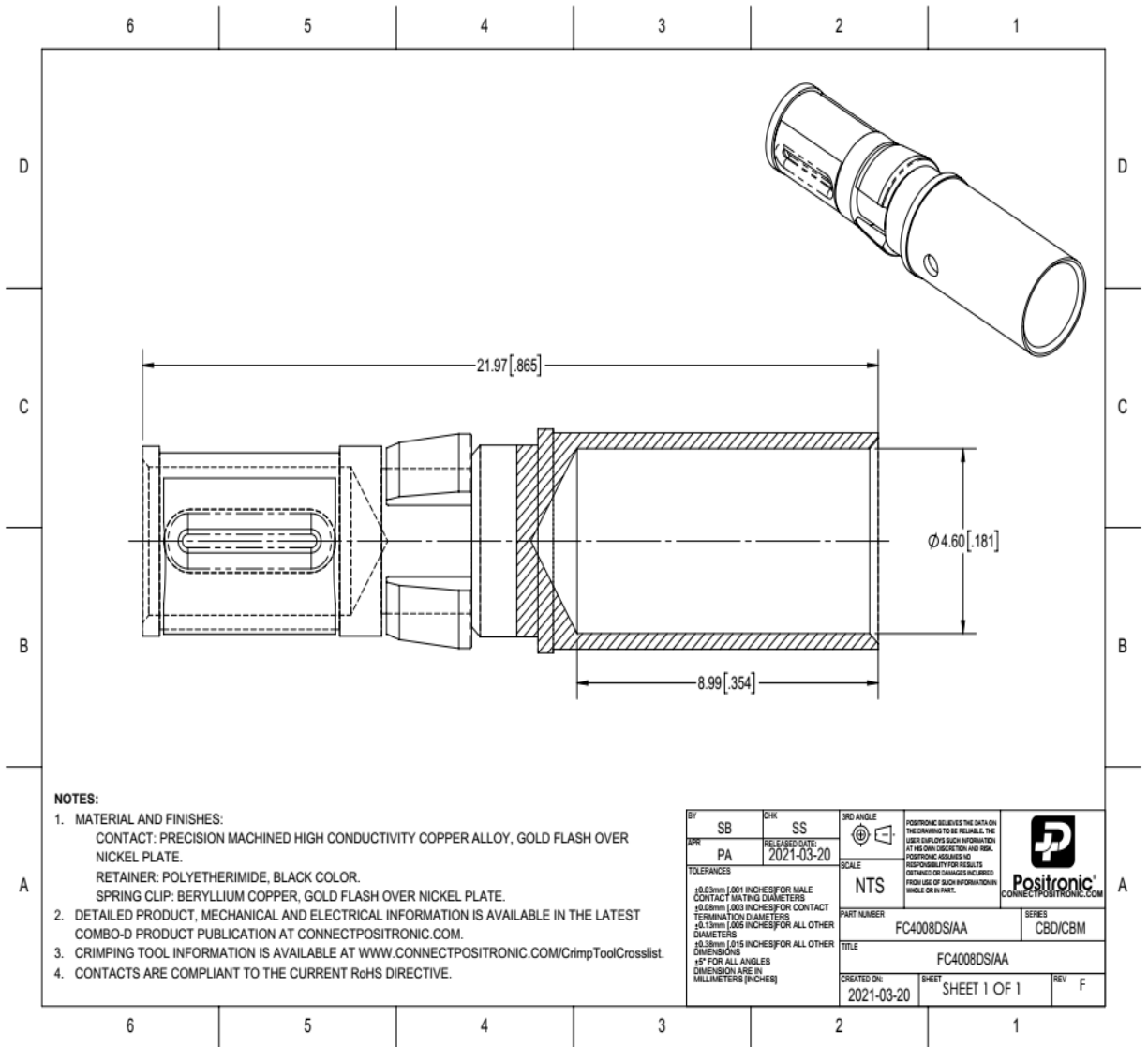
**4. DIMENSIONS ARE IN INCHES [MILLIMETERS]**


|  |  |
|--|--|
| <b>POSITRONIC INDUSTRIES INC.</b><br>SPRINGFIELD, MISSOURI 65801 |  |
| <br>DECIMAL TOL.<br>$\pm 0.015$ [0.38]                           | SCALE<br>N.T.S.<br>DRAWN BY<br>AMOL B.<br>APPROVED BY<br>PA    |
| TITLE<br>FC1816P2/AA   |  |
| ANGLUAR TOL.<br>$\pm 5^\circ$                                    | DATE<br>06-16-20<br>DRAWING NUMBER<br>FC1816P2/AA<br>REV.<br>A |

|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic®<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 25 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

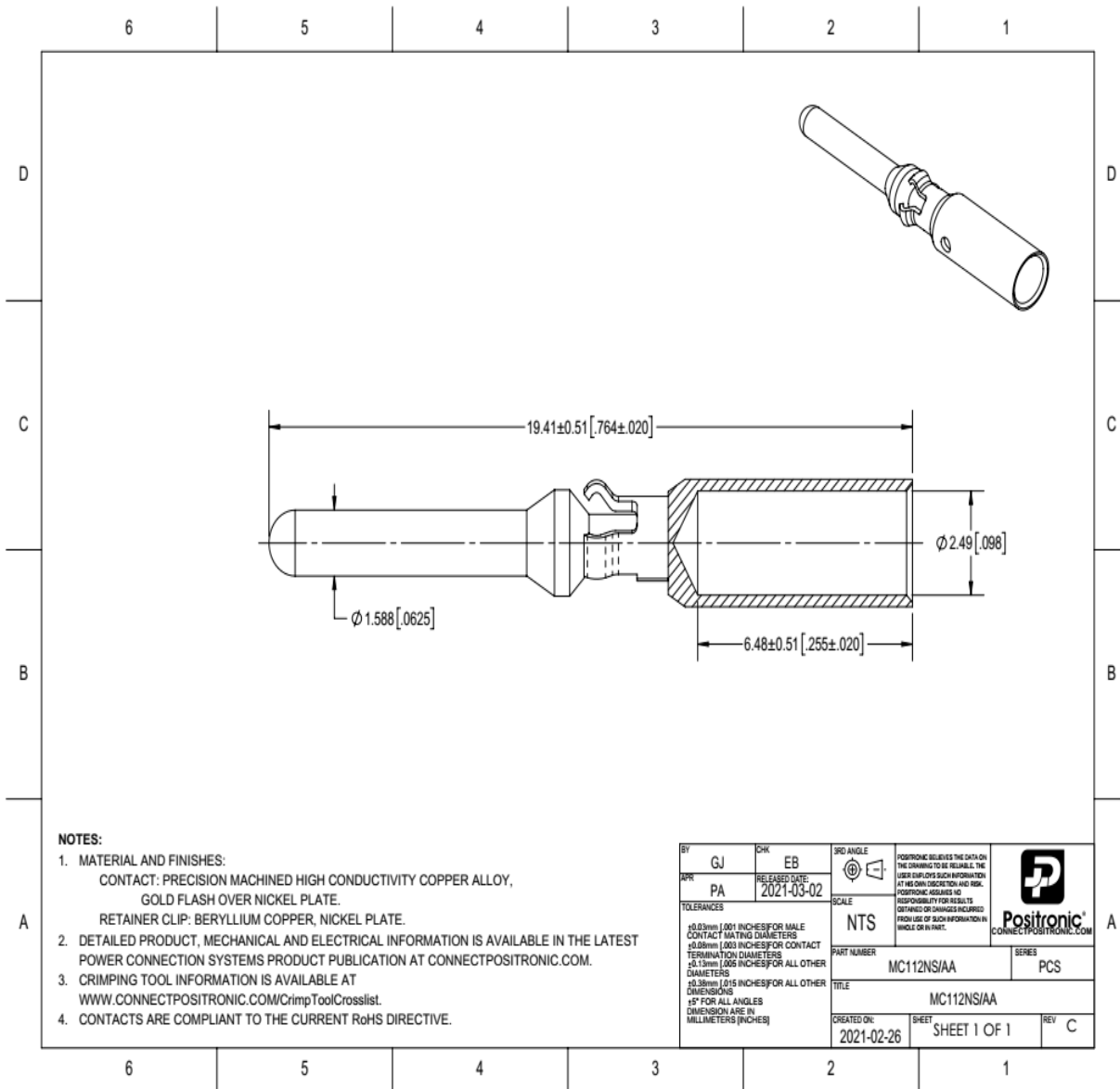
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 26 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

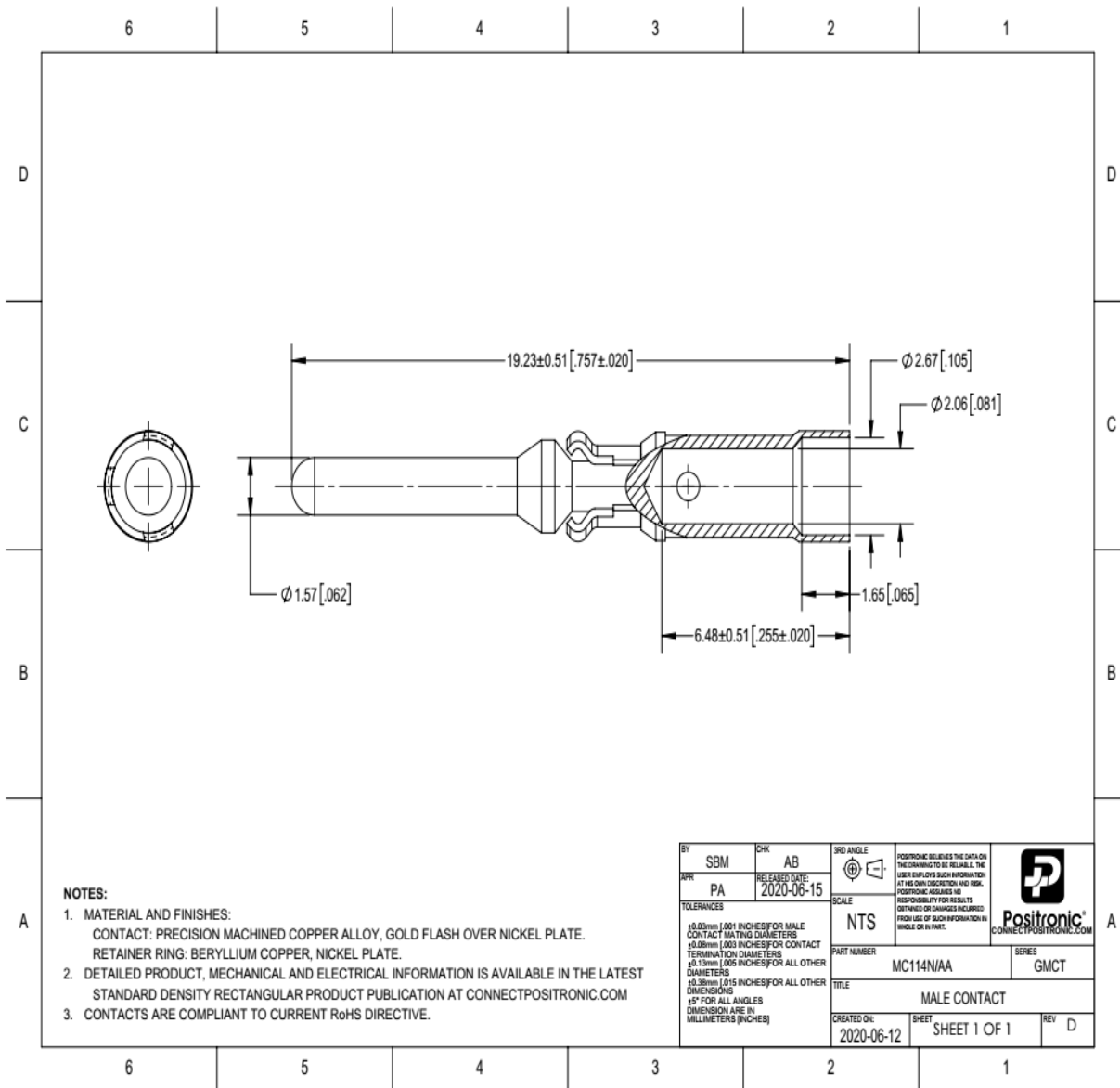
## USER GUIDE




|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br>Positronic <sup>®</sup><br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 27 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

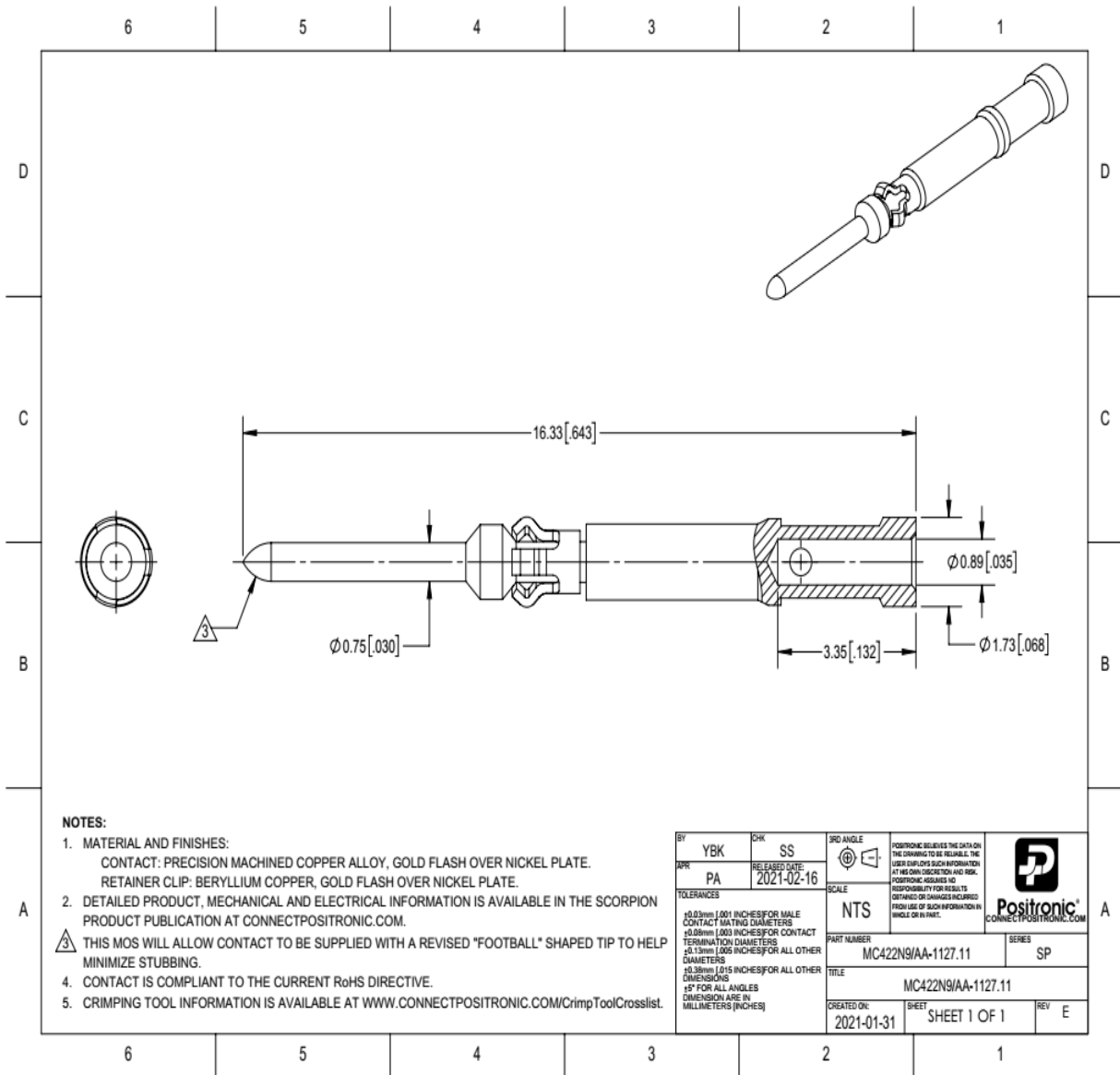
## USER GUIDE



|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br>Positronic <sup>®</sup><br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 28 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

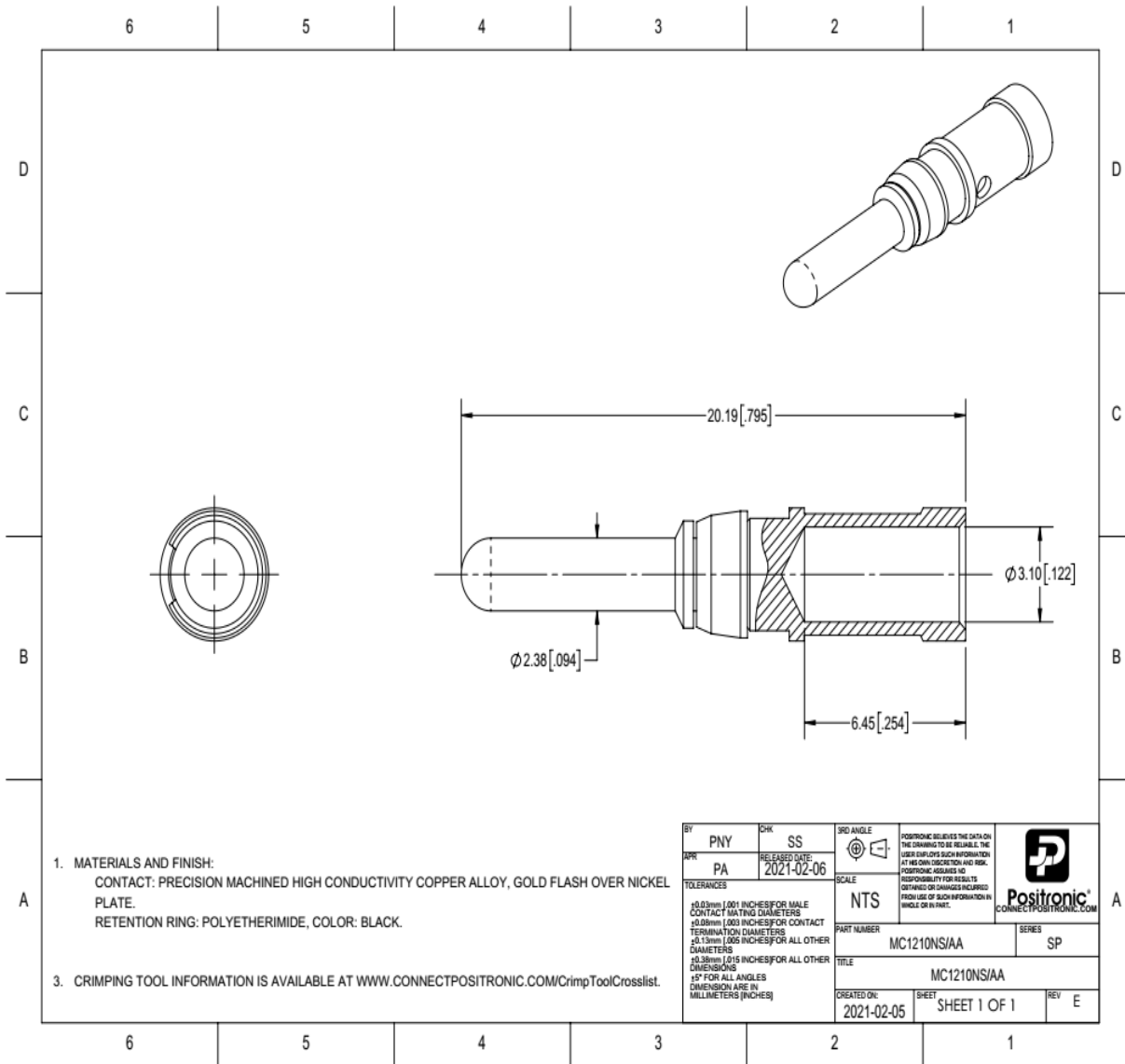
## USER GUIDE




|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 29 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

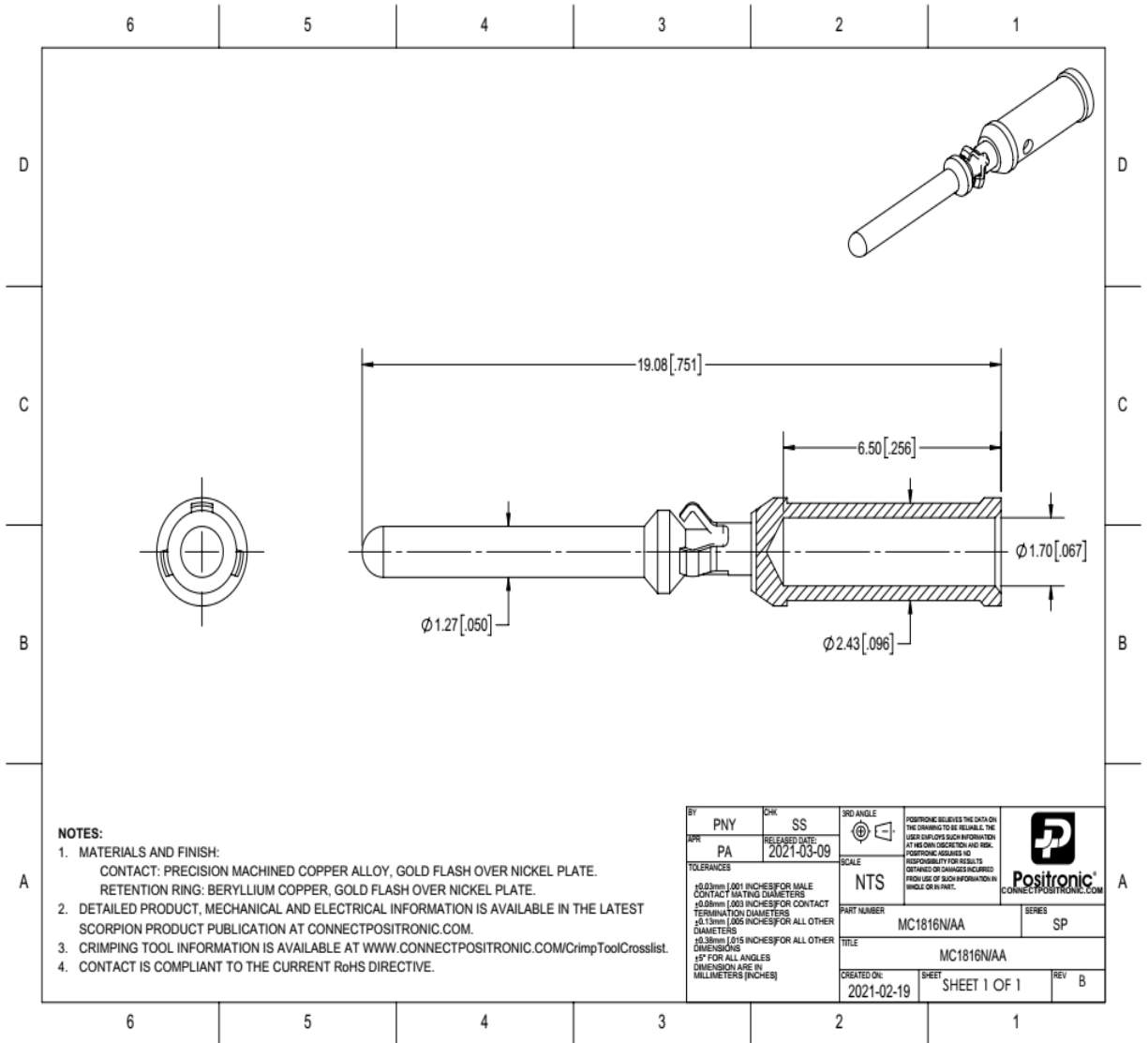
## USER GUIDE




|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 30 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

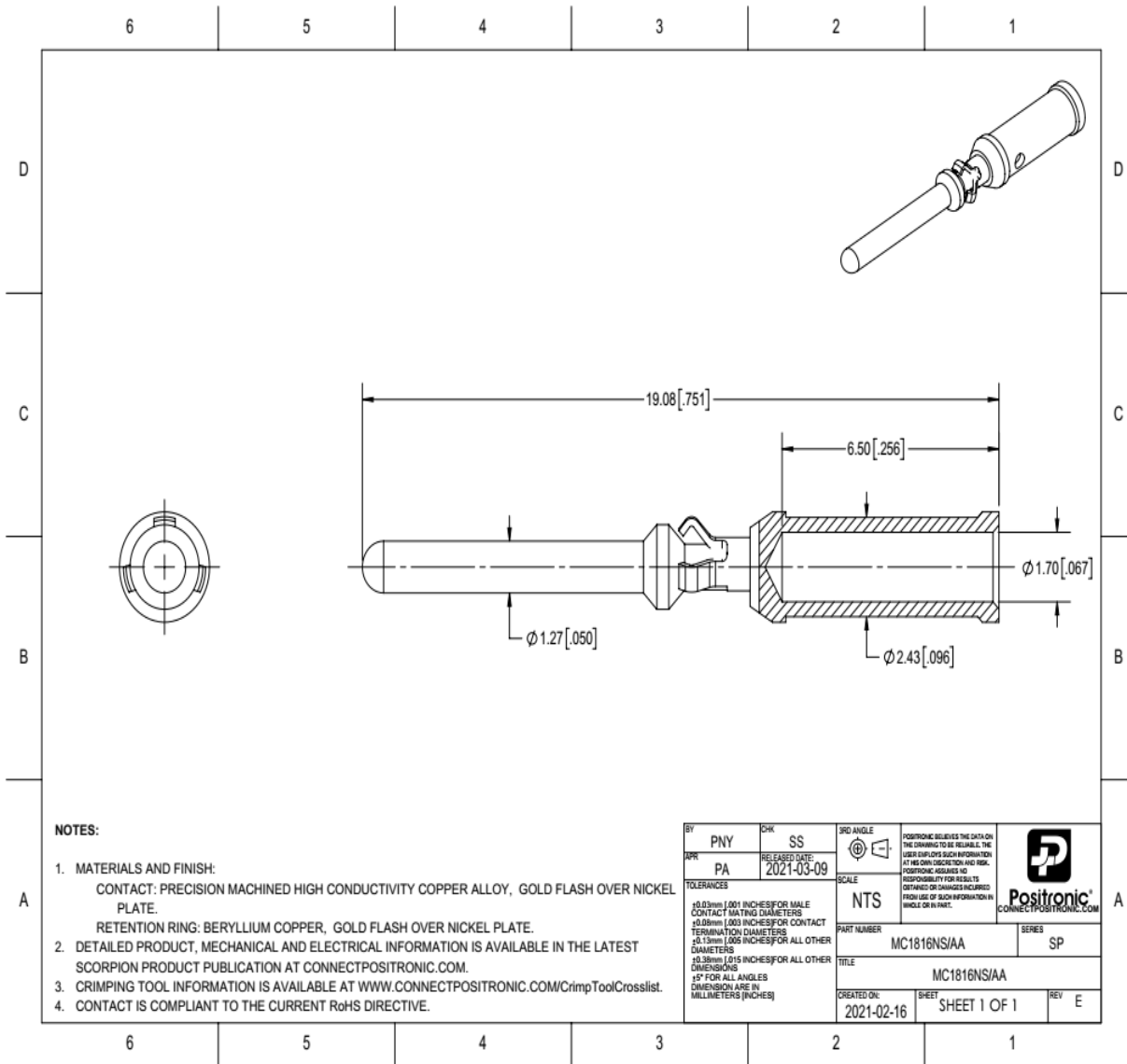


|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 31 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

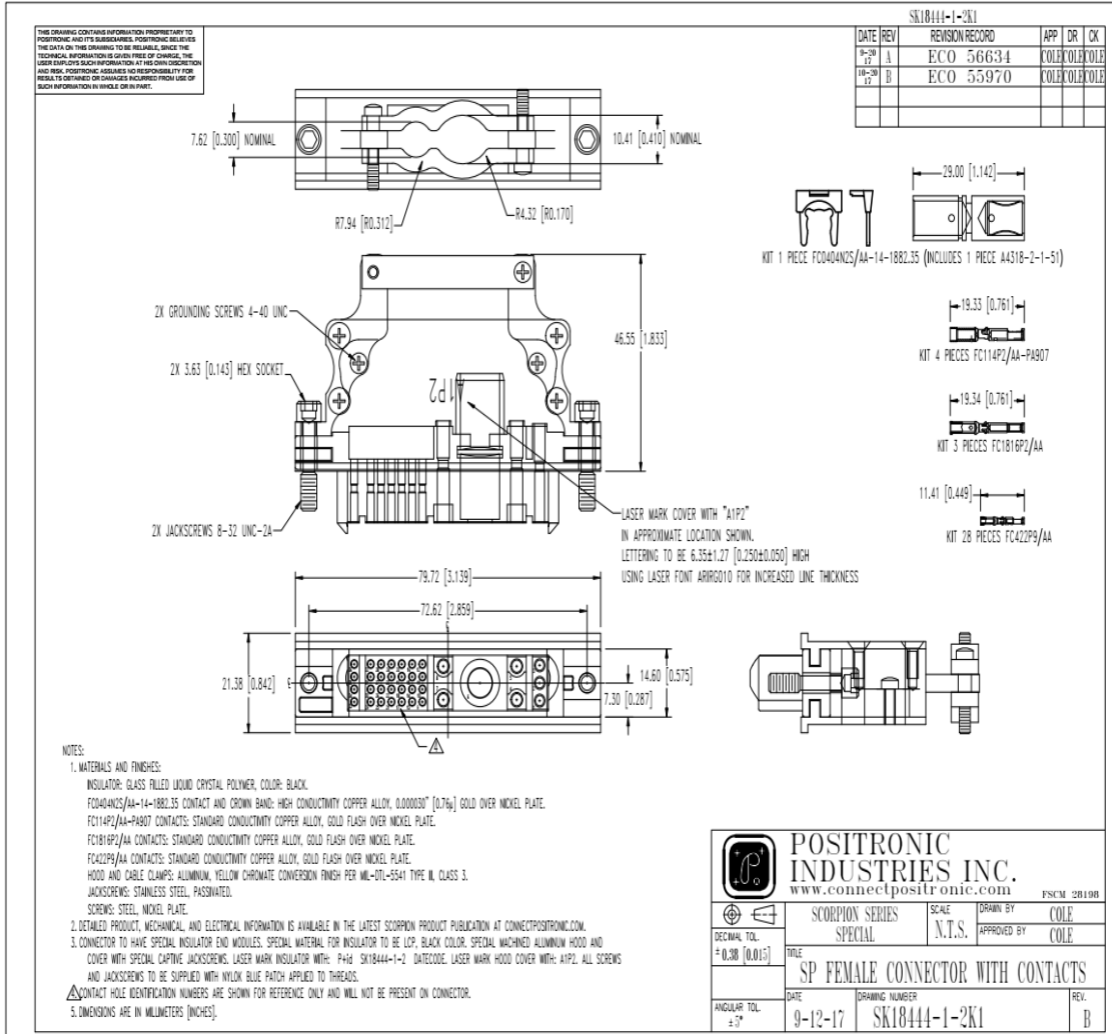
## USER GUIDE




|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 32 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

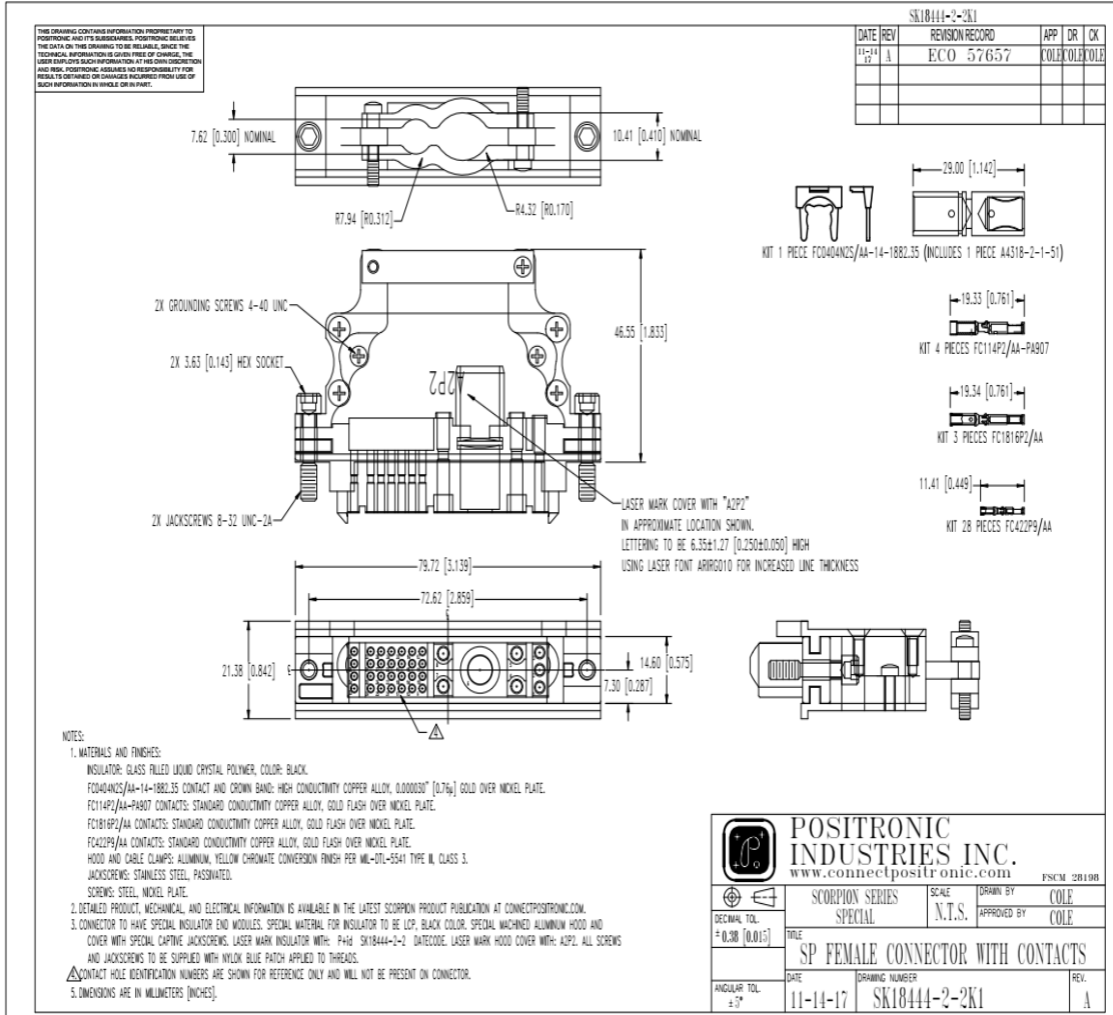
## USER GUIDE




|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br>Positronic <sup>®</sup><br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 33 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

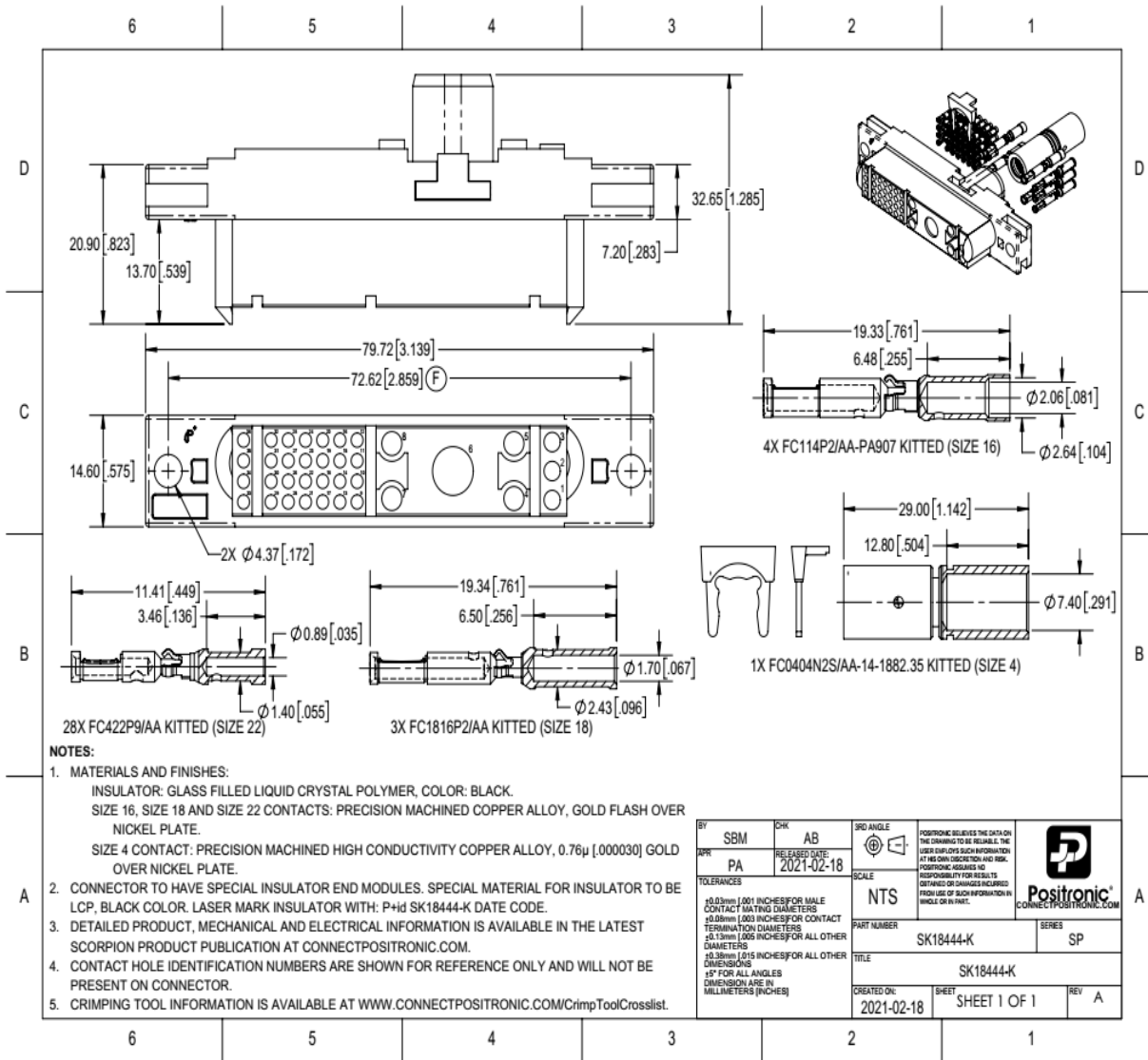
## USER GUIDE



|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 34 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

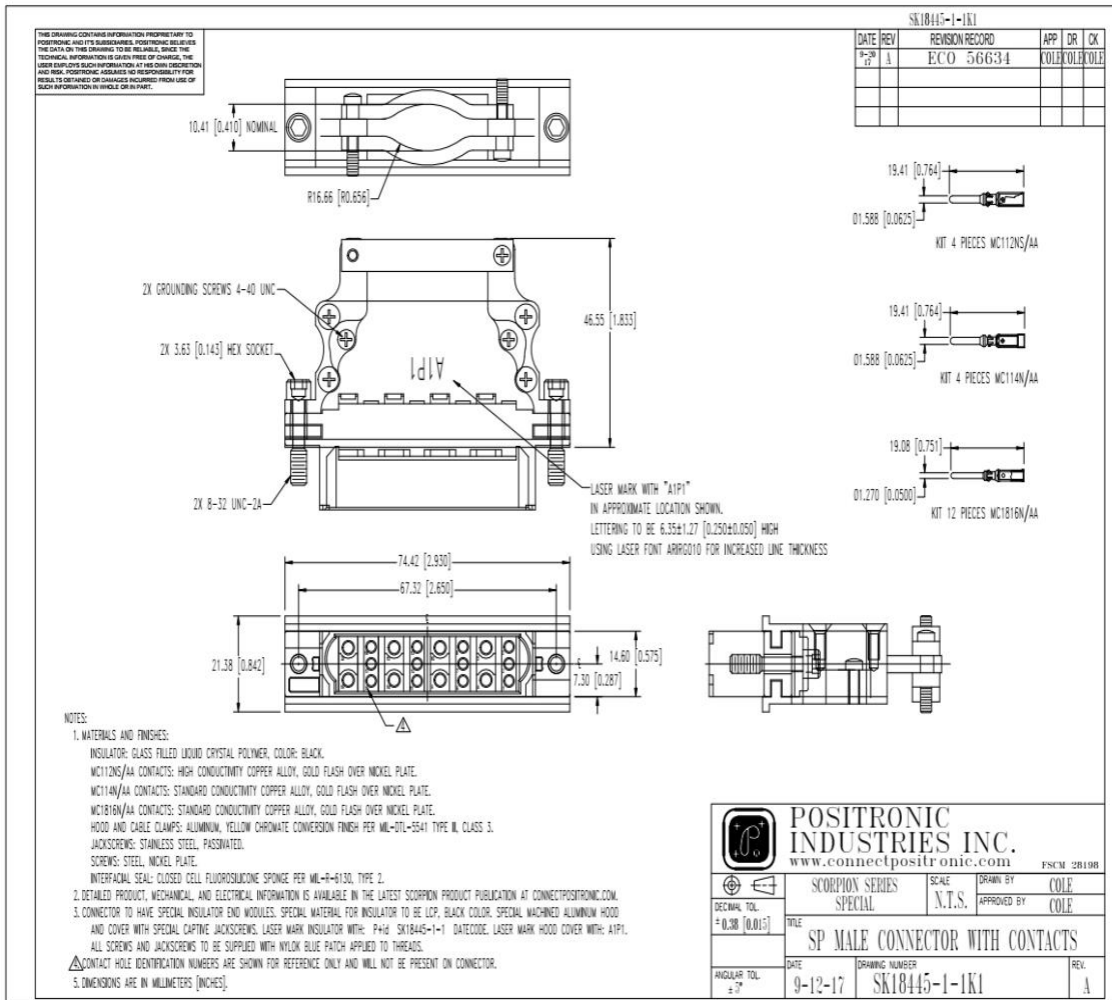
## USER GUIDE




|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 35 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

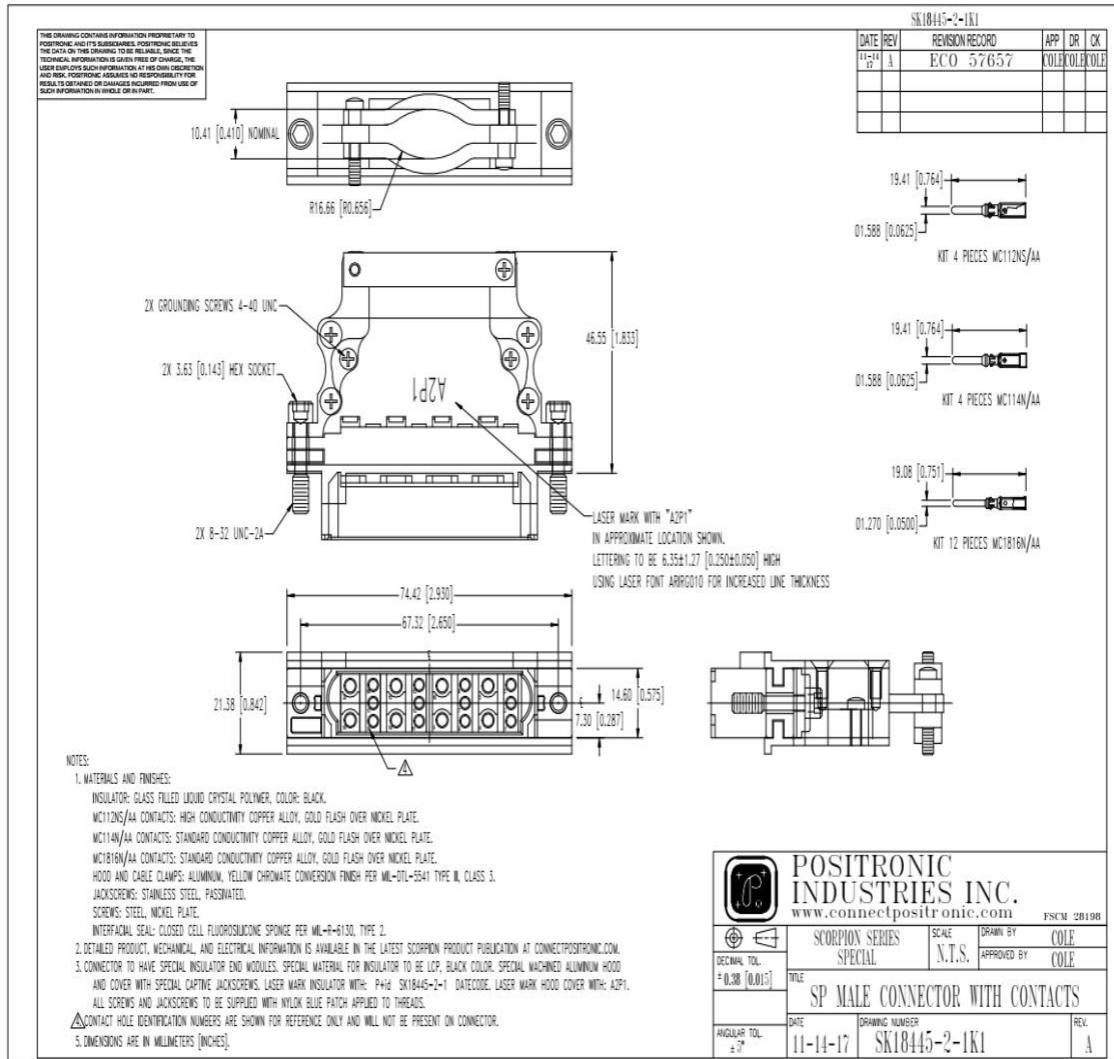
## USER GUIDE



|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 36 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

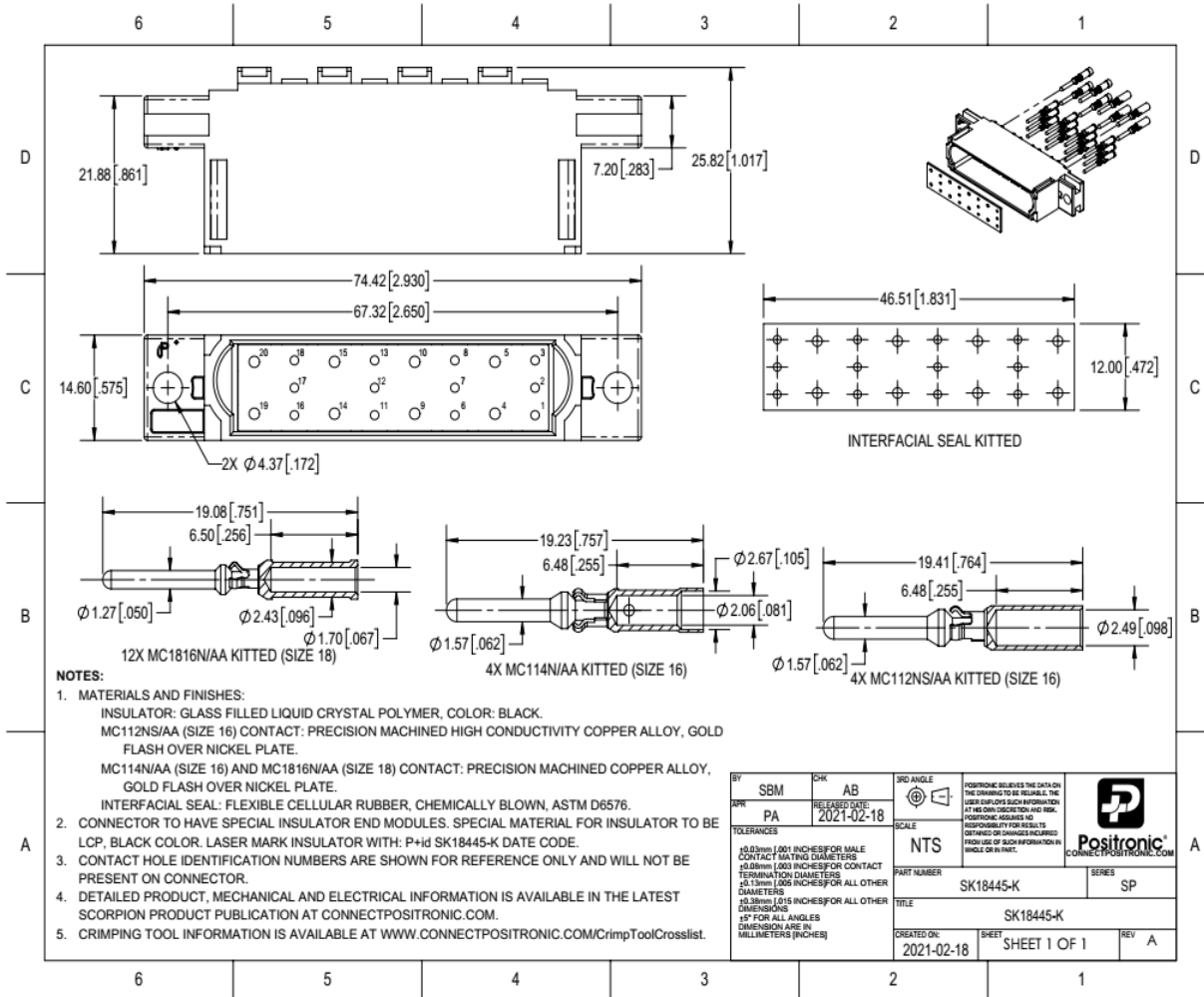
## USER GUIDE




|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 37 of 59 |


# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



- NOTES:**
- MATERIALS AND FINISHES:**  
 INSULATOR: GLASS FILLED LIQUID CRYSTAL POLYMER, COLOR: BLACK.  
 MC112NS/AA (SIZE 16) CONTACT: PRECISION MACHINED HIGH CONDUCTIVITY COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 MC114N/AA (SIZE 16) AND MC1816N/AA (SIZE 18) CONTACT: PRECISION MACHINED COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 INTERFACIAL SEAL: FLEXIBLE CELLULAR RUBBER, CHEMICALLY BLOWN, ASTM D6576.
  - CONNECTOR TO HAVE SPECIAL INSULATOR END MODULES. SPECIAL MATERIAL FOR INSULATOR TO BE LCP, BLACK COLOR. LASER MARK INSULATOR WITH: P-Id SK18445-K DATE CODE.
  - CONTACT HOLE IDENTIFICATION NUMBERS ARE SHOWN FOR REFERENCE ONLY AND WILL NOT BE PRESENT ON CONNECTOR.
  - DETAILED PRODUCT, MECHANICAL AND ELECTRICAL INFORMATION IS AVAILABLE IN THE LATEST SCORPION PRODUCT PUBLICATION AT [CONNECTPOSITRONIC.COM](http://CONNECTPOSITRONIC.COM).
  - CRIMPING TOOL INFORMATION IS AVAILABLE AT [WWW.CONNECTPOSITRONIC.COM/CrimpToolCrosslist](http://WWW.CONNECTPOSITRONIC.COM/CrimpToolCrosslist).

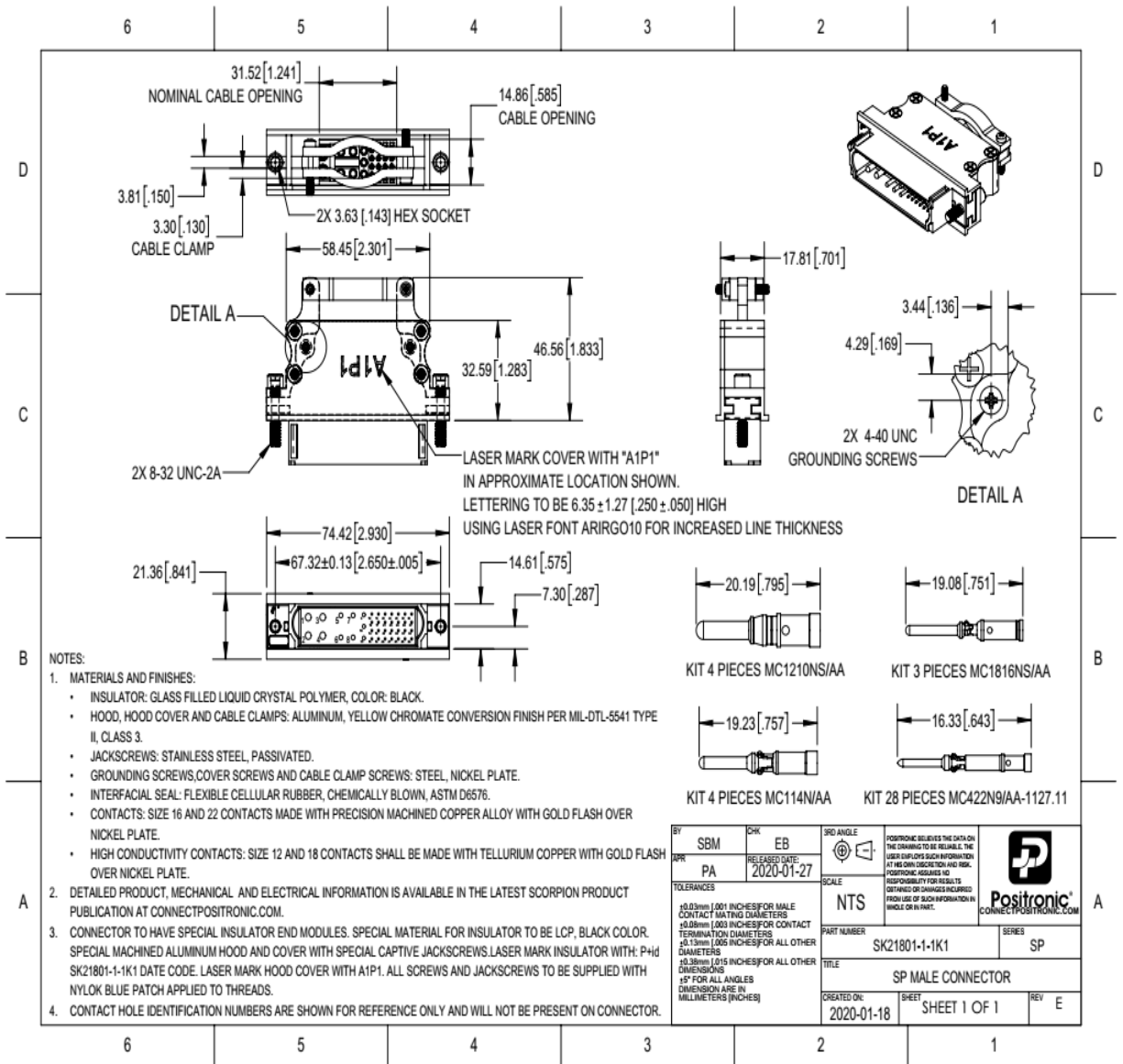
|  |                           |                       |   |  |
|--|---------------------------|-----------------------|---|--|
| BY SBM   | CHK AB                    | 3RD ANGLE             | POSITRONIC BELIEVES THE DATA ON THE DRAWING TO BE RELIABLE. THE USER ASSUMES SUCH INFORMATION AT HIS OWN RISK AND USES IT AT HIS OWN RISK. POSITRONIC ASSUMES NO LIABILITY FOR RESULTS OBTAINED OR DAMAGES INCURRED FROM USE OF SUCH INFORMATION IN WHOLE OR IN PART. | <br><b>Positronic</b><br><small>CONNECTPOSITRONIC.COM</small> |
| APP PA   | RELEASED DATE: 2021-02-18 | SCALE NTS             |   |  |
| TOLERANCES   |                           | PART NUMBER SK18445-K | SERIES SP   |  |
| ±0.25mm [0.01 INCHES] FOR MALE CONTACT MATING DIAMETERS<br>±0.08mm [0.003 INCHES] FOR CONTACT TERMINATION DIAMETERS<br>±0.13mm [0.005 INCHES] FOR ALL OTHER DIAMETERS<br>±0.38mm [0.015 INCHES] FOR ALL OTHER DIMENSIONS<br>15° FOR ALL ANGLES<br>DIMENSIONS ARE IN MILLIMETERS (INCHES) |                           | TITLE SK18445-K       |   |  |
| CREATED ON: 2021-02-18   |                           | SHEET SHEET 1 OF 1    | REV A   |  |


|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 38 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

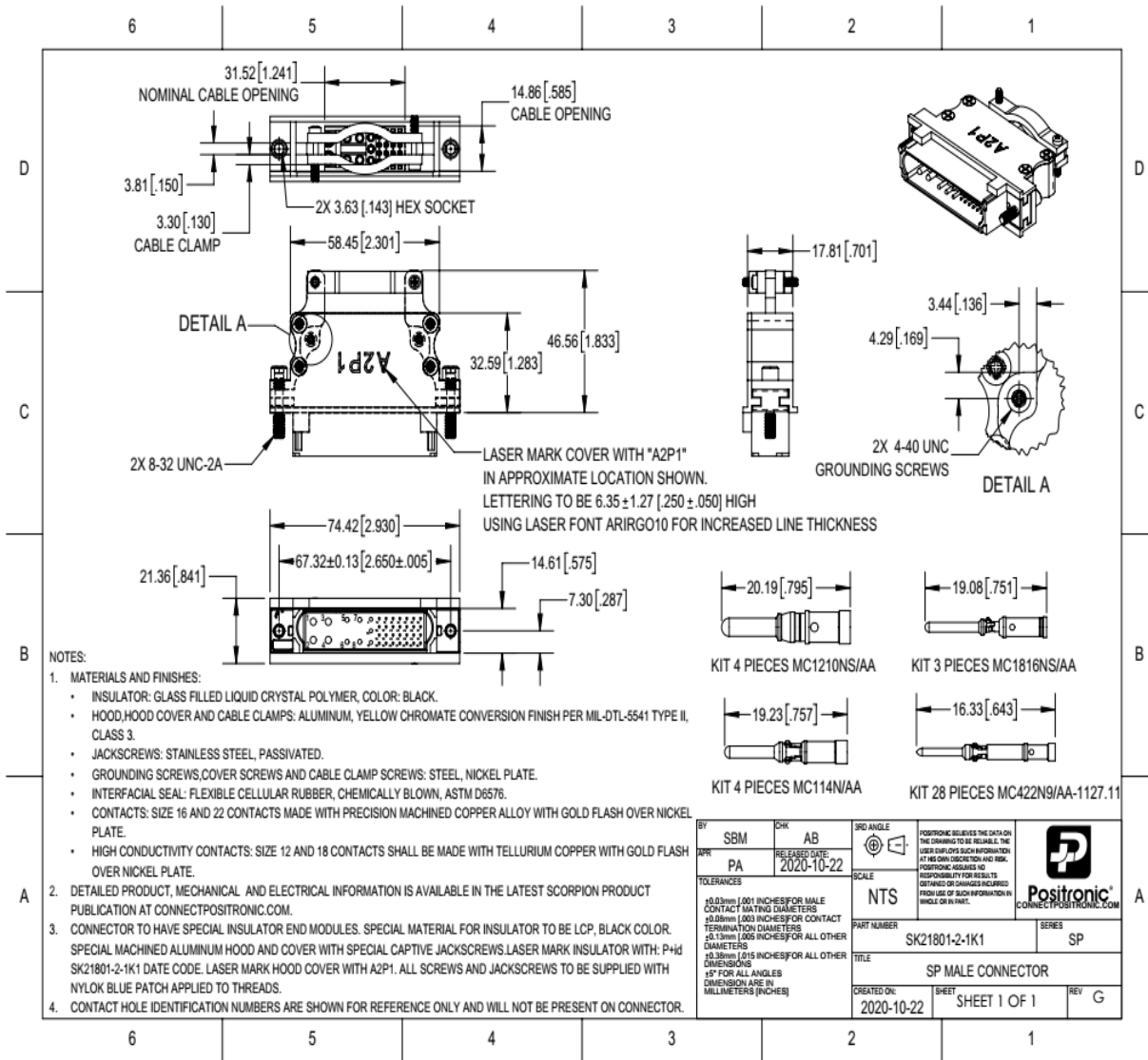



|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 39 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

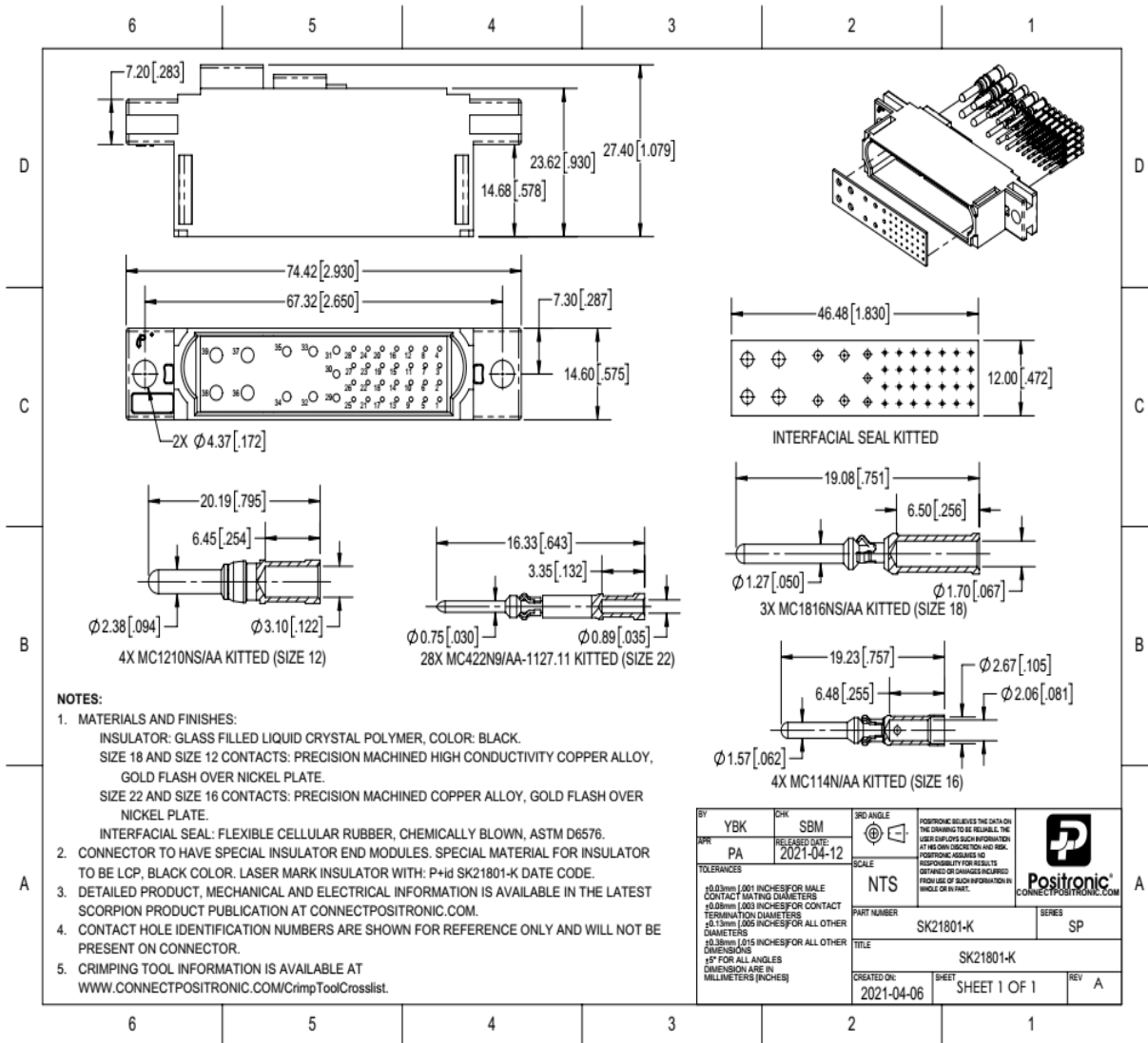
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 40 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

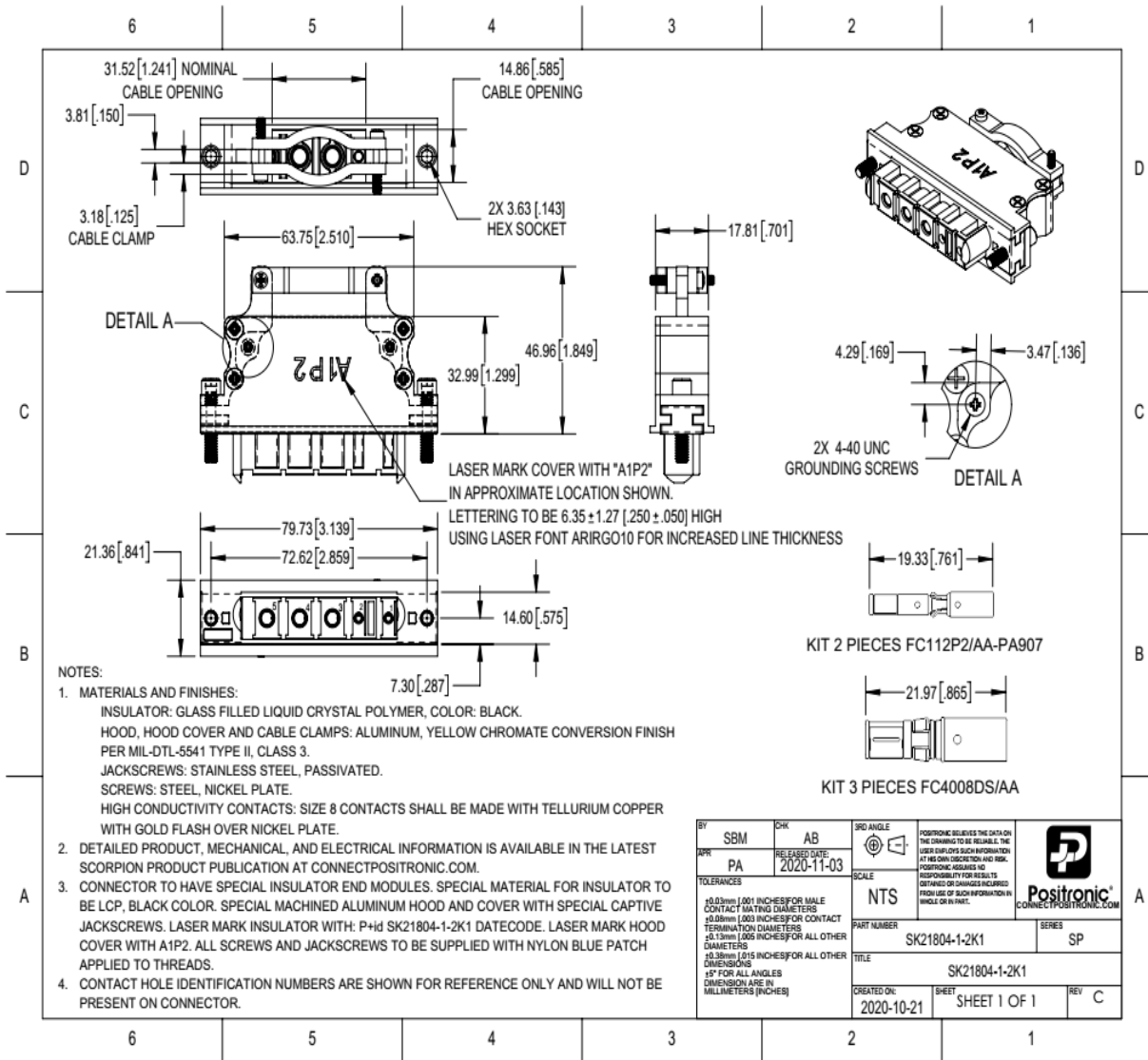
## USER GUIDE




|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 41 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

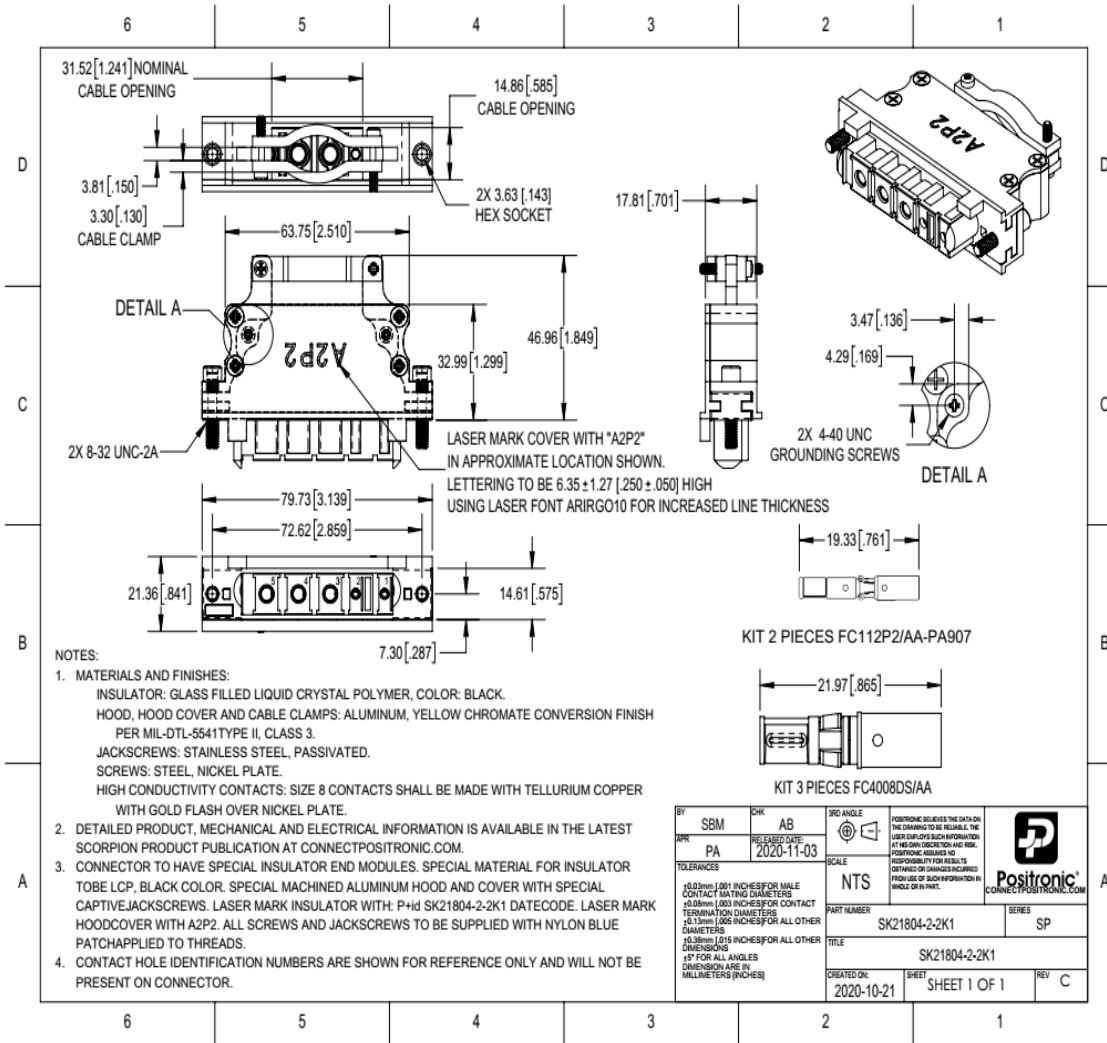
## USER GUIDE



|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 42 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

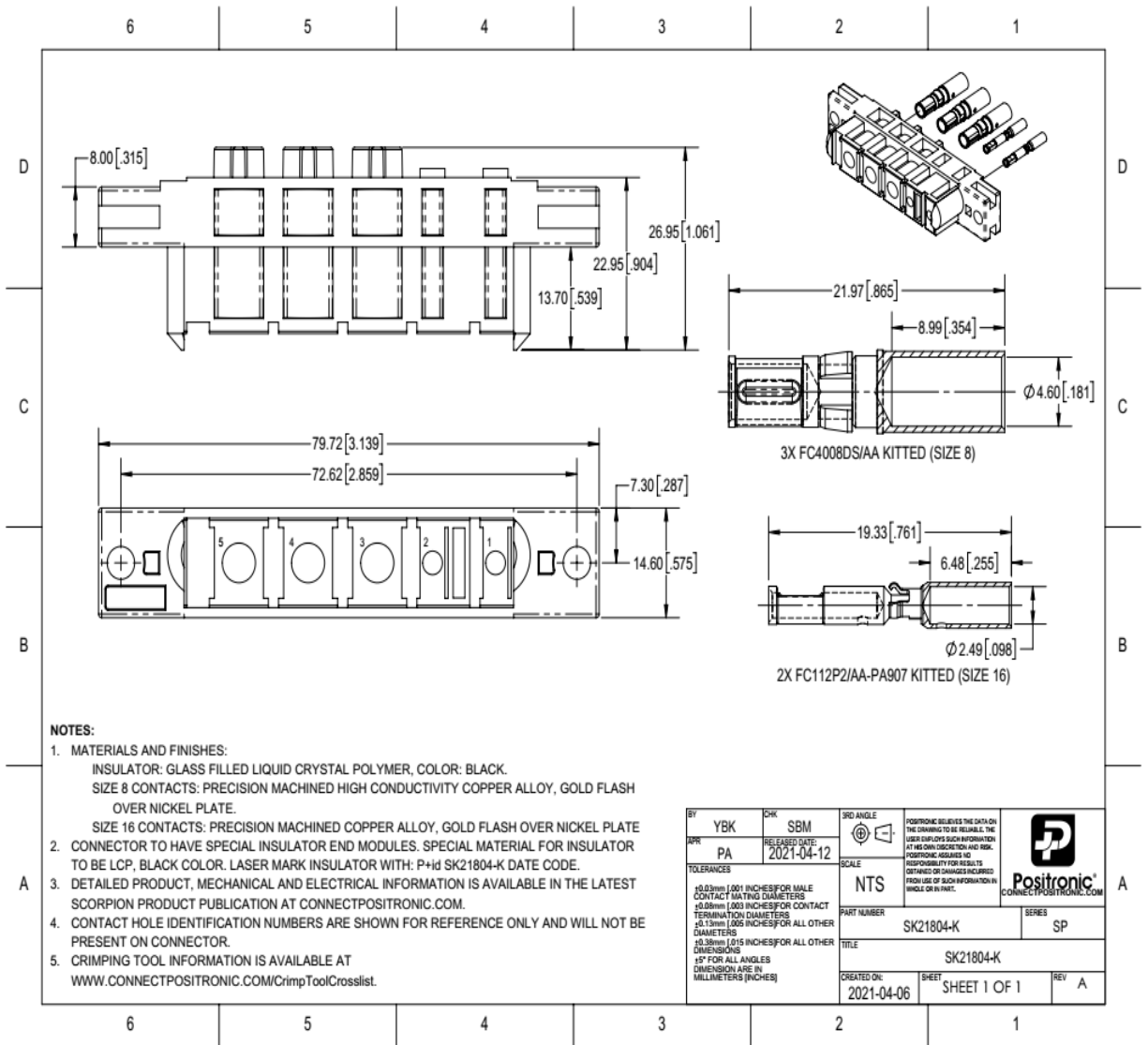
## USER GUIDE




|                                       |                 |          |               |
|---------------------------------------|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                                       | AES-ECBU        | A        | Page 43 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

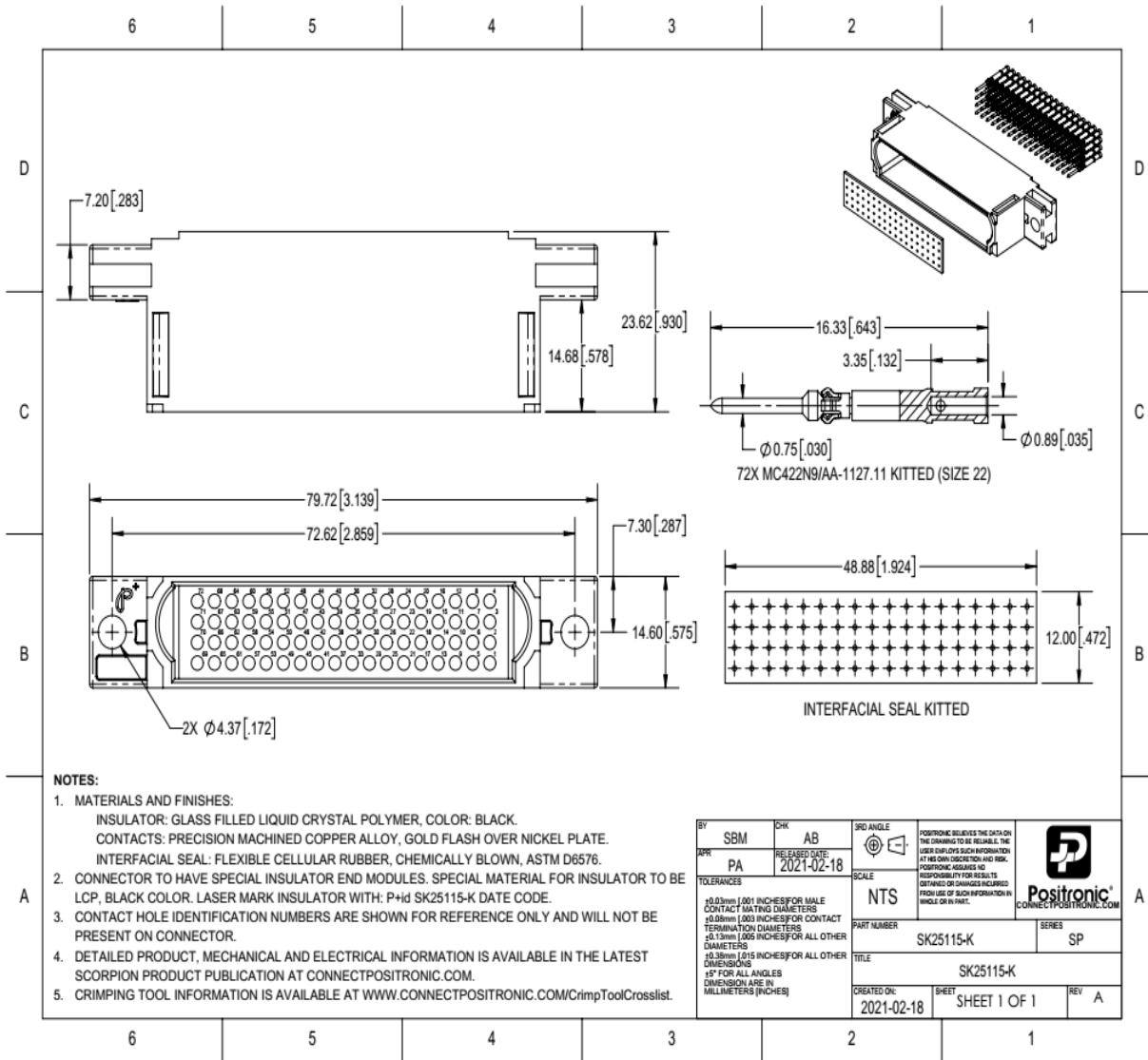
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 44 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

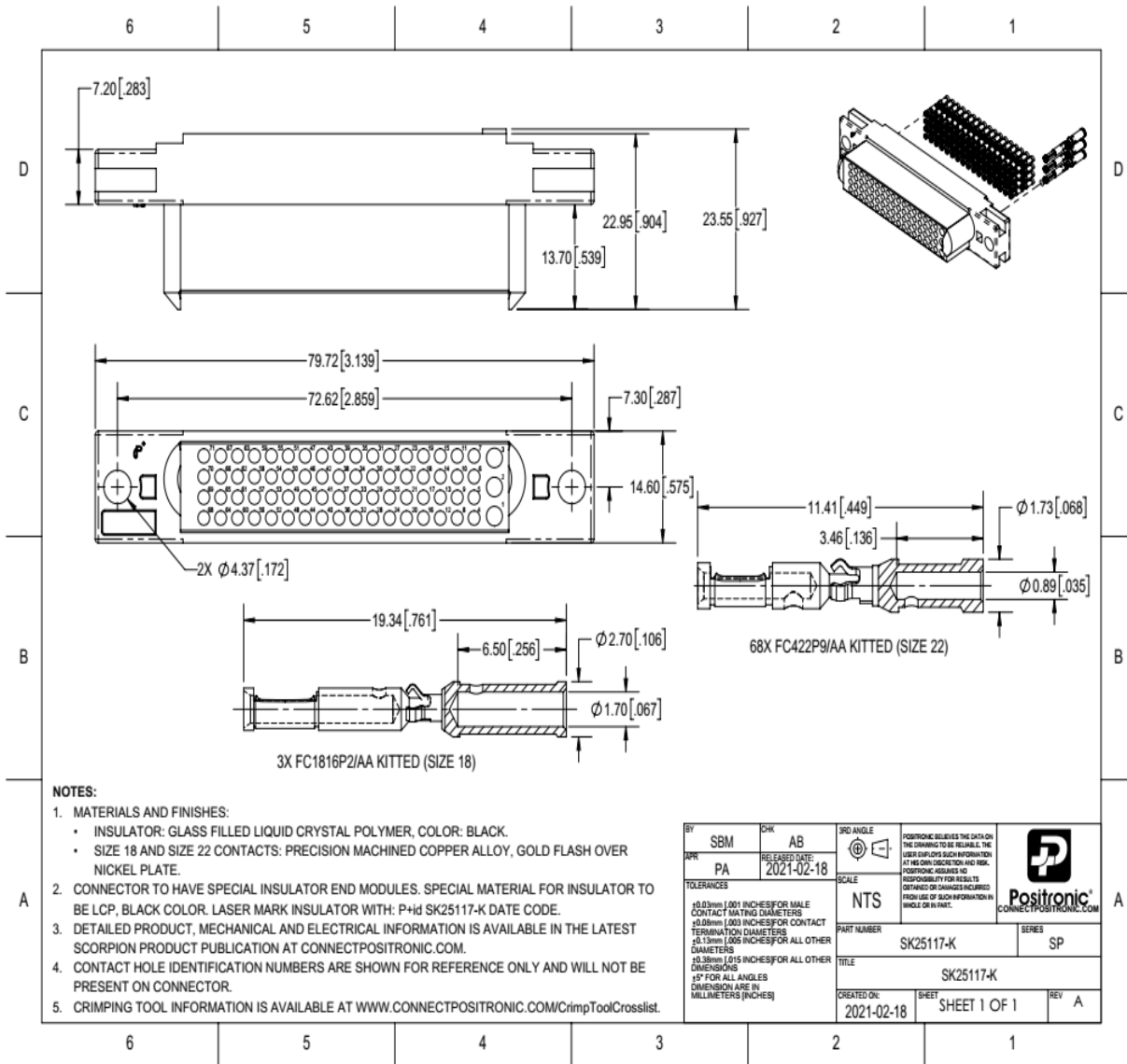
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 45 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

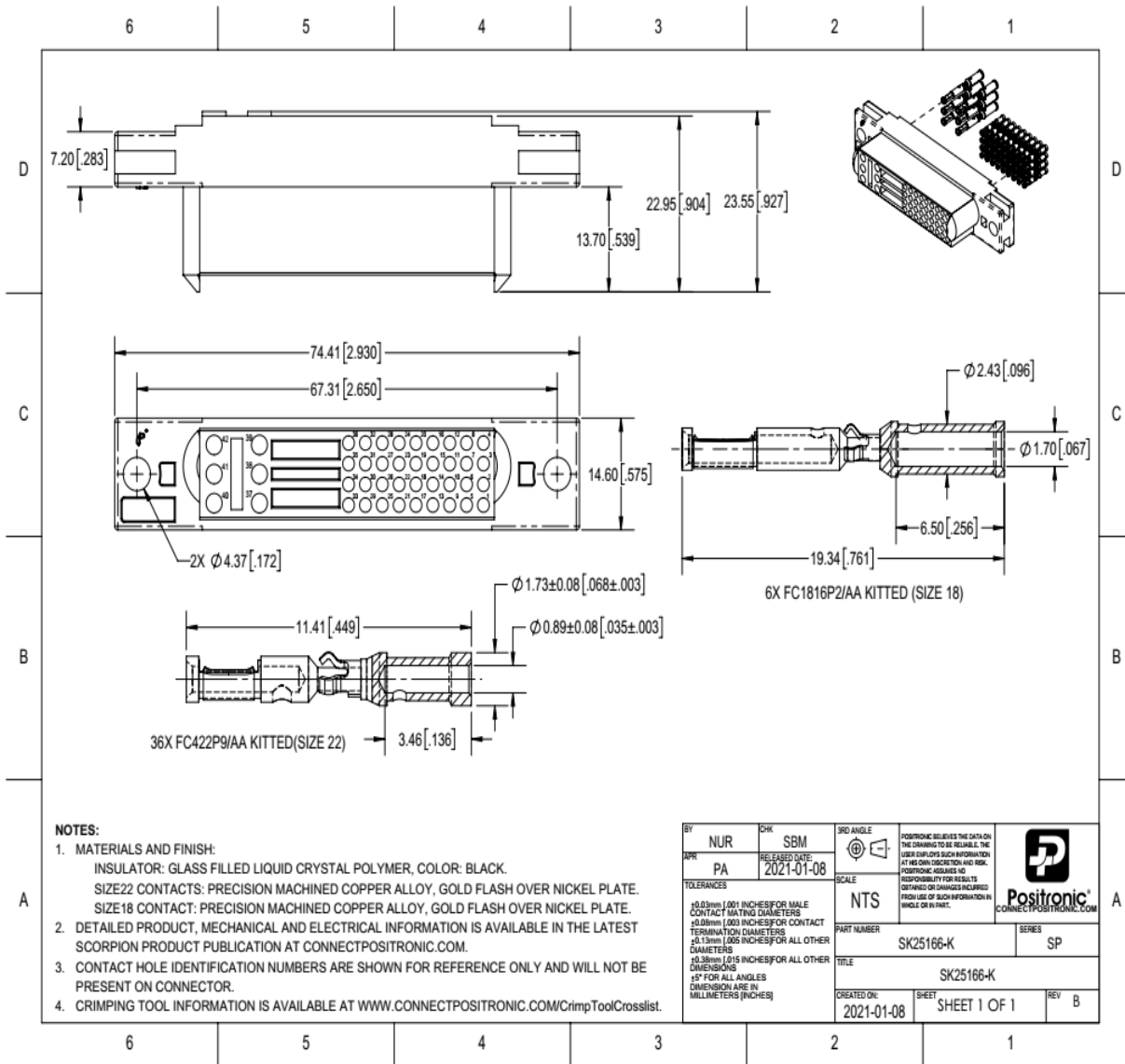



|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 46 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

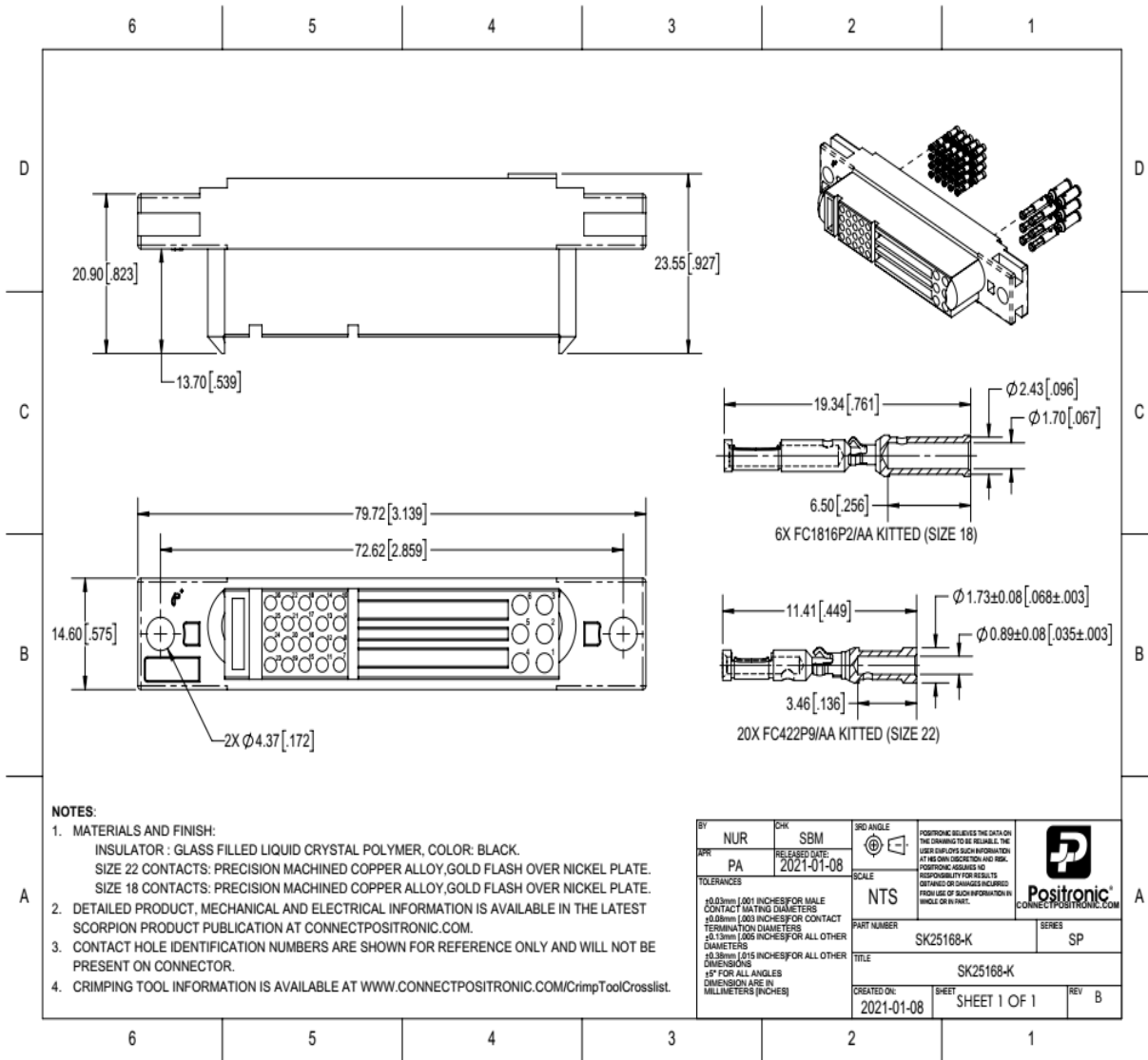



|   |                 |          |               |
|---|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 47 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

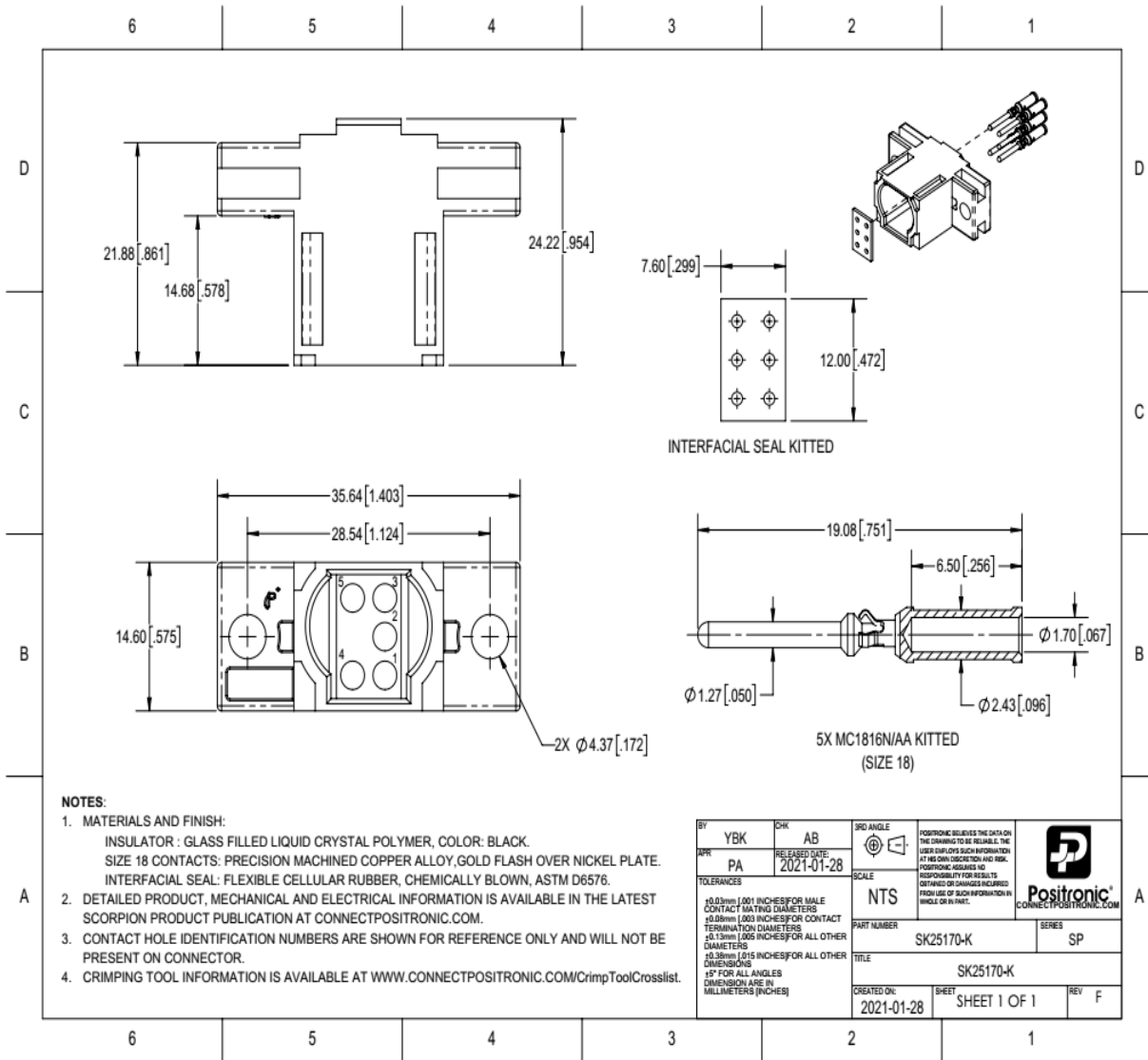
## USER GUIDE





|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 48 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

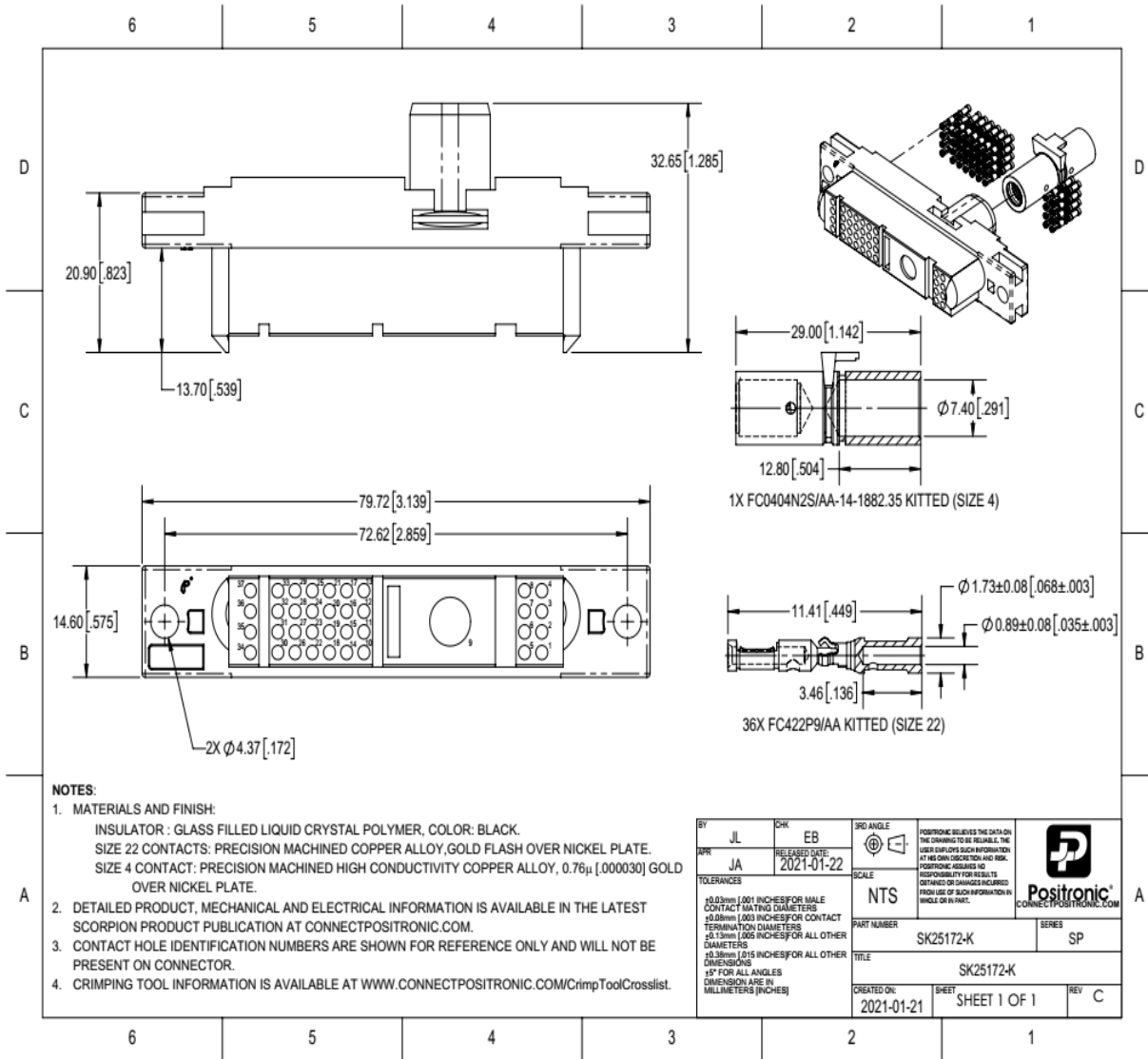



|  |     |               |            |             |  |   |     |   |
|--|-----|---------------|------------|-------------|--|---|-----|---|
| BY   | YBK | CHK           | AB         | 3RD ANGLE   | POSITRONIC BELIEVES THE DATA ON THE DRAWING TO BE RELIABLE. THE USER ASSUMES ALL SUCH INFORMATION AT HIS OWN DISCRETION AND RISK. POSITRONIC ASSUMES NO RESPONSIBILITY FOR RESULTS OBTAINED BY UNUSUAL METHODS FROM USE OF SUCH INFORMATION IN WHOLE OR IN PART. | <br><b>Positronic</b><br>CONNECTPOSITRONIC.COM |     |   |
| APP  | PA  | RELEASED DATE | 2021-01-28 | SCALE       |  |   | NTS |   |
| TOLERANCES   |     |               |            | PART NUMBER | SK25170-K  | SERIES  | SP  |   |
| ±0.25mm (.010 INCHES) FOR MALE CONTACT MATING DIAMETERS<br>±0.08mm (.003 INCHES) FOR CONTACT TERMINATION DIAMETERS<br>±0.13mm (.005 INCHES) FOR ALL OTHER DIAMETERS<br>±0.25mm (.010 INCHES) FOR ALL OTHER DIMENSIONS<br>°F FOR ALL ANGLES<br>DIMENSIONS ARE IN MILLIMETERS (INCHES) |     |               |            | TITLE       | SK25170-K  |   |     |   |
| CREATED ON:  |     |               |            | 2021-01-28  | SHEET  | SHEET 1 OF 1  | REV | F |

|   |                 |          |               |
|---|-----------------|----------|---------------|
| <br><b>Positronic</b><br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|   | AES-ECBU        | A        | Page 49 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

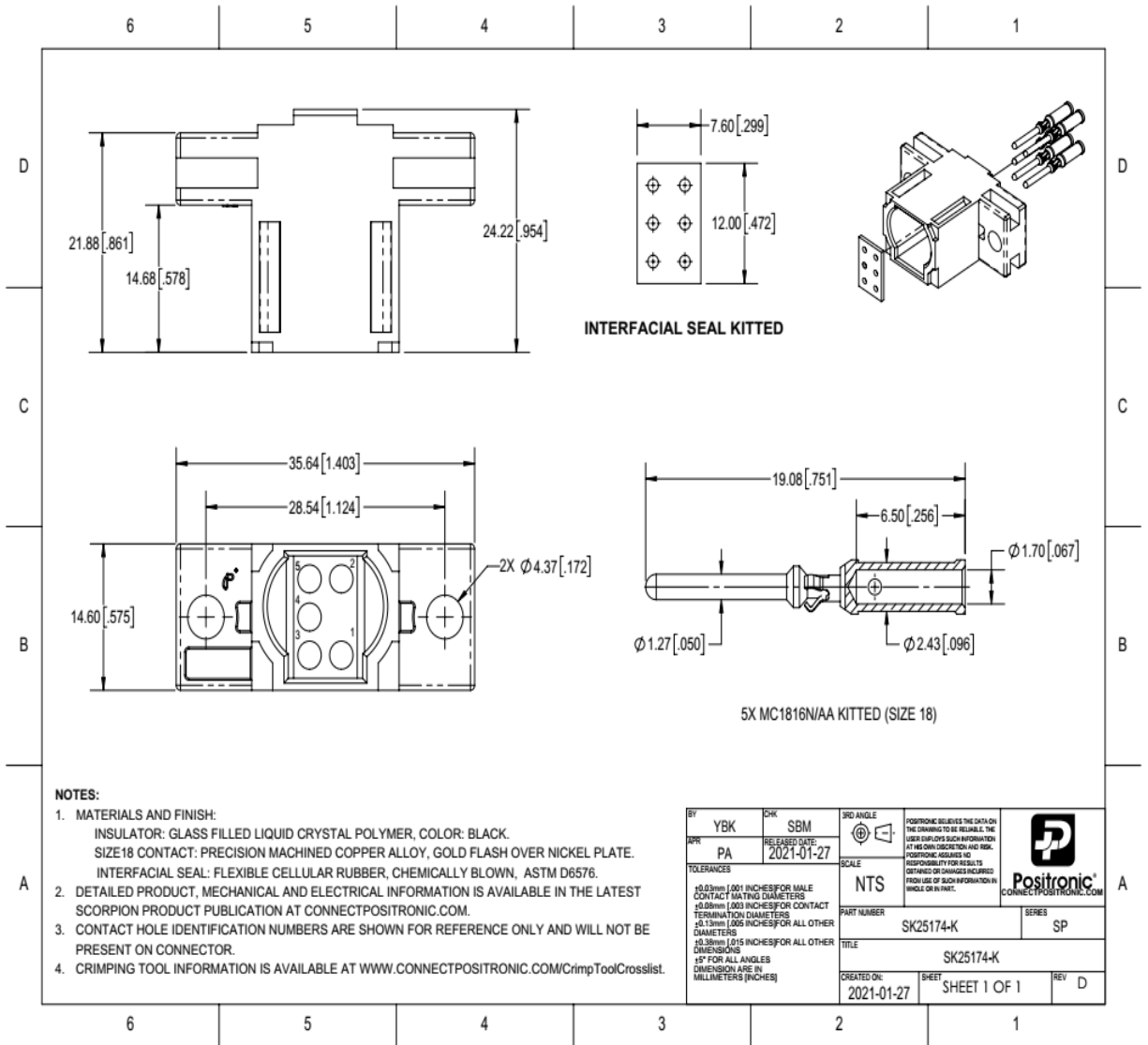
## USER GUIDE




|  |                        |                 |                    |
|--|------------------------|-----------------|--------------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | <b>DOCUMENT NUMBER</b> | <b>REVISION</b> | <b>PAGE NUMBER</b> |
|  | AES-ECBU               | A               | Page 50 of 59      |

# ASTRONICS ECBU CABLE CONNECTORS

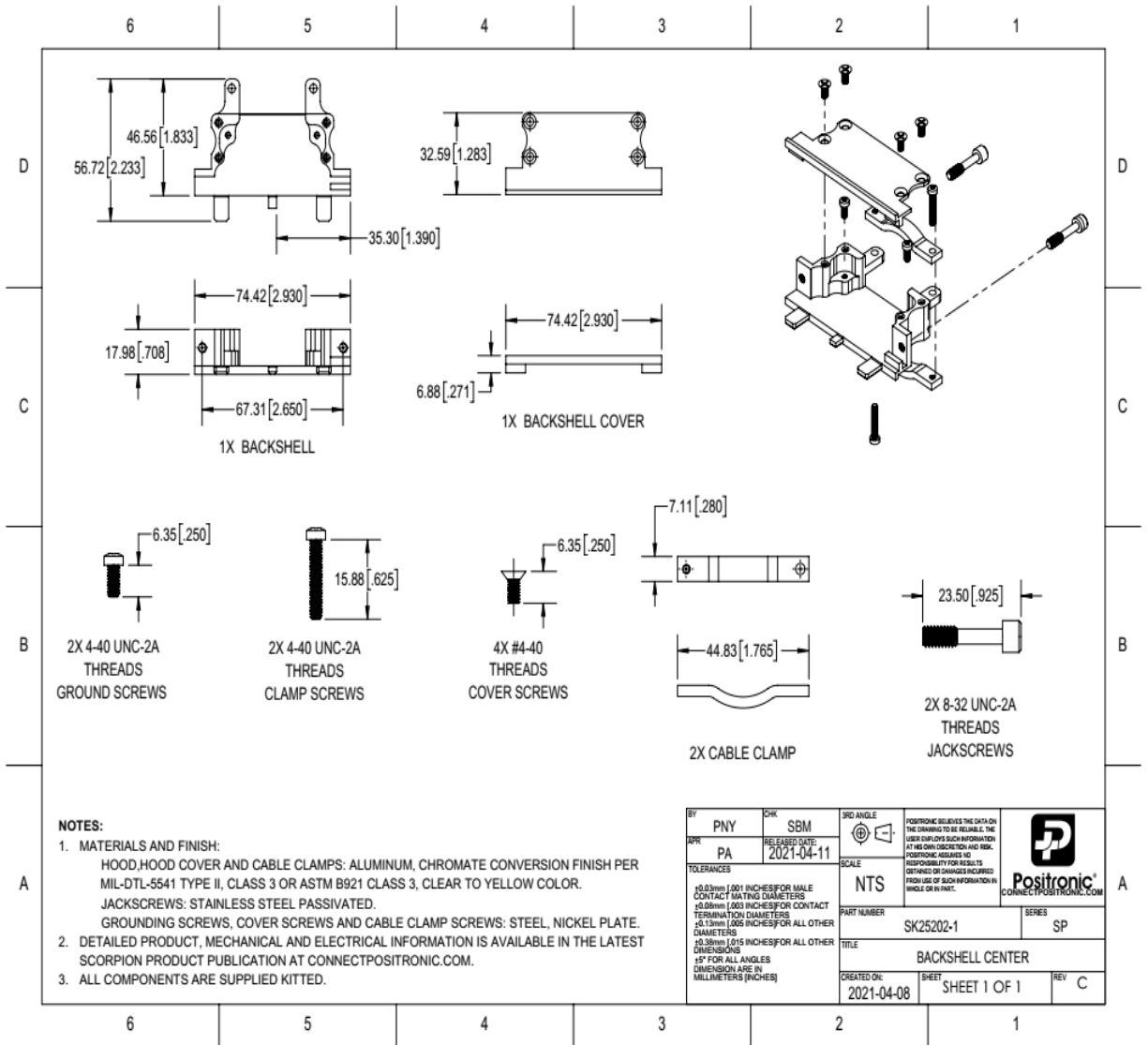
## USER GUIDE





|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 51 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

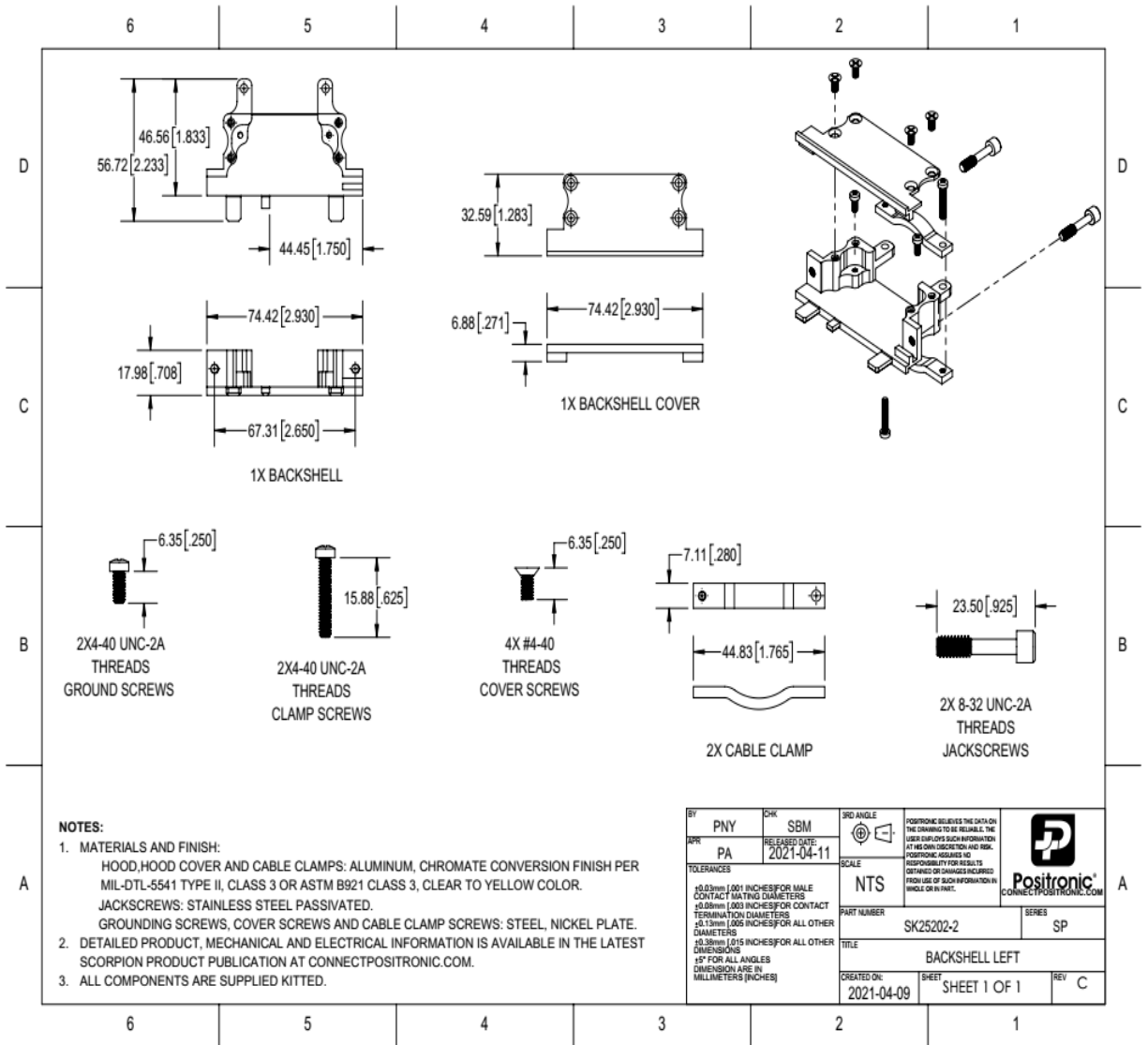


|   |     |               |            |             |   |  |                  |   |
|---|-----|---------------|------------|-------------|---|--|------------------|---|
| BY  | PNY | CHK           | SBM        | 3RD ANGLE   | POSITRONIC BELIEVES THE DATA ON THE DRAWING TO BE RELIABLE. THE USER EMPLOYS SUCH INFORMATION AT HIS OWN DISCRETION AND RISK. POSITRONIC ASSUMES NO RESPONSIBILITY FOR RESULTS OBTAINED OR DAMAGES INCURRED FROM USE OF SUCH INFORMATION IN WHOLE OR IN PART. | <br>CONNECTPOSITRONIC.COM |                  |   |
| APP   | PA  | RELEASED DATE | 2021-04-11 | SCALE       |   |  | NTS              |   |
| TOLERANCES  |     |               |            | PART NUMBER | SK25202-1   | SERIES   | SP               |   |
| ±0.25mm (.010 INCHES) FOR MALE CONTACT MATING DIAMETERS<br>±0.25mm (.010 INCHES) FOR CONTACT TERMINATION DIAMETERS<br>±0.13mm (.005 INCHES) FOR ALL OTHER DIAMETERS<br>±0.25mm (.010 INCHES) FOR ALL OTHER DIMENSIONS<br>±5° FOR ALL ANGLES<br>DIMENSIONS ARE IN MILLIMETERS (INCHES) |     |               |            | TITLE       |   |  | BACKSHELL CENTER |   |
| CREATED ON:   |     |               |            | 2021-04-08  | SHEET   | SHEET 1 OF 1   | REV              | C |

|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 52 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

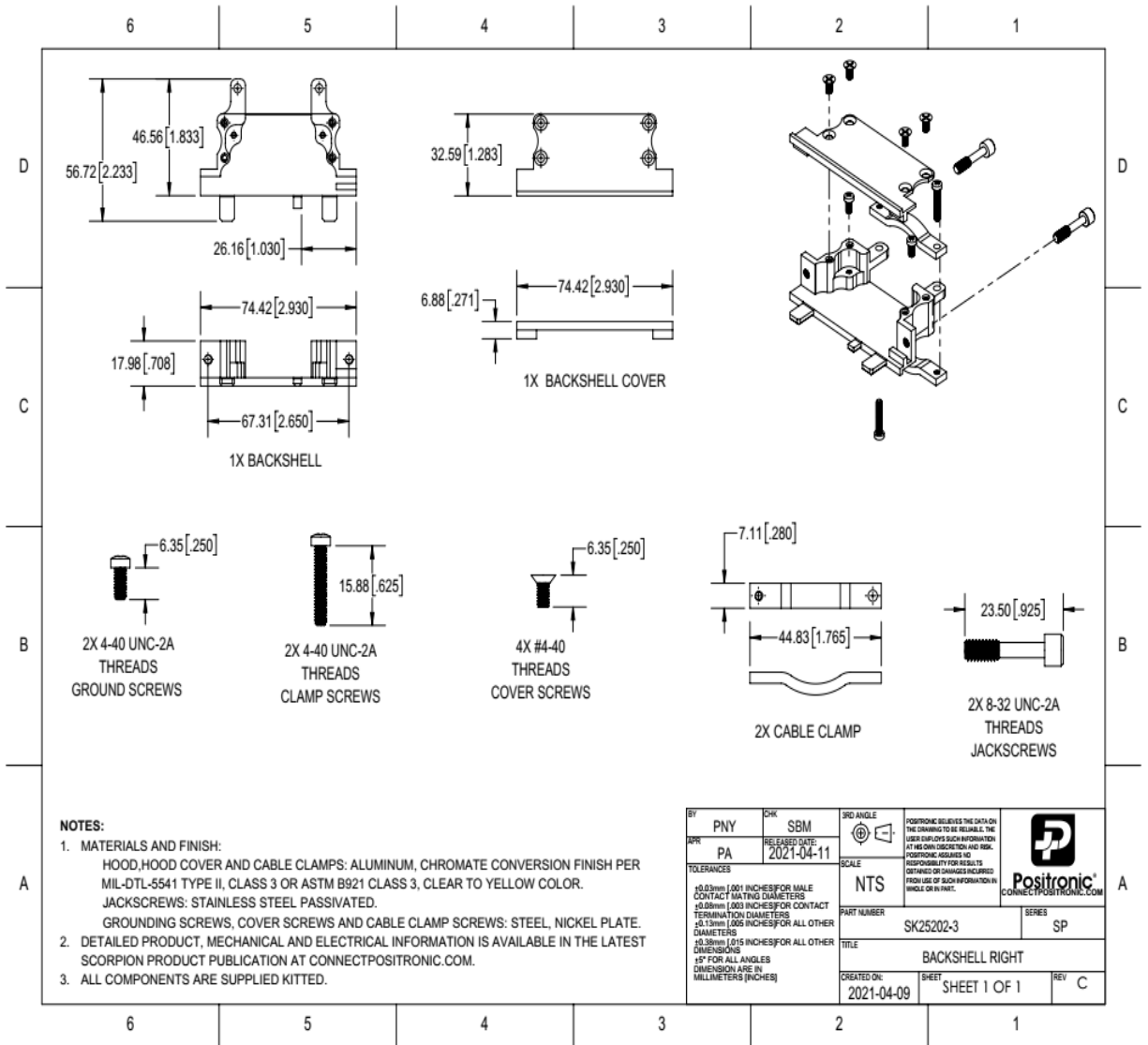
## USER GUIDE




|  |                 |          |               |
|--|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 53 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

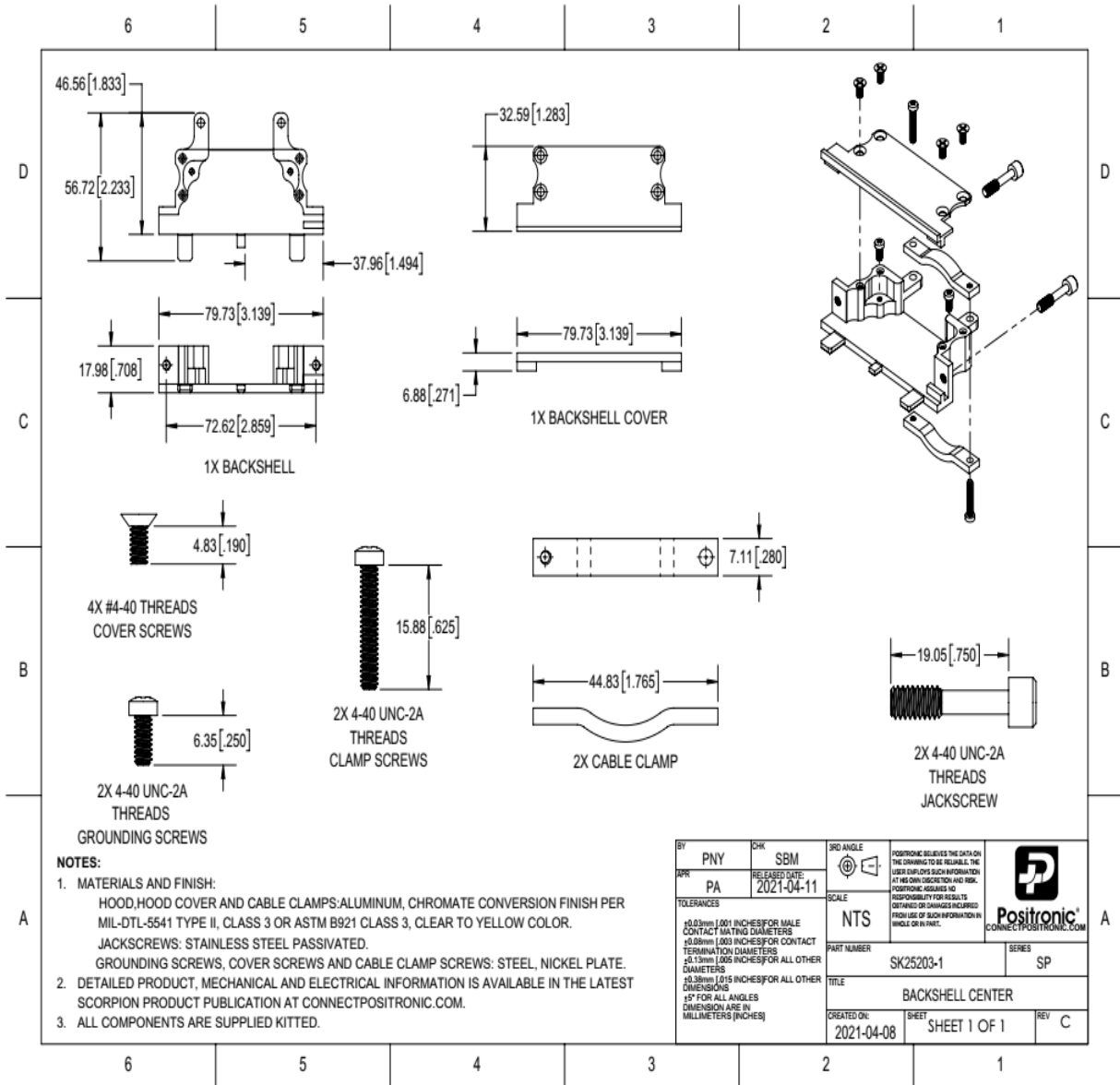
## USER GUIDE



|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br>Positronic<br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 54 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

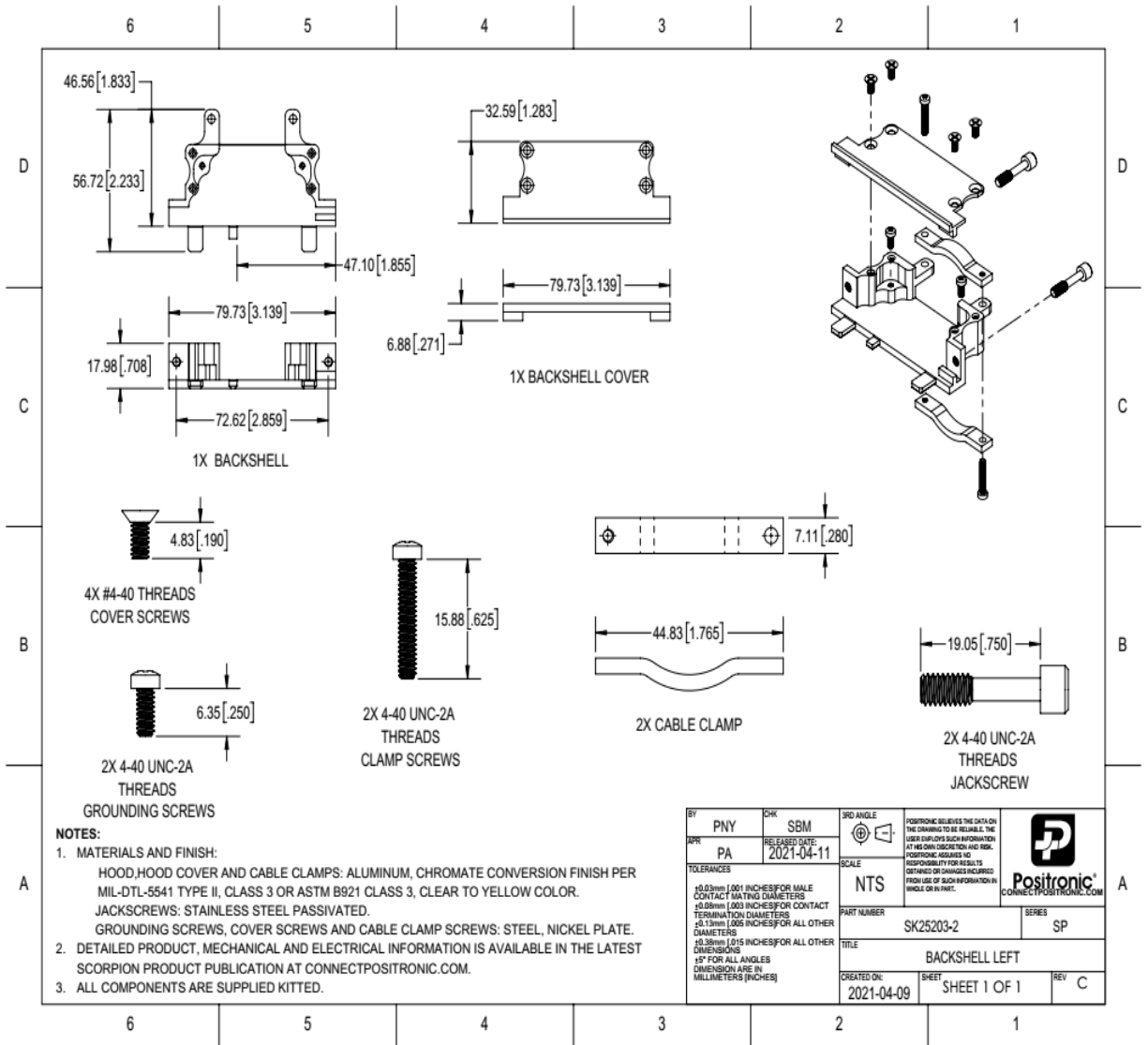



|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 55 of 59 |



# ASTRONICS ECBU CABLE CONNECTORS

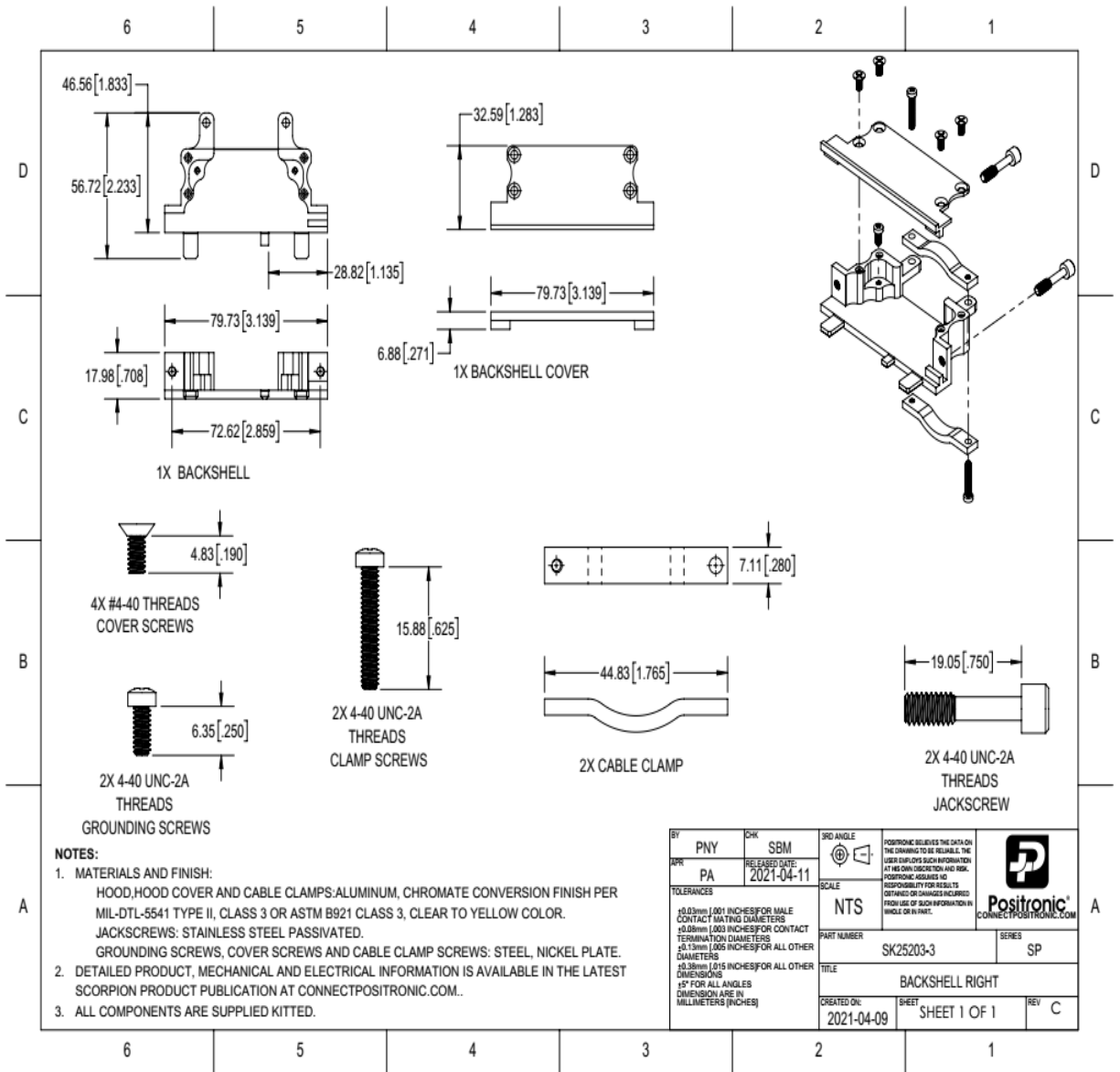
## USER GUIDE



|  |                 |          |               |
|--|-----------------|----------|---------------|
| <br><b>Positronic</b><br><small>an Amphenol company</small> | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 56 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

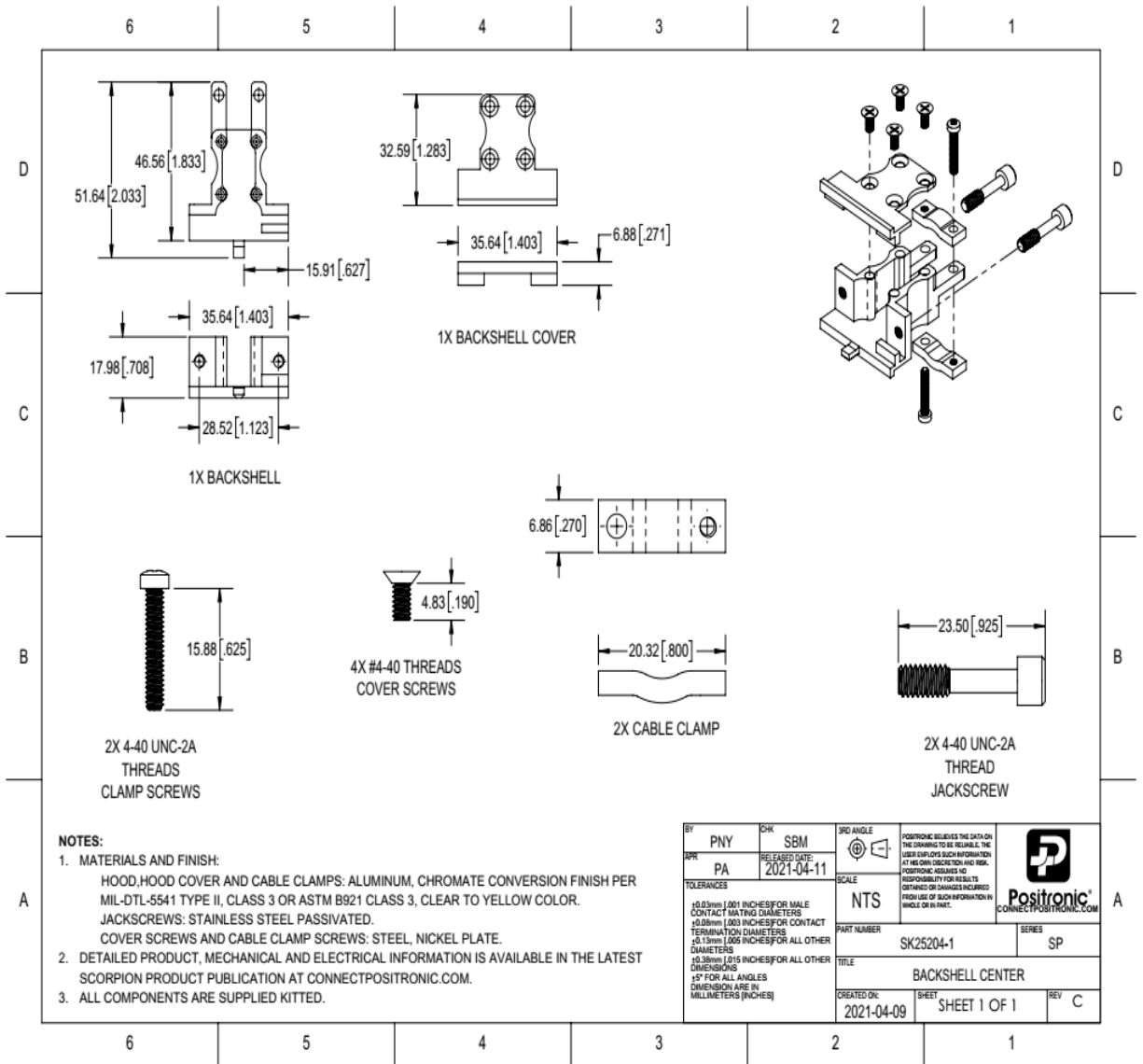
## USER GUIDE



|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 57 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

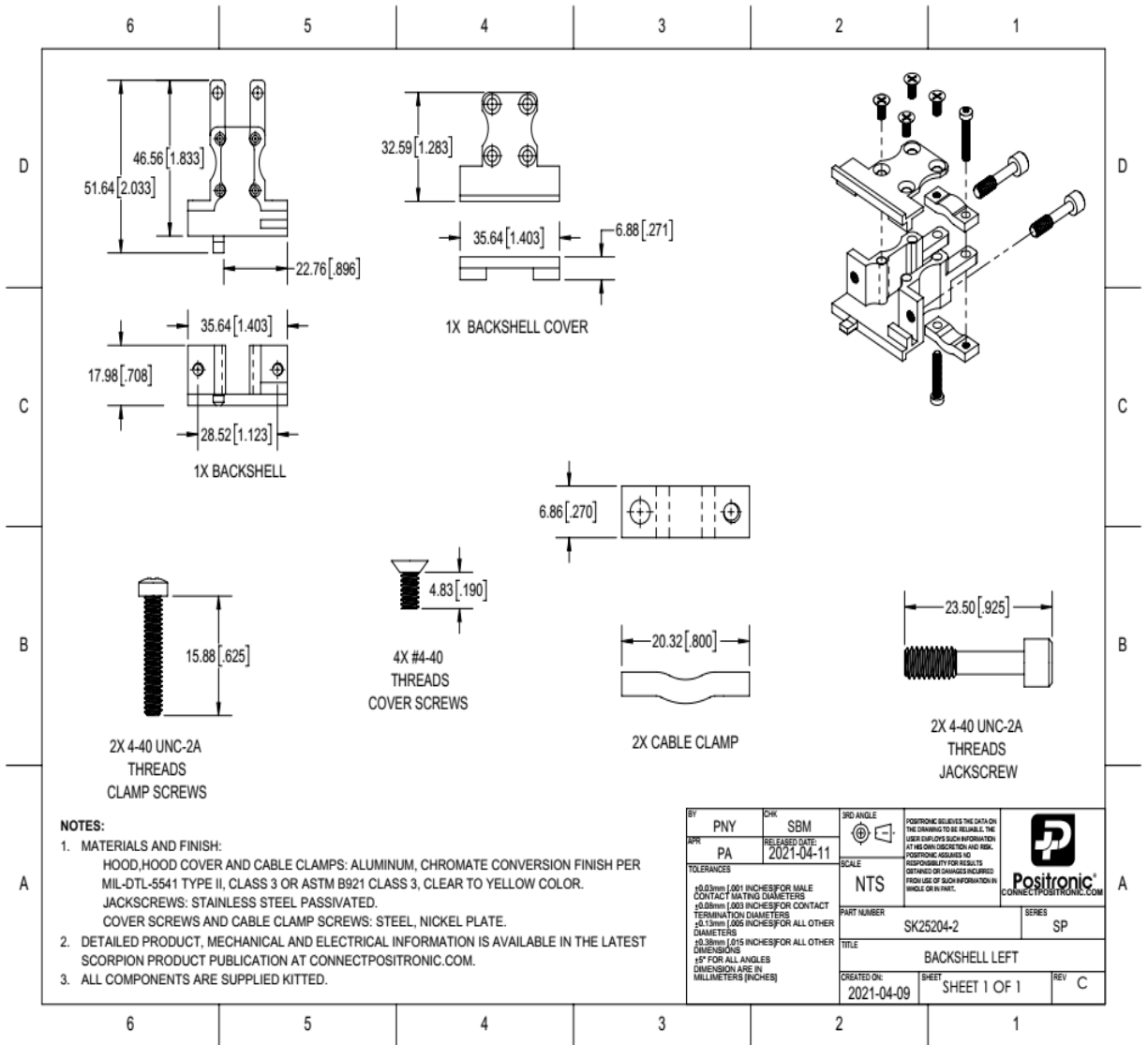
## USER GUIDE



|                         |                 |          |               |
|-------------------------|-----------------|----------|---------------|
| <br>an Amphenol company | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|                         | AES-ECBU        | A        | Page 58 of 59 |

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



|  |                 |          |               |
|--|-----------------|----------|---------------|
|  | DOCUMENT NUMBER | REVISION | PAGE NUMBER   |
|  | AES-ECBU        | A        | Page 59 of 59 |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Crimpers / Crimping Tools](#) category:*

*Click to view products by [Positronic](#) manufacturer:*

Other Similar products are found below :

[010-0096](#) [CT150-2-D02](#) [CT150-6-RH07](#) [622-6441LF](#) [63484-3701](#) [63800-8355](#) [63819-1875](#) [63819-2875](#) [63819-4475](#) [63827-5375](#) [64005-0175](#) [662903-2](#) [690602-6](#) [7-23471-1](#) [734611-1](#) [762637-1](#) [811242-5](#) [91362-1](#) [1-21002-3](#) [1-21002-7](#) [12118040](#) [12085270](#) [12387119-6](#) [1-22548-4](#) [125442-1](#) [DCE.91.073.BVC](#) [DCE.91.090.3MVM](#) [DCE.91.162.BVCM](#) [DCE.91.202.BVCM](#) [1310G2](#) [1333249-1](#) [1-354003-0](#) [1338301-1](#) [DF62/RE-MD](#) [142321](#) [AP105-DF11-2428S\(64\)](#) [1456088-1](#) [1-45804-6](#) [15397700](#) [AX100749](#) [1-59619-7](#) [1596970-1](#) [1-59619-8](#) [1901238-2](#) [2119581-1](#) [K761](#) [KTH-1079](#) [KTH-2022](#) [KTH-2260](#) [904139-1](#)