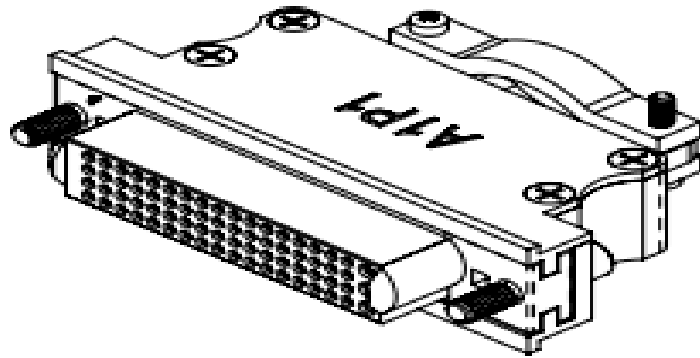


# ASTRONICS COREPOWER ECBU CABLE CONNECTORS

USER GUIDE



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an Amphenol company

THE SCIENCE OF CERTAINTY<sup>®</sup>


# ASTRONICS ECBU CABLE CONNECTORS

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### 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.

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### 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
	<b>Contact current rating</b>	Power - up to 100A Signal - 3A

#### MECHANICAL

<b>Contact style</b>	Removable
<b>Contact termination</b>	Crimp

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<b>Female contact design</b>	Closed entry
<b>Mating cycles</b>	1000
<b>Back shell jackscrews</b>	8-32, with 0.143 [3.63mm] socket head

### **ENVIRONMENTAL**

<b>Operation temperature</b>	-55 to 160 deg C
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### 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 Size 4 - qty 1 For 4 awg wire	FC0404N2S/AA-14-1882.35 Size 4 - qty 1 For 4 awg wire
<b>Kitted Contact</b>	FC114P2/AA-PA907 Size 16 - qty4 For 14 to 16 awg wire	FC114P2/AA-PA907 Size 16 - qty4 For 14 to 16 awg wire
<b>Kitted Contact</b>	FC1816P2/AA Size 18 - qty3 For 16 to 18 awg wire	FC1816P2/AA Size 18 - qty3 For 16 to 18 awg wire
<b>Kitted Contact</b>	FC422P9/AA Size 22 - qty 28 For 22 to 26 awg wire	FC422P9/AA Size 22 - qty 28 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 Size 16 - qty 4 For 12 awg wire	MC112NS/AA Size 16 - qty 4 For 12 awg wire
<b>Kitted Contact</b>	MC114N/AA Size 16 - qty 4 For 14 to 16 awg wire	MC114N/AA Size 16 - qty 4 For 14 to 16 awg wire
<b>Kitted Contact</b>	FC1816N/AA Size 18 - qty 12 For 16 to 18 awg wire	FC1816N/AA Size 18 - qty 12 For 16 to 18 awg wire

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### 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	-
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	-	-

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### 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 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	-	-	-

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### 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

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### 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	-	-

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### 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	-


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### 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	-	-

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### 7.0 CONNECTORS – GCU – ECBU LRU

#### GCU connectors

Part number	SK25166-K	SK25168-K
Position		
Gender	Female	Female
Associated back shell	SK25202-*	SK25203-*
Keyed	NA	NA
Kitted Contact	FC1816P2/AA Size 22 - qty 6 For 16 to 18 awg wire	FC1816P2/AA Size 22 - qty 6 For 16 to 18 awg wire
Kitted Contact	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	K1202	-
					9502-18-0-0		
FC422P9/AA	.125±.020 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-


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### 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	-	-

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### 8.0 CONNECTORS – CPDU LRU

#### CPDU connectors

Part number	SK27001-K	SK27003-K
Position		
Gender	Female	Male
Keyed	NA	NA
Kitted Contact	FC422P9/AA Size 22 - qty 72 For 22 to 26 awg wire	FC1816N/AA Size 18 - qty 21 For 16 to 18 awg wire
Kitted Contact	FC114P2/AA-PA907 Size 16 - qty 5 For 14 to 16 awg wire	MC114NS/AA Size 16 - qty 4 For 14 to 16 awg wire

Part number	SK27005-K
Position	
Gender	Female
Keyed	NA
Kitted Contact	FC422P9/AA Size 22 - qty 40 For 22 to 26 awg wire
Kitted Contact	FC114P2S/AA-PA907 Size 16 - qty 2 For 14 to 16 awg wire

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### CPDU 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	-
MC114NS/AA	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
FC422P9/AA	.125±.020 (3.18±.51)	9507-0-0-0	AFM8	M22520/2-01	9502-13-0-0	K280	-
FC114P2/AA-PA907	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03
FC114P2S/AA-PA907	.230±.020 (5.84±.51)	9501-0-0-0	AF8	M22520/1-01	9502-1-0-0	TH4	M22520/1-03

### GPDU 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	-	-	-
MC114NS/AA	9099-0-0-0	ITH 1094	DAK123A	M81969/18-01	9081-0-0-0	RTG 2103	DRK124A	M81969/20-01
FC422P9/AA	9099-7-0-0	-	-	-	9081-3-0-0	RNG-2103	-	-
FC114P2/AA-PA907	9099-0-0-0	ITH 1094	DAK123A	M81969/18-01	9081-0-0-0	RTG 2103	DRK124A	M81969/20-01
FC114P2S/AA-PA907	9099-0-0-0	ITH 1094	DAK123A	M81969/18-01	9081-0-0-0	RTG 2103	DRK124A	M81969/20-01

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### 9.0 BACKSHELLS – ALL ECBU/LRU

#### Backshells

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


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

<b>Part number</b>	SK25203-1DC	SK25203-2DC	SK25203-3DC
<b>Keying position</b>	Neutral	Left	Right
<b>Center to center dim.</b>	2.86" [72.62mm]	2.86" [72.62mm]	2.86" [72.62mm]

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

<b>Part number</b>	SK25205-1	SK25205-2	SK25205-3
<b>Keying position</b>	Neutral	Left	Right
<b>Center to center dim.</b>	3.932" [99.87mm]	3.932" [99.87mm]	3.932" [99.87mm]

<b>Part number</b>	SK25206-1	SK25206-2	SK25206-3
<b>Keying position</b>	Neutral	Left	Right
<b>Center to center dim.</b>	2.465" [66.61mm]	2.465" [66.61mm]	2.465" [66.61mm]

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### 10.0 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 9503-2-2-0	WA23 WA23-4	M22520/23-01 M22520/23-04	9503-2-4-0	WA23-458L	-
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	-


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### 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			

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### 11.0 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 pigtails 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”.
- 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.

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### 12.0 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/>

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