CIRCULAR PLASTIC CONNECTORS (CPC)

CPC Series 4

Circular Plastic Connectors Series 4 offer a versatile solution by combining the signal and coaxial circuit capabilities of Series 1 with the power circuit capabilities of Series 3. These connectors accept Size 16 Multimate contacts and Type XII power contacts, supporting both high-power and mixed-signal applications. Available in three sizes, Series 4 connectors provide flexible power and signal combinations, accommodating 13, 16, and 22 positions. Designed for reliability, they deliver signal currents up to 25A and power currents up to 47A. With configurations such as 8 signal/5 power, 12 signal/4 power, and 20 signal/2 power, Series 4 circular plastic connectors are ideal for applications requiring mixed circuit capabilities in a durable, lightweight housing.

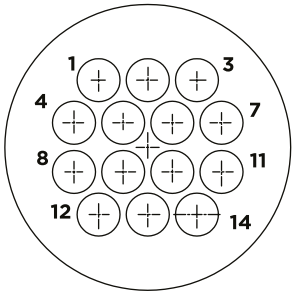
The use of Circular Plastic Connectors enables customers to reduce installation time, meet harsh and space saving requirements, design with high-performance materials, and speed up their go-to-market plans.

TABLE OF CONTENTS

CONNECTOR SERIES AND TYPES

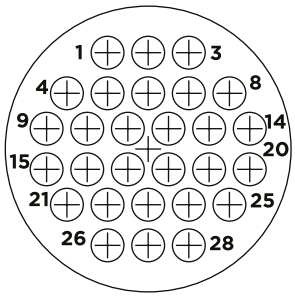
Series 1 – Size 16 Contacts

Series 1 connectors permit the use of multiple combinations of signal and coaxial circuits in the same housing by accepting durable Multimate contacts. These pin and socket contacts include Type III+ and subminiature coaxial contacts, interchangeable in the same Multimate contact cavity. Type III+ contacts (.062 [1.57] pin diameter) are capable of carrying a maximum of 13 amperes when crimped in wire. Type III solder contacts and posted contacts for pc board applications are also available. Many connector arrangements offer both standard and reverse mate contact loading – **from 4 thru 37 positions**.



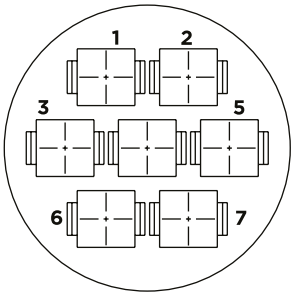
Series 2 – Size 20 Contacts

Series 2 connectors accept Size 20 DF (precision formed) and Size 20 DM (screw-machined) pin and socket contacts with a .040 [1.02] pin diameter, Size 20 DF contacts are available in crimp and solder versions, as well as a posted version for wrap-type and pc board applications. Maximum current carrying capability is 7.5 amperes. Many connector arrangements offer both standard and reverse mate contact loading – from **8 thru 63 positions**.



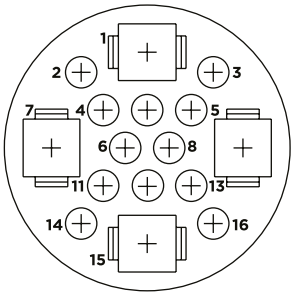
Series 3 – Power Contacts

Series 3 connectors accept Type XII power contacts which can carry up to 25 amps per contact. These contacts will accommodate a wire size range of 16 to 10 AWG [1.4 to 5 mm2]. Two connector sizes are available in both standard and reverse mate connector arrangements **3 and 7 positions**.



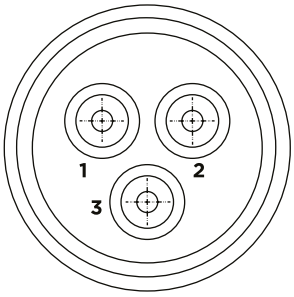
Series 4 – Combination, Size 16 and Power Contacts

Series 4 connectors accept Size 16 Multimate and Type XII power contacts, combining the signal and coaxial circuit capabilities of Series 1 connectors with the power circuit capabilities of Series 3 connectors. Available in three connector sizes offering power mixing combinations totaling **13, 16 an 22 positions**.



Series 5 – Power Contacts .125 POWERBAND

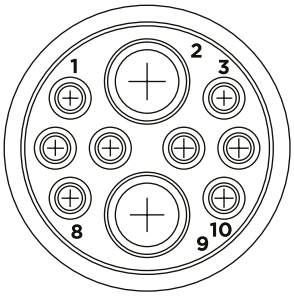
Series 5 connectors combine the revolutionary performance of the new AMP POWERBAND Contact, high current contact in configurations similar to the Series 3 connectors. AMP POWERBAND contacts offer the electrical performance of the best Mil Spec Size 8 screwmachined contacts with the economy and productivity of strip-fed, precision formed contacts. Series 5 connectors are environmentally sealable to meet IEC IP 65 and IP 67 specifications. Rated at 250 VAC or VDC, 50 amperes maximum in a single contact, the connectors are available in free-hanging and panelmount applications – **one connector configuration containing three .125 POWERBAND contacts**.



CONNECTOR SERIES AND TYPES

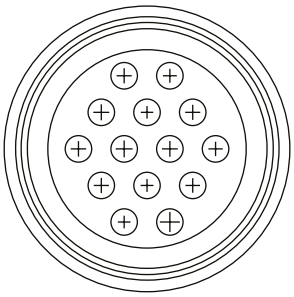
Series 6 – Combination, Size 16 and .125 POWERBAND Contacts

Series 6 combines the high current and environmental sealing capability of Series 5, POWERBAND contacts, and the reliability of signal carrying, low current Type III+ contacts. This combination of power and signal contacts is offered in **one connector configuration containing two .125 POWERBAND contacts and eight Type III+ signal pin and socket contacts.positions**.



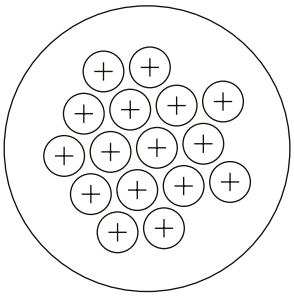
MIL-C-5015 Style – Size 16 Contacts

This new addition to the AMP Circular Plastic Connector Line is specifically designed to be **intermateable with Metal-Shell size 20-14 and 18-10, MIL-C-5015 Style connector systems**. The high impact resistant plastic housing offers the advantages of light weight and lower cost than existing metal-shell connectors. In addition the connector design prevents mismating when used with other insert arrangements. As part of the AMP Multimate family of connectors, the MIL-C-5015 style connector offers the economies of crimp Type III+ pin and socket contacts in reel-mounted, strip-form for high volume automatic machine termination, as well as in loose piece-form for low volume, prototype or maintenance and repair.



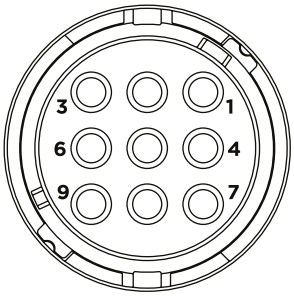
Metal-Shell, Circular Plastic Connectors

Metal-Shell CPC connectors consist of a black thermoplastic insert in a nickel-plated, zinc alloy shell. These connectors are currently available in **shell sizes 14, 22 and 28, and in two basic configurations consisting of plugs and square flange receptacles**.



Miniature CPC Connectors

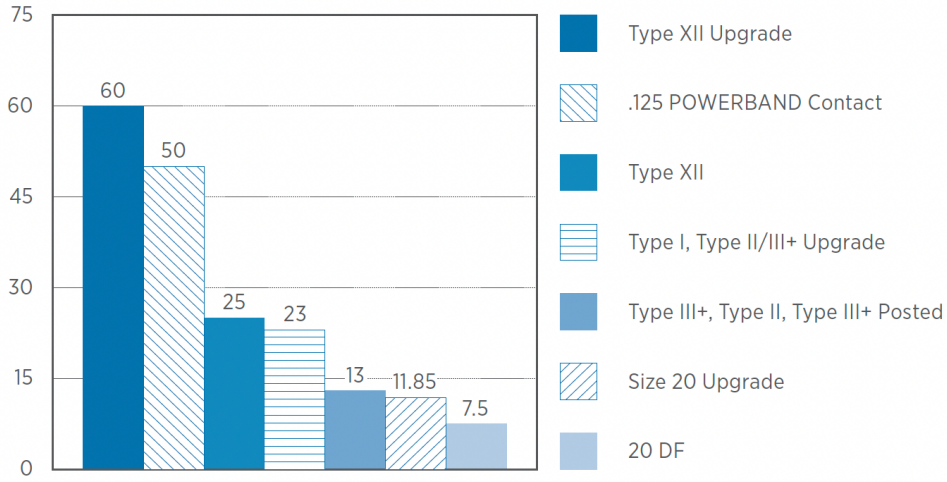
These compact connectors accept existing Mini-Universal MATE-N-LOK pin and socket contacts, 30-22 AWG [.05-.3 mm2]. Two shell sizes (8 or 11) are available, accommodating **from 1 to 4 and 5 to 9 positions**. Featuring high contact density and IP67 sealing, these durable connectors are well suited for many wire-to-wire and wire-topanel applications.



CURRENT CARRYING CAPABILITIES

The total current capacity of each contact in a given connector is dependent upon the heat rise resulting from the combination of electrical loads of the contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating. Caution must be taken so that this combination of conditions does not cause the internal temperature of the connector to exceed the maximum operating temperature of the housing material. Several variables which must be considered when determining this maximum current capability for your application are:

Contact Current Guide Maximum Current (Amperes) for Largest Wire Size



Wire Size– Larger wire will carry more current since it has less internal resistance to current flow and generates less heat. The wire also conducts heat away from the connector.

Connector Size– In general, with more circuits in a connector, less current per contact can be carried.

Current Load Distribution– Spreading those lines with greater current loads throughout the connector, particularly around the outer perimeter, will enhance heat dissipation.

Ambient Temperature– With higher ambient temperatures, less current can be carried.

Contact Selector Chart

Connector Type	20 DF	Type II	Type III+	Posted Type III+	Type XII	POWERBAND Contacts
CPC Series 1		✓	✓	✓		
CPC Series 2	✓					
CPC Series 3					✓	
CPC Series 4		✓	✓		✓	
CPC Series 5						✓
CPC Series 6		✓	✓			✓
CPC 5015			✓			
CMC Series 1		✓	✓	✓		
CMC Series 2	✓					
CMC Series 3					✓	
CMC Series 4		✓	✓		✓	

Note: All part numbers are RoHS Compliant.

PLUGS AND RECEPTACLES, STANDARD MATE

Arrangement		No. of Cavities		Square Flange Receptacle	Free-Hanging Receptacle	Plug
Shell Size	No. of Positions	Power	Signal			
23-13M		5 (Type XII)	8 (Size 16)*	211825-1	211825-2	211824-1
23-16M		4 (Type XII)	12 (Size 16)*	207486-1	207486-2	207485-1
23-22M		2 (Type XII)	20 (Size 16)*	206613-1	206613-3	206612-1

*Type II, Type III+, Type III+ Enhanced High Current, and sub miniature COAXICON Crimp Contacts
Note: Maximum wire insulation diameter is .150 [3.81] for Multimate contacts; .220 [5.59] for Power contacts

Square Flange Receptacle

Free-Hanging Receptacle

Plug

Replacement Coupling Rings

Shell Size	Part No.
23	213812-1

Listed part numbers are for connectors only; **contacts must be ordered separately.**

Related Product Data

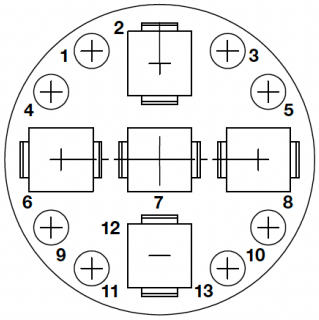
Contacts – Pages 7-13

Material

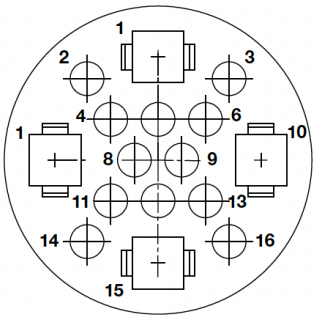
Housing – Thermoplastic, 94V-0 rated, black

CONTACT ARRANGEMENTS

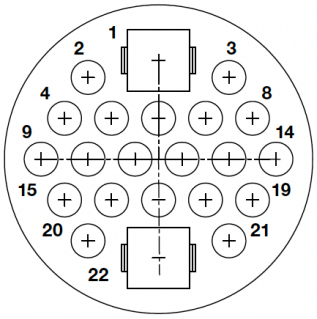
Shell Size 23



Arrangement 23-13M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,



Arrangement 23-16M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,



Arrangement 23-22M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,

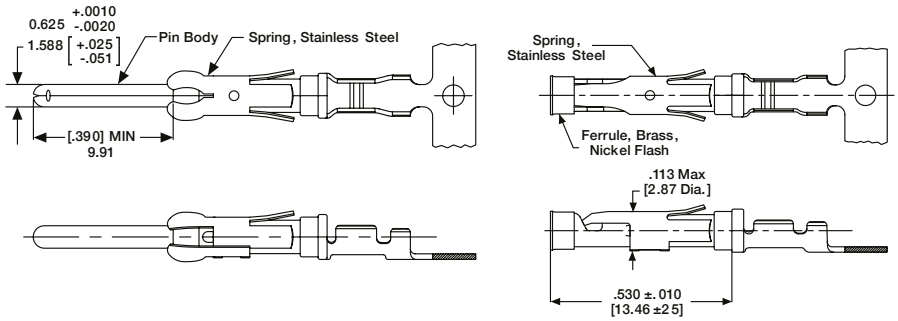
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

SIGNAL CONTACTS, TYPE III+, CRIMP, SNAP-IN

Socket

Pin



Material and Finish
See chart.

Contact Body – Copper alloy
Retention Spring – Stainless steel

Technical Documents
Application Specification – 114-10004
Product Specification – 108-10042

Contact Size 16 – Pin Diameter .062 [1.57] (Test Current, 13 Ampere)‡

Wire Size Range		Ins. Dia. Range	Contact Finish	Strip Form Contact No.		Loose Piece Contact No.		Tooling Part No.	
AWG	mm²			Pin	Socket	Pin	Socket	Loose Piece Hand Tool	Strip Form Applicators
30-28	0.05-0.09	.015-.030 [0.38-0.76]	15 Precious metal/Tin[2]	788085-3	788088-2	-	-	-	***
		.015-.030 [0.38-0.76]	30 Precious metal/Tin[3]	788085-1	788088-1	-	-		
30-26	0.05-0.15	.040-.060[1] [1.02-1.52]	Tin	1-66425-2	1-66424-1	-	-	91515-1	***
		.040-.060[1] [1.02-1.52]	15 Precious metal/Tin[2]	66425-7	66424-7	66429-3	66428-3		
		.040-.060[1] [1.02-1.52]	30 Precious metal/Tin[3]	66425-8	66424-8	66429-4	66428-4		
		.014-.030[1] [0.36-0.76]	15 Precious metal/Tin[2]	66393-7	66394-7	-	-		2151847-☐
		.014-.030[1] [0.36-0.76]	30 Precious metal/Tin[3]	66393-8	66394-8	66406-4	66405-4		
26-24	0.12-0.2	.035-.055[1] [0.89-1.40]	Tin	1-66106-5	1-66108-5	1-66107-1	1-66109-7	91515-1 or 58495-1*	2266335-☐
		.035-.055[1] [0.89-1.40]	15 Precious metal/Tin[2]	66106-7	66108-7	66107-3	66109-3		
		.035-.055[1] [0.89-1.40]	30 Precious metal/Tin[3]	66106-8	66108-8	66107-4	66109-4		
24-20	0.2-0.6	.040-.080[1] [1.02-2.03]	Tin	2-66102-5	3-66104-0	1-66103-8	1-66105-9	91515-1 or 58495-1*	2151016-☐
		.040-.080[1] [1.02-2.03]	15 Precious metal/Tin[2]	66102-8	66104-8	66103-3	66105-3		
		.040-.080[1] [1.02-2.03]	30 Precious metal/Tin[3]	66102-9	66104-9	66103-4	66105-4		
		.060-.120[5] [1.52-3.05]	Tin	1-66564-2	1-66563-1	66566-7	66565-7	91542-1	2151669-☐
		.060-.120[5] [1.52-3.05]	30 Precious metal/Tin[3]	66564-8	66563-8	66566-4	66565-4		
		.080-.100[1] [2.03-2.54]	Tin	1-66332-4	1-66331-4	1-66400-0	1-66399-0	91523-1	2151641-☐
		.080-.100[1] [2.03-2.54]	15 Precious metal/Tin[2]	66332-7	66331-7	66400-3	66399-3		
		.080-.100[1] [2.03-2.54]	30 Precious metal/Tin[3]	66332-8	66331-8	66400-4	66399-4		
18-16	0.8-1.4	.080-.100[1] [2.03-2.54]	Tin	1-66098-8	1-66100-9	1-66099-5	1-66101-9	91505-1 or 91523-1 or 58495-1*	2151023-☐
		.080-.100[1] [2.03-2.54]	15 Precious metal/Tin[2]	66098-8	66100-8	66099-3	66101-3		
		.080-.100[1] [2.03-2.54]	30 Precious metal/Tin[3]	66098-9	66100-9	66099-4	66101-4		
18-14	0.8- 2.0	.080-.100[1] [2.03-2.54]	Tin	1-66359-4	1-66358-6	1-66361-2	1-66360-2	91519-1	2151101-☐
		.080-.100[1] [2.03-2.54]	15 Precious metal/Tin[2]	66359-9	66358-9	66361-3	66360-3		
		.080-.100[1] [2.03-2.54]	30 Precious metal/Tin[3]	1-66359-0	1-66358-0	66361-4	66360-4		
		.110-.150[5] [2.79-3.81]	Tin	66597-8	66598-9	66602-8	66601-9	91521-1	2151405-☐
		.110-.150[5] [2.79-3.81]	30 Precious metal/Tin[3]	66597-2	66598-2	66602-2	66601-2		

‡ Single contact, free-air test current is not to be construed as contact rating current. Use only for testing. Refer to contact current carrying capability information on page 5.
[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].
[2] .000015 [.00038] min precious metal plate in the mating area, .000050 [.00127] min matte tin plate in the wire crimp area, both over .000030 [.00076] min. nickel underplate.
[3] .000030 [.00076] min precious metal plate in the mating area, .000050 [.00127 min matte tin plate in the wire crimp area, both over .000030 [.00076] min nickel underplate.
[5] Contacts can ONLY be used in: Metrimate; CPC Series 1 (Arr. 23-19 & 23-24), Series 4 (Arr. 23-13M, 23-16M, 23-22M), and VDE connectors.
* Commercial PRO-CRIMPER II hand tool for field repair only. Note: Die Set can be adapted for use with 626 Pneumatic Tool System. Insertion Tool Part No. 91002-1 (for insulation diameters .070 [1.78] or less), No. 200893-2 (for insulation diameters .090 [2.29] max.). Extraction Tool Part No. 305183. (Instruction Sheet 408-1216)
*** Call Technical Support for Machine Applicator Part Numbers.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

SIGNAL CONTACTS, ENHANCED HIGH CURRENT TYPE III+, CRIMP, SNAP-IN

Contact Size 16 – Pin Diameter .062 [1.57]

Wire Size Range		Ins. Dia. Range	Contact Finish	Strip Form Contact No.		Loose Piece Contact No.		Tooling Part No.	
AWG	mm²			Pin	Socket	Pin	Socket	Loose Piece Hand Tool	Strip Form Applicators
18-14	0.8-2.0	.080-.100[1] [2.03-2.54]	Gold[3]	1-66359-6	1-66358-9	1-66361-4	1-66360-4	91519-1	2151101-☐ ***
		.080-.100[1] [2.03-2.54]	Tin[4]	1-66359-9	2-66358-1	1-66361-6	1-66360-6		
		.110-.150[2] [2.79-3.81]	Gold[3]	1-66597-0	1-66598-1	66602-9	1-66601-0	91521-1	2151405-☐ ***
		.110-.150[2] [2.79-3.81]	Tin[4]	1-66597-1	1-66598-2	1-66602-0	1-66601-2		

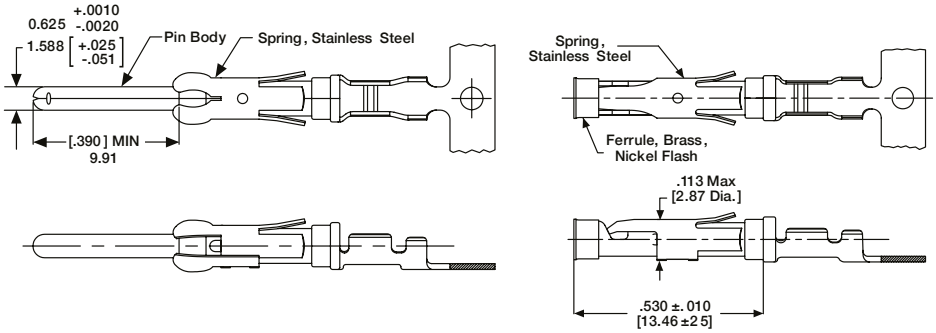
[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].

[2] Contacts can ONLY be used in CPC, Series 1 (Arr. 23-24), Series 4 (Arr. 23-13M, 23-16M, 23-22M), and VDE connectors.

[3] .000030 [.00076] min precious metal plate in the mating area with gold flash on the remainder, both over .000030 [.00076] min nickel underplate.

[4] .000050 [.00127] min tin over .000030 [.00076] min nickel.

*** Call Technical Support for Automatic Machine Applicator Part Numbers.



Material and Finish

(See chart)
Contact Body –
Copper Nickel Alloy
Retention Spring – Stainless steel

Ratings

Voltage – 250 Volts AC/DC
600 Volts AC/DC, Series I, VDE tested and select loaded only
Base Current –
Type III+ contacts: 17 amperes, 30°C temperature rise with single contact on 14 AWG wire
Enhanced High Current Type III+ contacts: **25 amperes**, 30°C temperature rise with single contact on 14 AWG wire
Temperature – -55°C to +105°C
VDE 0627 – XA/630/4KV/2 - Series I, VDE tested only

Multiplication Rating Factor (F)

Type III+ Contacts (Note: 1 = 17 amperes)

Arrangement		Percent Connector Loading					
Shell Size	No. of Positions	Single Circuit		≅ 50%		100%	
		Wire Size		Wire Size		Wire Size	
		30 AWG	14 AWG	30 AWG	14 AWG	30 AWG	14 AWG
11-4		.291	1	.212	.905	.140	.684
13-9		.278	.995	.175	.750	.134	.567
17-16		.270	.990	.146	.625	.127	.472
23-24		.281	.985	.138	.550	.120	.416
23-37		.275	.985	.131	.497	.114	.376

Enhanced High Current Type III+ Contacts (14 AWG wire only - Note: 1 = 25 amperes)

Arrangement		Percent Connector Loading		
Shell Size	No. of Positions	Single Circuit	≅ 50%	100%
		14 AWG	14 AWG	14 AWG
11-4		.880	.840	.640
13-9		.880	.640	.480
17-16		.880	.520	.400
23-24		.880	.520	.400
23-37		.880	.440	.320

SIGNAL CONTACTS, TYPE III+ (PRECISION FORMED, CRIMP)

Wire Size Range		Ins. Dia. Range[1]	Contact Finish	Grounding Pin Part No.		Strip Form No. Applicator Part No.	Loose Piece Hand Tool Part No.
AWG	mm²			Strip Form	Loose Piece		
26-24	0.12-0.2	.035-.055 [0.89-1.4]	Tin	164159-3	164162-1	-	91515-1 or 58495-1*
		.035-.055 [0.89-1.4]	Sel. Gold/Nickel[4]	164159-4	164162-2		
24-20	0.2-0.6	.045-.070 [1.14-1.78]	Tin	164160-3	164163-1	2151016-□***	91515-1 or 91505-1 or 58495-1*
		.045-.070 [1.14-1.78]	Sel. Gold/Nickel[4]	164160-4	164163-2		
18-16	0.8-1.4	.078-.098 [1.98-2.49]	Tin	164161-3	164164-1	2151023-□***	91523-1 or 91505-1 or 58495-1*
		.078-.098 [1.98-2.49]	Sel. Gold/Nickel[4]	164161-4	164164-2		

[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].

[4] Gold flash over .000030 [0.00076] min. nickel on entire contact, with .000030 [0.00076] gold in contact area.

* Commercial PRO-CRIMPER II hand tool for field repair only.

*** Call Technical Support for Automatic Machine Applicator Part Numbers.
Extraction Tool Part No. 539972-1.

Contact Size

16

Pin Diameter

.062 [1.57]

Material and Finish

Contact Body – Copper alloy, plated tin or gold
Spring – Stainless steel

Grounding Pin

(make first – break last)

SIGNAL CONTACTS, HIGH CURRENT POWER CONTACT – SIZE 16

Wire Size Range		Contact Part No.		Crimping Tool		
		Pin	Socket	Tool	Turret	
AWG	mm²	Loose Piece	Loose Piece		for Pins	for Sockets
18-16	0.8-1.4	796964-1	796966-1	601967-1	1-601967-5	1-601967-5
14	2	193844-1	193846-1	601967-1	1-601967-6	1-601967-5

Extraction Tool Part No. 305183

Socket

Pin

The features of the High Current Size 16 contact have been designed to retrofit into the existing AMP Connectors such as CPC (Circular Plastic Connector) and CMC (Circular Metal Connector), G Series, M Series, Metrimate Square Grid and Drawer Connector housings. An initial T-Rise test in free air has shown a 23 amp capability with a 30° T-Rise. The contact may be crimped onto 14 AWG wire with an AMP hand tool **Part No. 601967-1**. Use turret TH502 **(1-601967-6)** for the pin and turret TH501 **(1-601967-5)** for the socket.

Material and Finish

Body – Copper alloy
Louvertac Band – Beryllium copper
Retention Spring – Stainless steel

Finish

Body – Silver
Louvertac Band – Gold

SIGNAL CONTACTS, TYPE III+ (PRECISION FORMED, SOLDER)

Contact Size 16 – Pin Diameter .062 [1.57]

Wire Size Range		Contact Finish	Loose Piece Contact No.	
AWG	mm²		Pin	Socket
26-20	0.12-0.6	Gold/Nickel[1]	66182-1	66183-1
18-16	0.8-1.4	Gold/Nickel[1]	66180-1	66181-1
Solder Tab[3]		Duplex[2]	202236-7	202237-7
		Tin	202236-5	202237-5

Contact Size
16

Pin Diameter
.062 [1.57]

Material and Finish
Contact Body – Copper alloy, plated tin or gold
Spring – Stainless steel

[1] .000030 [0.00076] gold in mating area over .000030 [0.00076] min. nickel.

[2] Duplex plated .000030 [0.00076] gold in mating area over .000030 [0.00076] min. nickel on contact body; bright tin on solder tab.

[3] Designed for up to 14 AWG; but, not to exceed current limitation of contact.

Note: These contacts can be used in Multimate contact cavities of all connector housings.

‡ Single contact, free-air test current is not to be construed as contact rating current. Use only for testing.
Extraction Tool Part No. 305183

Solder-Type (with Preformed Wire Barrel/Insulation Support)

Pin

Socket

Solder-Tab

Pin

Socket

SIGNAL CONTACTS, TYPE II, SCREW MACHINED, CRIMP

Contact Size 16 – Pin Diameter .062 [1.57] (Test Current, 13 Ampere)‡

Wire Size Range		Ins. Dia. Range[1]	Loose Piece Contact No.		Contact Color Code	Tooling Part No.
AWG	mm²		Pin	Socket		Loose Piece / Hand Tool
28-24	0.08-0.20	.035-.055 [0.89-1.40]	201611-1[4]	201613-1[5]	Red/Red	91538-1 or 601967-1
		.048-.065 [1.22-1.65]	201334-1[4]	-	Red/Red	
24-20	0.2-0.6	.040-.062 [1.02-1.57]	201578-1[4]	201580-1[5]	Yellow/Red	91538-1 or 58541-1*
		.055-.088 [1.40-2.16]	201330-1[4]	201328-1[5]	Yellow/Red	601967-1
18 (Two)	0.9-0.9 (Two)	No Ins. Support	-	202726-1[4]	Blue	91539-1 or 601967-1
18-16	0.8-1.4	.080-.105 [2.03-2.67]	202507-1[4]	202508-1[5]	-	601967-1
		No Ins. Support	200336-1[4]	200333-1[4]	Blue/Blue	91539-1 58541-1* or 601967-1
		No Ins. Support	204219-1[5,6]	-	Blue/Blue	
14	2	No Ins. Support	201570-1[4]	201568-1[5]	Violet/Blue	91539-1 58541-1* or 601967-1
		No Ins. Support	212618-1[3,6,†]	-	-	

[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].

[3] Grounding pin is used to provide a make-first/break-last condition when mating and unmating connector halves.

[4] Use turret TH502 (**1-601967-6**) with hand tool **601967-1**.

[5] Use turret TH501 (**1-601967-5**) with hand tool **601967-1**.

[6] Pin length is .630±.005 [16.002±.127] on these two pins.

* Commercial PRO-CRIMPER II Hand Tool for field repair use only.

† Does not use Hand Tool 91539-1 or 601967-1.

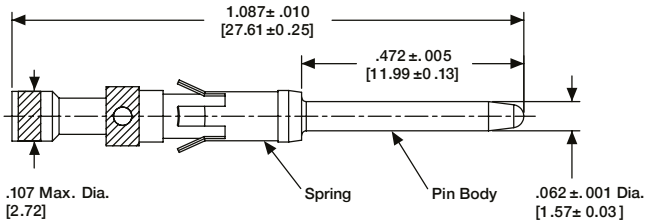
‡ Single contact, free-air test current is not to be construed as contact rating current. Use only for testing.
Insertion Tool Part No. 200893-2 (for insulation diameters .070 [1.78] or less).
Extraction Tool Part No. 305183.

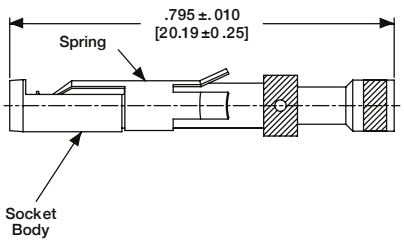
Material

Contact Body – Brass
Retention Spring – Stainless steel

Finish

Contact Body – .000030 [0.00076] gold over .000050 [0.00127] nickel. Gold thickness controlled on socket O.D.
Retention Spring – Stainless steel





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

POWER CONTACTS, TYPE XII, PRECISION FORMED, CRIMP

Wire Size Range[1]		Ins. Dia. Range	Contact Finish	Strip Form Contact No.				Loose Piece		Tooling	
AWG	mm²			Standard***		Heavy Duty Miniature***		Contact Part Nos.		OCEAN Applicator	Die Set for Hand Tool 69710-1
				Male	Female	Male	Female	Male	Female		
16 and 14-12	1.25-1.4 and 2-3	.135-.160 [3.43-4.06]	A	66255-1	66740-7	66255-5	1-66740-2	66261-1	66740-8	2151426-☐	90145-2[3] and 90145-1[4]
			A	-	-	-	-	66262-12	-		
			B	66255-2	66740-5	66255-6	1-66740-1	66261-2	66740-6		
			B	66256-2[2]	-	66256-4[2]	-	66262-2[2]	-		
			C[5]	66255-7	66740-1	66255-8	66740-9	66261-4	66740-2		
			C[5]	66256-6[2]	-	-	-	66262-4[2]	-		
10	5-6	.190-.220 [4.83-5.59]	A	66253-1	66741-7	66253-5	1-66741-2	66259-1	66741-8	2151411-☐	90140-1
			A	-	-	-	-	-	-		
			B	66253-2	66741-5	66253-6	1-66741-1	66259-2	66741-6		
			B	66254-2[2]	-	-	-	66260-2[2]	-		
			C[5]	66253-4	66741-1	66253-8	66741-9	66259-4	66741-2		
			C[5]	66254-4[2]	-	-	-	66260-4[2]	-		

[1] Wire strip length – .281 [7.14].
[2] Ground contact.
[3] Die insert Part No. **90145-2** is for crimping 16 AWG [1.25-1.4 mm2] wire.
[4] Die insert Part No. **90145-1** is for crimping 14-12 AWG [2-3 mm2] wire.
[5] Recommended for high current/vibration applications where fretting corrosion is a problem.

Extraction Tool No. **91019-3**.
*** Call Technical Support for Automatic Machine Applicator Part Numbers.

Material

Copper

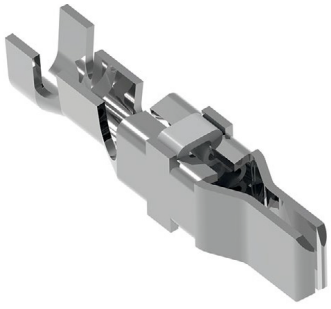
Finish

A – Tin
B – .000030 [0.00076] selective gold over .000030 [0.00076] nickel
C – .000100 [0.00254] silver plated contacts with lubricant added

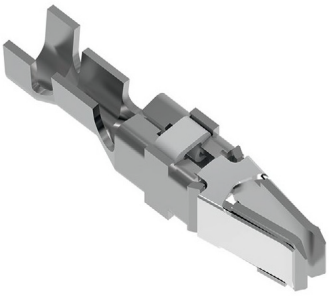
Test Current Rating

Silver or Gold – 35 amperes ‡
Tin – 15 amperes ‡

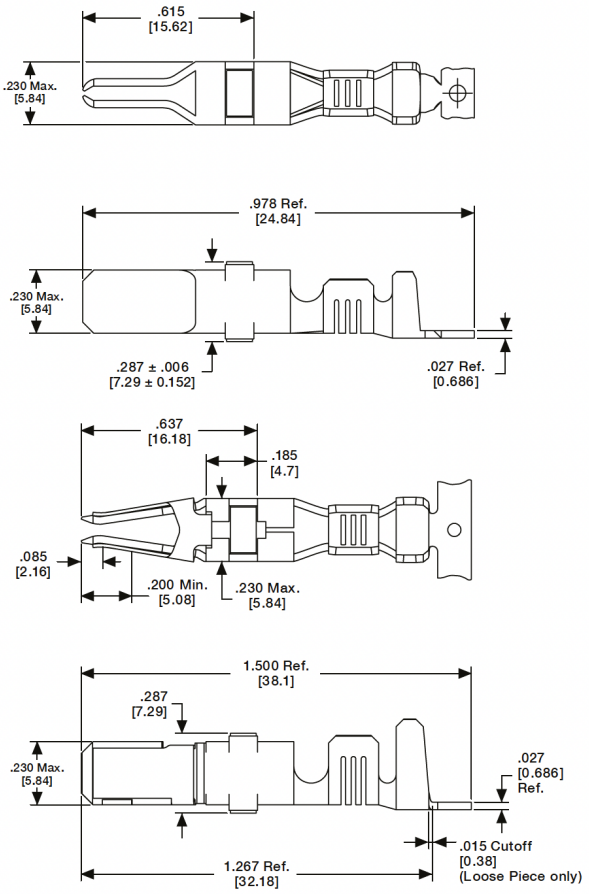
‡ Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.



Male



Female



Note: All part numbers are RoHS Compliant.

POWER CONTACTS, HIGH CURRENT TYPE XII, CRIMP

The Multimate features of the High Current Type XII contact have been designed to fit into the existing AMP Connectors such as CPC (Circular Plastic Connector), CMC (Circular Plastic Metal-Shell Connector), G Series, M Series, and CMPC (Circular Multipin Connector) housings. An initial T-Rise test in free air has shown a 60 amp capability with a 30° T-Rise with 8 gage wires. The contact may be crimped onto 8 AWG wire with a Daniels Hand Tool M310 or AMP P/N 356114-1 and Positioner TP1068 or AMP P/N 356119-1.

High Current Type XII Socket
Part No. 193990-2

High Current Type XII Pin
Part No. 193991-4

Material

Body – Copper Alloy
Louvertac Band – Beryllium Copper
Retention Spring – Stainless Steel

Finish

Body – Silver
Louvertac Band – Gold

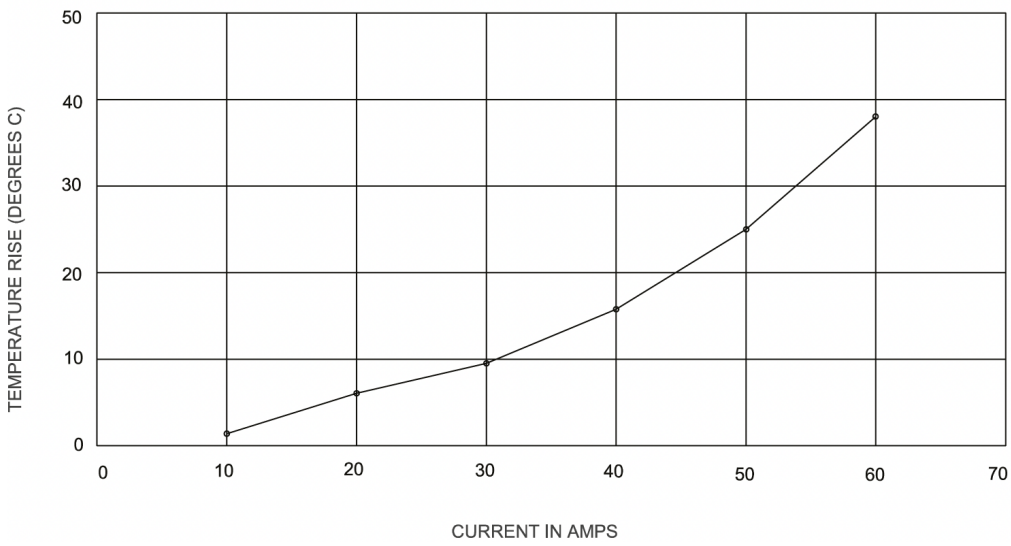
Related Product Data

Extraction Tool – 224155-1

Current Rating for 30°C Temperature Rise 100% Energized
3 Circuit Connector (Wire-to-Wire)

Current-Carrying Capacity

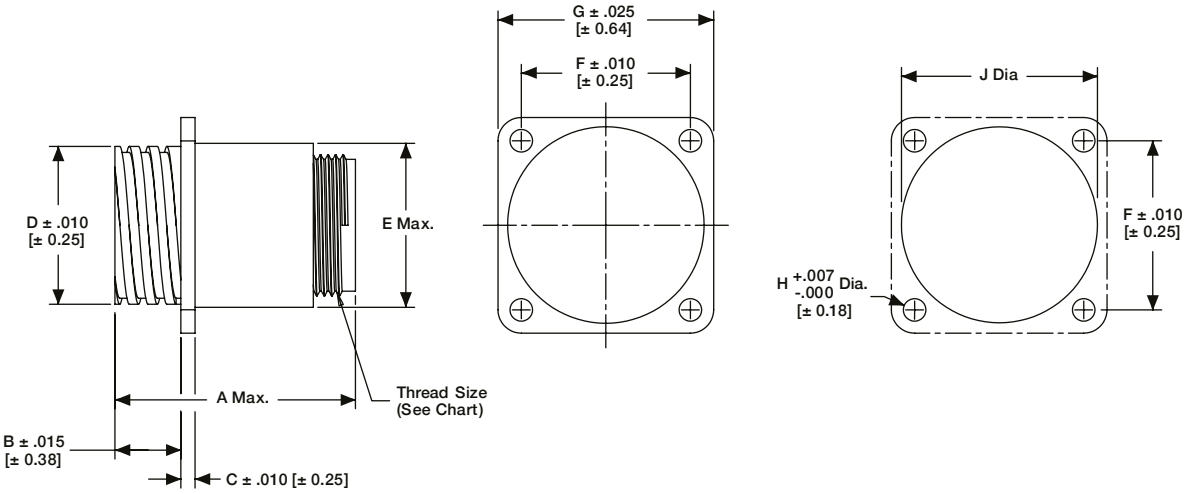
The graph shows current-carrying capacity versus temperature rise for a fully energized 3 position CPC plug P/N 206037-2 and receptacle P/N 206036-2. These initial representative amperage ratings were conducted with 8 AWG wires that were 3 feet long.



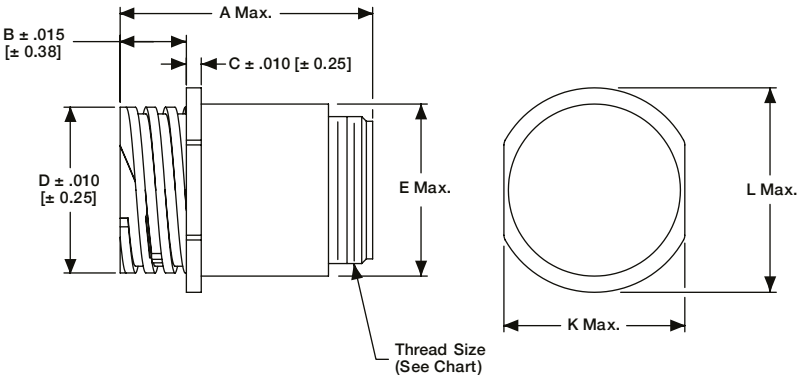
CPC, Series 4

COMPONENT DIMENSIONS

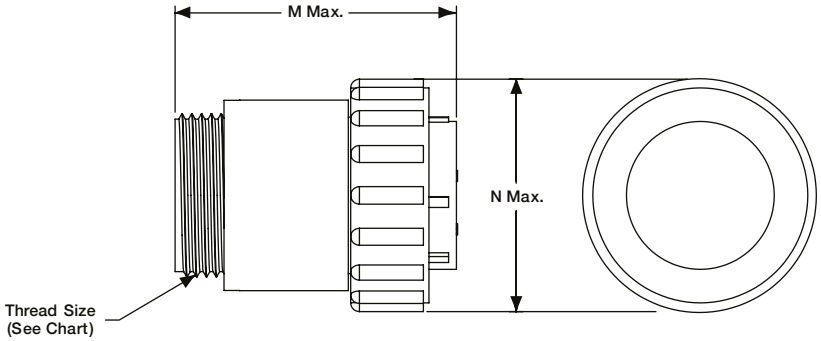
Square Flange Receptacle



Free-Hanging Receptacle



Plug



Arrangement		Dimensions													Thread Size
Shell Size	No. of Pos.	A	B	C	D	E	F	G	H	J	K	L	M	N	
23-7		1.635 [41.53]	.520 [13.21]	.156 [3.96]	1.438 [36.53]	1.510 [38.35]	1.438 [36.53]	1.750 [44.45]	.150 [3.81]	1.610 [40.89]	1.505 [38.23]	1.733 [44.02]	1.645 [41.78]	1.788 [45.42]	1-3/8-18 UNEF-2A

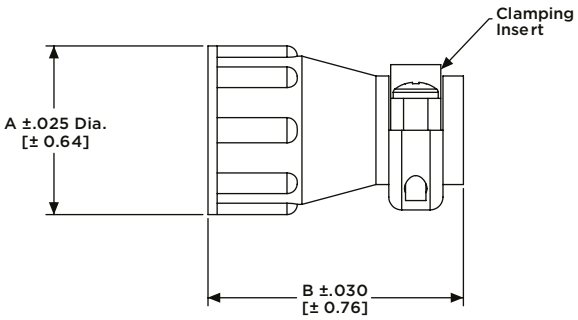
Note: All dimensions apply to both standard and reverse mate.

CABLE CLAMPS

Shell Size	Dimensions		Cable O.D. (Max.)	Thread Size	Part No.	
	A	B			Individually Packaged	Bulk Packaged*
23	1.600 [40.64]	1.555 [39.5]	.703 [17.86]	1-3/8-18 UNEF-2B	206138-8	1-206138-0** (100)

* Numbers in parentheses specify, in multiples, the minimum quantity of parts that can be ordered.
** Packaging includes two screws: shell sizes 11-17, screw length .500 [12.7]; shell size 23, screw length .625 [15.88].

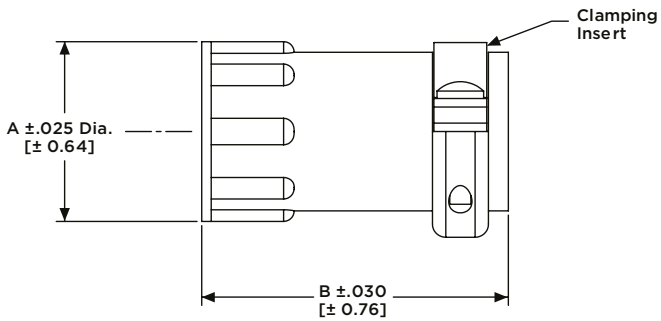
Notes:
1. Clamping areas adjustable by inverting or changing clamping inserts. The quantity of inserts supplied with each assembly is as follows: for size 11 cable clamps, one insert; for all other cable clamps, two inserts.
2. Components for all cable clamps are packaged unassembled. This includes the cable clamp, two screws and the clamping inserts.
3. Cable clamps can be threaded directly onto plugs or receptacles, or onto back-shell extenders (page 17).
4. Replacement screws are available in the following sizes: 3/8 in. [9.52] – **5019024-1**, 1/2 in. [12.7] – **5019024-2**, 5/8 in. [15.88] – **5019024-3**, 1 in. [25.4] – **5019024-4**, 3/4 in. [19.05] – **5019024-5.**
5. Cable clamp inserts not sold separately.



Shell Size	Dimensions		Cable O.D. (Max.)	Thread Size	Part No.	
	A	B			Individually Packaged	Bulk Packaged*
23	1.600 [40.64]	1.655 [42.04]	1.125 [28.58]	1-3/8-18 UNEF-2B	206512-5	206512-6** (100)

* Numbers in parentheses specify, in multiples, the minimum quantity of parts that can be ordered.
** Packaging includes two screws: shell sizes 11-17, screw length .500 [12.7]; shell size 23, screw length .625 [15.88].

Notes:
1. Clamping areas adjustable by inverting or changing clamping inserts. The quantity of inserts supplied with each assembly is as follows: for size 11 cable clamps, one insert; for all other cable clamps, two inserts.
2. Components for all cable clamps are packaged unassembled. This includes the cable clamp, two screws and the clamping inserts.
3. Cable clamps can be threaded directly onto plugs or receptacles, or onto back-shell extenders (page 17).
4. Replacement screws are available in the following sizes: 3/8 in. [9.52] – **5019024-1**, 1/2 in. [12.7] – **5019024-2**, 5/8 in. [15.88] – **5019024-3**, 1 in. [25.4] – **5019024-4**, 3/4 in. [19.05] – **5019024-5**.
5. Cable clamp inserts not sold separately.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

Cable clamps provide strain relief and can be used on all series receptacles and plugs.

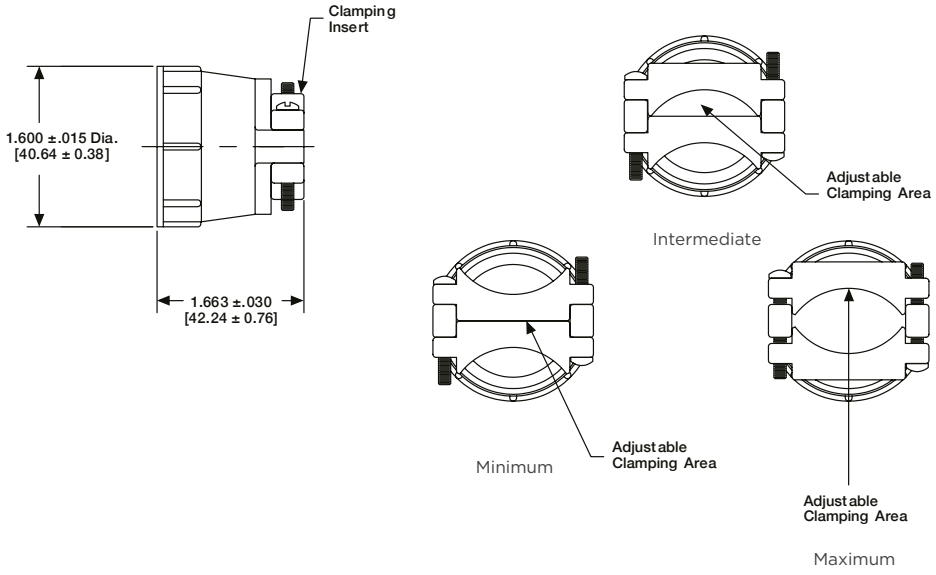
Standard Size

Material

Black thermoplastic heat-stabilized, fire-resistant, self-extinguishing, UL 94V-0 rated

Large Size

SELF-CENTERING CABLE CLAMP (SHELL SIZE 23)



The self-centering cable clamp is used in applications where strain relief protection is required and the cable or wire bundle is large and/or stiff.

Standard Size

Material

Black thermoplastic,
UL 94V-0 rated

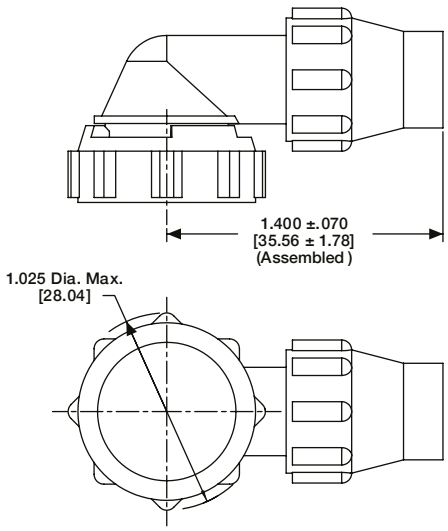
Part Numbers

207774-3 (individually packaged)
207774-4 (bulk packaged)

Notes:
1. Clamping area is adjustable by inverting clamping inserts; maximum cable diameter is 1.125 [28.58].
2. Components for cable clamp are packaged unassembled. This includes the cable clamp, two screws (1.00 [25.4]) and the clamping inserts.
3. Cable clamp can be threaded directly onto plugs or receptacles, or onto back-shell extenders (page 17).

RIGHT-ANGLE CABLE CLAMPS

Shell Size	Dimensions	Cable O.D. (Max.)	Coupling Ring Thread Size	Part Number	
	A			Kit	Kit w/Cover
23	1.500 [38.10]	.703 [17.86]	1-3/8-18 UNEF-2B	796382-2	1546350-2



Style B
Part Number 213982-1
(for Shell Size 13)

Right-angle cable clamps are used in tight areas where typical 180° cable clamp strain reliefs will not fit.

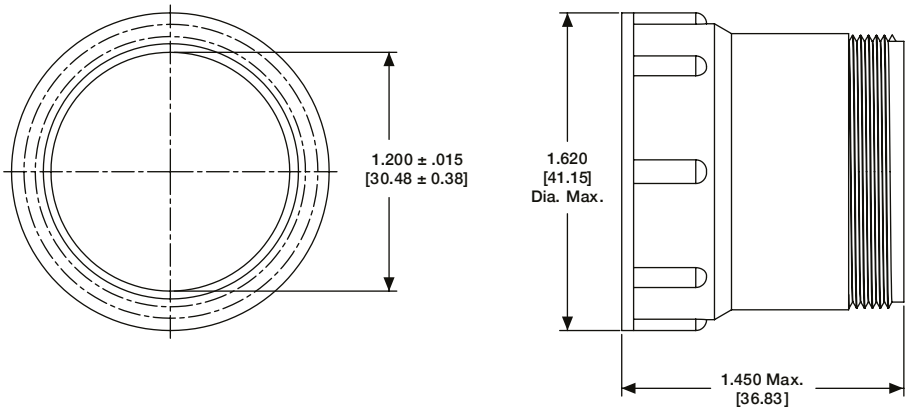
Standard Size

Material

Black thermoplastic,
UL 94V-0 rated

Note: All part numbers are RoHS Compliant.

BACK-SHELL EXTENDER (SHELL SIZE 23)



A back-shell extender is used with a cable clamp in applications where added length and/or additional wire breakout are required.

Standard Size

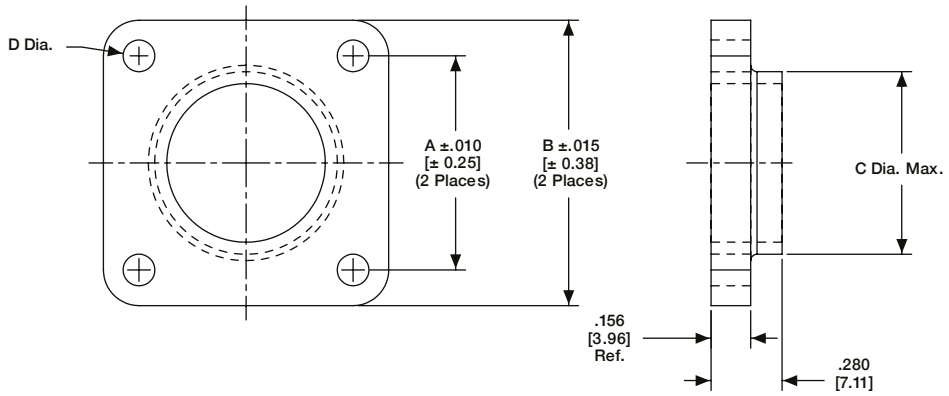
Note: Back-shell extenders can be threaded directly onto plugs or receptacles and will accept cable clamps of the appropriate size (page 15-16).

Material
Black glass-filled thermoplastic

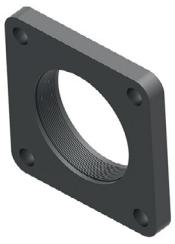
Part No. 207055-1

PANEL MOUNT FLANGES (PLUGS ONLY)

Shell Size	Dimensions				Part Number
	A	B	C	D	
23	1.438 [36.53]	1.750 [44.45]	1.510 [38.35]	.150 [3.81]	207299-4

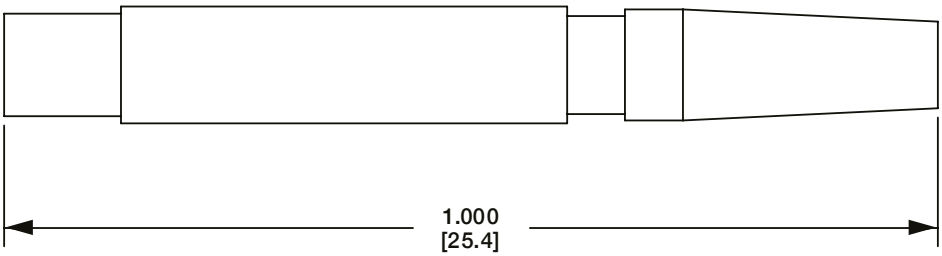


A panel mount flange is used in applications that require the plug half of a connector to be panel mounted.

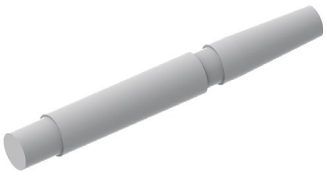


Material
Black thermoplastic

KEYING PLUGS

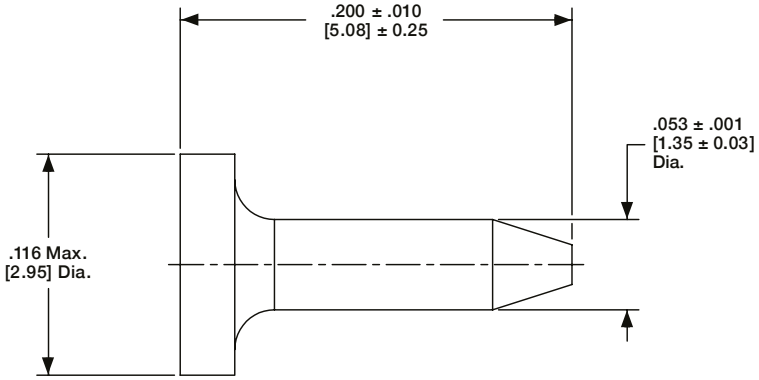


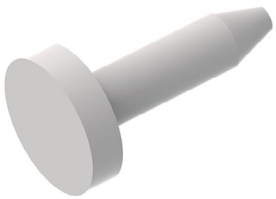
Keying plugs are used to provide keying capabilities for all connector series. Keying plugs are used in socket cavities of standard mate plugs and reverse mate receptacles, except when used with sealing caps.



Material
Nylon, natural, UL 94V-2 rated

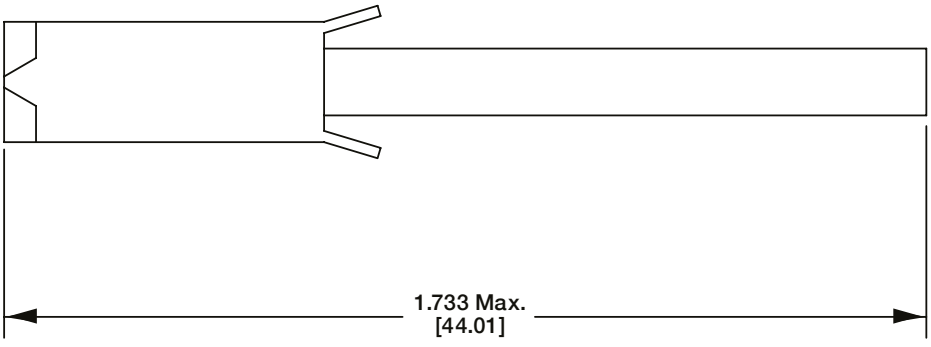
Series 1 and Series 4 Keying Plug
(for Types III+ Contacts)
Part No. 200821-1

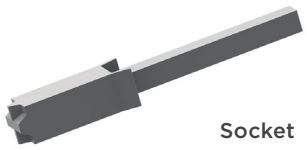




Material
Polyphenylene oxide, white,
UL 94V-1 rated

Series 2 Keying Plug
(for Size 20 DM and 20 DF Contacts)
Part No. 206509-1





Socket

Pin

Material
Nylon, natural, UL 94V-2 rated

Series 3 and Series 4 Keying Plugs
(for Type XII Contacts)
Part Nos. 206508-1 **(Socket Cavities) – Shown Above**
207597-1 **(Pin Cavities)**

PROTECTIVE CAPS

Cap Type	Shell Size	Part Number
PLUG	23	5-2407269-1
RECEPTACLE	23	6-2407269-1
PLUG	23	5-2407269-2
RECEPTACLE	23	6-2407269-2
PLUG	23	5-2407269-3
RECEPTACLE	23	6-2407269-3
PLUG	23	5-2407269-4
RECEPTACLE	23	6-2407269-4

Note: Caps are available in orange, black, red and yellow. Download datasheet to learn more.

Material: LDPE (Low Density Polyethylene)

CPC disposable protective caps are designed to fit the existing CPC plugs and receptacles, providing protection from environmental contaminants during storage and handling.

CIRCULAR PLASTIC CONNECTOR SELECTOR TOOL

Explore Circular Plastic Connector Selector Tool. It takes guesswork out of the selection process and provides you with the best options tailored to your needs.

Connect With Us

We make it easy to connect with our experts and are ready to provide all the support you need.
Visit **te.com/support** to chat with a Product Information Specialist.

TE Connectivity
Connected Living Solutions

te.com/circular-plastic-connector

04-26