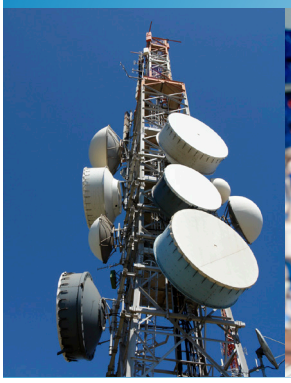
Amphenol®



Micro Bayonet Connector
Micro-B™

Company Introduction

Amphenol Industrial Products Group

The Amphenol Industrial Products Group (AIPG), a division of the Amphenol Corporation, is a prominent manufacturer of cylindrical connectors known around the world. Amphenol Industrial's product lines consist of rectangular, standard miniature, fiber optic, EMI/EMP filter, and a variety of special application connectors.

Manufacturing connectors since 1932, we take pride that the Amphenol Industrial Products Group is the undisputed leader in interconnect systems for harsh environment applications. Innovations like our RADSOK® contact technology can provide roughly 50% more current through the same size pin. Connectors utilizing this RADSOK® technology will outperform similar products in the market hands down.

The Sidney, NY facility, nestled at the foothills of the Catskill Mountains, is over 307,000 square feet (28,521m²). This complex houses over 1,000+ employees incorporating state-of-the-art manufacturing technologies. The facility is both ISO9001 certified and qualified to MIL-STD-790 requirements.

Amphenol Technology (Zhuhai)

Established in 2007, Amphenol Technology (Zhuhai) Co., Ltd. is a manufacturing facility for the Amphenol Industrial Products Group, which serves a number of industrial markets, included but not limited to Factory Automation, Transportation, Heavy Equipment, Alternative Energy, Oil & Gas, Server/Data Comm and Power Distribution.

Amphenol Technology (Zhuhai) Co., Ltd. covers an area of 306,449 square feet (28,470m²) and is equipped with CNCs, plating, injection molding and assembly workshops. This plant specializes in the design and manufacturing of industrial connectors featuring high power, high density inserts, medium to high voltage electrical properties, and harsh environment applications.

Many of the products produced here have been certified by independent standards including UL, IEC/TUV, ATEX, IECEx and MA. The facility is also certified to ISO 9001, ISO 14001 and TS16949.

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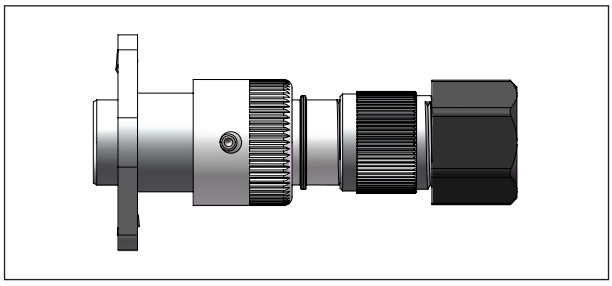
Micro-B™ Product Introduction

Amphenol Industrial offers a high performance circular connector product range developed for industrial applications where electrical performance must be met with affordability. High mating cycles along with excellent shell-to-shell electrical bonding for EMI are the benchmark of rugged connectors. Amphenol's new Micro-Bayonet series provides the solution that meets your budget and performance goals.

Made from an aluminum shell, Micro-B utilizes a robust triple bayonet coupling (1/4 turn mating) mechanism and stamped & formed contacts. An internal EMI grounding spring is used to provide exceptional shell-to-shell conductivity. Various mounting options are available including in-line and 2-hole flange mount configurations.

Micro-B meets the requirements of today's electrical equipment for a connector with a small footprint, light in weight, high density insert patterns, exceptional shell-to-shell electrical EMI shielding, and high reliability.

Micro-B meets all RoHS requirements. With Gray ZnNi Plating, Micro-B can withstand up to 500 hours salt spray without corrosion detrimental to its operation.



Features and Benefits

- **Aluminum shell construction provides high strength while being light in weight**
- **Stamped and formed crimp contacts, easy for cable assembly**
- **¼ turn positive bayonet coupling, quick coupling**
- **Multiple shell plating options (up to 500H salt spray protection)**
- **Excellent shell-to-shell EMI shielding**
- **High shock and high vibration resistance**
- **Meets Smoke, Toxicity and Flammability Requirements**
- **Operating temperature range: -40°C~125°C**
- **Protection up to IP67 when in the mated condition with Backshell**
- **5 Key/keyway mating**
- **EMI shielding backshell option**
- **High density**
- **Compact**
- **PCB Tail contact option is available**
- **UL certifications in process**

Market Application

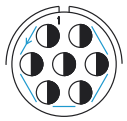
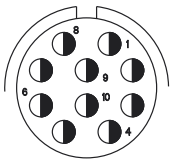
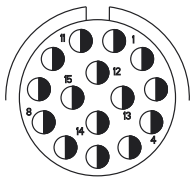
Widely used in general and hash environments, Micro-B is suitable for markets using signal connections including but not limited to the following:

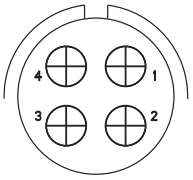
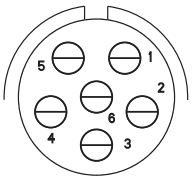
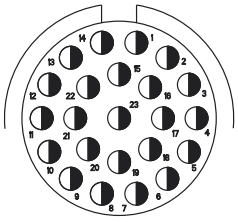
- **Telecommunications**
- **Hybrid/Electric Vehicle**
- **Robotics/Factory Automation**
- **Industrial Instrumentation**
- **Security**
- **Test equipment**

Technical Specifications

Shell Material	Aluminum	
EMI-Ring	Copper Alloy	
Retaining Ring	Stainless steel	
Wave Ring	Stainless steel	
Insert Material	Plastic (PA66)	
Contact	Material	Copper Alloy
	Plating	Tin/Gold Plated
	Termination	Crimp
Temperature Range	-40°C ~ 125°C	
Ingress Protection	With Heat Shrink, the ingress protection is IP54 in the mated condition.With Cable Gland Backshell, the ingress protection level increases to IP67 in the mated condition.	
Test Current	#22D Contact 3A	
Recommended Operating Voltage	AC 250V RMS	
Test Voltage	AC 500V RMS	
Insulation Resistance	500V, 5000MΩ Min	
Contact Resistance	22mΩ Max	
Mating Cycles	500 Cycles (30μ Gold Plated, Selective Area on Contacts)	
	300 Cycles (Tin/Gold Plating 10μ, Selective Area on Contacts)	
	100 Cycles (Gold Flash on Contacts)	
Vibration	In accordance with test procedure EIA-364-28D	
Thermal Shock	In accordance with test procedure EIA-364-32D	
Salt Spray	1. Gray ZnNi (Conductive): 500H	
	2. Electroless Nickel (Conductive): 48H	
RoHS	Compliant	

Insert Arrangements

Pole	7	9	15
Insert Arrangement			
	8-7	**9-10**	**10-15**
Total Contacts	7	10	15
Contact Size	22D	22D	22D

Pole	4	6	23
Coming Soon **Insert Arrangement**			
	Coming Soon **10-4**	*Coming Soon* **10-6**	*Coming Soon* **11-23**
Total Contacts	4	6	23
Contact Size	16	20	22D

6 - Keying	
N	(Standard)
A	120°
B	150°
C	210°
D	240°

Keying

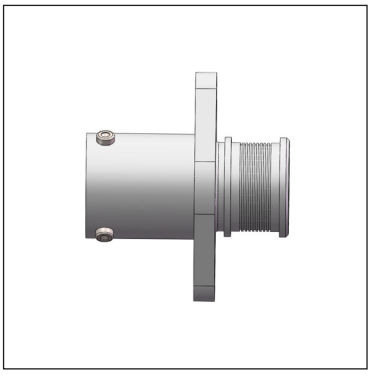
To avoid cross-plugging within applications requiring the use of more than one miniature cylindrical connector of the same size and arrangement, alternate insert rotations are available.

As shown in the diagram to the left, the front face of the plug shell is rotated in a clockwise direction from the normal shell keying position. The receptacle shell is rotated counterclockwise the same number of degrees in respect to the normal shell key position.

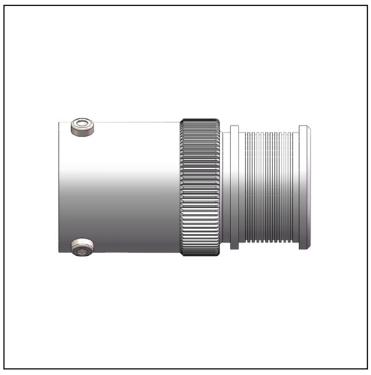
A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The degree angles for a given connector are the same whether it contains pin or socket. Inserts are not rotated in conjunction with the master key/keyway.

Shell Styles

1. Heat Shrink & Band-It for EMI Shielding (Rear Accessory Compatible)



Receptacle Flange

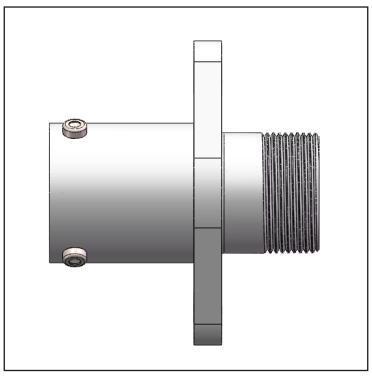


Receptacle In-line

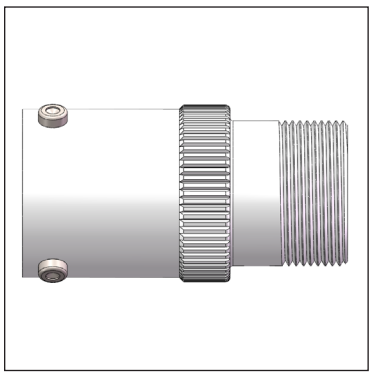
Size 10 Plug

Size 8 & 9 Plug

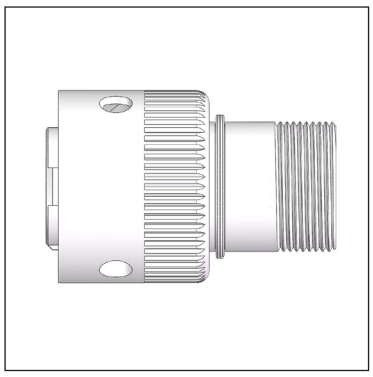
2. Cable Gland or Cable Clamp (Rear Accessory Compatible)



Receptacle Flange



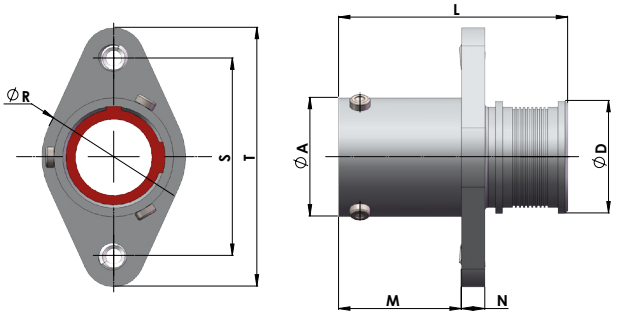
Receptacle In-line



Plug

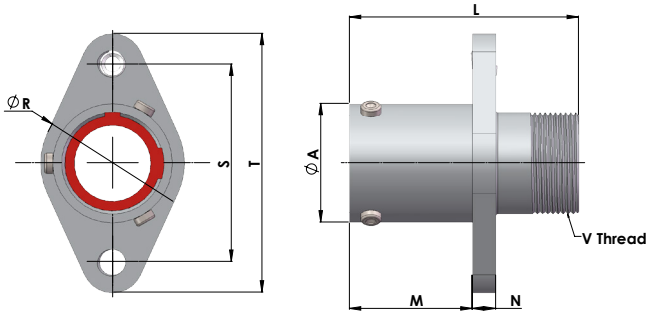
Shell Dimensions

Receptacle Flanged
Heatshrink groove version



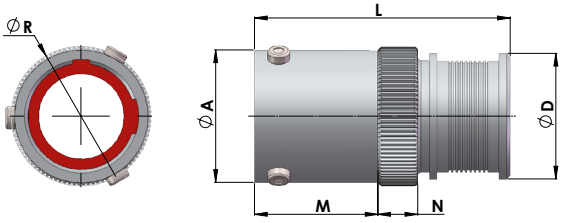
Shell Size	ØR	S ±0.05	T	ØA ±0.05	M	N	L ±0.1	ØD ±0.1
08	14	19.3	25.3	11.6	12	2.3	22.4	11
09	17.8	22	29	14.2	12	2.3	22.4	13
10	21	24.9	33.1	16.6	12	2.3	22.4	15

Receptacle Flanged
Thread version



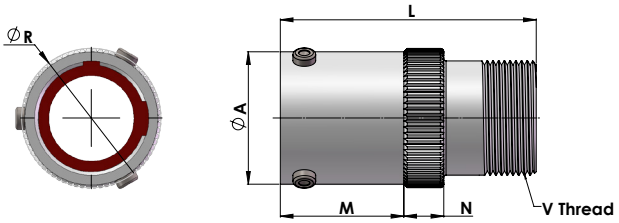
Shell Size	ØR	S ±0.05	T	ØA ±0.05	M	N	L ±0.1	V Thread
08	14	19.3	25.3	11.6	12	2.3	22.4	M10x0.5-6g
09	17.8	22	29	14.2	12	2.3	22.4	M12x0.5-6g
10	21	24.9	33.1	16.6	12	2.3	22.4	M15x1-6g

Receptacle In-line
Heatshrink groove version



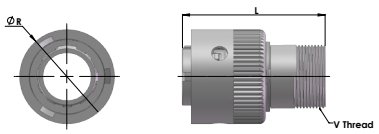
Shell Size	ØR	ØA ±0.05	M	N	L ±0.1	ØD ±0.1
08	12.2	11.6	10.8	3.5	22.4	11
09	14.8	14.2	10.8	3.5	22.4	13
10	17.2	16.6	10.8	3.5	22.4	15

Receptacle In-line
Thread version

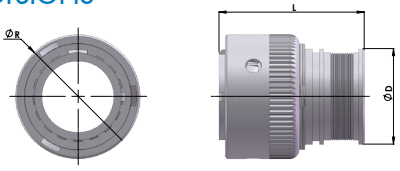


Shell Size	ØR	ØA ±0.05	M	N	L ±0.1	V Thread
08	12.2	11.6	10.8	3.5	22.4	M10x0.5-6g
09	14.8	14.2	10.8	3.5	22.4	M12x0.5-6g
10	17.2	16.6	10.8	3.5	22.4	M15x1-6g

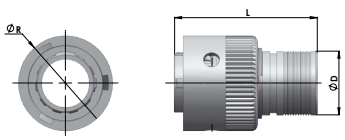
Groove and Thread Plug Versions



Shell Size	ØR +0.13 0	ØD ±0.1	L ±0.1
08	14.8	10	22.4
09	17.2	12	22.4



Shell Size	ØR +0.13 0	ØD ±0.1	L ±0.1
10	19.5	15	22.4



Shell Size	ØR +0.13 0	L ±0.1	V Thread
08	14.8	22.4	M10x0.5-6g
09	17.2	22.4	M12x0.5-6g
10	19.5	22.4	M15x1-6g

How to Order

1	2	3	4	5	6	7
Series	Shell Style	Service Class	Insert Arrangement	Contacts	Keying	Options
MB	**06T**	**E**	**10-15**	**P**	**N**	**(072)**

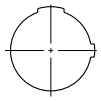
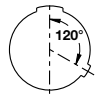
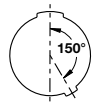
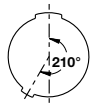
1 - Series	
MB	Designates Micro-B™

2 - Shell Style	
01T	Cable connecting receptacle with metric thread
01H	Cable connecting receptacle with Heat Shrink Tubing grooves
03T	2 Hole flanged receptacle with metric thread
03H	2 Hole flanged receptacle with Heat Shrink Tubing grooves
06T	Straight plug with metric thread
06H	Straight plug with Heat Shrink Tubing grooves
03	2 Hole flanged receptacle with no grooves and no thread

3 - Class	
A	Non-Environmental
E	Environmental

4 - Insert Arrrangements
Refer to page 5 for insert availability. "10-15" designates insert arrangement.

5 - Contacts	
P	Pin Crimp (S&F)
S	Stamped & Formed pin contacts, order separately and packaged by reel, see page 9
A	Machined pin contacts, packaged with connector
B	Machined socket contacts, packaged with connector
C	Pin PC tail contacts pre-loaded in connector
D	Socket PC tail contacts pre-loaded in connector

6 - Keying (See Alternate Keying, page 5)	
N	 (Standard)
A	
B	
C	
D	

7 - Options	
(072)	Gray ZnNi
(023)	Electroless Nickel
(424)	Electroless Nickel finish with cable clamp
(425)	Electroless Nickel finish with cable gland
(574)	Gray ZnNi finish with cable clamp
(575)	Gray ZnNi finish with cable gland

Example: **MB 06T E 10-15 PN (425)** equals a Straight Plug with Cable Gland, Electroless Nickel plating, Stamped & Formed Pin contacts, N keyway.

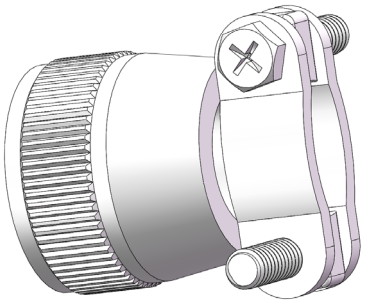
By including a cable gland this part number can achieve IP67 in the mated condition, as an E service class.

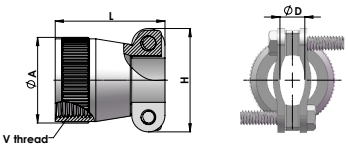
#22D Stamped & Formed Contacts

Size	Current (A)	PIN/SOCKET	Wire AWG	Wire mm²	Plating	Part No	Pcs/Reel
22D#	3	S & F PIN	22-26	0.14-0.30	Tin plating	C10-737688-221	3000pcs / Reel (Order Separately)
					Gold flash	C10-737688-222	
					10u" gold plating	C10-737688-223	
					30u" gold plating	C10-737688-224	
		S & F POCKET	22-26	0.14-0.30	Tin plating	C10-737689-221	
					Gold flash	C10-737689-222	
					10u" gold plating	C10-737689-223	
					30u" gold plating	C10-737689-224	
22D#	5	MACHINED PIN	22-26	0.14-0.30	Tin plating	C10-737874-221	Pcs (Packaged with Connector)
					Gold flash	C10-737874-222	
					10u" gold plating	C10-737874-223	
					30u" gold plating	C10-737874-224	
		MACHINED SOCKET	22-26	0.14-0.30	Tin plating	C10-747152-221	
					Gold flash	C10-747152-222	
					10u" gold plating	C10-747152-223	
					30u" gold plating	C10-747152-224	
22D#	5	PC TAIL MACHINED PIN	22-26	0.14-0.30	Tin plating	C10-748768-221	Pcs (Loaded in Connector)
					Gold flash	C10-748768-222	
					10u" gold plating	C10-748768-223	
					30u" gold plating	C10-748768-224	
		PC TAIL MACHINED SOCKET	22-26	0.14-0.30	Tin plating	C10-737869-221	
					Gold flash	C10-737869-222	
					10u" gold plating	C10-737869-223	
					30u" gold plating	C10-737869-224	

Accessories – Cable Clamps, Cable Glands, Caps

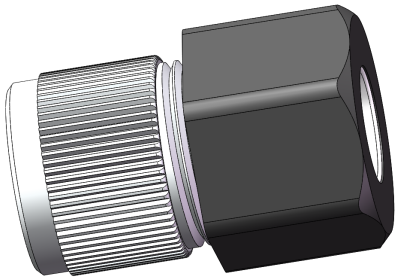
Non-Environmental Cable Clamp

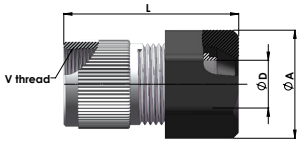




Shell Size	ØA ±0.1	H ±0.1	L ±0.1	CableRange ØD	V Thread
08	11.6	14	14.87	3~6.5	M10x0.5-6H
09	13.6	16	14.87	4~8	M12x0.5-6H
10	16.6	19	14.87	7~12	M15x1-6H

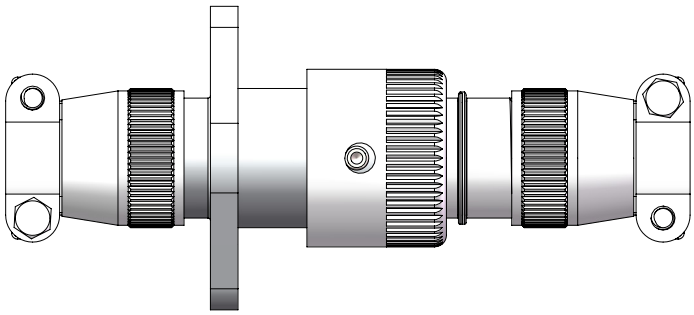
Environmental Cable Gland (EMI Shielding & IP67)

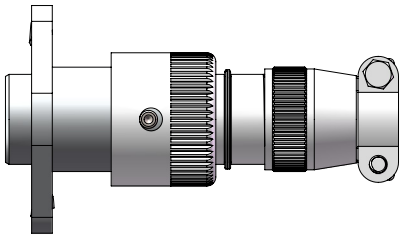




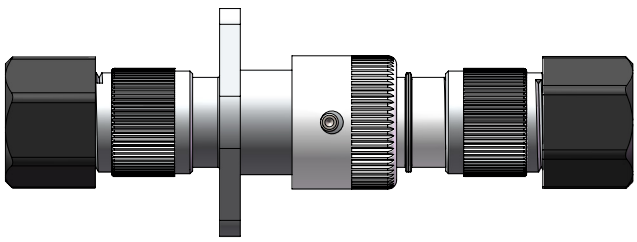
Shell Size	ØA ±0.1	L REF	CableRange ØD	V Thread
08	14.64	20.8~23.7	3~6.5	M10x0.5-6H
09	16.7	20.8~23.7	4~8	M12x0.5-6H
10	20	20.8~23.7	7~12	M15x1-6H

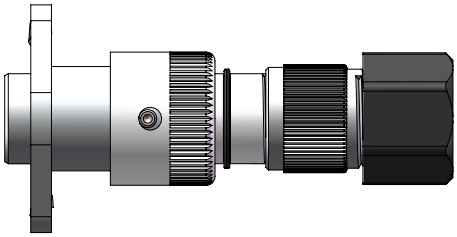
Non-Environmental Cable Clamp





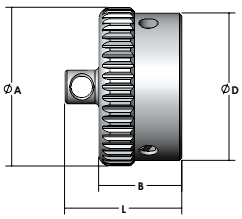
Environmental Cable Gland (EMI Shielding & IP67)

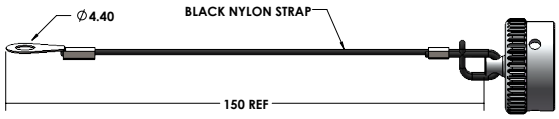




Accessories – Cable Clamps, Cable Glands, Caps

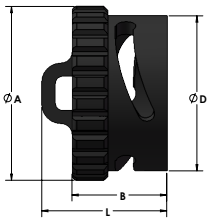
Receptacle Metal Cap

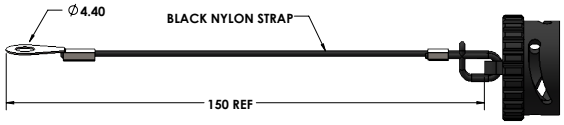




Part Number	Cap Size	ØA +0.13 0	B ±0.1	ØD ±0.1	L ±0.1	Strap Length Code
C10-738666-08M	08	16	11	14.5	15.5	Less Lanyard
C10-738666-08M0						0-150 Milimeters
C10-738666-08M1						25-200 Milimeters
C10-738666-08M2						50-250 Milimeters
C10-738666-08M3						75-300 Milimeters
C10-738666-08M4						100-350 Milimeters
C10-738666-09M	09	18.6	11	17.1	15.5	Less Lanyard
C10-738666-09M0						0-150 Milimeters
C10-738666-09M1						25-200 Milimeters
C10-738666-09M2						50-250 Milimeters
C10-738666-09M3						75-300 Milimeters
C10-738666-09M4						100-350 Milimeters
C10-738666-10M	10	21	11	19.5	15.5	Less Lanyard
C10-738666-10M0						0-150 Milimeters
C10-738666-10M1						25-200 Milimeters
C10-738666-10M2						50-250 Milimeters
C10-738666-10M3						75-300 Milimeters
C10-738666-10M4						100-350 Milimeters

Receptacle Plastic Cap

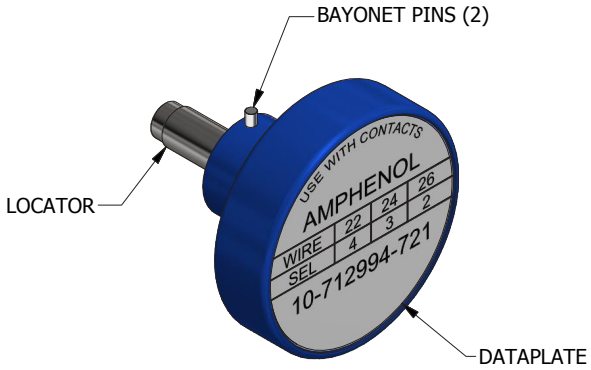




Part Number	Cap Size	ØA +0.13 0	B ±0.1	ØD ±0.1	L ±0.1	Strap Length Code
C10-738671-08P	08	18	11	15.5	16.53	Less Lanyard
C10-738671-08P0						0-150 Milimeters
C10-738671-08P1						25-200 Milimeters
C10-738671-08P2						50-250 Milimeters
C10-738671-08P3						75-300 Milimeters
C10-738671-08P4						100-350 Milimeters
C10-738671-09P	09	20.6	11	18.1	16.53	Less Lanyard
C10-738671-09P0						0-150 Milimeters
C10-738671-09P1						25-200 Milimeters
C10-738671-09P2						50-250 Milimeters
C10-738671-09P3						75-300 Milimeters
C10-738671-09P4						100-350 Milimeters
C10-738671-10P	10	23	12.53	20.5	16.53	Less Lanyard
C10-738671-10P0						0-150 Milimeters
C10-738671-10P1						25-200 Milimeters
C10-738671-10P2						50-250 Milimeters
C10-738671-10P3						75-300 Milimeters
C10-738671-10P4						100-350 Milimeters

Tools

Part Number	C10-737871-000
Description	Crimp Tool



Part Number	10-749738-22D
Description	Positioner

* Positioner to be used when crimping machined contacts

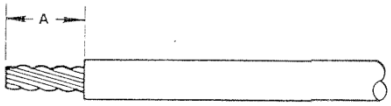
Part Number	10-712998-22D
Description	Insertion / Extraction Tool

Crimp Instructions

Wire Preparation

Strip wire to length shown in chart. DO not cut or nick wire strands. Twist wire strands back to their original lay.

CONTACT AND WIRE SIZES			
Contact Size	Wire Size	Insulation O.D.	Stripping Length “A”
22D	22AWG	0.643	3-4mm

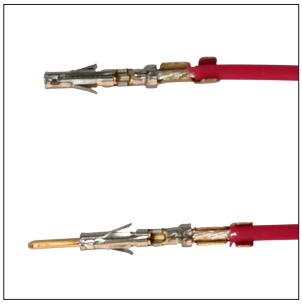


Crimp Tool

Part Number: 10-737871-000
DMC GMT 220

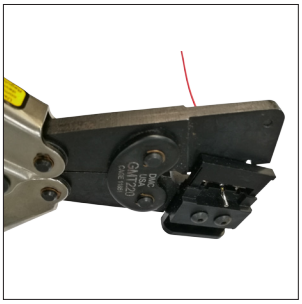
Crimp Wire To Contacts

1. Put the wire into the contact. All wire strands should be in crimp barrel. Place contact crimp barrel on correct anvil of tool with open side facing up.
2. Slowly close jaws until the contact is retained by crimping jaws.
3. Check that the wire is in place, making sure all wire strands are in crimp barrel. Continue to close the jaws slowly, until the ratchet disengages.
4. The tool will not release until the crimp cycle is complete.

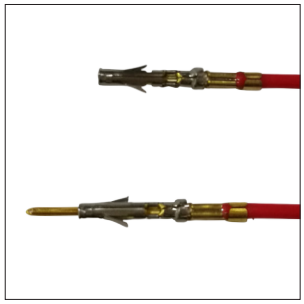


Step One

Step Two

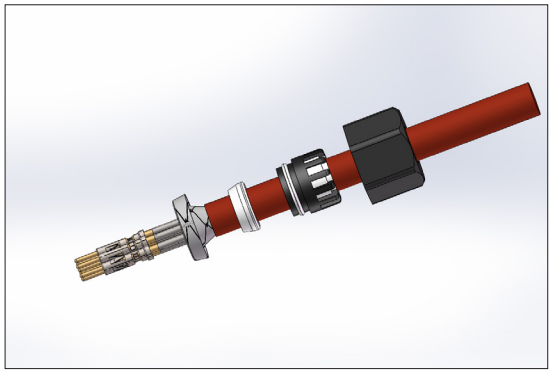


Step Three

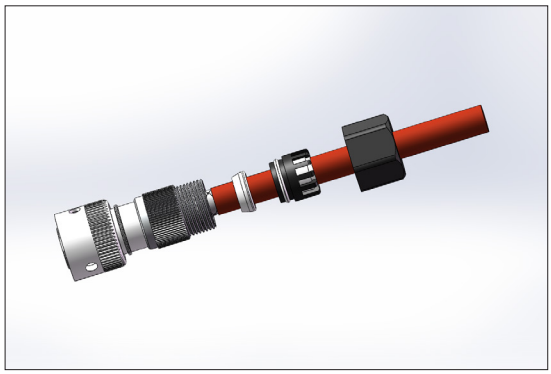


Step Four

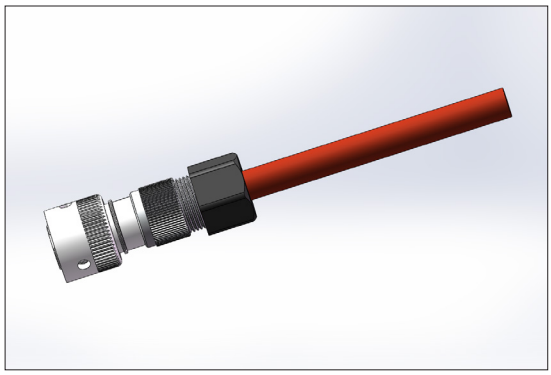
Cable Assembly Instructions



Step 1:
Spread open the shielding braid and slide down the shielding ring into position so the shielding braid is equally pressed around, pass the terminated contacts through the adaptor and grommet.



Step 2:
Align the connector into their corresponding insert holes. Press the cable gland down into a tightly seated position into the rear of the cable gland adaptor.



Step 3:
Assemble the hex nut onto the adaptor and tighten using a spanner.

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