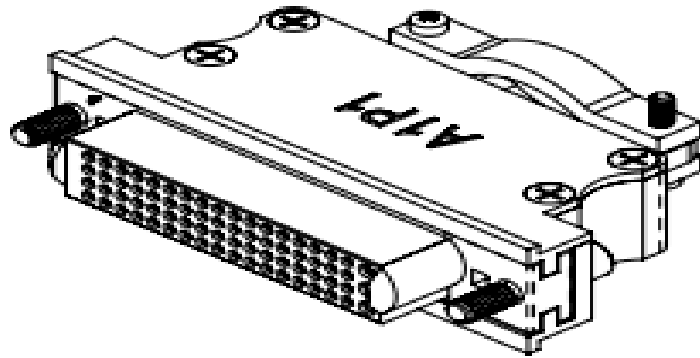


# ASTRONICS COREPOWER ECBU CABLE CONNECTORS

USER GUIDE



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# 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

 Positronic® <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

 Positronic® <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 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 Steel with thread locking patch
<b>Backshell hardware plating</b>	Passivation 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 Signal - 5 mΩ

 Positronic® <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

---

**Contact current rating**

Power - up to 100A  
Signal - 3A

### MECHANICAL

**Contact style**

Removable

**Contact termination**

Crimp

**Female contact design**

Closed entry

**Mating cycles**

1000


**Back shell jackscrews**

8-32, with 0.143 [3.63mm] socket head

### ENVIRONMENTAL

**Operation temperature**

-55 to 160 deg C

 <b>Positronic</b> <small>an Amphenol company</small>	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	AES-ECBU	A	Page 4 of 59

# ASTRONICS ECBU CABLE CONNECTORS


## USER GUIDE

### 3.0 CONNECTORS – 28VDC – ECBU LRU

#### 28VDC connectors with backshells

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

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

 Positronic® <small>an Amphenol company</small>	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	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 Size 4 - qty 1 For 4 awg wire	MC112NS/AA Size 16 - qty 4 For 12 awg wire
<b>Kitted Contact</b>	FC114P2/AA-PA907 Size 16 - qty4 For 14 to 16 awg wire	MC114N/AA Size 16 - qty 4 For 14 to 16 awg wire
<b>Kitted Contact</b>	FC1816P2/AA Size 18 - qty3 For 16 to 18 awg wire	FC1816N/AA Size 18 - qty 12 For 16 to 18 awg wire
<b>Kitted Contact</b>	FC422P9/AA Size 22 - qty 28 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 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-32-0-0 9502-18-0-0	K1202	-
MC114N/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
MC112NS/AA	.230±.020 (5.84±.51)	9509-4-0-0	GS222	-	9509-5-0-0	TP1366	-
FC1816P2/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-30-0-0 9502-18-0-0	K1202	-
FC114P2/AA-PA907	.230±.020 (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 (11.68±.51)	9503-2-1-0 9503-2-2-0	WA23 WA23-4	M22520/23-01 M22520/23-04	9503-2-4-0	WA23-458L	-

 <b>Positronic</b> <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 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-
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### 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	-	-

 <b>Positronic</b> <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 Size 12 - qty 1 For 10 awg wire	MC1210NS/AA Size 12 - qty 1 For 10 awg wire
<b>Kitted Contact</b>	MC114N/AA Size 16 - qty 4 For 14 - 16 awg wire	MC114N/AA Size 16 - qty 4 For 14 - 16 awg wire
<b>Kitted Contact</b>	MC1816NS/AA Size 18 - qty3 For 16 – 18 awg wire	MC1816NS/AA Size 18 - qty3 For 16 – 18 awg wire
<b>Kitted Contact</b>	MC422N9/AA-1127.11 Size 22 - qty 28 For 22 to 26 awg wire	MC422N9/AA-1127.11 Size 22 - qty 28 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 Size 12 - qty 3 For 8 awg wire	MC4008DS/AA Size 12 - qty 3 For 8 awg wire
<b>Kitted Contact</b>	FC112P2/AA-PA907 Size 16 - qty 2 For 12 to 12 awg wire	FC112P2/AA-PA907 Size 16 - qty 2 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 Size 12 - qty 1 For 10 awg wire	MC4008DS/AA Size 12 - qty 3 For 8 awg wire
<b>Kitted Contact</b>	MC114N/AA Size 16 - qty 4 For 14 - 16 awg wire	FC112P2/AA-PA907 Size 16 - qty 2 For 12 to 12 awg wire
<b>Kitted Contact</b>	MC1816NS/AA Size 18 - qty3 For 16 – 18 awg wire	
<b>Kitted Contact</b>	MC422N9/AA-1127.11	

 <b>Positronic</b> <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 For 22 to 26 awg wire
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### 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 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-
MC1816NS/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-32-0-0 9502-18-0-0	K1202	-
MC114N/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
MC112NS/AA	.230±.020 (5.84±.51)	9509-4-0-0	GS222	-	9509-5-0-0	TP1366	-
MC1210NS/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9509-6-2-0	TP1386	-
FC114P2/AA-PA907	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
FC4008DS/AA	.350±.020 (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	-	-	-

 <b>Positronic</b> <small>an Amphenol company</small>	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	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 Size 18 - qty 5 For 16 – 18 awg wire	FC0404N2S/AA-14-1882.35 Size 4 - qty 1 For 4 awg wire
<b>Kitted Contact</b>		FC422P9/AA Size 22 - qty 36 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 Size 18 - qty 5 For 16 – 18 awg wire

 Positronic® <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 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-32-0-0 9502-18-0-0	K1202	-
FC4008DS/AA	.350±.020 (8.89±.51)	9504-1-0-0	HX-4	M22520/5-01	9504-19-1-0	Y524	-
FC422P9/AA	.125±.020 (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	-	-

 <b>Positronic</b> <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 Size 22 - qty 72 For 22 to 26 awg wire	FC1816P2/AA Size 22 - qty 3 For 16 to 18 awg wire
<b>Kitted Contact</b>		FC422P9/AA Size 22 - qty 68 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 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-
FC1816P2/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-30-0-0 9502-18-0-0	K1202	-
FC422P9/AA	.125±.020 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-


 <b>Positronic*</b> <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	-	-

 Positronic® <small>an Amphenol company</small>	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	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 Size 22 - qty 6 For 16 to 18 awg wire	FC1816P2/AA Size 22 - qty 6 For 16 to 18 awg wire
<b>Kitted Contact</b>	FC422P9/AA Size 22 - qty 36 For 22 to 26 awg wire	FC422P9/AA Size 22 - qty 20 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 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-30-0-0 9502-18-0-0	K1202	-
FC422P9/AA	.125±.020 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-


 <b>Positronic</b> <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	-	-

 <b>Positronic</b> <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]

 Positronic® <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 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-
MC1816N/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-32-0-0 9502-18-0-0	K1202	-
MC1816NS/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-32-0-0 9502-18-0-0	K1202	-
MC114N/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
MC112NS/AA	.230±.020 (5.84±.51)	9509-4-0-0	GS222	-	9509-5-0-0	TP1366	-
MC1210NS/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9509-6-2-0	TP1386	-
FC1816P2/AA	.230±.020 (5.84±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-30-0-0 9502-18-0-0	K1202	-
FC112P2/AA-P907	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
FC114P2/AA-PA907	.230±.020 (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 (11.68±.51)	9503-2-1-0	WA23	M22520/23-01	9503-2-4-0	WA23-458L	-
		9503-2-2-0	WA23-4	M22520/23-04			
FC4008DS/AA	.350±.020 (8.89±.51)	9504-1-0-0	HX-4	M22520/5-01	9504-19-1-0	Y524	-

 <b>Positronic</b> <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 (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			

 Positronic® an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	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”.

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	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.

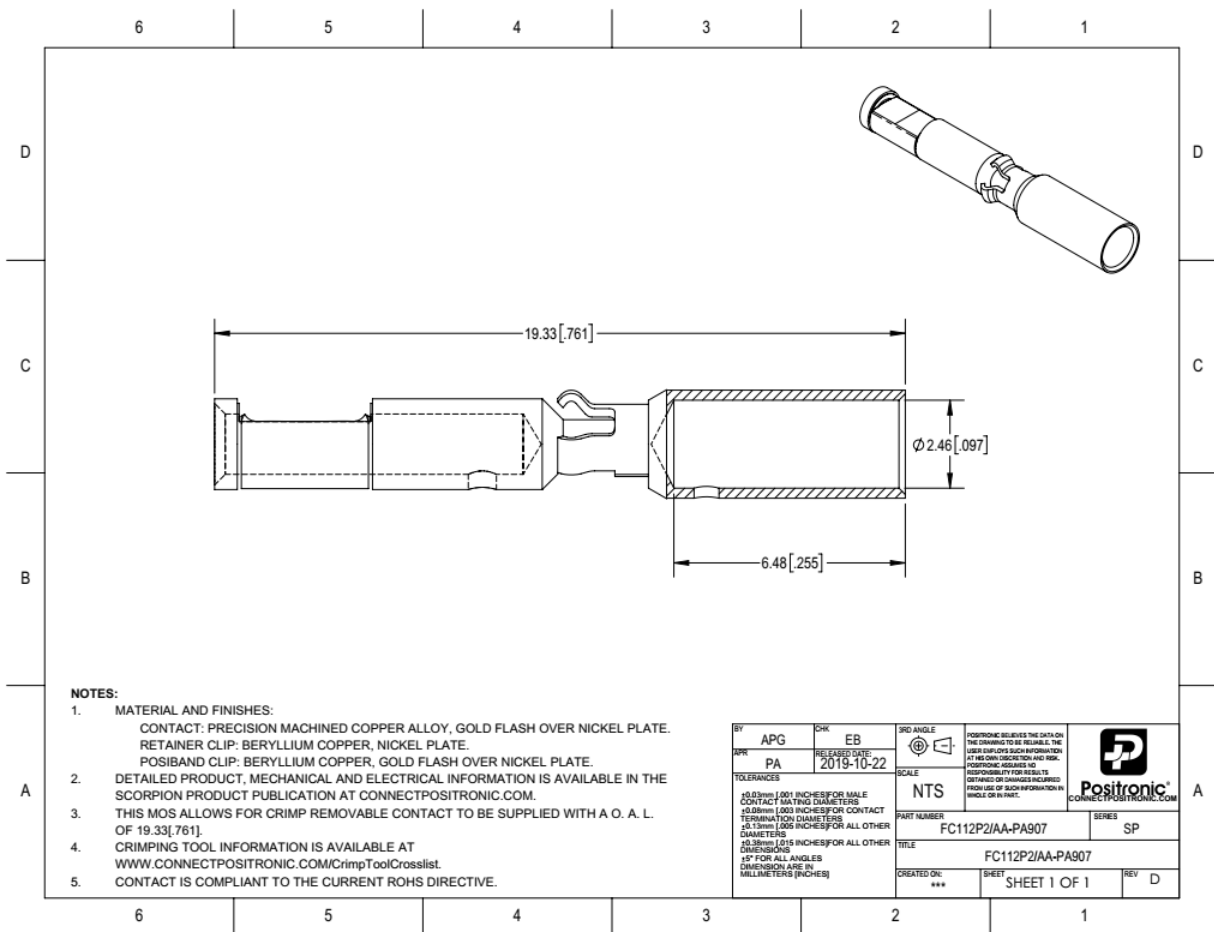
- Positronic direct communication:
  - Inside sales team
  - [Insidesales@connectpositronic.com](mailto:Insidesales@connectpositronic.com)
  - 417.866.2322
- Authorized distributors
  - Distributors: <https://www.connectpositronic.com/en/channel-partners/>


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

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

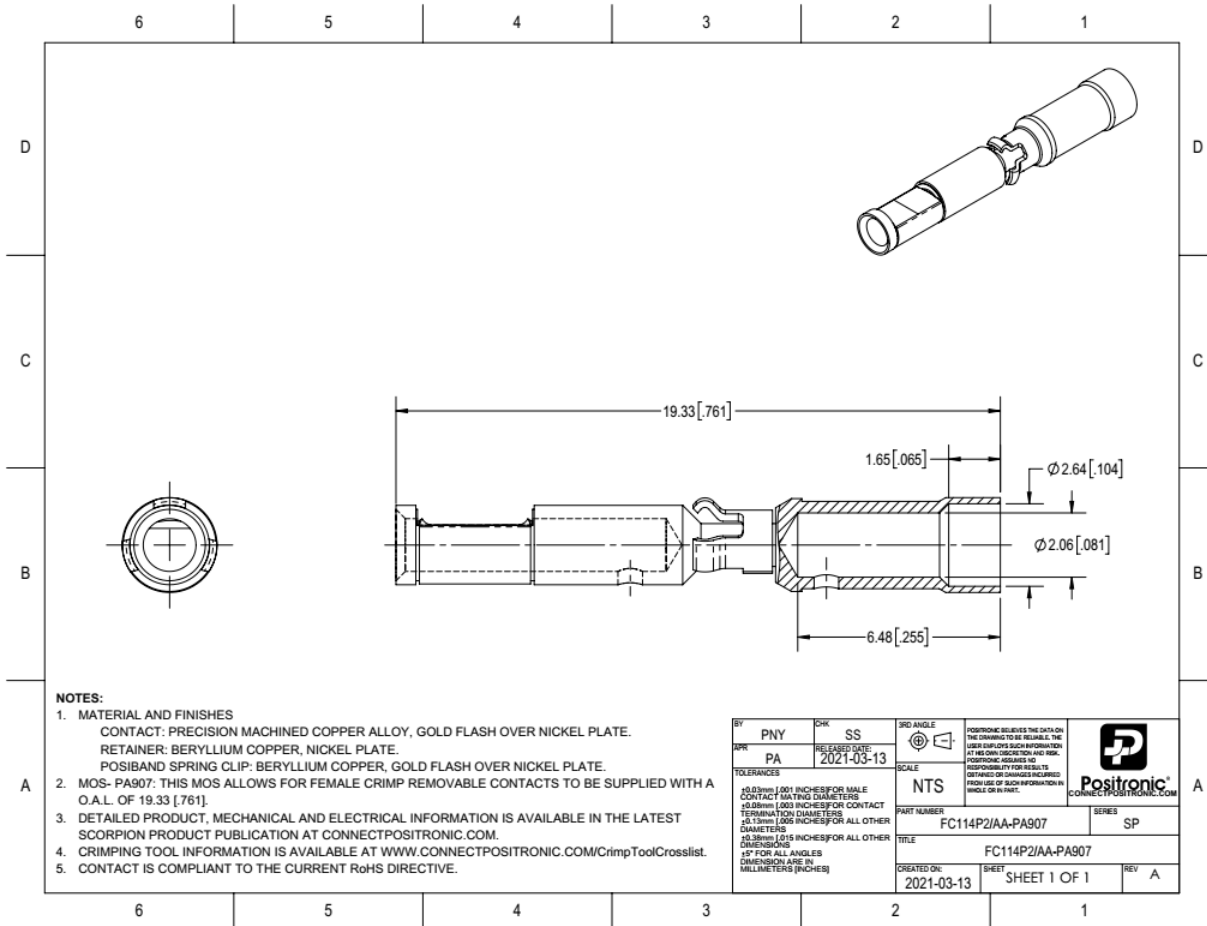
### 12.0 DRAWINGS – CONTACTS - CONNECTORS - BACKSHELLS




 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 21 of 59

# ASTRONICS ECBU CABLE CONNECTORS

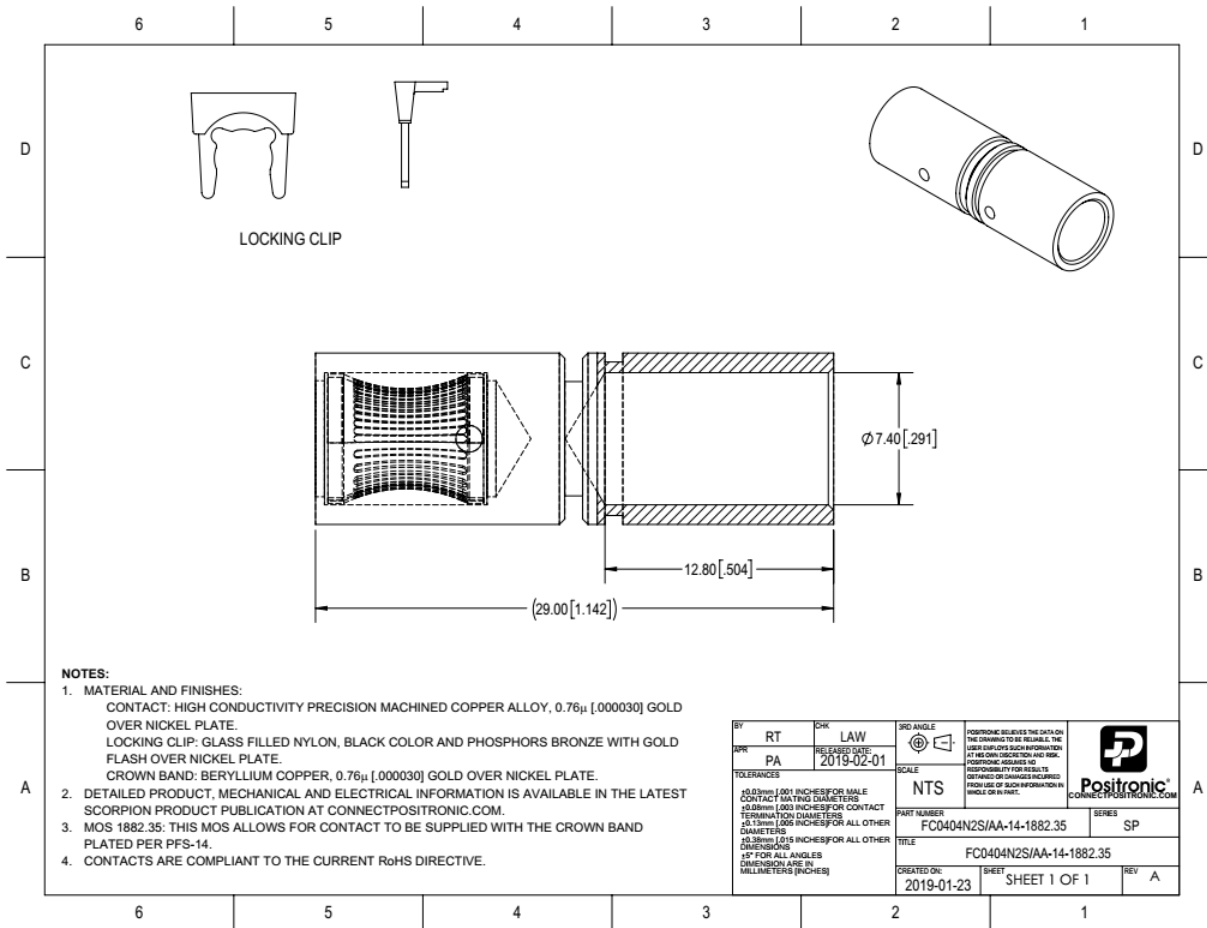
## USER GUIDE




 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 22 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

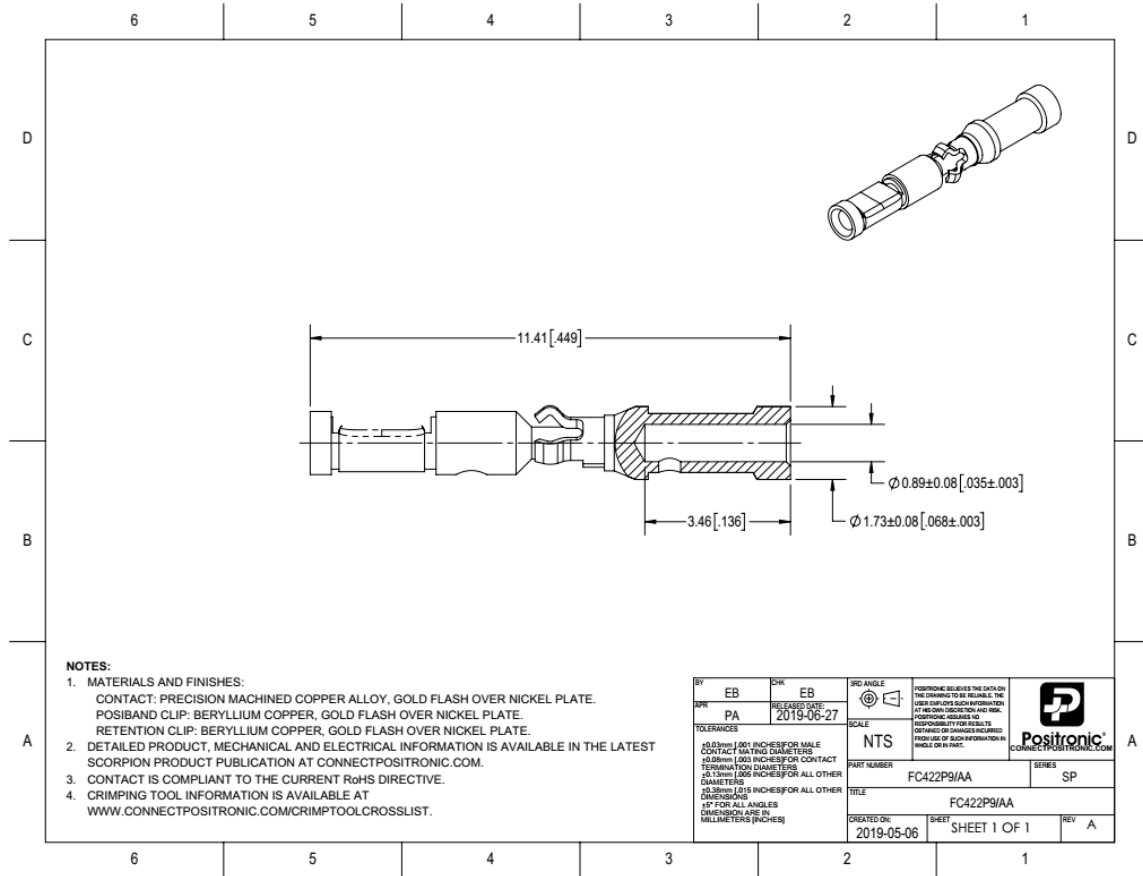



 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 23 of 59



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



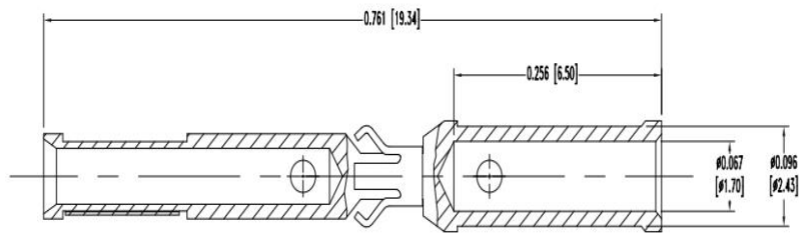
 Positronic <sup>®</sup> an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 24 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

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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.**

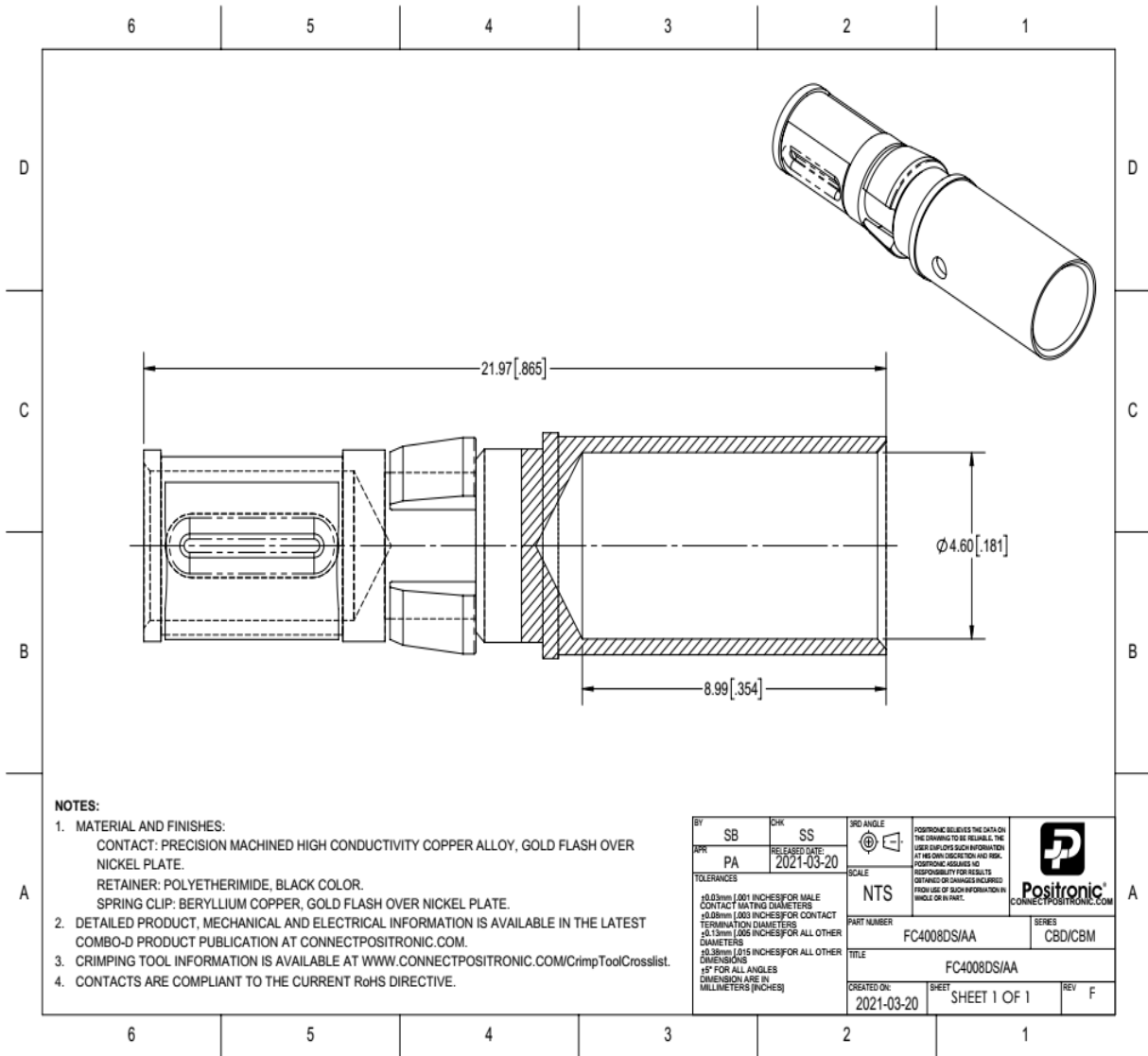
**4. DIMENSIONS ARE IN INCHES [MILLIMETERS]**


<b>POSITRONIC INDUSTRIES INC.</b> SPRINGFIELD, MISSOURI 65801		SCALE	DRAWN BY
		N.T.S.	AMOL B.
DECIMAL TOL.	SP SERIES	APPROVED BY	
±0.015 [0.38]	TITLE	PA	
	FC1816P2/AA		
ANGULAR TOL.	DATE	DRAWING NUMBER	REV.
±5°	06-16-20	FC1816P2/AA	A

 <b>Positronic</b> an Amphenol company	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	AES-ECBU	A	Page 25 of 59

# ASTRONICS ECBU CABLE CONNECTORS

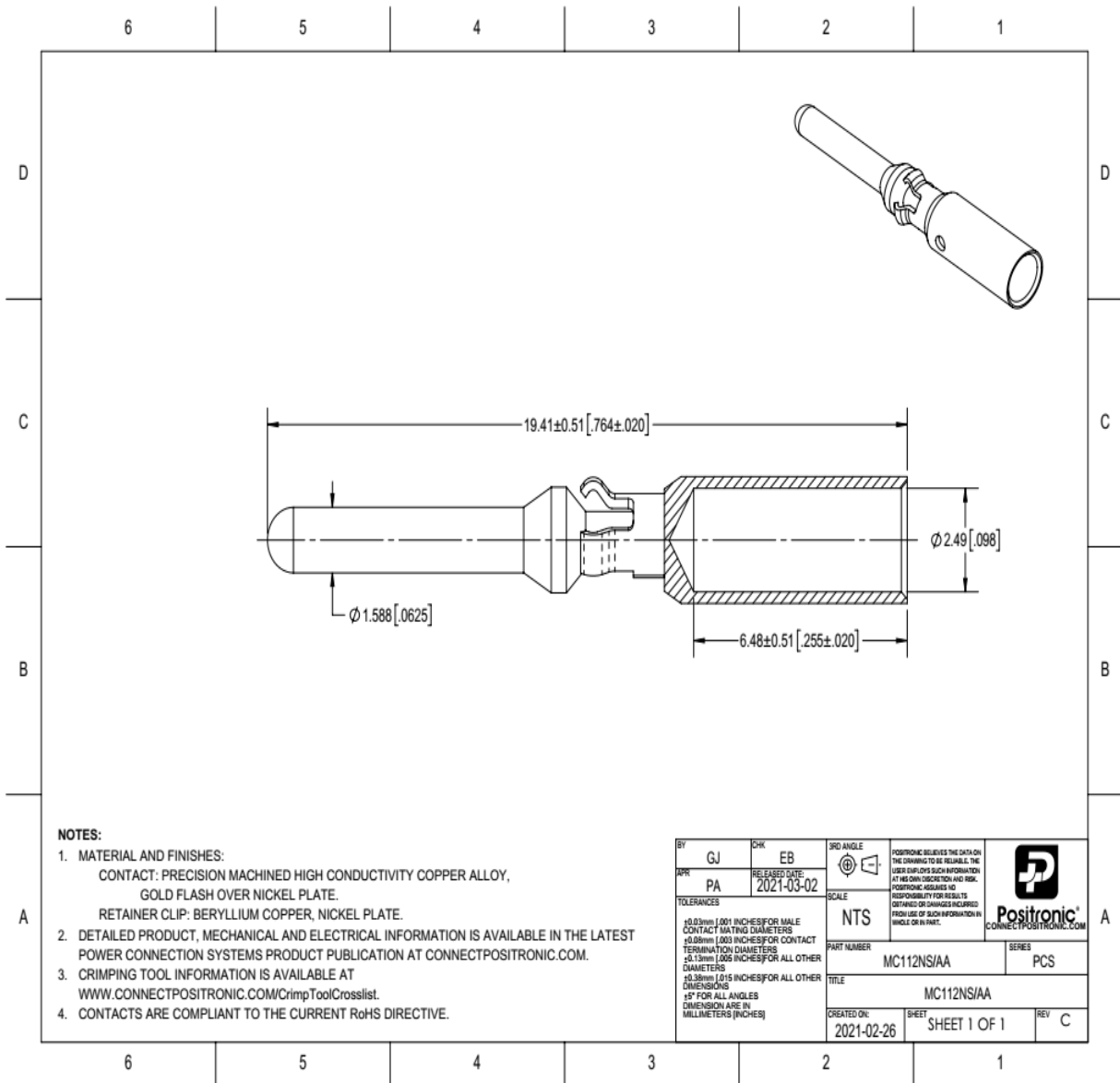
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 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 26 of 59

# ASTRONICS ECBU CABLE CONNECTORS

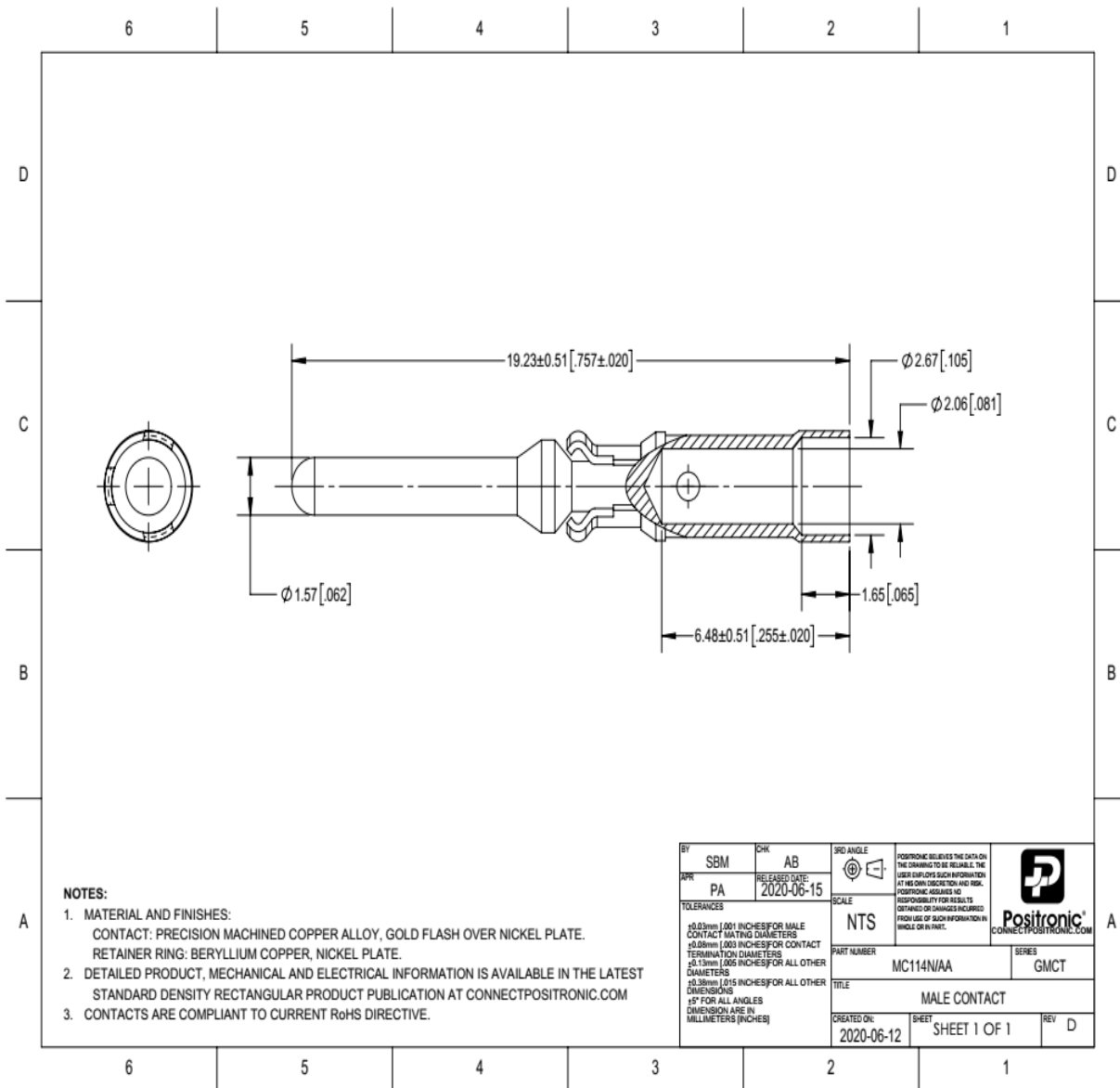
## USER GUIDE



	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 27 of 59

# ASTRONICS ECBU CABLE CONNECTORS

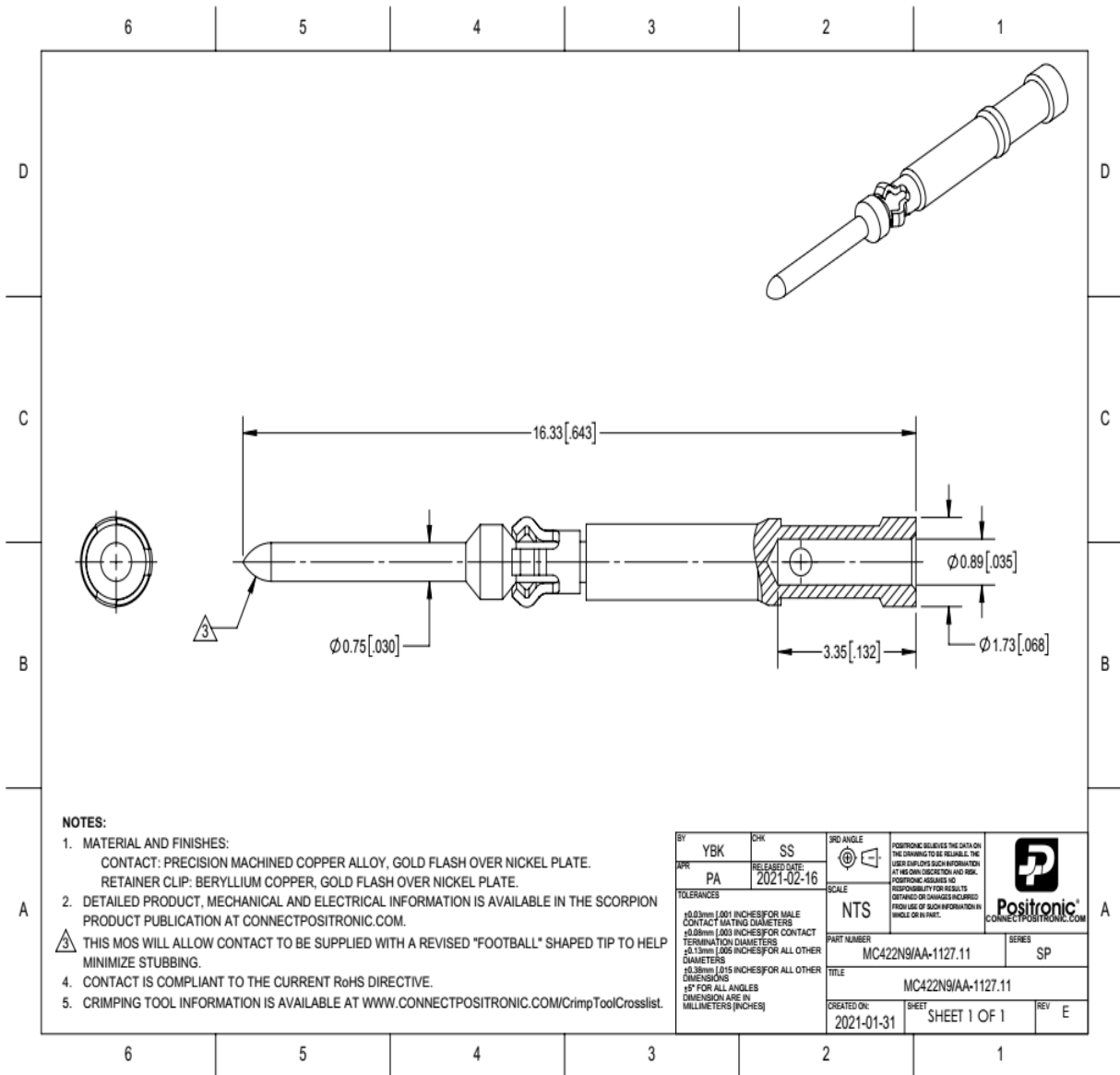
## USER GUIDE



	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 28 of 59

# ASTRONICS ECBU CABLE CONNECTORS

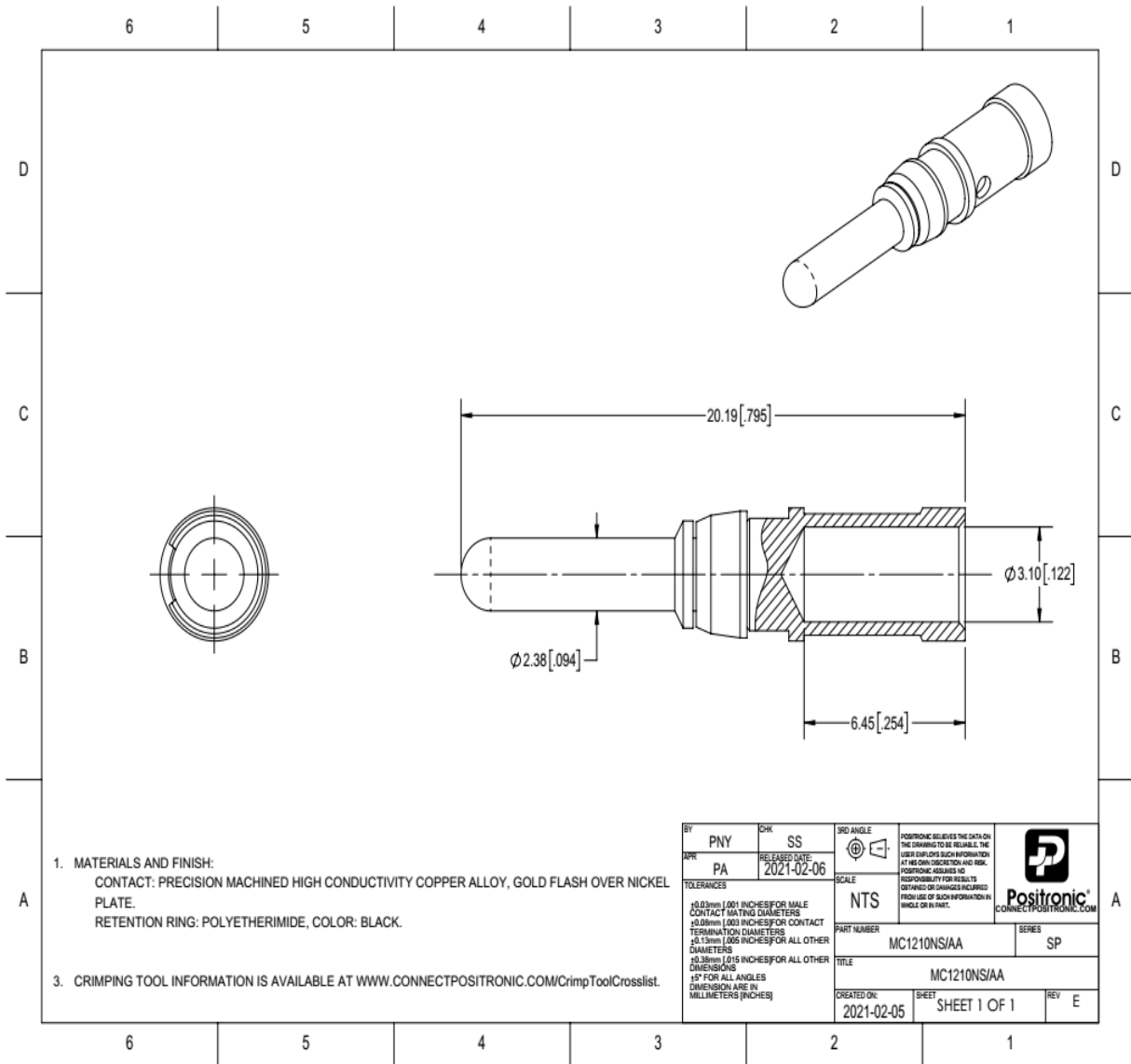
## USER GUIDE



 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 29 of 59

# ASTRONICS ECBU CABLE CONNECTORS

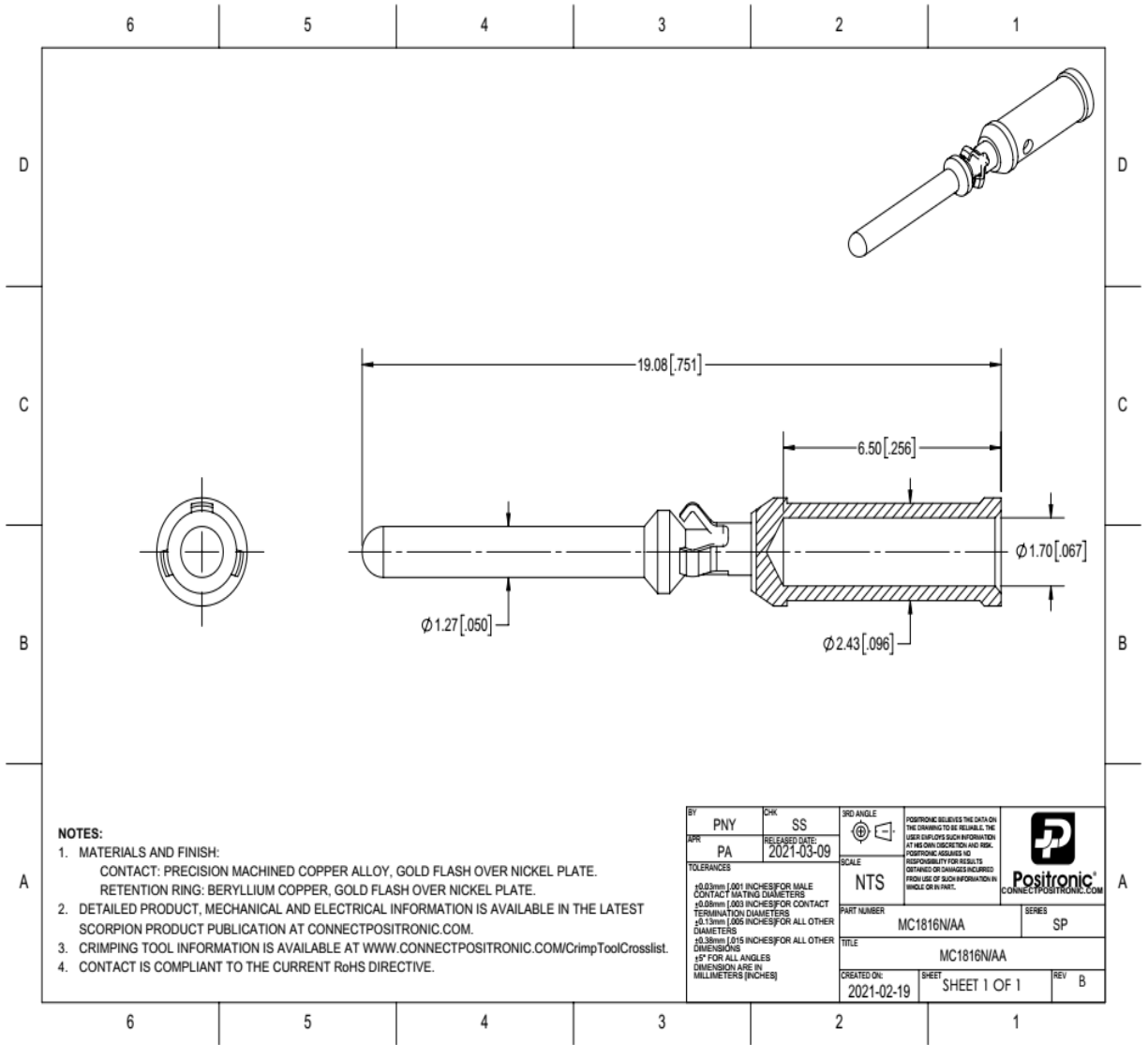
## USER GUIDE




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

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

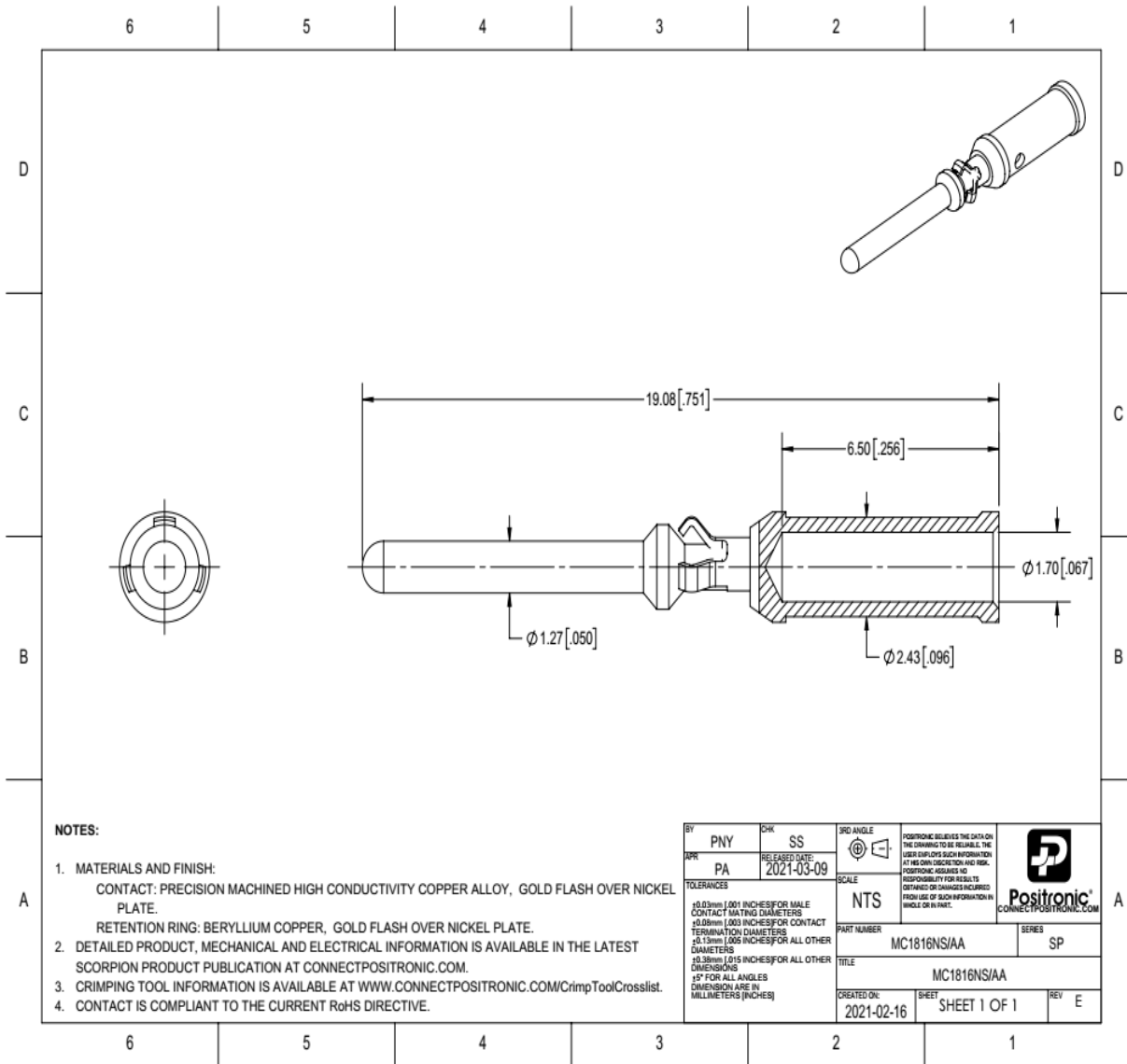


	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 31 of 59



# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 32 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

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SK18444-1-2K1			
DATE	REV	REVISION RECORD	APP DR CK
9-12-17	A	ECO 56634	COLE/COLE/COLE
10-30-17	B	ECO 55970	COLE/COLE/COLE

KIT 1 1 PIECE FC0404NCS/AA-14-1882.35 (INCLUDES 1 PIECE A4318-2-1-51)

KIT 4 4 PIECES FC114P2/AA-P4907

KIT 3 3 PIECES FC1816P2/AA

KIT 28 28 PIECES FC422P9/AA

**NOTES:**

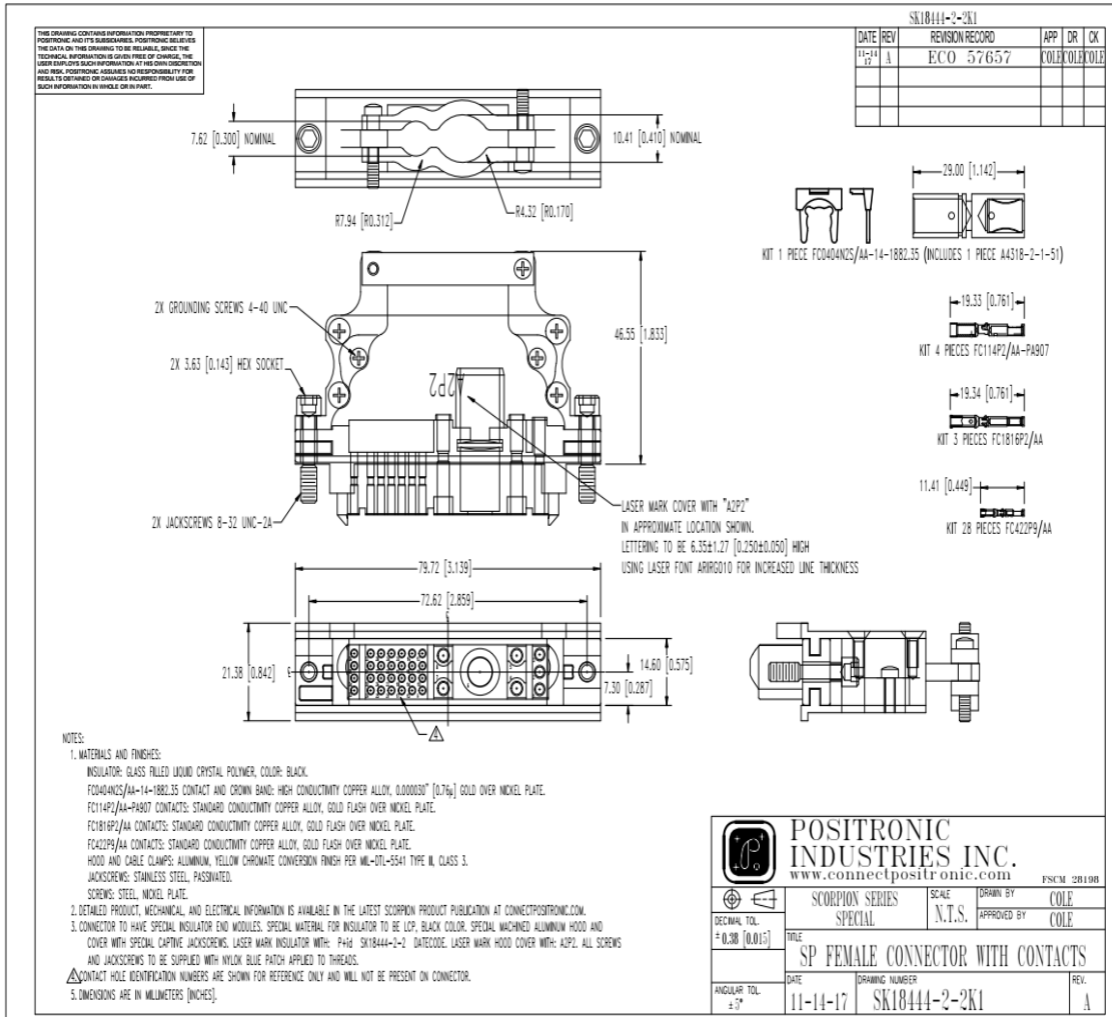
1. MATERIALS AND FINISHES:  
 INSULATOR: GLASS FILLED LIQUID CRYSTAL POLYMER, COLOR: BLACK.  
 FC0404NCS/AA-14-1882.35 CONTACT AND CROWN BAND: HIGH CONDUCTIVITY COPPER ALLOY, 0.000030" [0.76] GOLD OVER NICKEL PLATE.  
 FC114P2/AA-P4907 CONTACTS: STANDARD CONDUCTIVITY COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 FC1816P2/AA CONTACTS: STANDARD CONDUCTIVITY COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 FC422P9/AA CONTACTS: STANDARD CONDUCTIVITY COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 HOOD AND CABLE CLAMPS: ALUMINUM, YELLOW CHROMATE CONVERSION FINISH PER MIL-DTL-5541 TYPE II, CLASS 3.  
 JACKSCREWS: STAINLESS STEEL, PASSIVATED.  
 SCREWS: STEEL NICKEL PLATE.
2. DETAILED PRODUCT, MECHANICAL AND ELECTRICAL INFORMATION IS AVAILABLE IN THE LATEST SCORPION PRODUCT PUBLICATION AT CONNECTPOSITRONIC.COM.
3. CONNECTOR TO HAVE SPECIAL INSULATOR END MODULES. SPECIAL MATERIAL FOR INSULATOR TO BE LCP, BLACK COLOR. SPECIAL MACHINED ALUMINUM HOOD AND COVER WITH SPECIAL CAPTIVE JACKSCREWS. LASER MARK INSULATOR WITH: P4H SK18444-1-2 DATECODE. LASER MARK HOOD COVER WITH: A1P2. ALL SCREWS AND JACKSCREWS TO BE SUPPLIED WITH NYLON BLUE PATCH APPLIED TO THREADS.
4. CONTACT HOLE IDENTIFICATION NUMBERS ARE SHOWN FOR REFERENCE ONLY AND WILL NOT BE PRESENT ON CONNECTOR.
5. DIMENSIONS ARE IN MILLIMETERS [INCHES].


	<b>POSITRONIC INDUSTRIES INC.</b> www.connectpositronic.com		FSCM 28198
	SCORPION SERIES SPECIAL	SCALE N.T.S.	DRAWN BY COLE APPROVED BY COLE
DECIMAL TOL. = 0.20 [0.015]	TITLE SP FEMALE CONNECTOR WITH CONTACTS		
ANGULAR TOL. ± 5°	DATE 9-12-17	DRAWING NUMBER SK18444-1-2K1	REV. B

	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	AES-ECBU	A	Page 33 of 59

# ASTRONICS ECBU CABLE CONNECTORS

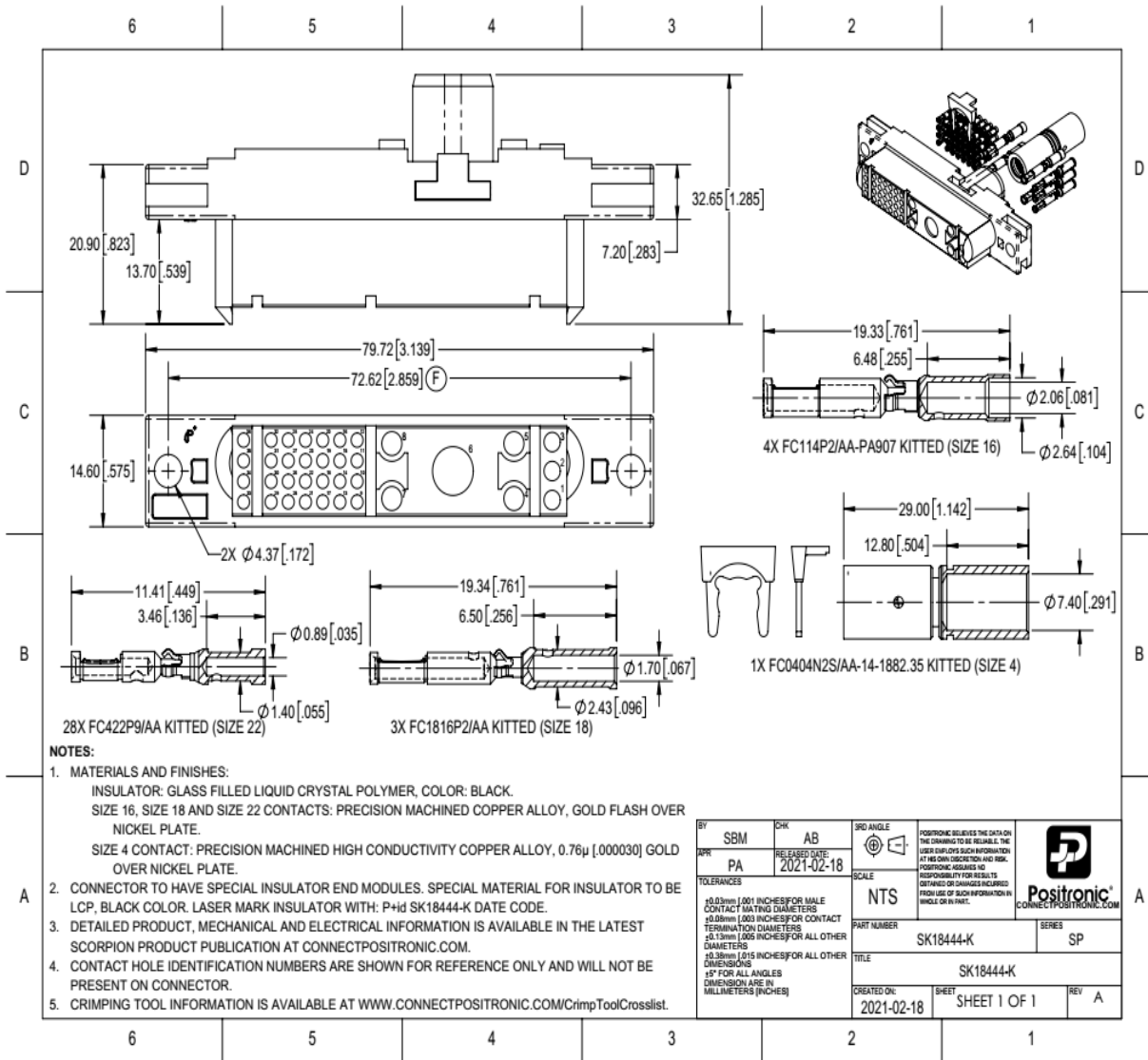
## USER GUIDE



 Positronic <sup>®</sup> an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 34 of 59

# ASTRONICS ECBU CABLE CONNECTORS

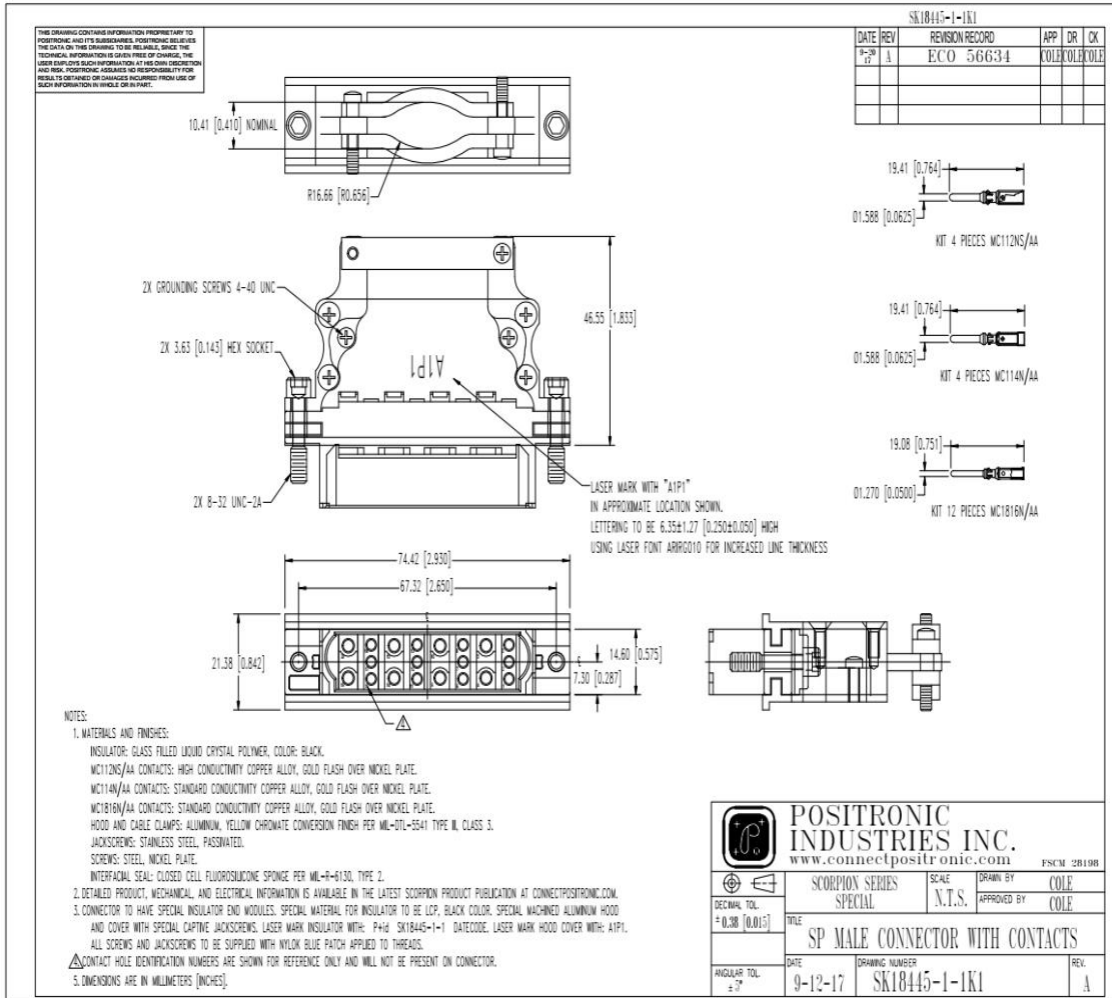
## USER GUIDE




 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 35 of 59

# ASTRONICS ECBU CABLE CONNECTORS

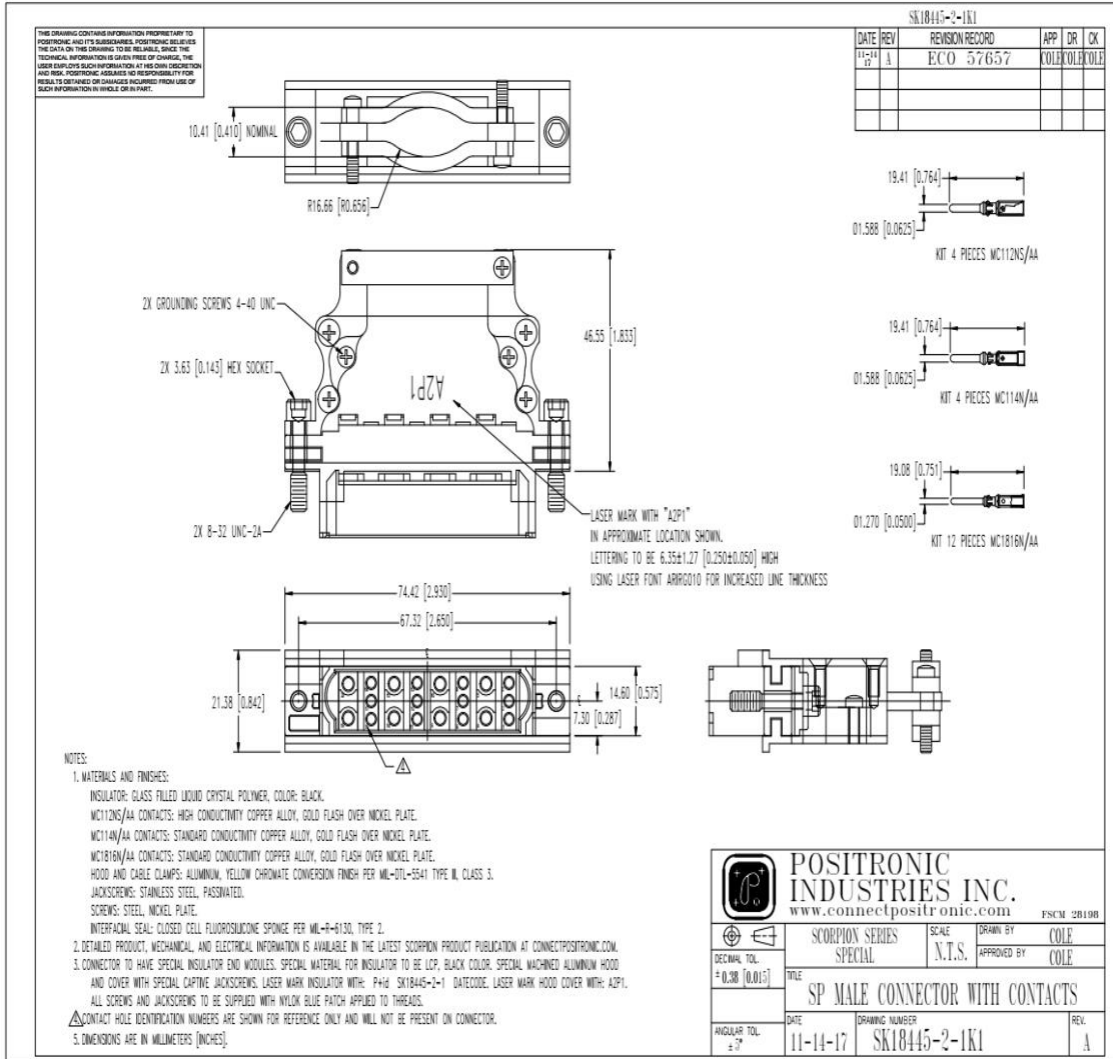
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	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 36 of 59

# ASTRONICS ECBU CABLE CONNECTORS

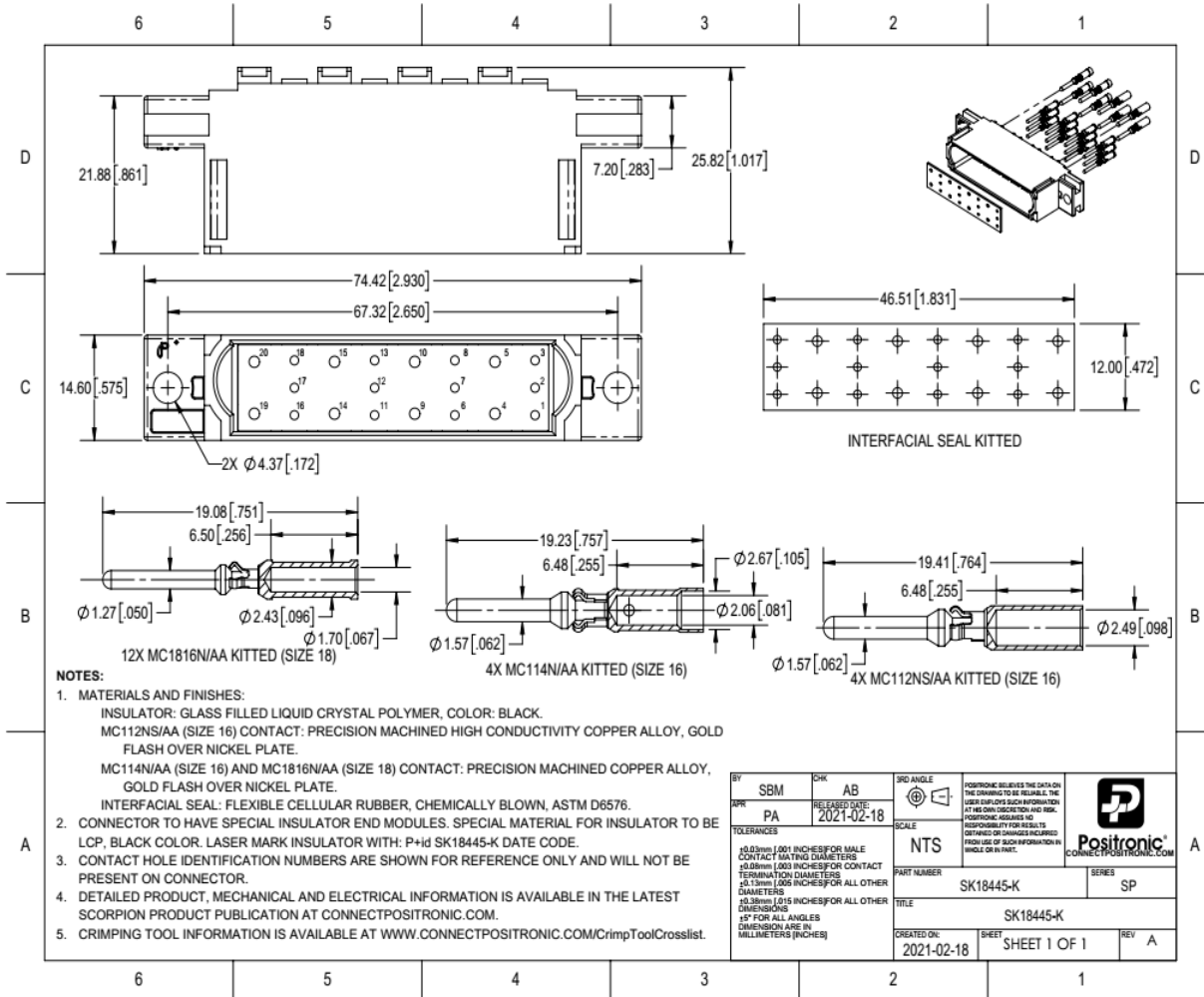
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 <b>Positronic</b> <small>an Amphenol company</small>	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 37 of 59

# ASTRONICS ECBU CABLE CONNECTORS

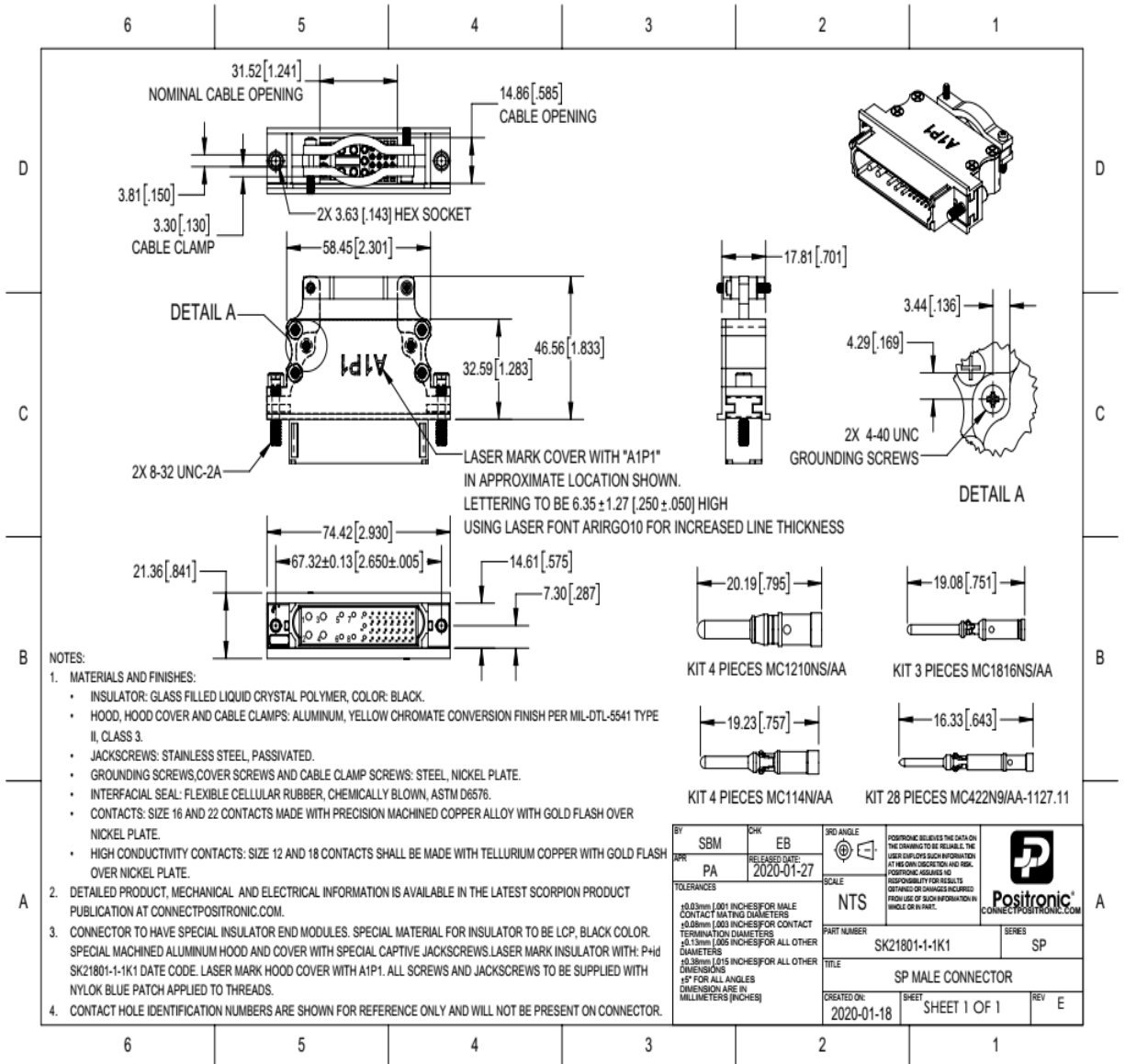
## USER GUIDE



 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 38 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

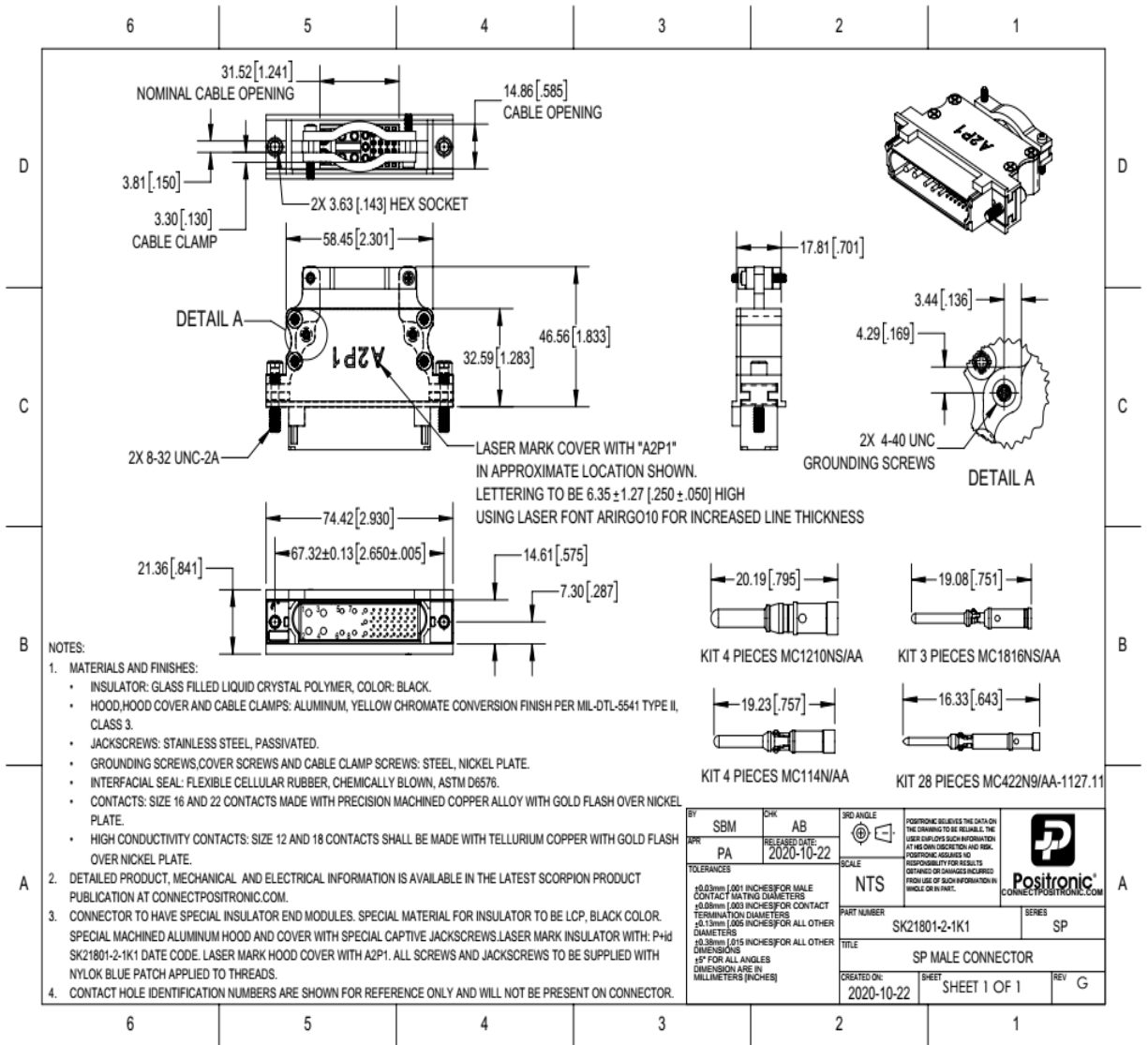


	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 39 of 59



# ASTRONICS ECBU CABLE CONNECTORS

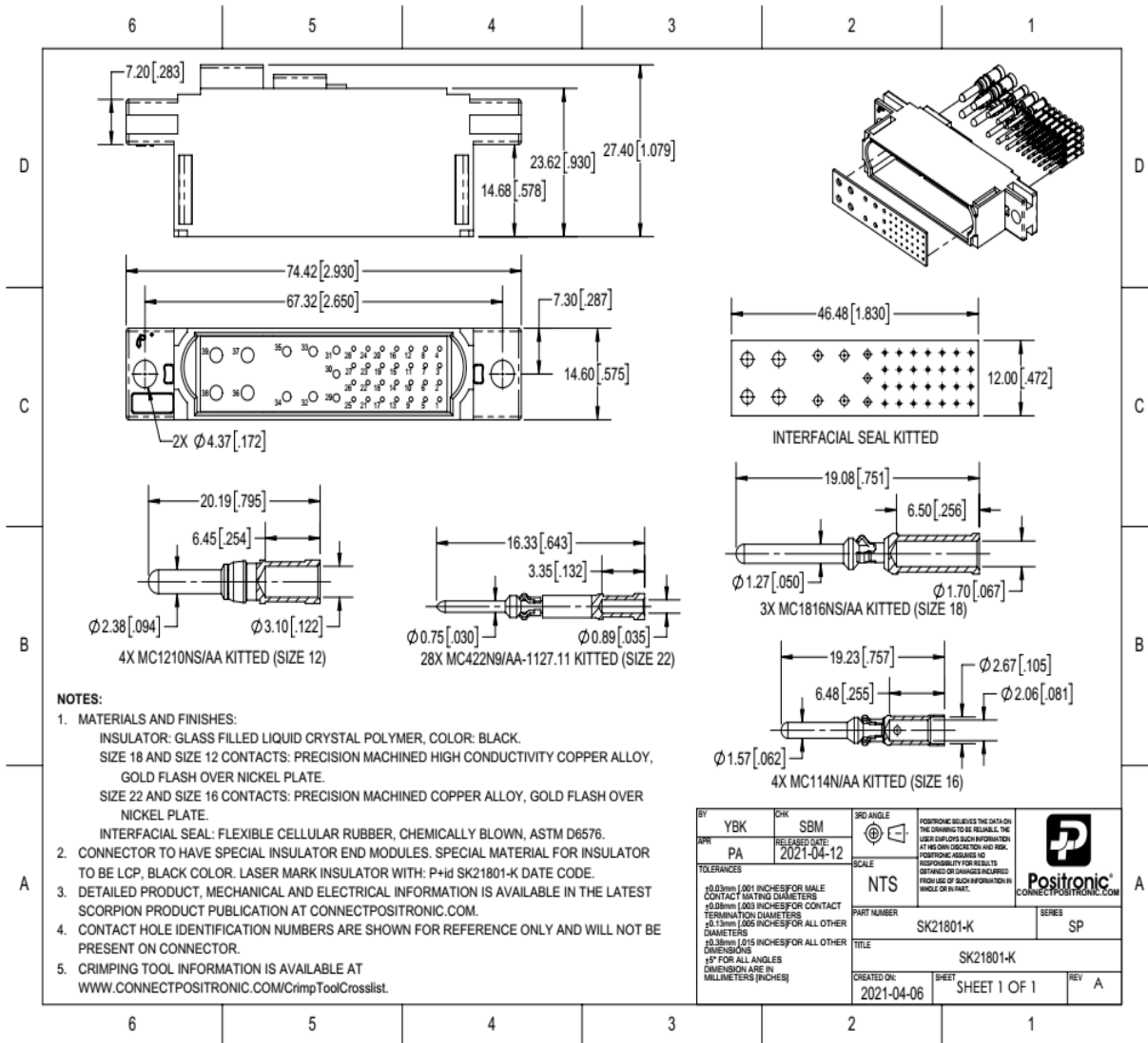
## USER GUIDE



Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 40 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE



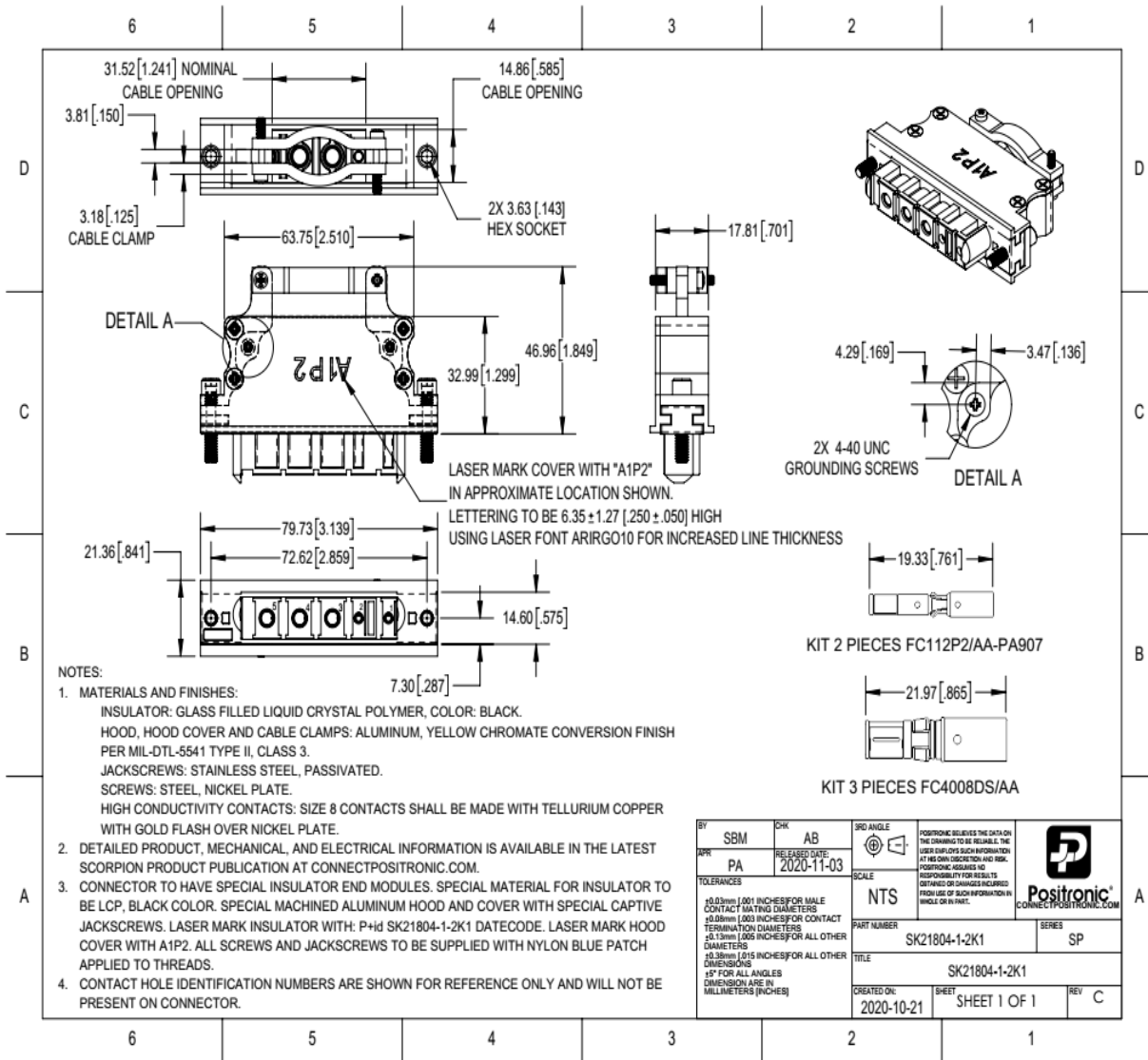
- NOTES:**
- MATERIALS AND FINISHES:**  
 INSULATOR: GLASS FILLED LIQUID CRYSTAL POLYMER, COLOR: BLACK.  
 SIZE 18 AND SIZE 12 CONTACTS: PRECISION MACHINED HIGH CONDUCTIVITY COPPER ALLOY, GOLD FLASH OVER NICKEL PLATE.  
 SIZE 22 AND SIZE 16 CONTACTS: PRECISION MACHINED COPPER ALLOY, GOLD FLASH OVER NICKEL 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 SK21801-K DATE CODE.
  - DETAILED PRODUCT, MECHANICAL AND ELECTRICAL INFORMATION IS AVAILABLE IN THE LATEST SCORPION PRODUCT PUBLICATION AT CONNECTPOSITRONIC.COM.
  - CONTACT HOLE IDENTIFICATION NUMBERS ARE SHOWN FOR REFERENCE ONLY AND WILL NOT BE PRESENT ON CONNECTOR.
  - CRIMPING TOOL INFORMATION IS AVAILABLE AT [WWW.CONNECTPOSITRONIC.COM/CrimpToolCrosslist](http://WWW.CONNECTPOSITRONIC.COM/CrimpToolCrosslist).


BY	YBK	CHK	SBM	3RD ANGLE		POSITRONIC BELIEVES THE DATA ON THE DRAWING TO BE RELIABLE. THE USER EMPLOYS SUCH INFORMATION AT HIS OWN RISK. POSITRONIC ASSUMES NO RESPONSIBILITY FOR RESULTS OBTAINED OR DAMAGES INCURRED FROM USE OF SUCH INFORMATION IN SINGLE OR IN PART.	 CONNECTPOSITRONIC.COM	
APP	PA	RELEASED DATE:	2021-04-12	SCALE				NTS
TOLERANCES				PART NUMBER				SK21801-K
±0.03mm (.001 INCHES) FOR MALE CONTACT MATING DIAMETERS ±0.08mm (.003 INCHES) FOR CONTACT TERMINATION DIAMETERS ±0.13mm (.005 INCHES) FOR ALL OTHER DIAMETERS ±0.25mm (.010 INCHES) FOR ALL OTHER DIMENSIONS °R FOR ALL ANGLES DIMENSIONS ARE IN MILLIMETERS (INCHES)				TITLE				SK21801-K
CREATED ON:				SHEET		REV		
2021-04-06				SHEET 1 OF 1		REV A		

 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 41 of 59

# ASTRONICS ECBU CABLE CONNECTORS

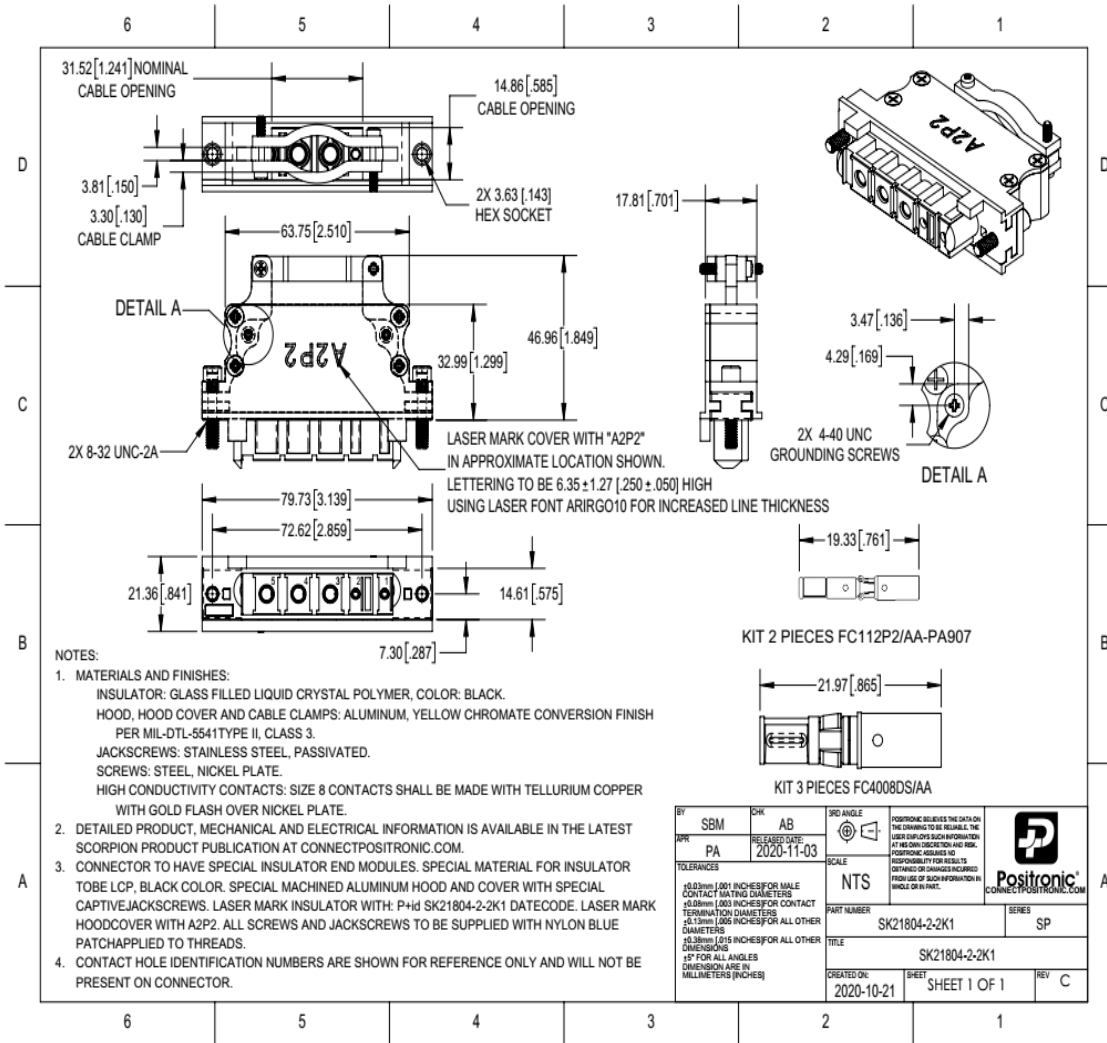
## USER GUIDE




 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 42 of 59

# ASTRONICS ECBU CABLE CONNECTORS

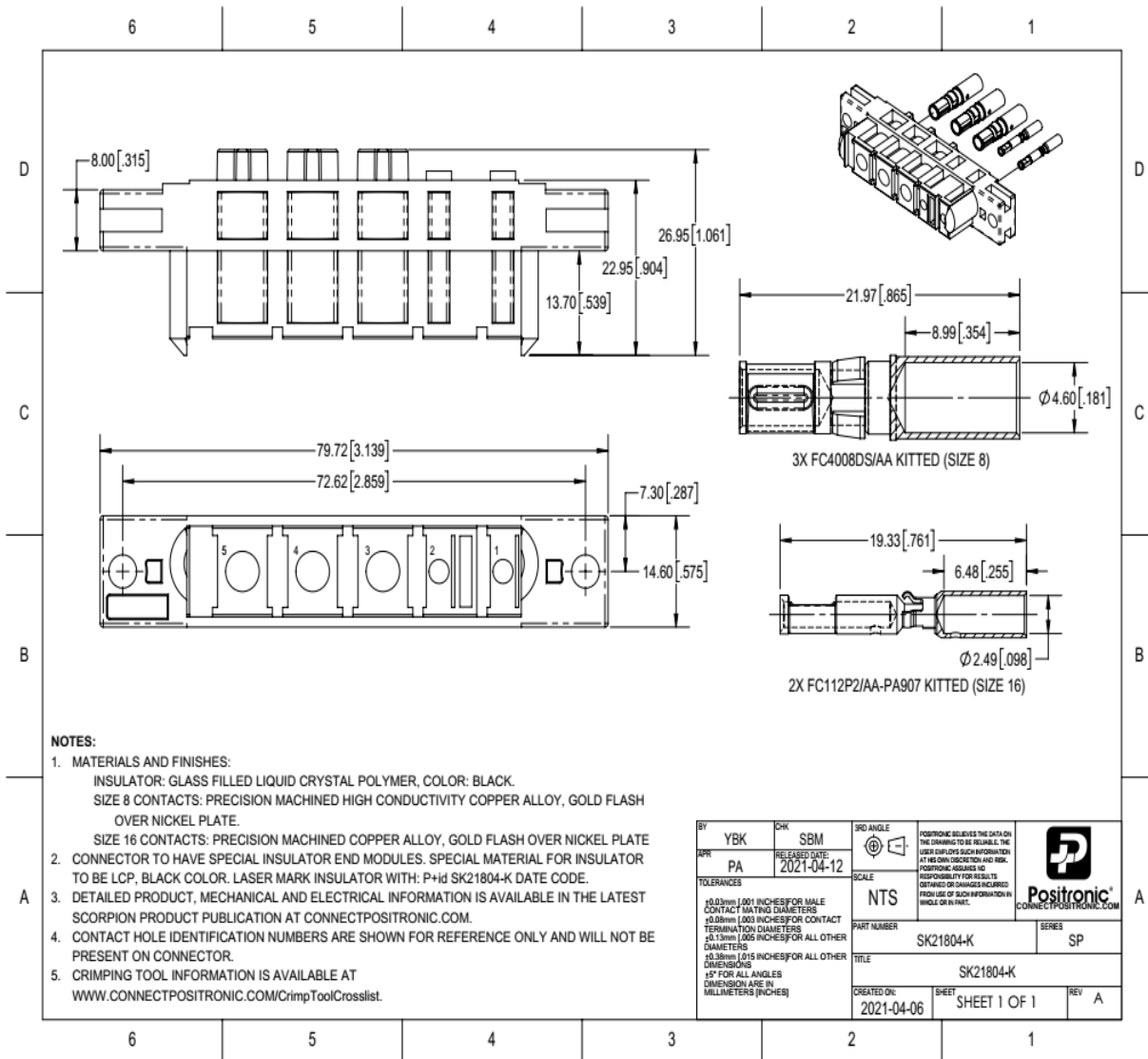
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	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	AES-ECBU	A	Page 43 of 59

# ASTRONICS ECBU CABLE CONNECTORS

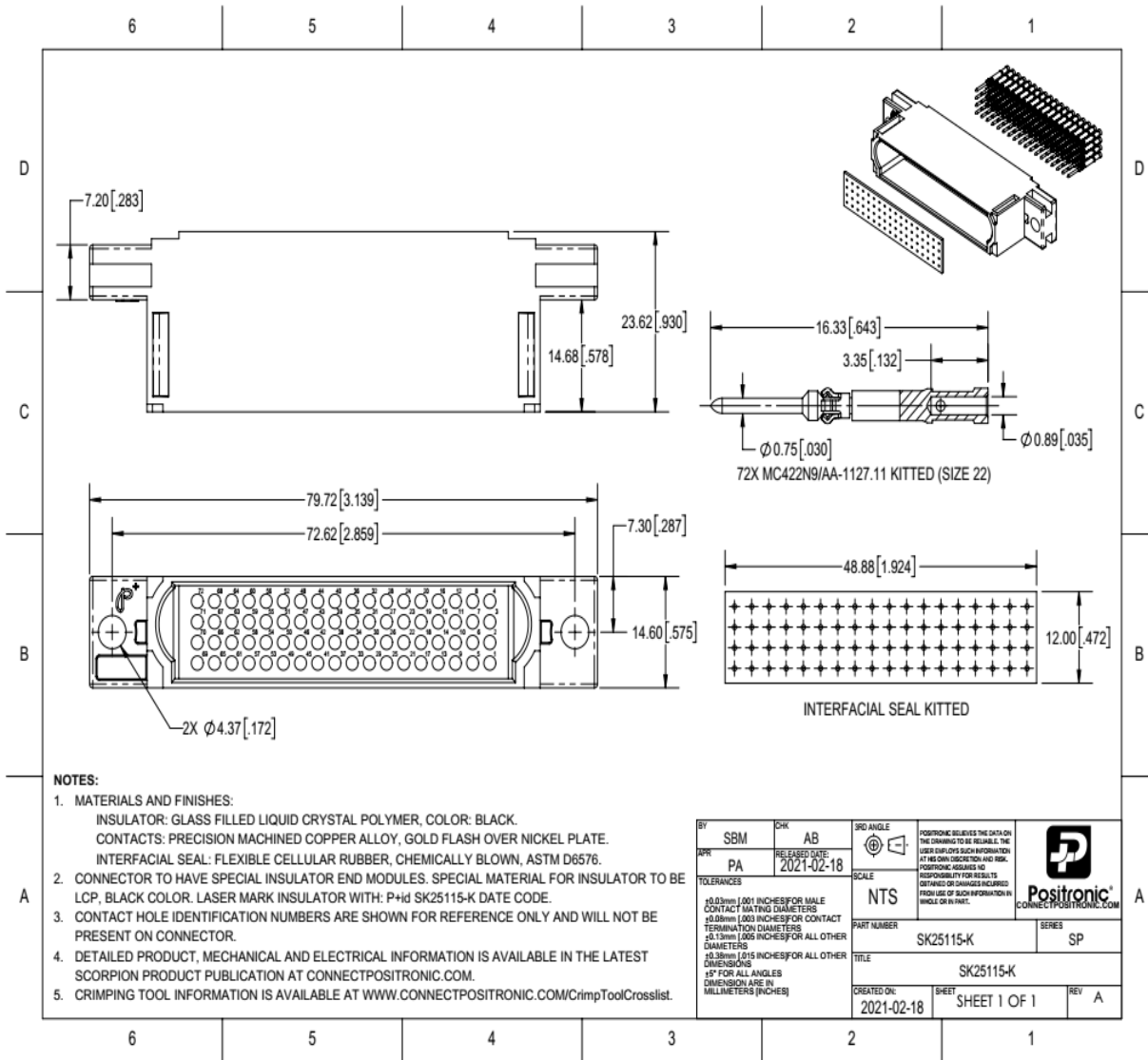
## USER GUIDE



 Positronic® an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 44 of 59

# ASTRONICS ECBU CABLE CONNECTORS

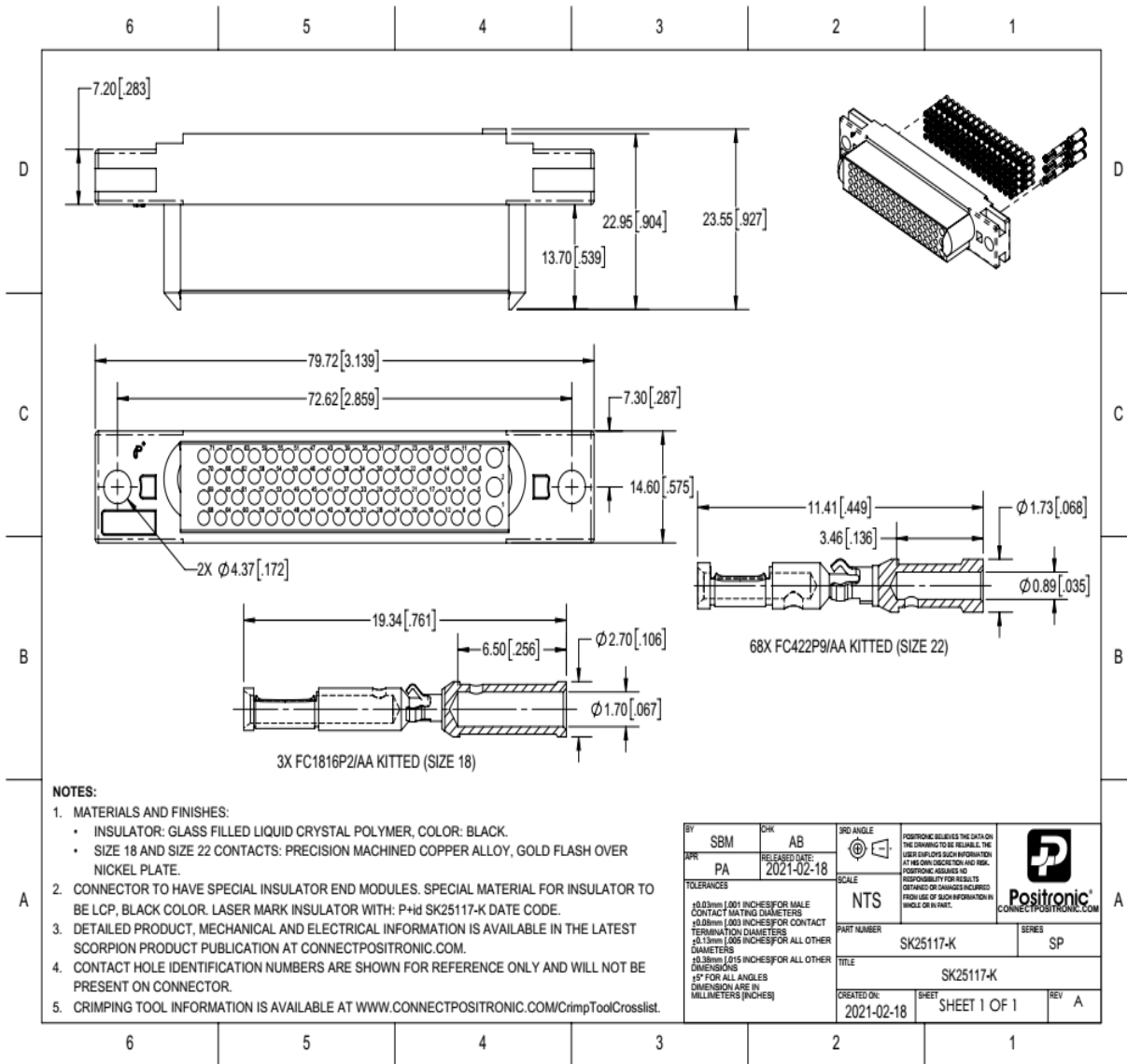
## USER GUIDE




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

# ASTRONICS ECBU CABLE CONNECTORS

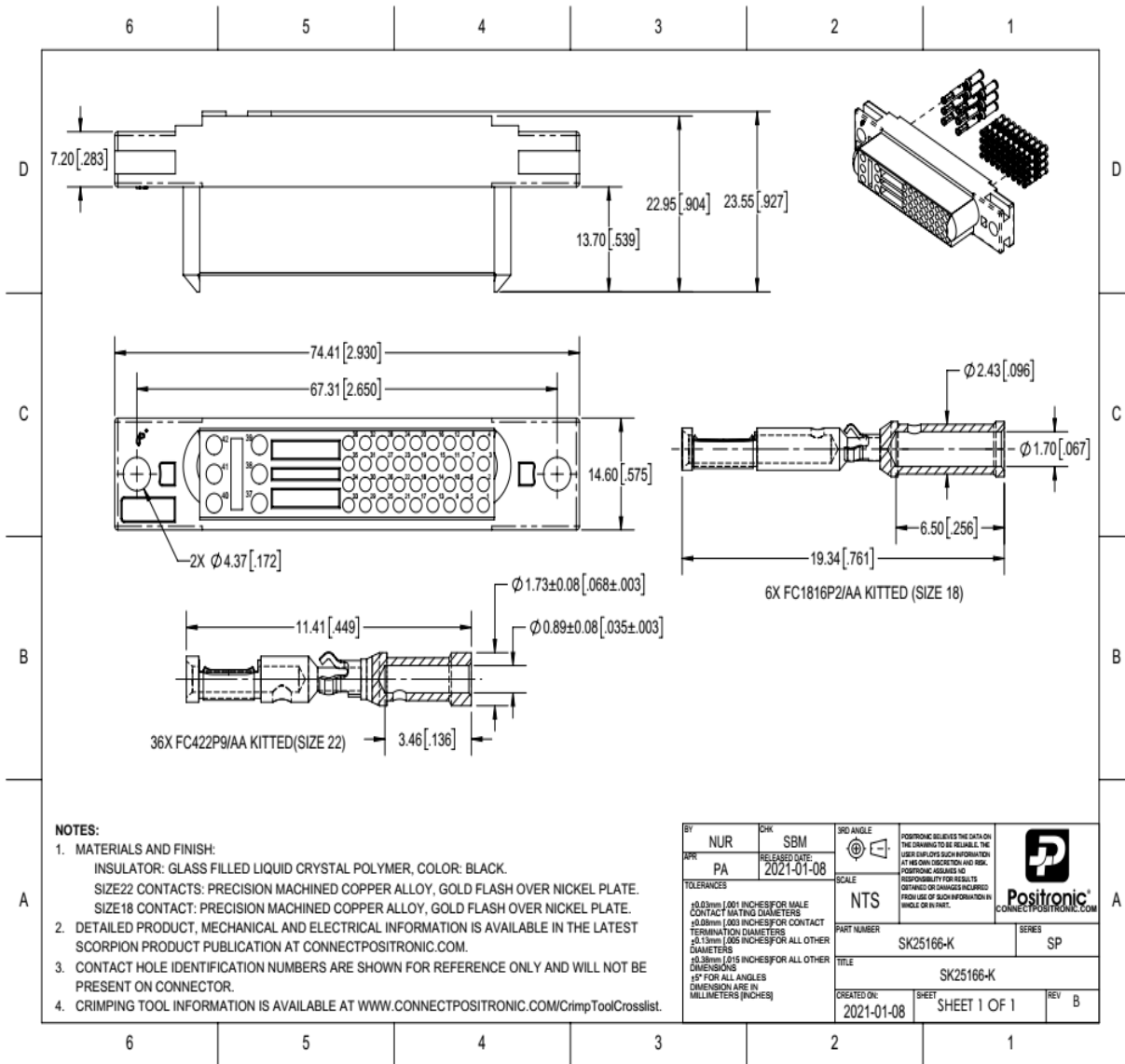
## USER GUIDE




 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 46 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

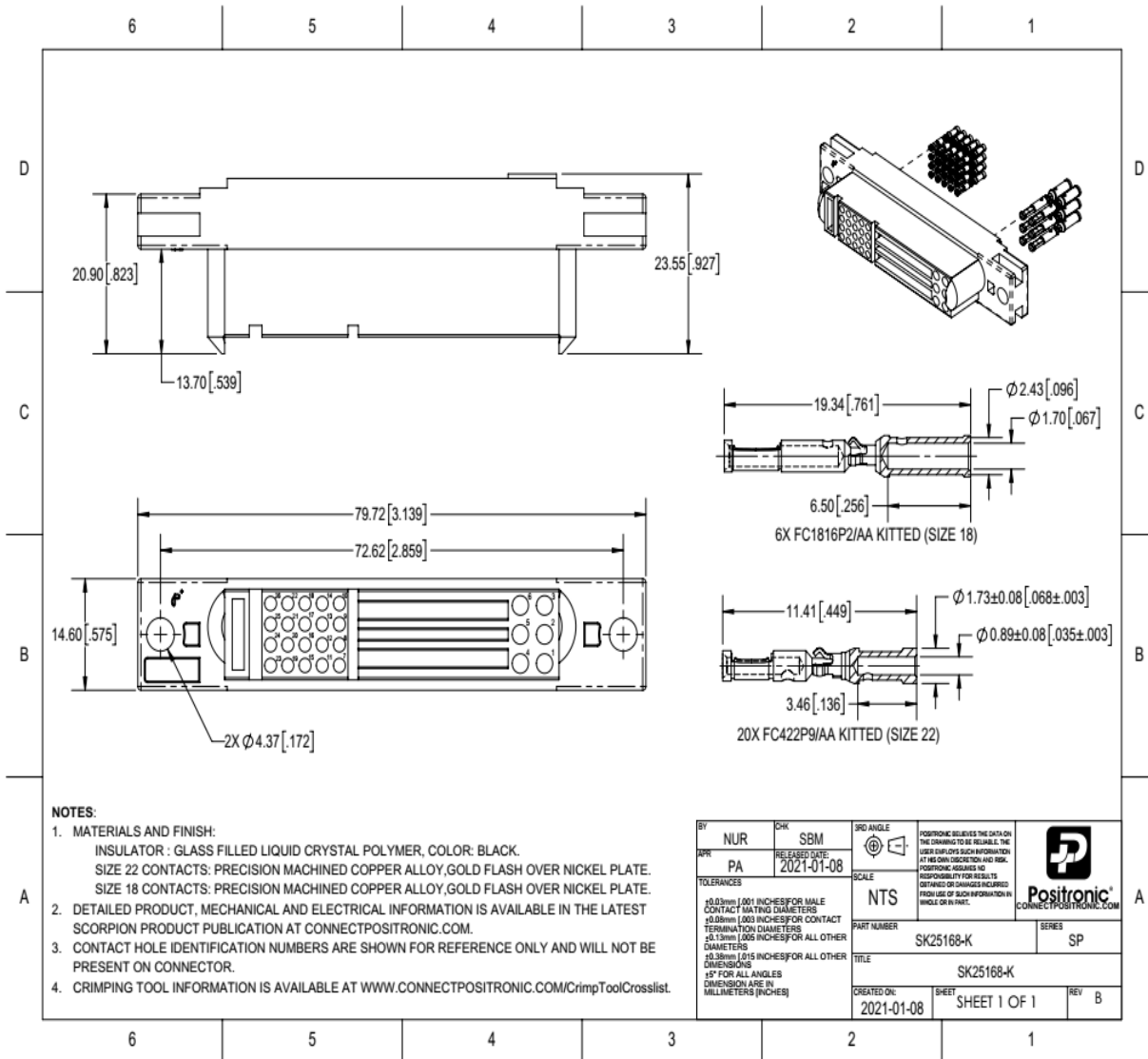



	<b>DOCUMENT NUMBER</b>	<b>REVISION</b>	<b>PAGE NUMBER</b>
	AES-ECBU	A	Page 47 of 59



# ASTRONICS ECBU CABLE CONNECTORS

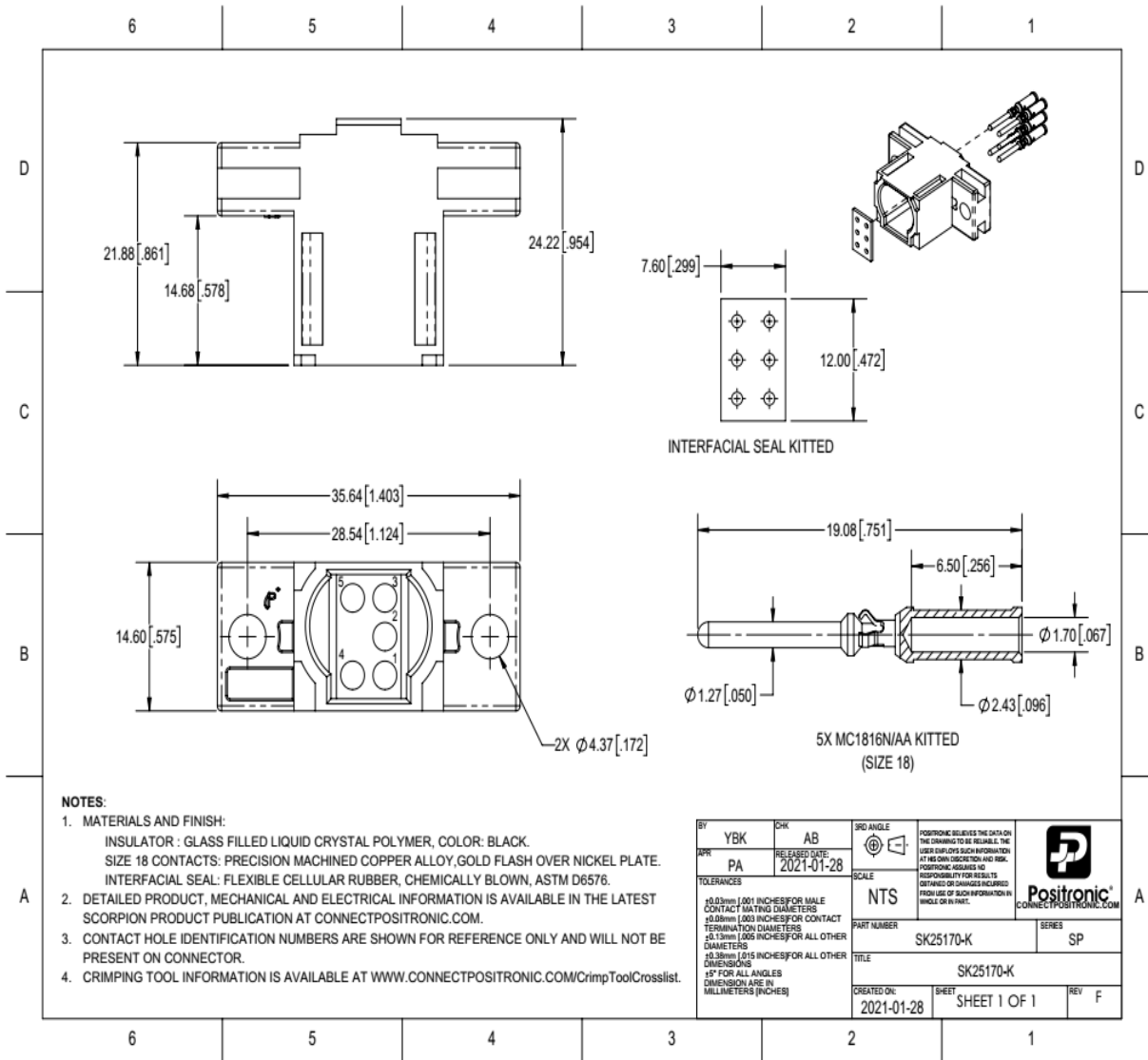
## USER GUIDE




 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 48 of 59

# ASTRONICS ECBU CABLE CONNECTORS

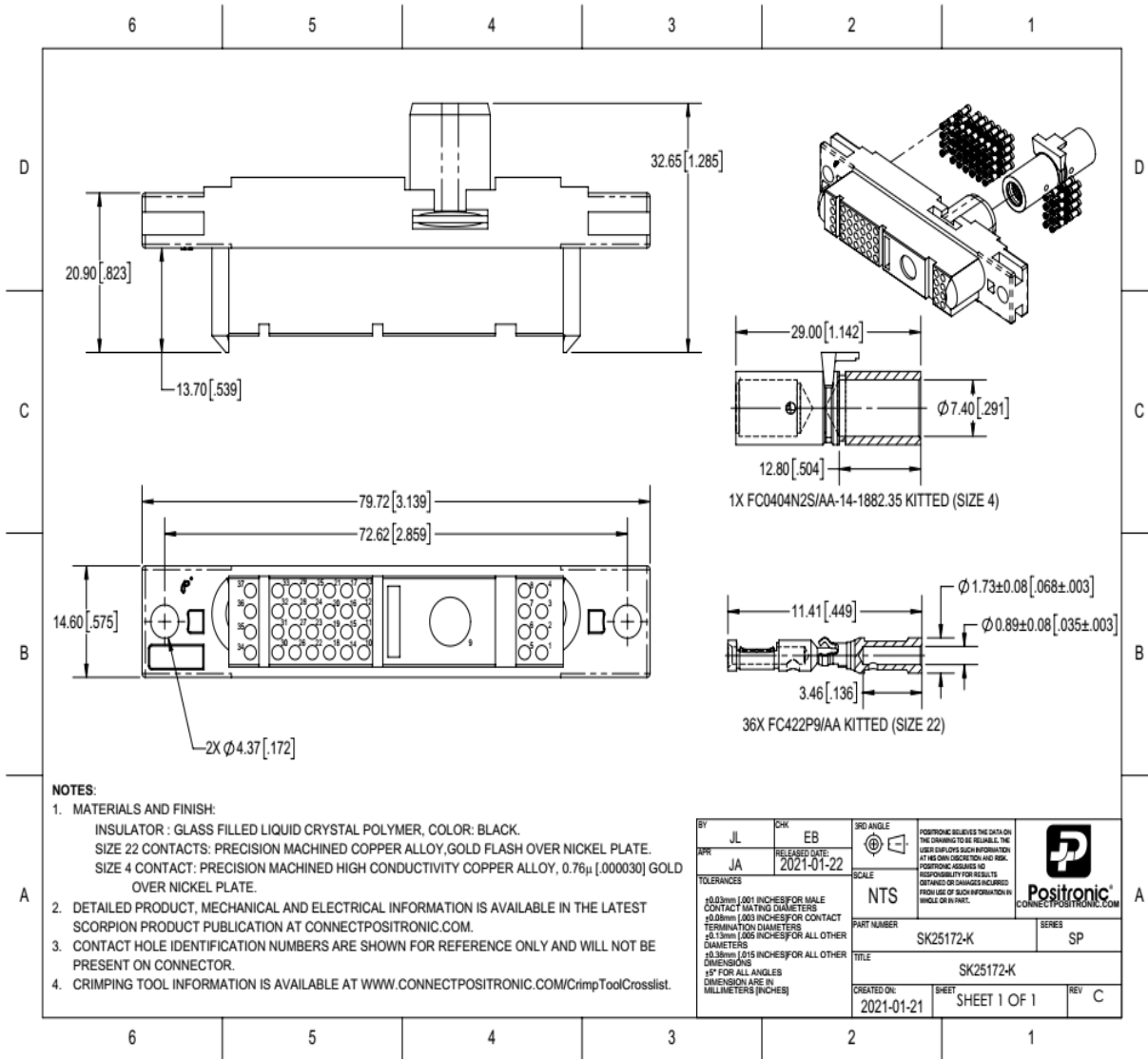
## USER GUIDE



 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 49 of 59

# ASTRONICS ECBU CABLE CONNECTORS

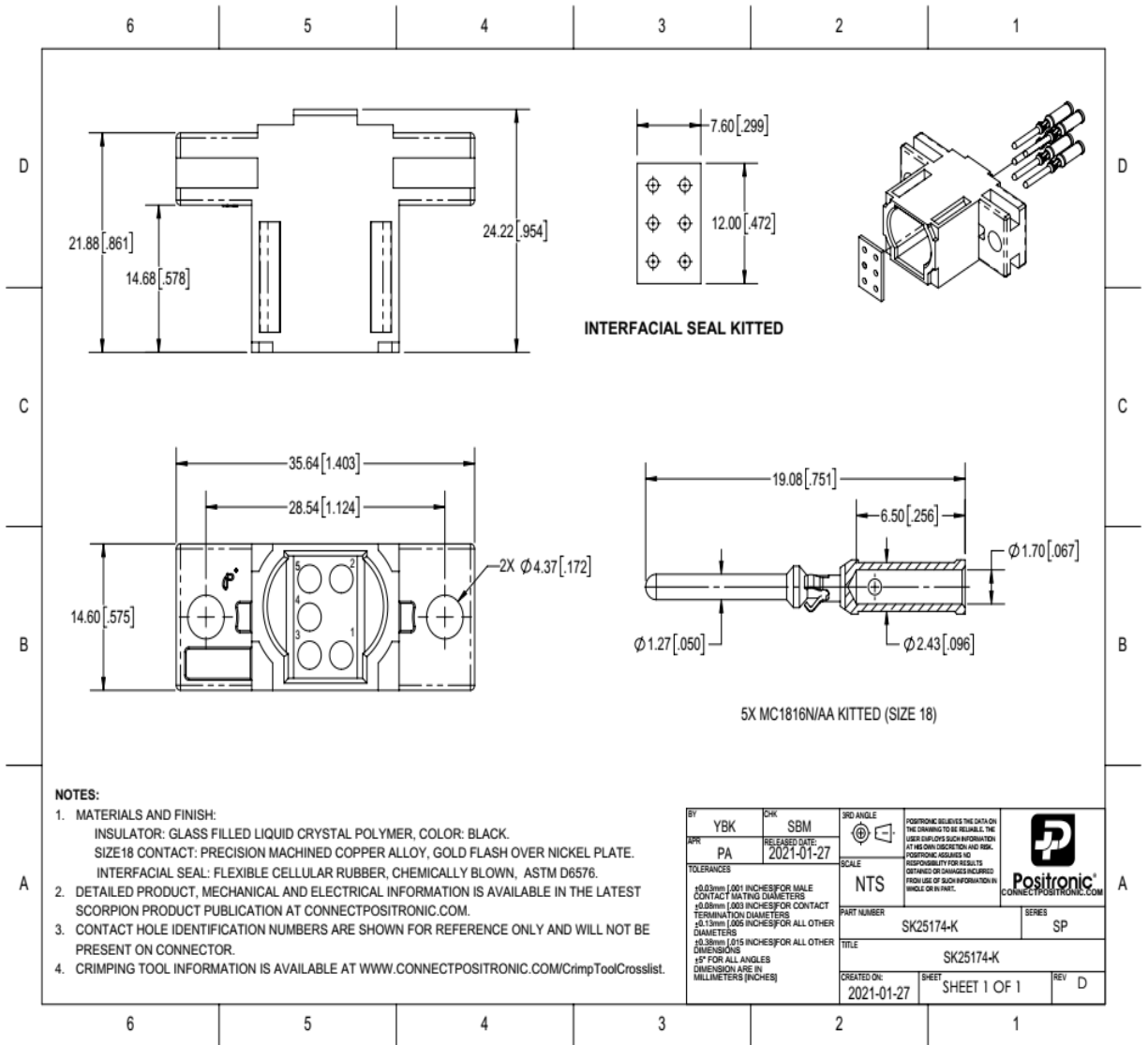
## USER GUIDE




 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 50 of 59

# ASTRONICS ECBU CABLE CONNECTORS

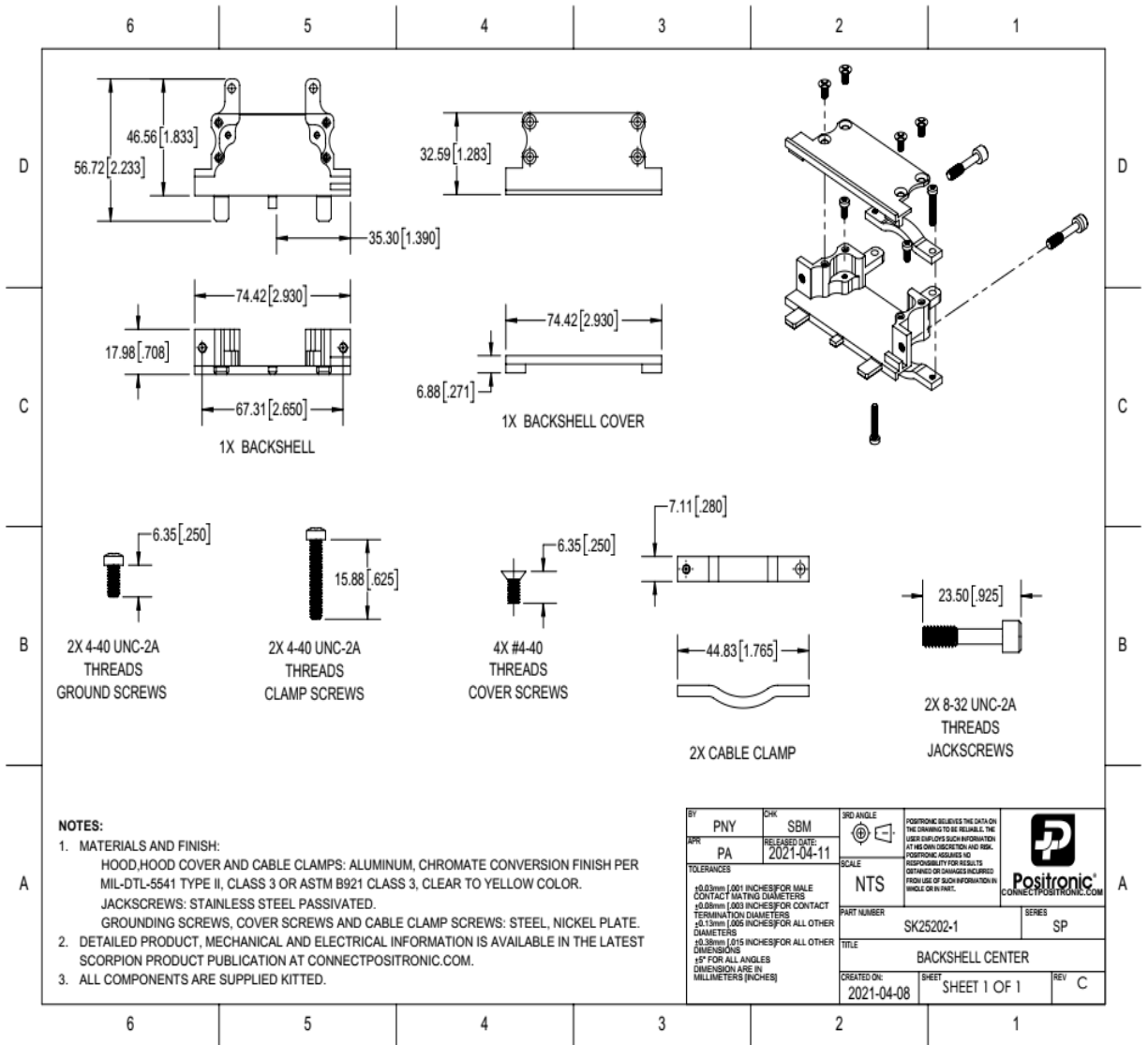
## USER GUIDE





 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 51 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

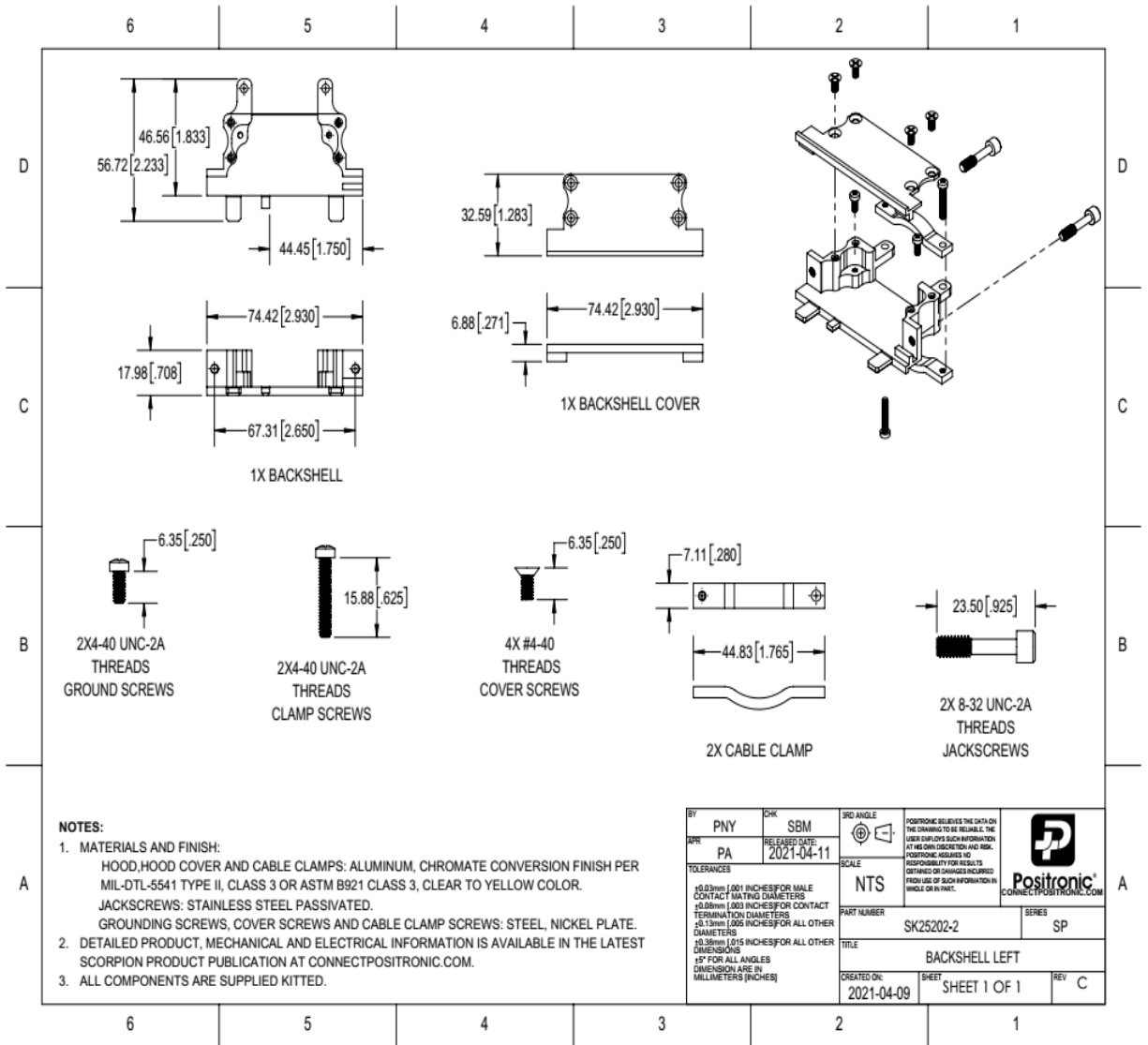



BY	PNY	CHK	SBM	3RD ANGLE	POSITRONIC BELIEVES THE DATA ON THE DRAWING TO BE RELIABLE. THE USER EMPLOYS SUCH INFORMATION AT HIS OWN DISCRETION AND RISK. POSITRONIC ASSUMES NO RESPONSIBILITY FOR RESULTS OBTAINED OR DAMAGES INCURRED FROM USE OF SUCH INFORMATION IN WHOLE OR IN PART.	 CONNECTPOSITRONIC.COM		
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 ±0.25mm (.010 INCHES) FOR CONTACT TERMINATION DIAMETERS ±0.13mm (.005 INCHES) FOR ALL OTHER DIAMETERS ±0.25mm (.010 INCHES) FOR ALL OTHER DIMENSIONS ±5° FOR ALL ANGLES DIMENSIONS ARE IN MILLIMETERS (INCHES)				TITLE		BACKSHELL CENTER		
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 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 52 of 59

# ASTRONICS ECBU CABLE CONNECTORS

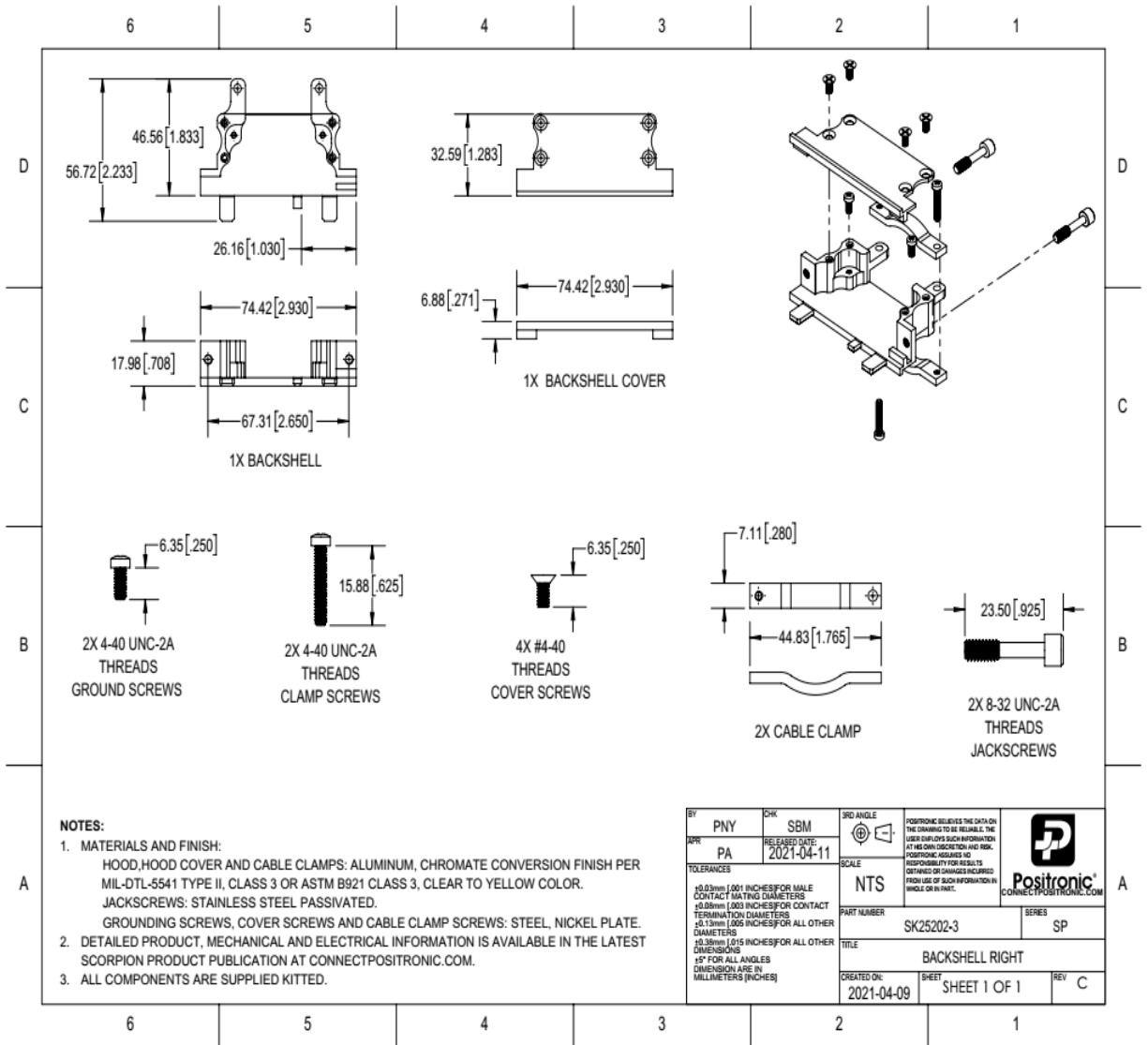
## USER GUIDE





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

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

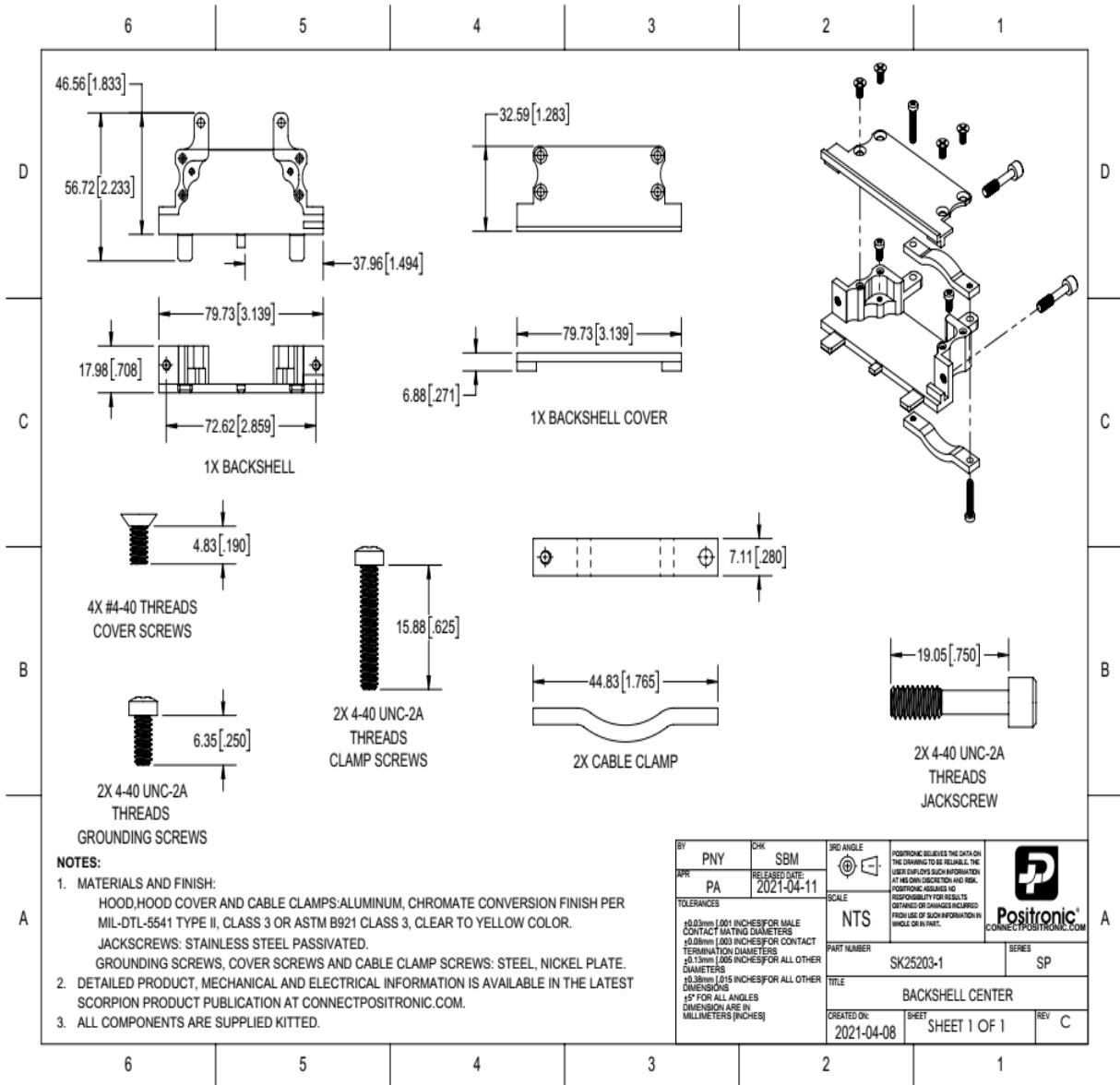



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APP	PA	RELEASED DATE	2021-04-11	SCALE			NTS	
TOLERANCES				PART NUMBER	SK25202-3	SERIES	SP	
<small>±0.25mm (.010 INCHES) FOR MALE CONTACT MATING DIAMETERS                  ±0.08mm (.003 INCHES) FOR CONTACT TERMINATION DIAMETERS                  ±0.13mm (.005 INCHES) FOR ALL OTHER DIAMETERS                  ±0.25mm (.010 INCHES) FOR ALL OTHER DIMENSIONS                  °15° FOR ALL ANGLES                  DIMENSIONS ARE IN MILLIMETERS (INCHES)</small>				TITLE		BACKSHELL RIGHT		
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	AES-ECBU	A	Page 54 of 59

# ASTRONICS ECBU CABLE CONNECTORS

## USER GUIDE

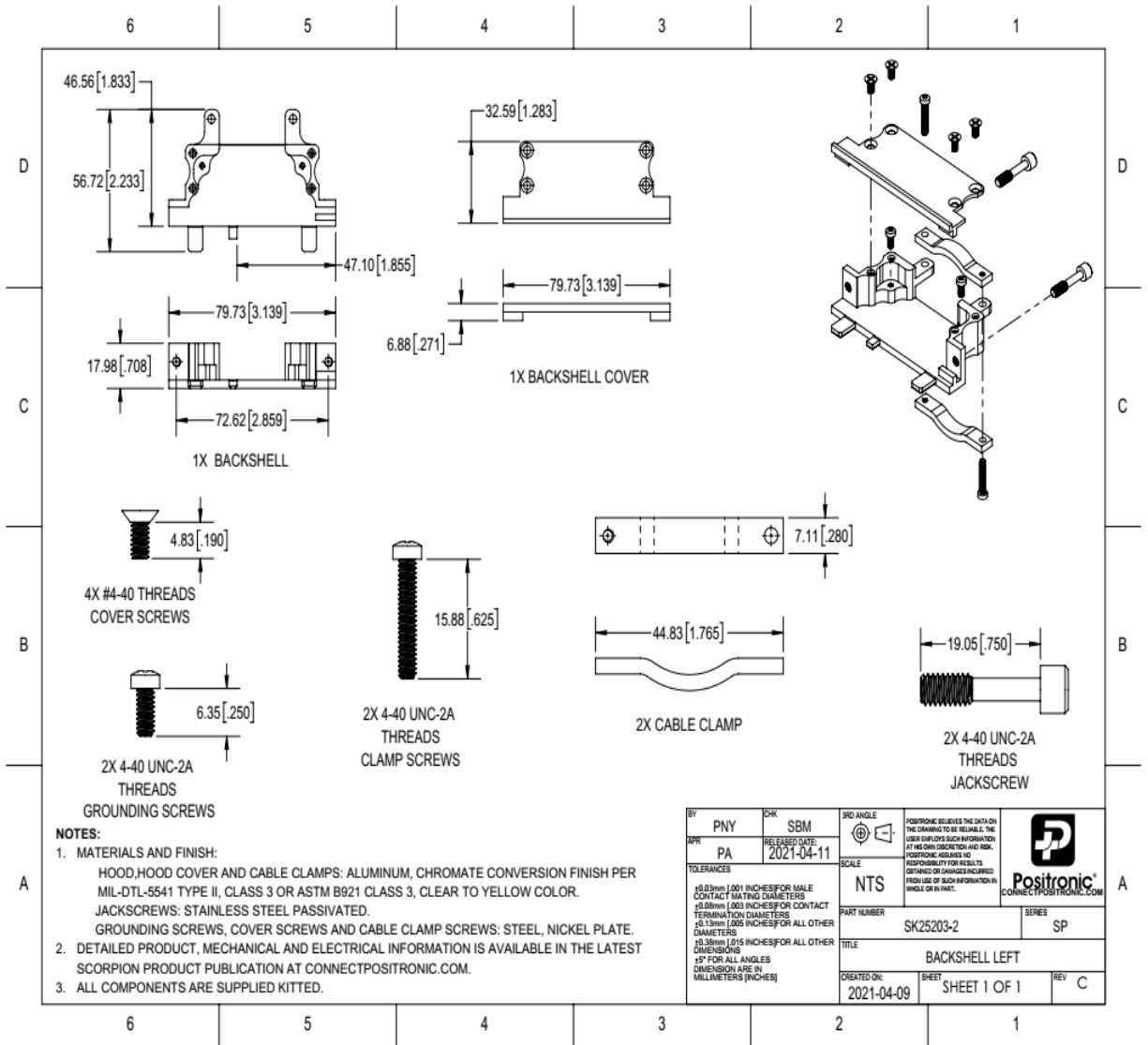



 an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 55 of 59



# ASTRONICS ECBU CABLE CONNECTORS

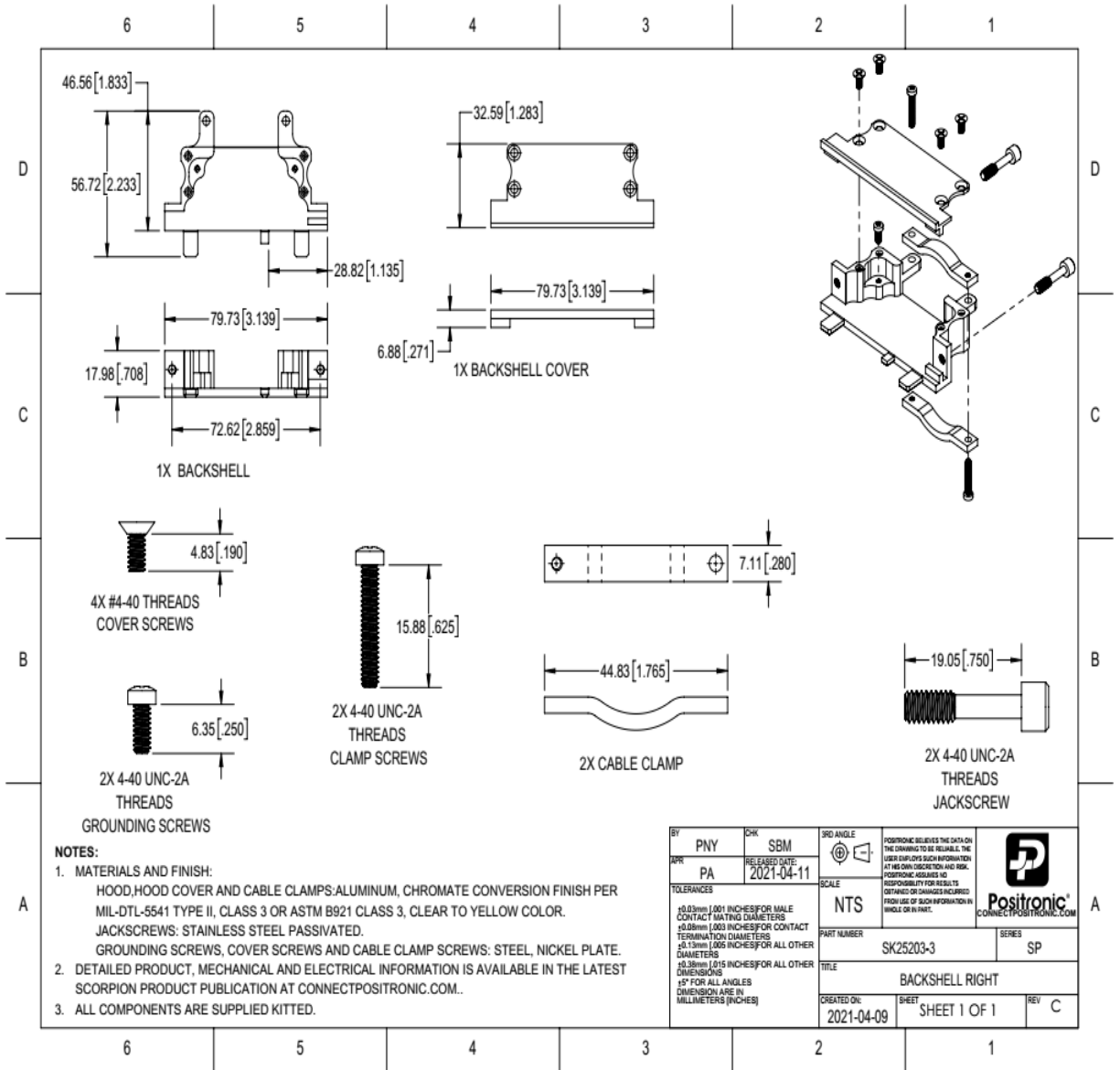
## USER GUIDE




 Positronic an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 56 of 59

# ASTRONICS ECBU CABLE CONNECTORS

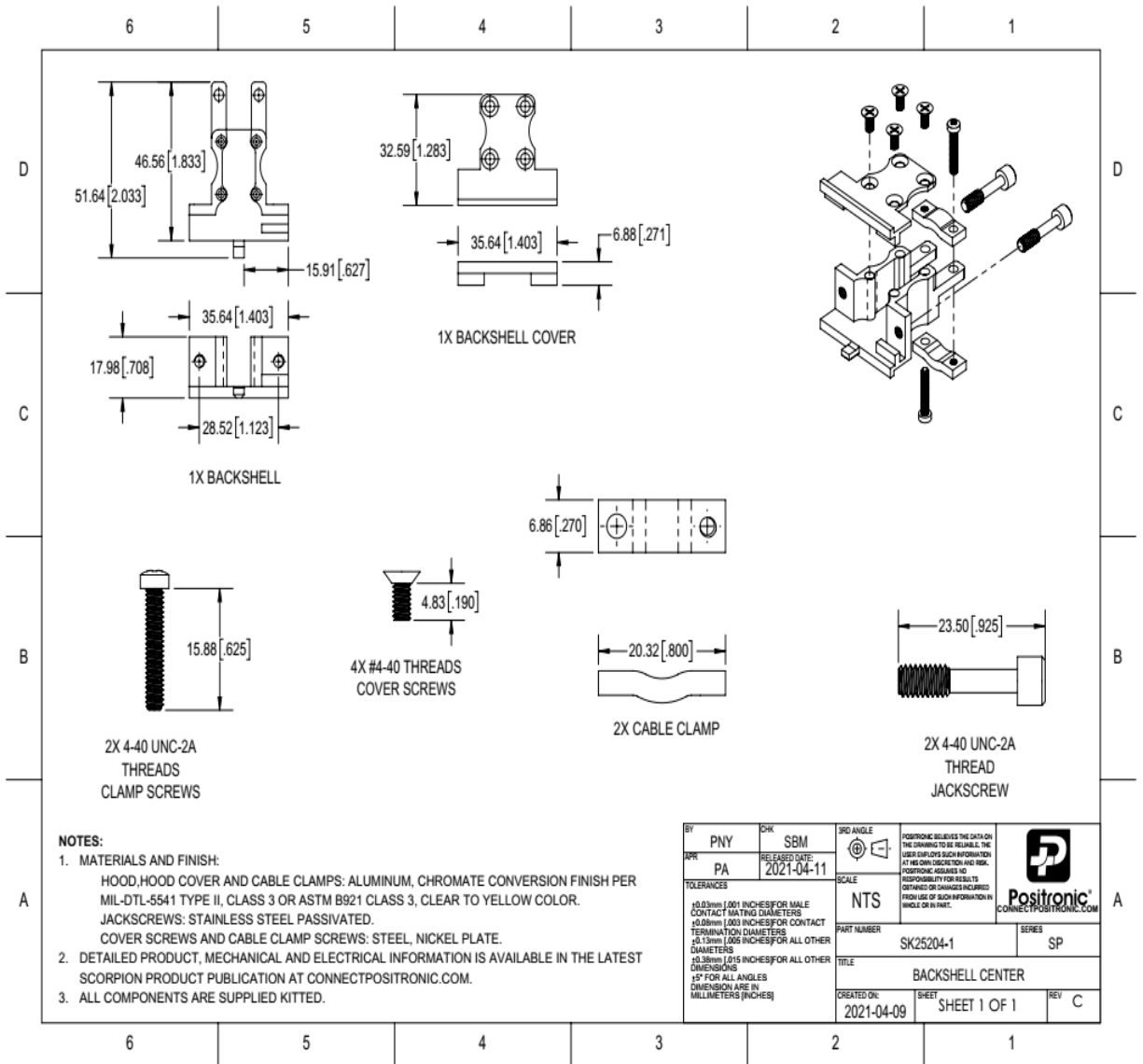
## USER GUIDE



 Positronic® an Amphenol company	DOCUMENT NUMBER	REVISION	PAGE NUMBER
	AES-ECBU	A	Page 57 of 59

# ASTRONICS ECBU CABLE CONNECTORS

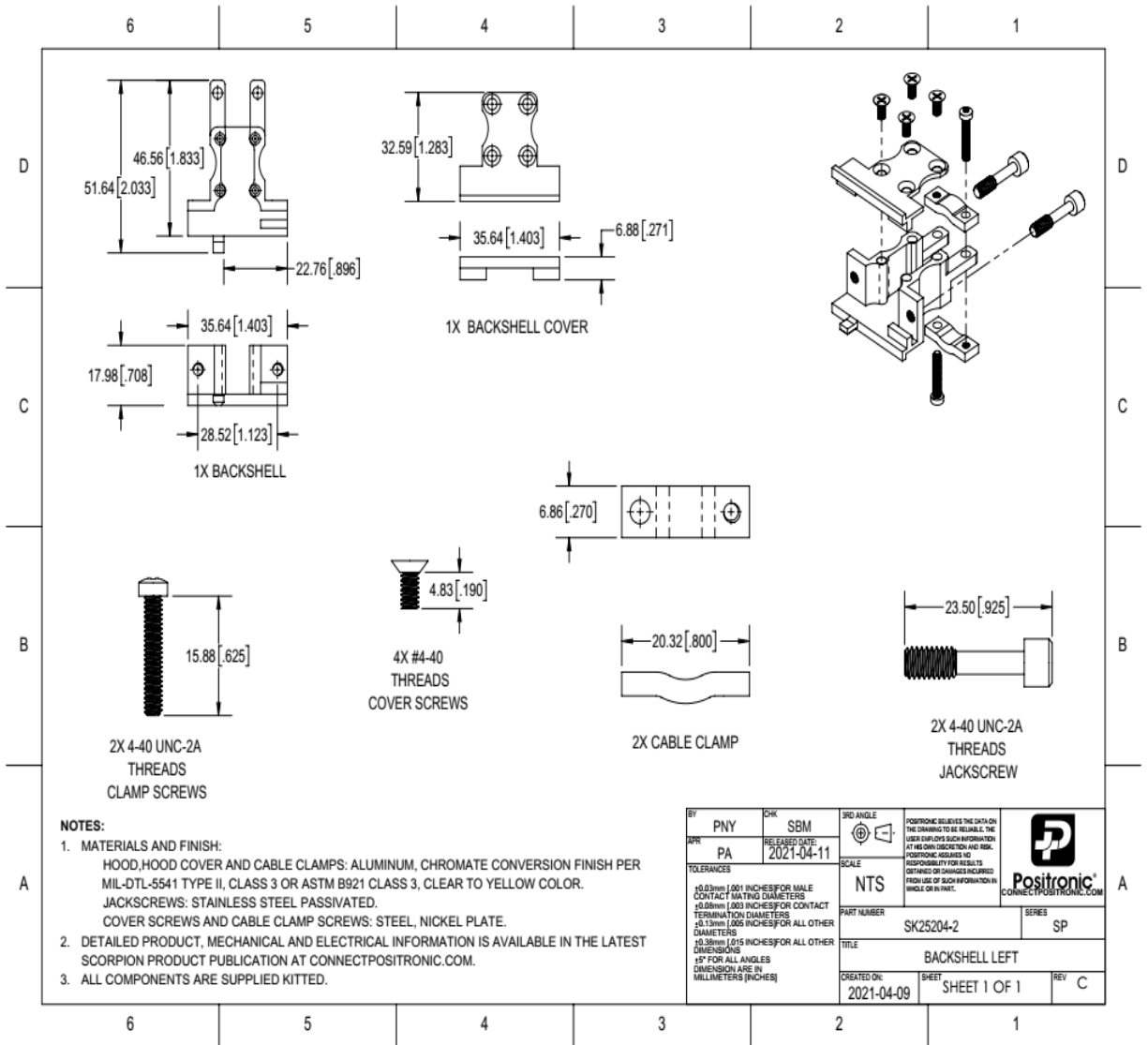
## USER GUIDE



 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