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2M Accessories, Contacts, and tools



2M

2M Series Contacts and Tools

Crimp Contacts

Contact Size	Type	AMPS	Wire Size AWG	Part Number	Color Band		
					1st	2nd	3rd
#23	Pin	5	#22-#28	2M809-001	N/A	N/A	N/A
	Pin		#26-#30	2M809-042*	Blue	N/A	N/A
	Socket		#22-#28	2M809-002	N/A	N/A	N/A
	Socket		#26-#30	2M809-043*	Blue	N/A	N/A
#20HD	Pin	7.5	#20-#24	2M809-204	N/A	N/A	N/A
	Socket		#20-#24	2M809-205	N/A	N/A	N/A
#20	Pin	7.5	#20-#24	M39029/58-363	Orange	Blue	Orange
	Socket		#20-#24	M39029/57-357	Orange	Green	Violet
#16	Pin	13	#16-#20	M39029/58-364	Orange	Blue	Orange
	Socket		#16-#20	M39029/57-358	Orange	Green	Gray
#12	Pin	23	#12-#14	M39029/58-365	Orange	Blue	Green
	Socket		#12-#14	M39029/57-359	Orange	Green	White



*Special order please consult Amphenol-Aerospace for information.

Contact Tools

Contact Size	Crimper	Tooling Part Numbers	
		Positioner	Insertion/ Removal Number
#23	M22520/2-01	K1461-1* (Daniels)	DAK225-22* (Daniels Insertion Only)
			2M809-23R (Removal only)
#20HD	M22520/2-01	2M809-206	2M809-20HDR (Removal only)
#20	M22520/1-01	M22520/1-04	M81969/14-10
#16	M22520/1-01	M22520/1-04	M81969/14-03
#12	M22520/1-01	M22520/1-04	M81969/14-04

*Daniels Manufacturing Co. part number

Crimp Tensile Strength

Contact Size	Wire Gage	Silver or Tin Coated Copper Wire	Nickel Coated Copper Wire
#23, #20HD	#22	12	8
#23, #20HD	#24	8	6
#23	#26	5	3
#23	#28	3	2
#23	#30	1.5	1.5

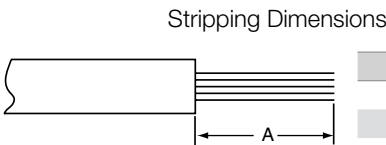
Tensile Strength for size #23 and #20HD only
Values represent minimums and are in pounds

Series 2M Torque Values

Shell Size Series 2M801, 2M803	Shell Size Series 2M805	Coupling Torque				Jam Nut Tightening				Backshell Tightening			
		In-LBs.		N-m		In-LBs.		N-m		In-LBs.		N-m	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
5	-	25	35	2.8	4.0	20	25	2.2	2.8	13	17	1.5	1.9
6	8	35	40	4.0	4.5	20	25	2.2	2.8	18	22	2.0	2.5
7	9	35	40	4.0	4.5	20	25	2.2	2.8	30	40	3.4	4.5
8	10	40	50	4.5	5.7	20	25	2.2	2.8	30	40	3.4	4.5
9	11	40	50	4.5	5.7	20	25	2.2	2.8	35	45	4.0	5.1
10	12	50	60	5.7	6.8	25	30	2.8	3.3	35	45	4.0	5.1
12, 13	15	50	60	5.7	6.8	25	30	2.8	3.3	35	45	4.0	5.1
14, 16	18	55	65	6.2	7.3	25	30	2.8	3.3	35	45	4.0	5.1
15, 17	19	55	65	6.2	7.3	25	30	2.8	3.3	35	45	4.0	5.1
21	23	55	65	6.2	7.3	25	30	2.8	3.3	35	45	4.0	5.1

Wire Stripping

- 1. Strip wire to required length. (See Figure at right). When using hot wire stripping, do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.
- 2. See Table 1 for proper finished outside wire dimensions.
- 3. Twist strands together to form a firm bundle.
- 4. Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted. When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.



Wire Size	A
23	.115 (2.92)
20/20HD	.188 (4.77)
16	.188 (4.77)
12	.188 (4.77)

Table 1

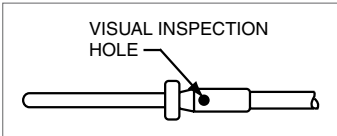
Contact Size	Wire Dimension (inches)**	
	Min.	Max.
10	.135	.162
12	.097	.142
16	.065	.109
20/20HD	.040	.077
23	.025	.048

** Min. diameters to insure moisture proof assembly; max. diameters to permit use of metal removal tools.

Crimping

See table on preceding page for more information on crimp contacts, contact tools, and crimp tensile strength

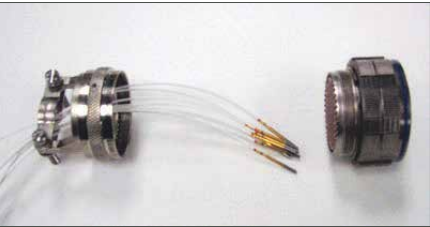
- 1. Insert stripped wire into contact crimp pot. Wire must be visible through inspection hole.
- 2. Using correct crimp tool and locator, cycle the tool once to be sure the indentors are open, insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.
- 3. Release crimped contact and wire from tool. Be certain the wire is visible through inspection hole in contact.



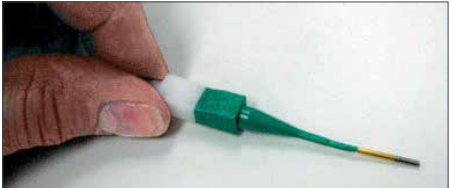
Examples of M22520 Series Crimping Tools:
Shown top: tool used for small size 23 contacts.
Shown bottom: tool used for size 20, 16 or 12 contacts and has a positioner that can be dialed for each contact size.

Contact Insertion

- 1. First remove hardware from the plug and receptacle and slide the hardware over wires in proper sequence.
- 2. Use proper plastic or metal insertion tool for corresponding contact. (Consult Insertion Tool table on preceding page). Slide correct tool (with plastic tool use colored end) over wire insulation and slide forward until tool bottoms against rear contact shoulder.
- 3. Next align the tool and contact up to the properly identified cavity at rear of connector plug. Use firm, even pressure; do not use excessive pressure. It is recommended to start at the center cavity. Contact must be aligned with grommet hole and not inserted at an angle. Push forward until contact is felt to snap into position within insert.



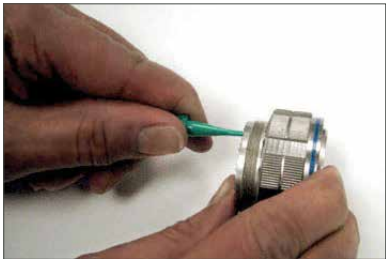
Note: All plastic tools are double-ended. The colored side is the insertion tool and the white side is the removal tool.



Plastic tool with contact in proper position.



Metal tool with contact.



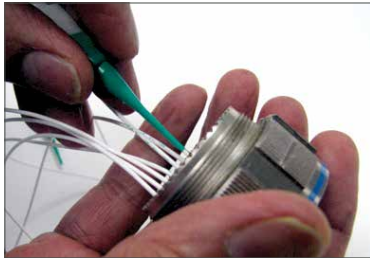
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2M Series

Assembly Instructions

CONTACT INSERTION, CONT.

4. Remove tool and pull back lightly on wire, making sure contact stays properly seated and isn't dragged back with the tool. Repeat operation with remainder of contacts to be inserted, beginning with the center cavity and working outward in alternating rows.



CAUTION: when inserting or removing contacts, do not spread or rotate tool tips.

5. After all contacts are inserted, fill any empty cavities with wire sealing plugs.



6. Reassemble plug or receptacle hardware slide forward and tighten using connector pliers. Connector holding tools are recommended while tightening back accessories. When using strain relief, center wires at bar clamp. Slide clamp grommet into position and tighten clamp bar screws. When tightening screws, pressure should be applied in the same direction that clamp is threaded to rear threads of connector. When not using clamp grommet, build up wire bundle with vinyl tape so clamp bar will maintain pressure on wires.



CONTACT REMOVAL

1. Remove hardware from plug or receptacle and slide hardware back along wire bundle.

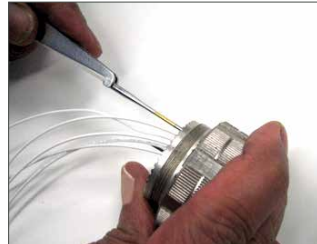


2. Use proper plastic or metal removal tool for corresponding contact. Slide correct size tool over wire insulation.



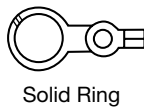
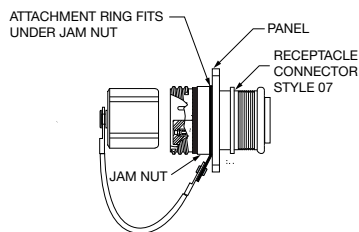
Use white end of plastic tool for removal of contacts.

3. Insert plastic or metal removal tool into contact cavity until tool tips enter rear grommet and come to a positive stop. Hold tool tip firmly against positive stop on contact shoulder. Grip wire and simultaneously remove tool and contact. (On occasion, it may be necessary to remove tool, rotate 90° and reinsert.)



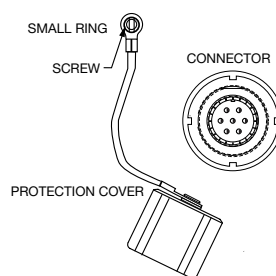
Removal of contacts with metal tool.

CAP ATTACHMENT TO JAM NUT RECEPTACLE



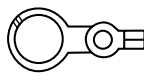
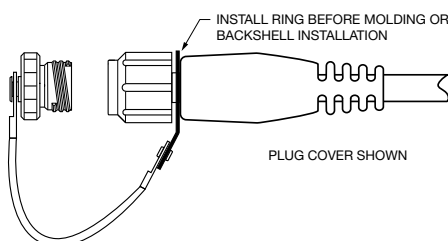
Solid Ring

CAP ATTACHMENT TO PANEL



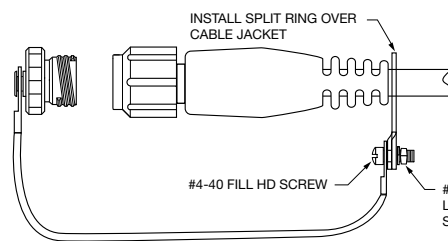
Small Ring for Attaching Receptacle Covers to a Panel with a Screw

CAP ATTACHMENT TO CABLE ASSEMBLY



Solid Ring

REMOVABLE CAP ATTACHMENT TO CABLE



Large Split Ring designed for attaching covers to cables

2M Series Contacts and Tools

Grommet Sealing Plugs, Spanner Tool & Holding Tool



Grommet Sealing Plugs

Size	Color	Part Number	Military Part Number
#23	Black	2M809-155	MS27488-22-2
#20	Red	2M859-012	MS27488-20-2
#16	Green	2M859-013	MS27488-16-2
#12	Orange	2M859-014	MS27488-12-2

Spanner Tool for Tightening Series 2M Jam Nuts

Shell Size	Holding Tool Part Number (Add P or R)				
	Series 2M801	Series 2M803	Series 2M804 Style 07	Series 2M804 Style 00	Series 2M805
5	2M600-146-02	2M600-137-05	2M600-146-03	2M600-147-05	
6	2M600-146-03	2M600-137-06	2M600-146-04	2M600-147-06	
7	2M600-146-05	2M600-137-07	2M600-146-06	2M600-147-07	
8	2M600-146-05	2M600-137-08	2M600-146-06	2M600-147-07	2M600-154-08
9	2M600-146-06	2M600-137-09	2M600-146-07	2M600-147-09	2M600-154-09
10	2M600-146-07	2M600-137-10	2M600-146-08	2M600-147-10	2M600-154-09
11					2M600-154-11
12		2M600-137-12	2M600-141-10	2M600-147-12	2M600-154-12
13	2M600-146-10				
14		2M600-137-14	2M600-141-12	2M600-147-14	
15		2M600-137-15	2M600-141-13	2M600-147-15	2M600-154-15
16	2M600-146-13				
17	2M600-146-14				
18					2M600-154-18
19					2M600-154-19
21	2M600-146-17				
23					2M600-154-23

Connector Holding Tool for Tightening Backshells Accessories

Shell Size	Holding Tool Part Number (Add P or R)					
	Series 2M801		Series 2M803		Series 2M804	Series 2M805
5	2M600MM005-05	•	2M600-140-5	*	2M600-141-5	×
6	2M600MM005-06	•	2M600-140-6	*	2M600-141-6	×
7	2M600MM005-07	•	2M600-140-7	*	2M600-141-7	×
8	2M600MM005-08	•	2M600-140-8	*	2M600-141-8	×
9	2M600MM005-06	•	2M600-140-9	*	2M600-141-9	×
10	2M600MM005-10		2M600-140-10		2M600-141-10	×
11						2M600-155-11
12			2M600-140-12	*	2M600-141-12	×
13	2M600MM005-13	•				
14			2M600-140-14	*	2M600-141-14	×
15			2M600-140-15	*	2M600-141-15	×
16	2M600MM005-16	•				
17	2M600MM005-17	•				
18						2M600-155-18
19						2M600-155-19
21	2M600MM005-21	•				
23						2M600-155-23



• Add P for Plug holder or R for receptacle holder, followed by polarizing position (N, X, Y, Z)

* Add P for Plug holder or R for Receptacle holder, followed by polarizing position (A, B, C, D).

× Add P for Plug holder or R for Receptacle holder.

2M Series Contacts and Tools

Micro Band Shield Termination Tool

Micro Band Shield Termination System:

Micro Band Termination: For assembling cables to overmolded style 2M connectors or backshells, the Micro Band System offers quick termination of cable shields and flexibility to be utilized on a wide range of parts with just one band size. These rugged straps have passed numerous hazardous environmental testing, including shock and vibration. Approved for use in military and aerospace applications.

MATERIALS:

Micro Band Installation Tool. Use with .120" (3.05 mm) wide bands. 6.75 inches (172 mm.) length, 1.2 pounds (0.6 Kg.)

Micro Band, .120" (3.05 mm) wide. Available in two lengths, flat or pre-coiled. Stainless steel.

Description	Part Number
Micro Band Installation Tool	2M600-061

Length		Part Number	Accommodates Diameter	
inch	mm		inch	mm
8.125	206.38	2M600-057	.88	22.35
14.250	361.95	2M600-083	1.88	47.75



Micro Band Shield Termination Instructions:

1. Prepare cable braid for termination process (Figure 1).
2. Push braid forward over adapter retention lip to the adapter incline point (or .4" [10.2mm] minimum braid length). Milk braid as required to remove slack and ensure a snug fit around the shield termination area (Figure 2).
3. Prepare the band in the following manner:
IMPORTANT: Due to connector/adapter circumference, it may be necessary to prepare the band around the cable or retention area.
A. Roll band through the buckle slot twice. (Band must be double-coiled!)
B. Pull on band until mark (▷) is within approximately .250 inch (6.4mm) of buckle slot (Figure 3). The band may be tightened further if desired.
NOTE: Prepared band should have this (▷) mark visible approximately where shown in Figure 3.

Shield Termination Clamping Process (Figures 4 thru 8)

NOTE: To free tool handles, squeeze handles together and move holding clips to center of tool.

4. Squeeze gray gripper release lever and insert band into the front end opening of the tool. (Circular portion of looped band must always face downward.)

5. Aligning the band and tool with the shield termination area, squeeze blue pull-up handle repeatedly in full strokes until it locks against tool body. (This indicates the band is compressed to the tool precalibrated tension.)
NOTE: To loosen or remove band before locking and cut-off, squeeze gray grip per release lever on tool and pull band out. To loosen or remove band after blue pull-up handle locks against tool body, squeeze pull-up handle and push tension release lever on top of tool forward. Let tension handle return to original position and use the gripper release lever to remove band.
6. Complete the clamping process by squeezing the black cut-off handle to form lock and trim excess band. To remove excess band from tool, squeeze gray gripper release handle, pull out and dispose. Inspect shield termination.

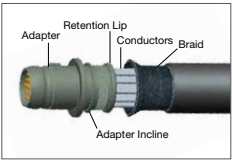


Fig. 1



Fig. 2

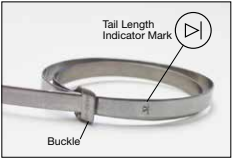


Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7

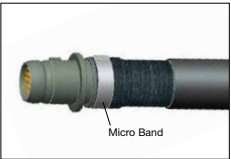


Fig. 8

2M Micro Miniature Python

Low Profile EMI/RFI Plug and Backshell Combo



BENEFITS:

SPACE SAVINGS

This plug and backshell combo design saves space, with a minimum height and superior EMI performance.

EASY MAINTENANCE

The rear removable cover makes it easy to cut wires and remove contacts for easy maintenance.

SIMPLE ASSEMBLY

Assembles with crimp or solder cup size 23 contacts.

Multiple cable entry options available for each connector size (rear opening).

KEY ROTATIONS

All key rotations are available as well as several connector clockings (rotating main key).

OVERVIEW

2M Python is a low profile EMI/RFI plug and backshell combo. This innovative combination reduces space requirements without compromising on ruggedness or shielding performance. Available in 2M 801 Series, 804 Series, and 805 Series, Python assemblies provide superior low profile cable routing and 2M Micro-miniature connector performance all-in-one.



2M Strain Relief Clamp Ordering Information

2M620MS064 and 2M620MS065

1.	2.	3.
PART NUMBER	SERVICE CLASS	SIZE CODE
2M620MS06X	-M	07



1. PART NUMBER	
Part #	Description
2M620MS065	Rotatable Coupling
2M620MS064	Direct Coupling

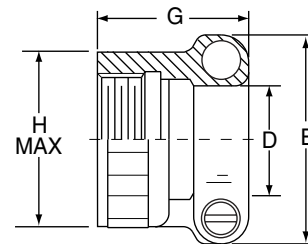
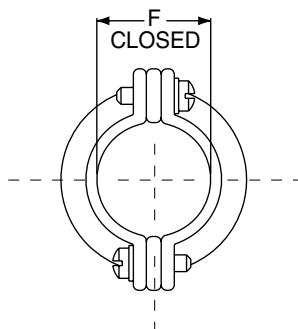
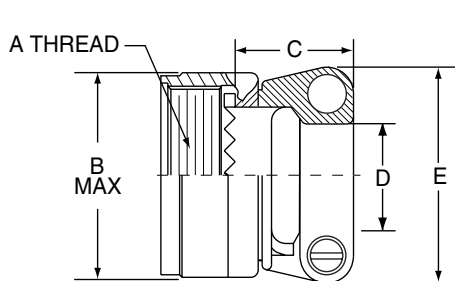
2. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	-C	Black Anodized (Non-conductive)	
	-M	Electroless Nickel	
	-NF	Olive Drab Cadmium	
	-MT	Durmalon (Ni PTFE)	
	-ZN	Olive Drab Zinc Nickel	
	-ZNU	Black Zinc Nickel	
STAINLESS STEEL	-Z1	Passivated	
	-ZM	Electroless Nickel	

3. SIZE CODE				
Size Code	UNEF-2B Thread Size	Cable Entry Diameter	Shell Size	
			Series 2M801, 2M803, 2M804	Series 2M805
05	.2500-32 UNEF	.11	5	
06	.3125-32 UNEF	.17	6	
11	.3750-32 UNEF	.17		8
07	.4375-28 UNEF	.23	7	9
08	.5000-28 UNEF	.30	8	10
09	.5625-24 UNEF	.30	9	11
10	.6250-24 UNEF	.36	10	12
12	.6875-24 UNEF	.42	12, 13	
13	.7500-20 UNEF	.42		15
14	.9375-20 UNEF	.48	14, 15, 16, 17	18, 19
15	.9375-20 UNEF	.61	14, 15, 16, 17	18, 19
17	1.1875-18 UNEF	.86	21	23

MATERIALS	
Nut, Clamp, and Saddles	Aluminum Alloy 6061-T6 or 300 Series SST
Hardware	300 Series Stainless Steel

2M Strain Relief Clamp Dimensions

2M620MS064 and 2M620MS065



Size Code	A Threads UNEF-2B	B Max.		C Max.		D DIA.		E		F		G Max		H Max.	
		in.	mm.	in.	mm.	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38	in. ± .030	mm. ± 0.76	in.	mm.	in.	mm.
05	.2500-32	.470	11.94	.688	17.48	.119	3.02	.496	12.60	.110	2.79	.625	15.88	.350	8.89
06	.3125-32	.530	13.46	.688	17.48	.182	4.62	.582	14.78	.170	4.32	.625	15.88	.415	10.54
11	.3750-32	.570	14.48	.688	17.48	.182	4.62	.582	14.78	.170	4.32	.625	15.88	.465	11.81
07	.4375-28	.637	16.18	.688	17.48	.244	6.20	.656	16.66	.230	5.08	.688	17.48	.530	13.46
08	.5000-28	.700	17.78	.688	17.48	.307	7.80	.726	18.44	.300	7.62	.688	17.48	.595	15.11
09	.5625-24	.758	19.25	.750	19.05	.307	7.80	.726	18.44	.300	7.62	.750	19.05	.650	16.51
10	.6250-24	.819	20.80	.750	19.05	.369	9.37	.885	22.48	.360	9.14	.875	22.23	.715	18.16
12	.6875-24	.896	22.76	.750	19.05	.432	10.97	.952	24.18	.420	10.67	.875	22.23	.785	19.94
13	.7500-20	.930	23.62	.750	19.05	.432	10.97	.952	24.18	.420	10.67	.875	22.23	.830	21.08
14	.9375-20	1.137	28.88	.750	19.05	.494	12.55	1.018	25.86	.480	12.19	1.000	25.40	1.020	25.91
15	.9375-20	1.137	28.88	.750	19.05	.619	15.72	1.148	29.16	.610	15.49	1.000	25.40	1.020	25.91
17	1.1875-18	1.397	35.48	.750	19.05	.869	22.07	1.400	35.56	.860	21.84	1.125	28.58	1.280	32.51

2M Thread-On Micro Band Adapter

Ordering Information 2M440MS135, MK135 and ML135

1.	2.	3.	4.	5.	6.
PART NUMBER	SERVICE CLASS	SIZE CODE	CABLE ENTRY SIZE	LENGTH	BAND OPTIONS
2M440MX135	-M	07	05	-6	K

Omit for no band supplied
K adapter is supplied with
Micro Band shield termination
band, pre-coiled

1. PART NUMBER	
Part #	Description
2M440MS135	Straight Entry
2M440MK135	45° Entry
2M440ML135	90° Entry

2. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	-C	Black Anodized (Non-conductive)	
	-M	Electroless Nickel	
	-NF	Olive Drab Cadmium	
	-MT	Durmalon (Ni PTFE)	
	-ZN	Olive Drab Zinc Nickel	
	-ZNU	Black Zinc Nickel	
STAINLESS STEEL	-Z1	Passivated	
	-ZM	Electroless Nickel	

3. SIZE CODE	
05	.2500-32
06	.3125-32
11	.3750-32
07	.4375-28
08	.5000-28
09	.5625-24
10	.6250-24
12	.6875-24
13	.7500-20
14	.9375-20
17	1.1875-18

4. CABLE ENTRY SIZE		
02	.125	05-17
03	.188	05-17
04	.250	06-17
05	.312	07-17
06	.375	07-17
07	.438	08-17
08	.500	09-17
09	.562	10-17
10	.625	12-17
11	.688	14-17
12	.750	14-17
13	.812	14-17
14	.875	14-17

5. LENGTH	
Straight Entry 2M440MS135 Only	
Length Code	Length (inches)
-6	.750
-7	.875
-8	1.000
-9	1.125
-10	1.250
-11	1.375
-12	1.500
-13	1.625
-14	1.750
-15	1.875
-16	2.000
-17	2.125
-18	2.250
-19	2.375
-20	2.500
Specify Length in increments of .125 inches (3.18 mm.)	

SHELL SIZE					
Accessory Thread	Size Code	Series 2M801	Series 2M803	Series 2M804	Series 2M805
.2500-32 UNEF-2B	05	5	5	5	
.3125-32 UNEF-2B	06	6	6	6	
.3750-32 UNEF-2B	11				8
.4375-28 UNEF-2B	07	7	7	7	9
.5000-28 UNEF-2B	08	8	8	8	10
.5625-24 UNEF-2B	09	9	9	9	11
.6250-24 UNEF-2B	10	10	10	10	12
.6875-24 UNEF-2B	12	13	12	12	
.7500-20 UNEF-2B	13				15
.9375-20 UNEF-2B	14	16, 17	14, 15	14, 15	18, 19
1.1875-18 UNEF-2B	17	21			23

MATERIALS	
Nut, Adapter	Aluminum Alloy or 300 Series SST
Band	300 Series SST
O-Ring	Silicone Elastomer

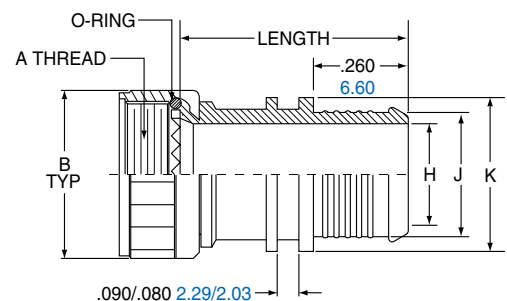
2M Thread-On Micro Band Adapter

2M440MS135, MK135 and ML135



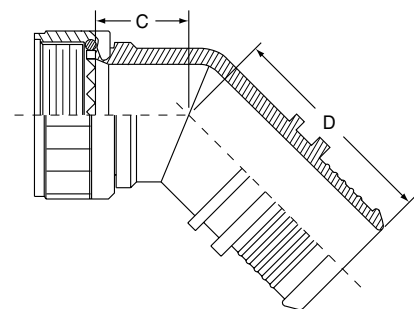
Size Code	A Threads UNEF-2B	B Max		C Max.		D Max.		E Max.		F Max.	
		in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
05	.2500-32	.470	11.94	.530	13.46	.660	16.76	.630	16.00	.780	19.81
06	.3125-32	.530	13.46	.550	13.97	.670	17.02	.660	16.76	.790	20.27
11	.3750-32	.570	14.48	.560	14.22	.680	17.27	.680	17.27	.810	20.57
07	.4375-28	.637	16.18	.570	14.48	.690	17.53	.700	17.48	.830	21.08
08	.5000-28	.700	17.78	.580	14.73	.700	17.78	.740	18.80	.860	21.84
09	.5625-24	.758	19.25	.590	14.99	.710	18.03	.770	19.56	.890	22.61
10	.6250-24	.819	20.80	.610	15.49	.730	18.54	.800	20.32	.920	23.37
12	.6875-24	.896	22.76	.640	16.26	.750	19.05	.840	21.34	.970	24.64
13	.7500-20	.930	23.62	.660	16.76	.770	19.56	.880	22.35	1.020	25.91
14	.9375-20	1.137	28.88	.690	17.53	.800	20.32	.950	24.13	1.090	27.69
17	1.1875-18	1.387	35.23	.720	18.29	.830	21.08	1.010	25.65	1.160	29.46

STRAIGHT ENTRY ROTATABLE COUPLING 2M440MS135



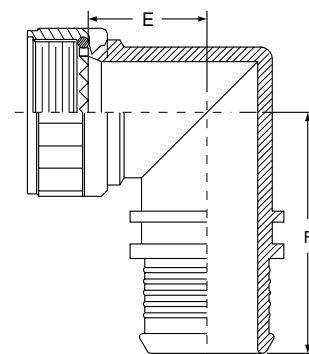
CABLE ENTRY							
Cable Entry Code	H Dia.		J Dia.		K Dia.		Use With Size Codes
	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38	
02	.125	3.18	.164	4.17	.266	6.76	05-14
03	.188	4.78	.227	5.77	.329	8.36	05-14
04	.250	6.35	.289	7.34	.391	9.93	06-14
05	.312	7.92	.351	8.92	.453	11.51	07-14
06	.375	9.53	.414	10.52	.516	13.11	07-14
07	.438	11.13	.477	12.12	.579	14.71	08-14
08	.500	12.70	.539	13.69	.641	16.28	09-14
09	.562	14.27	.601	15.27	.703	17.86	10-14
10	.625	15.88	.664	16.87	.766	19.46	12-14
11	.688	17.48	.727	18.47	.829	21.06	14
12	.750	19.05	.789	20.04	.891	22.63	14
13	.812	20.62	.851	21.62	.953	24.21	14
14	.875	22.23	.914	23.22	1.016	25.81	14

45° ENTRY ROTATABLE COUPLING 2M440MK135



CONNECTOR SHELL SIZE			
Size Code	A Threads	Shell Size	
		Series 2M801, 2M803, 2M804	Series 2M805
05	.2500-32 UNEF-2B	5	
06	.3125-32 UNEF-2B	6	
11	.3750-32 UNEF-2B		8
07	.4375-28 UNEF-2B	7	9
08	.5000-28 UNEF-2B	8	10
09	.5625-24 UNEF-2B	9	11
10	.6250-24 UNEF-2B	10	12
12	.6875-24 UNEF-2B	12, 13	
13	.7500-20 UNEF-2B		15
14	.9375-20 UNEF-2B	14, 15, 16, 17	18, 19
17	1.1875-18 UNEF-2B	21	23

90° ENTRY ROTATABLE COUPLING 2M440ML135



Accessories
Contacts Tools

2M Low-Profile Micro Band Adapter Order Info

2M440MS134

1.	2.	3.	4.	5.	6.
PART NUMBER	SERVICE CLASS	SIZE CODE	CABLE ENTRY SIZE	LENGTH	BAND OPTIONS
2M440MS134	-M	07	05	-6	K

Omit for no band supplied
K adapter is supplied with
Micro Band shield
termination band, pre-coiled

1. PART NUMBER	
Part #	Description
2M440MS134	Straight Entry

2. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	-C	Black Anodized (Non-conductive)	
	-M	Electroless Nickel	
	-NF	Olive Drab Cadmium	
	-MT	Durmalon (Ni PTFE)	
	-ZN	Olive Drab Zinc Nickel	
	-ZNU	Black Zinc Nickel	
STAINLESS STEEL	-Z1	Passivated	
	-ZM	Electroless Nickel	

3. SIZE CODE	
05	.2500-32
06	.3125-32
11	.3750-32
07	.4375-28
08	.5000-28
09	.5625-24
10	.6250-24
12	.6875-24
13	.7500-20
14	.9375-20
17	1.1875-18

4. CABLE ENTRY SIZE		
01	.094	05-06, 11
02	.125	05-07, 11
03	.175	05-08, 11
04	.234	06-08
05	.272	07-09
06	.312	07-10
07	.375	08-13
08	.438	09-13
09	.500	10-13
10	.562	12-14, 17
11	.625	14, 17
12	.688	14, 17
13	.750	14, 17
14	.812	14, 17

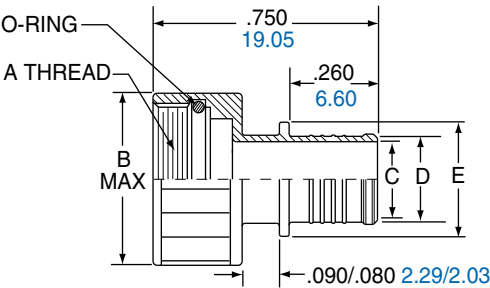
5. LENGTH	
Straight Entry 2M440MS135 Only	
Length Code	Length (inches)
-6	.750
-7	.875
-8	1.000
-9	1.125
-10	1.250
-11	1.375
-12	1.500
-13	1.625
-14	1.750
-15	1.875
-16	2.000
-17	2.125
-18	2.250
-19	2.375
-20	2.500
Specify Length in increments of .125 inches (3.18 mm.)	

SHELL SIZE					
Accessory Thread	Size Code	Series 2M801	Series 2M803	Series 2M804	Series 2M805
.2500-32 UNEF-2B	05	5	5	5	
.3125-32 UNEF-2B	06	6	6	6	
.3750-32 UNEF-2B	11				8
.4375-28 UNEF-2B	07	7	7	7	9
.5000-28 UNEF-2B	08	8	8	8	10
.5625-24 UNEF-2B	09	9	9	9	11
.6250-24 UNEF-2B	10	10	10	10	12
.6875-24 UNEF-2B	12	13	12	12	
.7500-20 UNEF-2B	13				15
.9375-20 UNEF-2B	14	16, 17	14, 15	14, 15	18, 19
1.1875-18 UNEF-2B	17	21			23

MATERIALS	
Nut, Adapter	Aluminum Alloy or 300 Series SST
Band	300 Series SST
O-Ring	Silicone Elastomer

2M Low-Profile Micro-Band Adapter Dimensions

2M440MS134



CONNECTOR SHELL SIZE			
Size Code	A Threads	B Max.	
		in.	mm.
05	.2500-32 UNEF-2B	.350	8.89
06	.3125-32 UNEF-2B	.415	10.54
11	.3750-32 UNEF-2B	.465	11.81
07	.4375-28 UNEF-2B	.530	13.46
08	.5000-28 UNEF-2B	.595	15.11
09	.5625-24 UNEF-2B	.650	16.51
10	.6250-24 UNEF-2B	.715	18.16
12	.6875-24 UNEF-2B	.785	19.94
13	.7500-20 UNEF-2B	.830	21.08
14	.9375-20 UNEF-2B	1.020	25.91
17	1.1875-18 UNEF-2B	1.280	32.51

CABLE ENTRY							
Cable Entry Code	C Dia.		D Dia.		E Dia.		Use With Size Codes
	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38	
01	.094	2.39	.133	3.38	.235	5.97	05-06
02	.125	3.18	.164	4.17	.266	6.76	05-07
03	.172	4.37	.211	5.36	.313	7.95	05-08
04	.234	5.94	.273	6.93	.375	9.53	06-08
05	.272	6.91	.311	7.90	.413	10.49	07-09
06	.312	7.92	.351	8.92	.453	11.51	07-10
07	.375	9.53	.414	10.52	.516	13.11	08-12
08	.438	11.13	.477	12.12	.579	14.71	09-12
09	.500	12.70	.539	13.69	.641	16.28	10-12
10	.562	14.27	.601	15.27	.703	17.88	12-14
11	.625	15.88	.664	16.87	.766	19.46	14
12	.688	17.48	.727	18.47	.829	21.06	14
13	.750	19.05	.789	20.04	.891	22.63	14
14	.812	20.62	.851	21.62	.953	24.21	14

CONNECTOR SHELL SIZE			
Size Code	A Threads	Shell Size	
		Series 2M801, 2M803, 2M804	Series 2M805
05	.2500-32 UNEF-2B	5	
06	.3125-32 UNEF-2B	6	
11	.3750-32 UNEF-2B		8
07	.4375-28 UNEF-2B	7	9
08	.5000-28 UNEF-2B	8	10
09	.5625-24 UNEF-2B	9	11
10	.6250-24 UNEF-2B	10	12
12	.6875-24 UNEF-2B	12, 13	
13	.7500-20 UNEF-2B		15
14	.9375-20 UNEF-2B	14, 15, 16, 17	18, 19
17	1.1875-18 UNEF-2B	21	23

2M Environmental Backshell Ordering Info

2M370MS37, MS038, MB038 and MA038



1.	2.	3.	4.	5.	6.
PART NUMBER	SERVICE CLASS	SIZE CODE	CABLE ENTRY SIZE	LENGTH	OPTIONS
2M370MS038	-M	07	05	-6	N

Omit for screw clamp with saddle bars
N Optional Compression Nut,
Low Profile

1. PART NUMBER	
Part #	Description
2M370MS038	Straight Entry Rotatable Coupling
2M370MS037	Straight Entry, Direct Coupling
2M370MB038	45° Entry
2M370MA038	90° Entry

2. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	-C	Black Anodized (Non-conductive)	
	-M	Electroless Nickel	
	-NF	Olive Drab Cadmium	
	-MT	Durmalon (Ni PTFE)	
	-ZN	Olive Drab Zinc Nickel	
	-ZNU	Black Zinc Nickel	
	-Z1	Passivated	
STAINLESS STEEL	-ZM	Electroless Nickel	

3. SIZE CODE	
05	.2500-32
06	.3125-32
11	.3750-32
07	.4375-28
08	.5000-28
09	.5625-24
10	.6250-24
12	.6875-24
13	.7500-20
14	.9375-20
17	1.1875-18

4. CABLE ENTRY SIZE		
Code	Max.	Min.
01	.109	.031
02	.172	.078
03	.234	.140
04	.297	.203
05	.359	.265
06	.422	.328
07	.484	.390
08	.547	.463
09	.609	.515

5. LENGTH	
Straight Entry 2M440MS. Only	
Length Code	Length (inches)
-5	.625
-6	.750
-7	.875
-8	1.000
-9	1.125
-10	1.250
-11	1.375
-12	1.500
-13	1.625
-14	1.750
-15	1.875
-16	2.000
-17	2.125
-18	2.250
-19	2.375
-20	2.500

Specify Length in increments of .125 inches (3.18 mm.)

SHELL SIZE					
Accessory Thread	Size Code	Series 2M801	Series 2M803	Series 2M804	Series 2M805
.2500-32 UNEF-2B	05	5	5	5	
.3125-32 UNEF-2B	06	6	6	6	
.3750-32 UNEF-2B	11				8
.4375-28 UNEF-2B	07	7	7	7	9
.5000-28 UNEF-2B	08	8	8	8	10
.5625-24 UNEF-2B	09	9	9	9	11
.6250-24 UNEF-2B	10	10	10	10	12
.6875-24 UNEF-2B	12	13	12	12	
.7500-20 UNEF-2B	13				15
.9375-20 UNEF-2B	14	16, 17	14, 15	14, 15	18, 19
1.1875-18 UNEF-2B	17	21			23

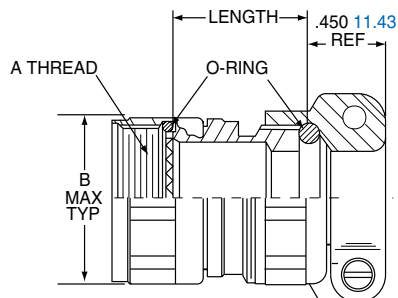
MATERIALS	
Adapter, Clamp, Nut and Saddles	Aluminum Alloy 6061-T6 or 300 Series Stainless Steel
O-Rings	Silicone Rubber
Hardware	300 Series Stainless Steel

2M Environmental Backshell

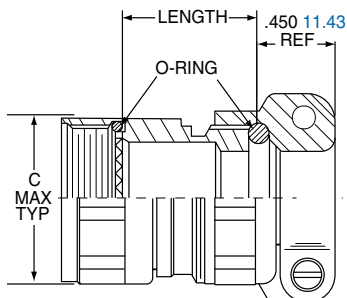
2M370MS037, MS038, MB038 and MA038



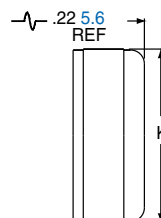
STRAIGHT ENTRY
ROTATABLE COUPLING
2M370MS038



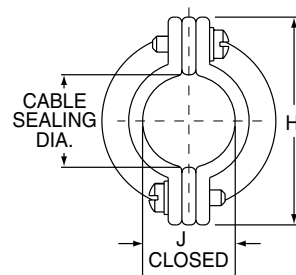
STRAIGHT ENTRY
DIRECT COUPLING
2M370MS037



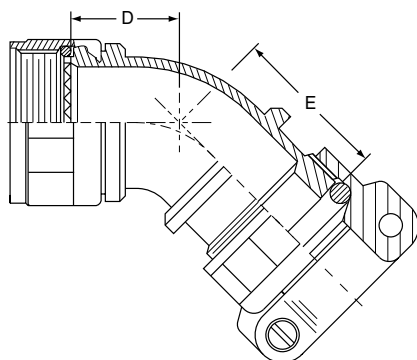
CLAMP STYLE N
COMPRESSION NUT



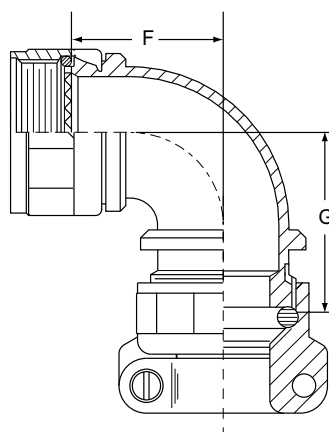
SADDLE CLAMP



45° ENTRY
ROTATABLE COUPLING
2M370MB038



90° ENTRY
ROTATABLE COUPLING
2M370MA038



Size Code	A Threads UNEF- 2B	B Max.		C Max.	
		in.	mm.	in.	mm.
05	.2500-32	.470	11.94	.350	8.89
06	.3125-32	.530	13.46	.415	10.54
11	.3750-32	.570	14.48	.465	11.68
07	.4375-28	.637	16.18	.530	13.46
08	.5000-28	.700	17.78	.595	15.11
09	.5625-24	.758	19.25	.650	16.51
10	.6250-24	.819	20.80	.715	18.16
12	.6875-24	.896	22.76	.785	19.94
13	.7500-20	.930	23.62	.830	21.08
14	.9375-20	1.137	28.88	1.020	25.91
17	1.1875-18	1.280	32.51	1.280	32.51

CABLE ENTRY																
Ca- ble Entry Code	Cable Seal- ing Dia.		D Max.		E Max.		F Max.		G Max.		H Dia.		J Dia.		K Dia.	
	Max.	Min.	In.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
											± .015	± 0.38	± .030	± 0.76	± .015	± 0.38
01	.109	.031	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.496	12.60	.110	2.79	.398	10.11
02	.172	.078	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.582	14.78	.170	4.32	.460	11.68
03	.234	.140	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.656	16.66	.230	5.84	.523	13.28
04	.297	.203	.629	15.98	.607	15.42	.786	19.96	.764	19.41	.726	18.44	.300	7.62	.585	14.86
05	.359	.265	.629	15.98	.607	15.42	.786	19.96	.764	19.41	.885	22.48	.360	9.14	.647	16.43
06	.422	.328	.655	16.64	.633	16.00	.848	21.54	.826	20.98	.952	24.18	.420	10.67	.710	18.03
07	.484	.390	.655	16.64	.633	16.00	.848	21.54	.826	20.98	1.018	25.86	.480	12.19	.773	19.63
08	.547	.453	.707	17.96	.685	17.40	.911	23.14	.889	22.68	1.084	27.53	.550	13.97	.835	21.21
09	.609	.515	.707	17.96	.685	17.40	.911	23.14	.889	22.58	1.148	29.16	.610	15.49	.897	22.76

2M EMI Backshell Ordering Information

2M380MS137, MS135, MB137 and MA137



1.	2.	3.	4.	5.	6.
PART NUMBER	SERVICE CLASS	SIZE CODE	CABLE ENTRY SIZE	LENGTH	OPTIONS
2M380MS135	-M	07	05	-6	N

Omit for screw clamp
with saddle bars
N Optional Compression Nut,
Low Profile

1. PART NUMBER	
Part #	Description
2M380MS137	Straight Entry Rotatable Coupling
2M380MS135	Straight Entry, Direct Coupling
2M380MB137	45° Entry
2M380MA137	90° Entry

2. SERVICE CLASS			
Material	Part #	Description	RoHS
ALUMINUM	-C	Black Anodized (Non-conductive)	
	-M	Electroless Nickel	
	-NF	Olive Drab Cadmium	
	-MT	Durmalon (Ni PTFE)	
	-ZN	Olive Drab Zinc Nickel	
	-ZNU	Black Zinc Nickel	
STAINLESS STEEL	-Z1	Passivated	
	-ZM	Electroless Nickel	

3. SIZE CODE	
05	.2500-32
06	.3125-32
11	.3750-32
07	.4375-28
08	.5000-28
09	.5625-24
10	.6250-24
12	.6875-24
13	.7500-20
14	.9375-20
17	1.1875-18

4. CABLE ENTRY SIZE	
Code	Saddle Clamp Dia. Fully Closed
01	.109
02	.172
03	.234
04	.297
05	.359
06	.422
07	.484
08	.547
09	.609

5. LENGTH	
Straight Entry 2M380MS Only	
Length Code	Length (inches)
-5	.625
-6	.750
-7	.875
-8	1.000
-9	1.125
-10	1.250
-11	1.375
-12	1.500
-13	1.625
-14	1.750
-15	1.875
-16	2.000
-17	2.125
-18	2.250
-19	2.375
-20	2.500

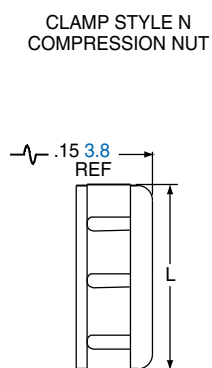
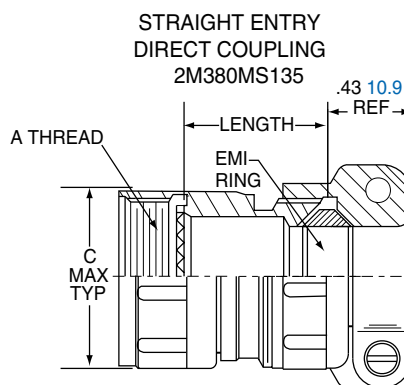
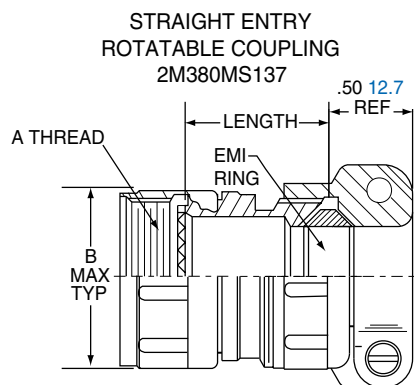
Specify Length in increments of .125 inches (3.18 mm.)

SHELL SIZE					
Accessory Thread	Size Code	Series 2M801	Series 2M803	Series 2M804	Series 2M805
.2500-32 UNEF-2B	05	5	5	5	
.3125-32 UNEF-2B	06	6	6	6	
.3750-32 UNEF-2B	11				8
.4375-28 UNEF-2B	07	7	7	7	9
.5000-28 UNEF-2B	08	8	8	8	10
.5625-24 UNEF-2B	09	9	9	9	11
.6250-24 UNEF-2B	10	10	10	10	12
.6875-24 UNEF-2B	12	13	12	12	
.7500-20 UNEF-2B	13				15
.9375-20 UNEF-2B	14	16, 17	14, 15	14, 15	18, 19
1.1875-18 UNEF-2B	17	21			23

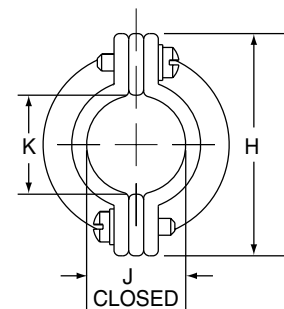
MATERIALS	
Adapter, Clamp, Nut and Saddles	Aluminum Alloy 6061-T6 or 300 Series Stainless Steel
O-Rings	Silicone Rubber
Hardware	300 Series Stainless Steel

2M EMI Backshell

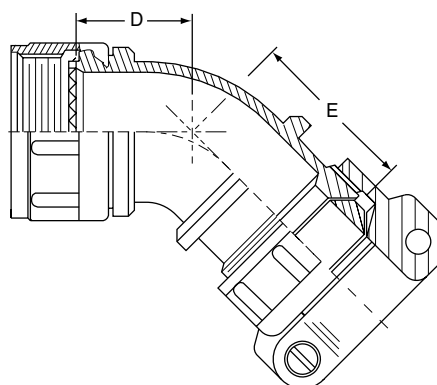
2M380MS137, MS135, MB138 and MA138



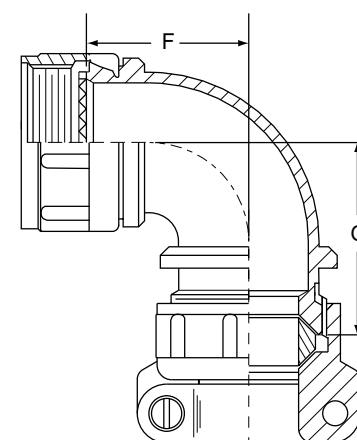
SADDLE CLAMP



45° ENTRY
ROTATABLE COUPLING
2M380MB137



90° ENTRY
ROTATABLE COUPLING
2M380MA137



Size Code	A Threads	B Max.		C Max.	
		in.	mm.	in.	mm.
05	.2500-32 UNEF-2B	.470	11.94	.350	8.89
06	.3125-32 UNEF-2B	.530	13.46	.415	10.54
11	.3750-32 UNEF-2B	.570	14.48	.465	11.68
07	.4375-28 UNEF-2B	.637	16.18	.530	13.46
08	.5000-28 UNEF-2B	.700	17.78	.595	15.11
09	.5625-24 UNEF-2B	.758	19.25	.650	16.51
10	.6250-24 UNEF-2B	.819	20.80	.715	18.16
12	.6875-24 UNEF-2B	.896	22.76	.785	19.94
13	.7500-20 UNEF-2B	.930	23.62	.830	21.08
14	.9375-20 UNEF-2B	1.137	28.88	1.020	25.91
17	1.1875-18 UNEF-2B	1.387	35.23	1.280	32.51

CABLE ENTRY

Cable Entry Code	D Max.		E Max.		F Max.		G Max.		H		J Dia. Closed		K Dia.		L Dia.	
	In.	mm.	in.	mm.	in.	mm.	in.	mm.	in. ± .015	mm. ± 0.38	in. ± .030	mm. ± 0.76	in. ± .015	mm. ± 0.38	in. ± .015	mm. ± 0.38
01	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.496	12.60	.110	2.79	.119	3.02	.398	10.11
02	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.582	14.78	.170	4.32	.182	4.62	.460	11.68
03	.603	15.32	.581	14.67	.724	18.39	.702	17.83	.656	16.66	.230	5.84	.244	6.20	.523	13.28
04	.629	15.98	.607	15.42	.786	19.96	.764	19.41	.726	18.44	.300	7.62	.307	7.80	.585	14.86
05	.629	15.98	.607	15.42	.786	19.96	.764	19.41	.885	22.48	.360	9.14	.369	9.37	.647	16.43
06	.655	16.64	.633	16.00	.848	21.54	.826	20.98	.952	24.18	.420	10.67	.432	10.97	.710	18.03
07	.655	16.64	.633	16.00	.848	21.54	.826	20.98	1.018	25.86	.480	12.19	.494	12.55	.773	19.63
08	.707	17.96	.685	17.40	.911	23.14	.889	22.68	1.084	27.53	.550	13.97	.557	14.15	.835	21.21
09	.707	17.96	.685	17.40	.911	23.14	.889	22.58	1.148	29.16	.610	15.49	.619	15.72	.897	22.76

2M Environmental EMI Backshell Ordering Info

2M390MS077, MS076, 2M390MB077 and 2M390MA077



1.	2.	3.	4.	5.	6.
PART NUMBER	SERVICE CLASS	SIZE CODE	CABLE ENTRY SIZE	LENGTH	OPTIONS
2M390MS076	-M	07	05	-6	N

Omit for screw clamp
with saddle bars
N Optional Compression Nut,
Low Profile

1. PART NUMBER		2. SERVICE CLASS				3. SIZE CODE	
Part #	Description	Material	Part #	Description	RoHS		
2M390MS077	Straight Entry Rotatable Coupling	ALUMINUM	-C	Black Anodized (Non-conductive)		05	.2500-32
2M390MS076	Straight Entry, Direct Coupling		-M	Electroless Nickel		06	.3125-32
2M390MB077	45° Entry Rotatable Coupling		-NF	Olive Drab Cadmium		11	.3750-32
2M390MA077	90° Entry Rotatable Coupling		-MT	Durmalon (Ni PTFE)		07	.4375-28
			-ZN	Olive Drab Zinc Nickel		08	.5000-28
			-ZNU	Black Zinc Nickel		09	.5625-24
		STAINLESS STEEL	-Z1	Passivated		10	.6250-24
			-ZM	Electroless Nickel		12	.6875-24
						13	.7500-20
						14	.9375-20
						17	1.1875-18

4. CABLE ENTRY SIZE		
Code	Max.	Min.
01	.109	.031
02	.172	.078
03	.234	.140
04	.297	.203
05	.359	.265
06	.422	.328
07	.484	.390
08	.547	.463
09	.609	.515
10	.672	.578
11	.734	.640

5. LENGTH	
Straight Entry 2M380MS Only	
Length Code	Length (inches)
-5	.625
-6	.750
-7	.875
-8	1.000
-9	1.125
-10	1.250
-11	1.375
-12	1.500
-13	1.625
-14	1.750
-15	1.875
-16	2.000
-17	2.125
-18	2.250
-19	2.375
-20	2.500

Specify Length in increments of .125 inches (3.18 mm.)

SHELL SIZE					
Accessory Thread	Size Code	Series 2M801	Series 2M803	Series 2M804	Series 2M805
.2500-32 UNEF-2B	05	5	5	5	
.3125-32 UNEF-2B	06	6	6	6	
.3750-32 UNEF-2B	11				8
.4375-28 UNEF-2B	07	7	7	7	9
.5000-28 UNEF-2B	08	8	8	8	10
.5625-24 UNEF-2B	09	9	9	9	11
.6250-24 UNEF-2B	10	10	10	10	12
.6875-24 UNEF-2B	12	13	12	12	
.7500-20 UNEF-2B	13				15
.9375-20 UNEF-2B	14	16, 17	14, 15	14, 15	18, 19
1.1875-18 UNEF-2B	17	21			23

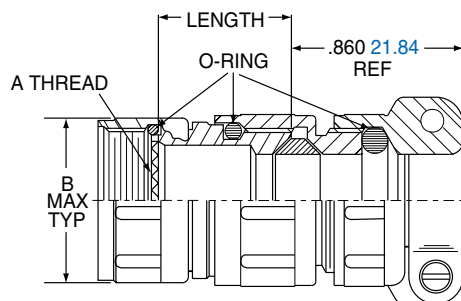
MATERIALS	
Adapter, Clamp, Nut and Saddles	Aluminum Alloy 6061-T6 or 300 Series Stainless Steel
O-Rings	Silicone Rubber
Hardware	300 Series Stainless Steel

2M Environmental EMI Backshell

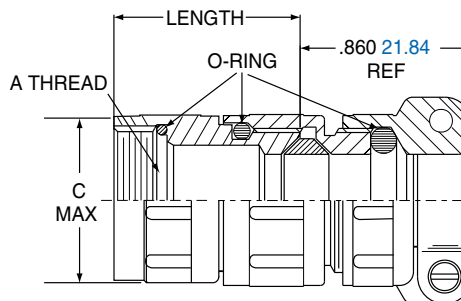
2M390MS077, MS076, MB077 and MA077



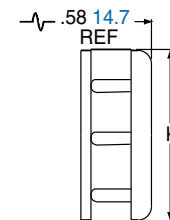
STRAIGHT ENTRY
ROTATABLE COUPLING
2M390MS077



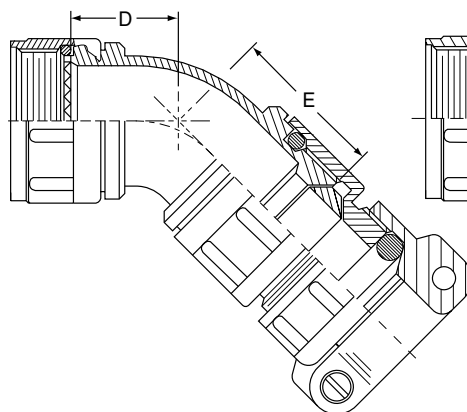
STRAIGHT ENTRY
DIRECT COUPLING
2M390MS076



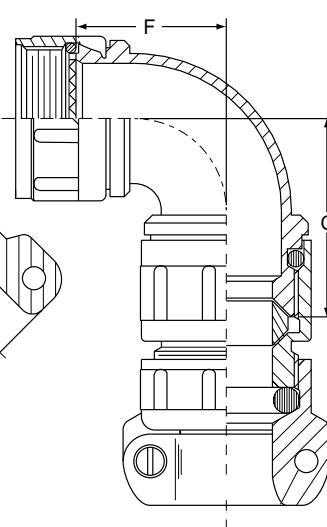
CLAMP STYLE N
COMPRESSION NUT



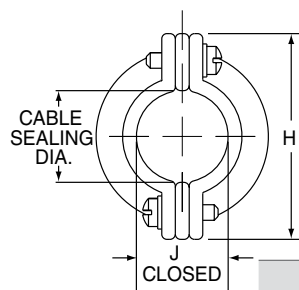
45° ENTRY
ROTATABLE COUPLING
2M390MB077



90° ENTRY
ROTATABLE COUPLING
2M390MA077



SADDLE CLAMP



Size Code	A Threads UNEF-2B	B Max.		C Max.	
		in.	mm.	in.	mm.
05	.2500-32	.470	11.94	.350	8.89
06	.3125-32	.530	13.46	.415	10.54
11	.3750-32	.570	14.48	.570	14.48
07	.4375-28	.637	16.18	.530	13.46
08	.5000-28	.700	17.78	.595	15.11
09	.5625-24	.758	19.25	.650	16.51
10	.6250-24	.819	20.80	.715	18.16
12	.6875-24	.896	22.76	.785	19.94
13	.7500-20	.930	23.62	.830	21.08
14	.9375-20	1.137	28.88	1.020	25.91
17	1.1875-18	1.387	35.23	1.280	32.51

CABLE ENTRY																
Ca- ble Entry Code	Cable Sealing Dia.		D Max.		E Max.		F Max.		G Max.		H		J Dia. Closed		K Dia.	
											in.	mm.	in.	mm.	in.	mm.
	Max.	Min.	In.	mm.	in.	mm.	in.	mm.	in.	mm.	± .010	mm. ± .025	± .030	mm. ± 0.76	± .010	mm. ± 0.25
01	.109	.031	.603	15.32	.681	14.67	.724	18.39	.802	20.37	.496	12.60	.110	2.79	.398	10.11
02	.172	.078	.603	15.32	.681	14.67	.724	18.39	.802	20.37	.582	14.78	.170	4.32	.460	11.68
03	.234	.140	.603	15.32	.681	14.67	.724	18.39	.802	20.37	.656	16.66	.230	5.84	.523	13.28
04	.297	.203	.629	15.98	.707	15.42	.786	19.96	.864	21.95	.726	18.44	.300	7.62	.585	14.86
05	.359	.265	.629	15.98	.707	15.42	.786	19.96	.864	21.95	.885	22.48	.360	9.14	.647	16.43
06	.422	.328	.655	16.64	.733	16.00	.848	21.54	.926	23.52	.952	24.18	.420	10.67	.710	18.03
07	.484	.390	.655	16.64	.733	16.00	.848	21.54	.926	23.52	1.018	25.86	.480	12.19	.773	19.63
08	.547	.453	.707	17.96	.785	17.40	.911	23.14	.989	25.12	1.084	27.53	.550	13.97	.835	21.21
09	.609	.515	.707	17.96	.785	17.40	.911	23.14	.989	25.12	1.148	29.16	.610	15.49	.897	22.78

2M Shorting Cap Backshell Ordering Info

2M340MS026

1.	2.	3.	4.	5.	6.	5.
PART NUMBER	SERVICE CLASS	ATTACHMENT TYPE	SIZE CODE	LENGTH	ATTACHMENT CODE	LENGTH
2M340MS026	-M	-G	07	-4	02	-5

Omit for attachment Type N
(No Attachment) Ex. "-5" equals
five inch length

1. PART NUMBER		2. SERVICE CLASS				3. ATTACHMENT TYPE		4. SIZE CODE	
Part #	Description	Material	Part #	Description	RoHS				
2M340MS026	Shorting Cap Backshell	ALUMINUM	-C	Black Anodized (Non-conductive)		-G	Nylon Rope	05	.2500-32
			-M	Electroless Nickel		-H	Stainless Steel Wire Rope, Teflon® Jacket	06	.3125-32
			-NF	Olive Drab Cadmium		-N	No Attachment	11	.3750-32
			-MT	Durmalon (Ni PTFE)		-S	Stainless Steel Sash Chain	07	.4375-28
			-ZN	Olive Drab Zinc Nickel		-SK	Nylon Rope With Slip Knot	08	.5000-28
			-ZNU	Black Zinc Nickel		-U	Stainless Steel Wire Rope, Polyurethane Jacket	09	.5625-24
			-Z1	Passivated				10	.6250-24
		STAINLESS STEEL	-ZM	Electroless Nickel				12	.6875-24
								13	.7500-20
								14	.9375-20
								17	1.1875-18

5. LENGTH	
Overall Length in Inches	
Length Code	Length (inches)
-4	.50
-5	.75
-6	1.00
-7	1.25
-8	1.50
-9	1.75
-10	2.00
-11	2.25
-12	2.50
-13	2.75
-14	3.00

6. ATTACHMENT CODE	
Omit for attachment Types N (No Attachment) and SK (Slip Knot)	
	SMALL RING 01 –.126 (3.20) I.D. 02 –.145 (3.68) I.D. 04 –.188 (4.78) I.D. 06 –.197 (5.00) I.D.
	LARGE RING 14 –.385 (9.78) I.D. 15 –.445 (11.30) I.D. 16 –.570 (14.48) I.D. 17 –.635 (16.13) I.D. 18 –.695 (17.65) I.D. 19 –.885 (22.48) I.D. 20 –1.070 (27.17) I.D.
	SPLIT RING 50 –.420 (10.67) I.D. 52 –.480 (12.19) I.D. 54 –.635 (16.13) I.D. 56 –.745 (18.92) I.D. 58 –.885 (22.48) I.D. 60 –1.010 (25.65) I.D. 64 –1.125 (28.58) I.D. 68 –1.345 (34.16) I.D.

MATERIALS	
Adapter, Clamp, Nut and Saddles	Aluminum Alloy 6061-T6 or 300 Series Stainless Steel
Hardware	300 Series SST
O-Ring	Silicone Elastomer

Assembly Instructions for
Protection Cap, see page 100.

2M Shorting Cap Backshell Dimensions

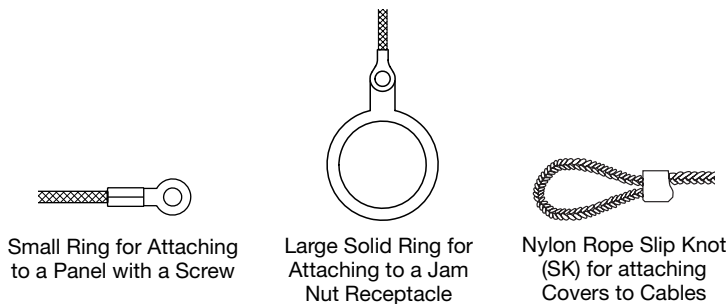
2M340MS026



ATTACHMENT OPTIONS

Dia. Code	Ring I.D.		Ring O. D.	
	in.	mm.	in.	mm.
	± .005	± .13	Max	Max
01	.126	8.89	.31	7.9
02	.145	10.54	.31	7.9
04	.188	11.81	.31	7.9
06	.197	13.46	.31	7.9
Dia. Code	Ring I.D.		Ring O. D.	
	in.	mm.	in.	mm.
	± .010	± .25	± .015	± .38
14	.385	9.78	.510	12.95
15	.445	11.30	.565	14.35
16	.570	14.48	.685	17.40
17	.635	16.13	.760	19.30
18	.695	17.65	.820	20.82
19	.885	22.48	1.010	25.65
20	1.070	27.17	1.195	30.35
21	1.135	28.83	1.250	31.75
22	1.210	30.73	1.312	33.32

55° to +100°C., black, flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter. Length includes .5" 13mm diameter loop.



DIMENSIONS

Size Code	A Max Dia.		B Threads
	in.	mm.	
05	.350	8.89	.2500-32 UNEF-2B
06	.415	10.54	.3125-32 UNEF-2B
11	.465	11.81	.3750-32 UNEF-2B
07	.530	13.46	.4375-28 UNEF-2B
08	.595	14.35	.5000-28 UNEF-2B
09	.650	16.51	.5625-24 UNEF-2B
10	.715	18.16	.6250-24 UNEF-2B
12	.785	19.94	.6875-24 UNEF-2B
13	.830	21.08	.7500-20 UNEF-2B
14	1.020	25.91	.9375-20 UNEF-2B
17	1.270	32.26	1.1875-18 UNEF-2B

LANYARD OPTIONS

	Nylon Rope	-55° to +100°C., black, very flexible, good abrasion resistance, good resistance to fuels, .120" 3mm diameter
	Polyurethane Coated Wire Rope	Black polyurethane over stainless steel rope, very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" 2mm diameter
	Teflon® Jacketed Wire Rope	Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter
	Sash Chain	Stainless steel, #8 chain, .240" 6mm diameter

2M Series Backshells and Accessories

2M809S060, 2M809A060 Shrink Boots

The 2M Series of Shrink Boots is intended for use with the 2M series of connectors supplied with Integral Backshells. All shrink boots are supplied pre-coated with Hi-Temperature, Hot-Melt adhesive that will seal the boot to both the cable and connector. The boots also contains a lip that will lock on to a groove on the connector for improved strain relief.

High Performance Elastomer - Lipped Shrink Boot

- Pre-coated with Adhesive
- Operating Temperature:
-70°C to +150°C
- Rated for 3000 hrs.
continuous operation
at +150°C
- Excellent resistance to fuels,
oils, and solvents

Material	Spec
Fluid Resistant Polymer	VG 95343 Part 6

Boot Size	Shell Size		Straight Shrink Boots Part Number	Right Angle Boots Part Number
	Series 2M801, 2M803, 2M804	Series 2M805	Pre-Coated with Hi-Temp Hot-Melt Adhesive	Pre-Coated with Hi-Temp Hot-Melt Adhesive
1	5	N/A	2M809S060-1G	2M809A060-1G
2	6, 7	8,9	2M809S060-2G	2M809A060-2G
3	8, 9	10,11	2M809S060-3G	2M809A060-3G
4	10, 12, 13	12, 15	2M809S060-4G	2M809A060-4G
5	14, 15, 16, 17	18, 19	2M809S060-5G	2M809A060-5G
6	21	23	2M809S060-6G	2M809A060-6G

Zero Halogen - Lipped Shrink Boots

- Low Smoke, Zero Halogen
- Toxicity Requirements:
Meets U.S. and EU standards
- Pre-coated with Adhesive
- Operating Temperature:
-30°C to +125°C
- Good resistance to fuels,
oils, and solvents

Material	Spec
Low Smoke Halogen Free	NAVSEA 5617649

Boot Size	Shell Size		Straight Shrink Boot Part Number	Right Angle Shrink Boots Part Number
	Series 2M801, 2M803, 2M804	Series 2M805	Pre-Coated with Hi-Temp Hot-Melt Adhesive	Pre-Coated with Hi-Temp Hot-Melt Adhesive
1	5	N/A	2M809S060-1H	2M809A060-1H
2	6, 7	8,9	2M809S060-2H	2M809A060-2H
3	8, 9	10,11	2M809S060-3H	2M809A060-3H
4	10, 12, 13	12, 15	2M809S060-4H	2M809A060-4H
5	14, 15, 16, 17	18, 19	2M809S060-5H	2M809A060-5H
6	21	23	2M809S060-6H	2M809A060-6H

Size 1 right angle supplied less lip see page 108

Series 2M Torque Values

Series 2M801, 2M803, 2M804, 2M805 Recommended Torque Values					
Shell Size Series 2M801, 2M803, 2M804	Shell Size Series 2M805	Backshell Tightening			
		In-LBs.		N-m	
		Min.	Max.	Min.	Max.
5	-	13	17	1.5	1.9
6	8	18	22	2.0	2.5
7	9	30	40	3.4	4.5
8	10	30	40	3.4	4.5
9	11	35	45	4.0	5.1
10	12	35	45	4.0	5.1
12, 13	15	35	45	4.0	5.1
14, 16	18	35	45	4.0	5.1
15, 17	19	35	45	4.0	5.1
21	23	35	45	4.0	5.1

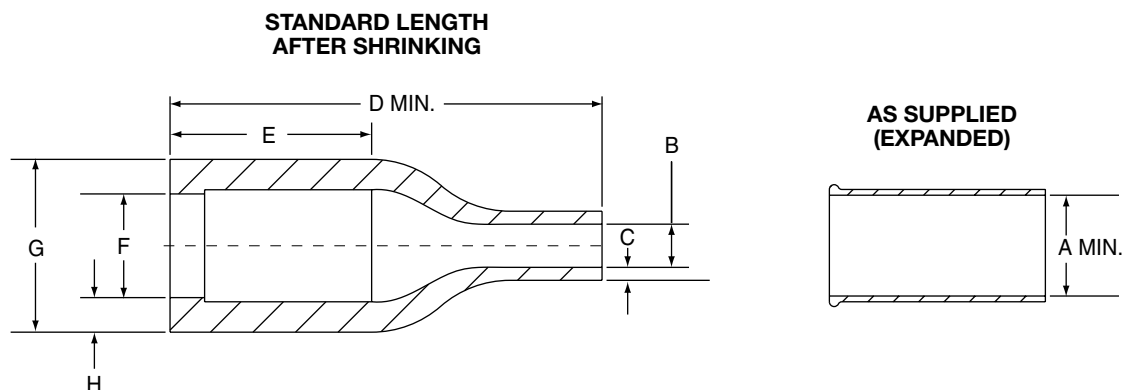


2M Backshells and Accessories

2M809S060, 2M809A060 Shrink Boots

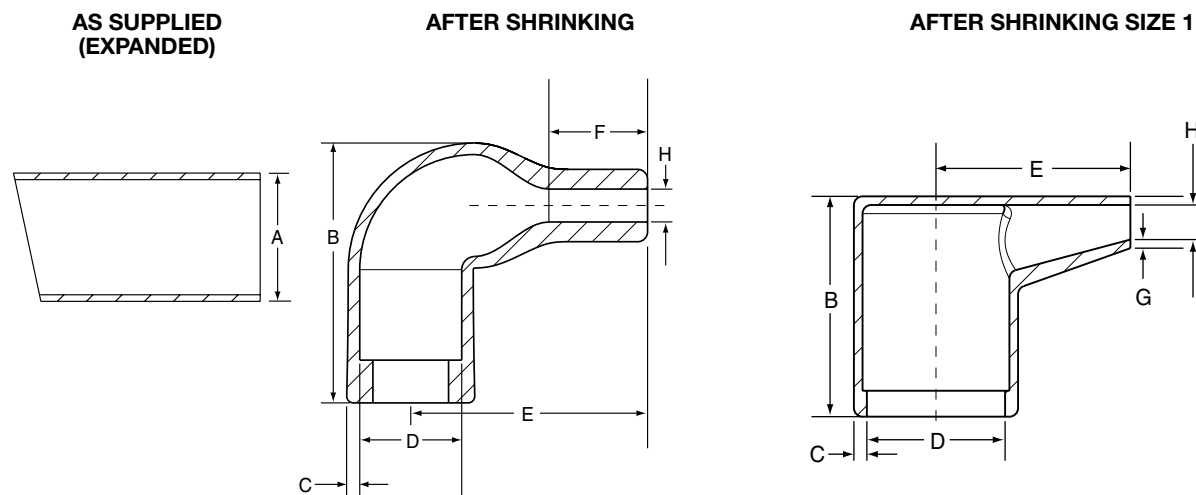


Lipped Straight Shrink Boots



Boot Size	A Min.		B Max.		C $\pm$ 20%		D $\pm$ 10%		E Ref.		F Max.		G Ref.		H $\pm$ 30%	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
1	.350	9.0	.075	1.91	.023	.584	.750	19.0	.350	9.0	.182	4.62	.300	7.6	.060	1.52
2	.650	16.5	.150	3.8	.050	1.27	1.000	25.4	.560	14.2	.238	6.05	.410	10.5	.090	2.29
3	.920	23.4	.220	5.6	.060	1.52	1.500	38.1	0.830	21.1	.338	8.59	.530	13.46	.100	2.54
4	1.120	28.4	.260	6.6	.070	1.78	2.160	54.9	1.090	27.7	.488	12.40	.700	17.8	.110	2.79
5	1.220	31.0	.280	7.1	.080	2.03	2.640	67.0	1.380	35.0	.628	15.95	.860	21.8	.120	3.05
6	1.680	42.7	.390	9.9	.080	2.03	4.080	103.6	2.220	56.4	.984	25.00	1.270	32.2	.143	3.63

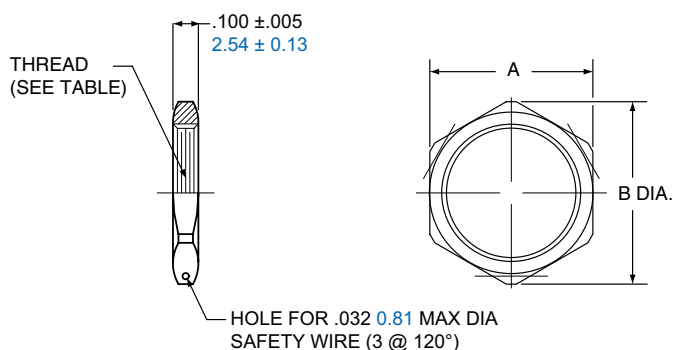
Lipped Right Angle Shrink Boots



Boot Size	A Min.		B Ref.		C $\pm$ 30%		D Max.		E $\pm$ 20%		F Ref.		G $\pm$ 20%		H Max	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
1	.240	6.0	.510	13.0	.040	1.0	.322	8.18	.410	10.5	N/A	N/A	.020	0.5	.080	2.0
2	.650	16.5	.790	20.1	.040	1.0	.310	7.9	.720	18.3	.300	7.62	.060	1.6	.100	2.5
3	.920	23.3	.900	22.9	.050	1.3	.410	10.4	.800	20.3	.230	5.8	.050	1.3	.220	5.6
4	1.120	28.5	1.120	28.5	.060	1.5	.560	14.2	1.170	29.8	.280	7.1	.060	1.5	.250	6.3
5	1.220	30.9	1.200	30.5	.070	1.8	.700	17.8	1.400	35.6	.340	8.6	.070	1.8	.280	7.1
6	1.680	42.6	1.700	43.2	.080	2.0	1.100	27.9	2.100	53.3	.620	15.7	.080	2.0	.380	9.7

2M Backshells and Accessories

Hex Jam Nuts for 2M Receptacles- 2M809-035



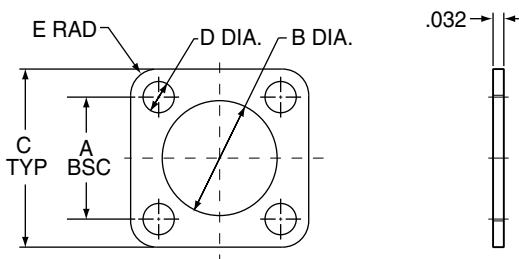
Thread Size Class 2B	Part Number						Dimensions			
	Aluminum				Stainless Steel		A Hex.		B Dia.	
	Electroless Nickel	Olive Drab Cadmium	Black Zinc Nickel	Nickel-PTFE	Passivated	Black Zinc-Cobalt	In.	mm.	In.	mm.
.2500-32 UNEF	2M809-035M01W	2M809-035NF01W	2M809-035ZNU01W	2M809-035MT01W	2M809-035Z101W	2M809-035ZC01W	.375	9.53	.403	10.24
.3125-28 UN	2M809-035M02W	2M809-035NF02W	2M809-035ZNU02W	2M809-035MT02W	2M809-035Z102W	2M809-035ZC02W	.4375	11.11	.475	12.07
.3125-32 UNEF	2M809-035M03W	2M809-035NF03W	2M809-035ZNU03W	2M809-035MT03W	2M809-035Z103W	2M809-035ZC03W	.4375	11.11	.475	12.07
.3750-28 UN	2M809-035M04W	2M809-035NF04W	2M809-035ZNU04W	2M809-035MT04W	2M809-035Z104W	2M809-035ZC04W	.500	12.70	.547	13.89
.4375-28 UNEF	2M809-035M05W	2M809-035NF05W	2M809-035ZNU05W	2M809-035MT05W	2M809-035Z105W	2M809-035ZC05W	.5625	14.29	.620	15.75
.5625-24 UNEF	2M809-035M06W	2M809-035NF06W	2M809-035ZNU06W	2M809-035MT06W	2M809-035Z106W	2M809-035ZC06W	.6875	17.46	.755	19.18
.5625-28 UN	2M809-035M16W	2M809-035NF16W	2M809-035ZNU16W	2M809-035MT16W	2M809-035Z116W	2M809-035ZC16W	.6875	17.46	.755	19.18
.5625-32 UN	2M809-035M07W	2M809-035NF07W	2M809-035ZNU07W	2M809-035MT07W	2M809-035Z107W	2M809-035ZC07W	.6875	17.46	.755	19.18
.6250-28 UN	2M809-035M08W	2M809-035NF08W	2M809-035ZNU08W	2M809-035MT08W	2M809-035Z108W	2M809-035ZC08W	.750	19.05	.830	21.08
.6875-28 UN	2M809-035M09W	2M809-035NF09W	2M809-035ZNU09W	2M809-035MT09W	2M809-035Z109W	2M809-035ZC09W	.8125	20.64	.898	22.81
.7500-28 UN	2M809-035M10W	2M809-035NF10W	2M809-035ZNU10W	2M809-035MT10W	2M809-035Z110W	2M809-035ZC10W	.875	22.23	.970	24.64
.8125-28 UN	2M809-035M17W	2M809-035NF17W	2M809-035ZNU17W	2M809-035MT17W	2M809-035Z117W	2M809-035ZC17W	.9375	23.81	1.030	26.16
.8750-28 UN	2M809-035M11W	2M809-035NF11W	2M809-035ZNU11W	2M809-035MT11W	2M809-035Z111W	2M809-035ZC11W	1.000	25.40	1.078	27.38
.9375-20 UNEF	2M809-035M12W	2M809-035NF12W	2M809-035ZNU12W	2M809-035MT12W	2M809-035Z112W	2M809-035ZC12W	1.0625	26.99	1.187	30.15
.9375-28 UN	2M809-035M13W	2M809-035NF13W	2M809-035ZNU13W	2M809-035MT13W	2M809-035Z113W	2M809-035ZC13W	1.0625	26.99	1.187	30.15
1.0000-28 UN	2M809-035M18W	2M809-035NF18W	2M809-035ZNU18W	2M809-035MT18W	2M809-035Z118W	2M809-035ZC18W	1.125	28.58	1.200	30.48
1.0625-20 UN	2M809-035M14W	2M809-035NF14W	2M809-035ZNU14W	2M809-035MT14W	2M809-035Z114W	2M809-035ZC14W	1.1875	30.16	1.264	32.11
1.1250-28 UN	2M809-035M15W	2M809-035NF15W	2M809-035ZNU15W	2M809-035MT15W	2M809-035Z115W	2M809-035ZC15W	1.250	31.75	1.325	33.66
1.1875-28 UN	2M809-035M19W	2M809-035NF19W	2M809-035ZNU19W	2M809-035MT19W	2M809-035Z119W	2M809-035ZC19W	1.3125	33.34	1.415	35.94
1.2500-28 UN	2M809-035M20W	2M809-035NF20W	2M809-035ZNU20W	2M809-035MT20W	2M809-035Z120W	2M809-035ZC20W	1.375	34.93	1.490	37.85
1.5000-28 UN	2M809-035M21W	2M809-035NF21W	2M809-035ZNU21W	2M809-035MT21W	2M809-035Z121W	2M809-035ZC21W	1.625	41.28	1.750	44.45

2M Backshells and Accessories

Flange Gaskets 2M809-108

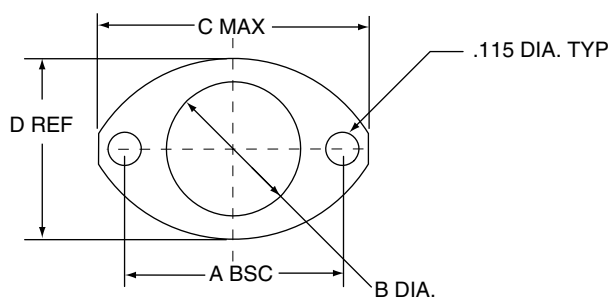


Flange Gaskets for Series 2M801 Receptacles



Shell Size	Part Number			A Bsc.		B Dia.		C Typ.		D Dia.		E Rad.	
	Fluorosilicone	Viton®	Conductive Fluorosilicone	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
5	2M809-108F11	2M809-108V11	2M809-108X11	.363	9.22	.342	8.69	.530	13.46	.093	2.36	.078	1.98
6	2M809-108F12	2M809-108V12	2M809-108X12	.423	10.74	.405	10.29	.590	14.99	.093	2.36	.078	1.98
7	2M809-108F13	2M809-108V13	2M809-108X13	.483	12.27	.467	11.86	.650	16.51	.093	2.36	.078	1.98
8	2M809-108F14	2M809-108V14	2M809-108X14	.545	13.84	.530	13.46	.712	18.08	.093	2.36	.078	1.98
9	2M809-108F16	2M809-108V16	2M809-108X16	.607	15.42	.560	14.22	.850	21.59	.125	3.18	.105	2.67
10	2M809-108F15	2M809-108V15	2M809-108X15	.670	17.02	.655	16.64	.890	22.61	.125	3.18	.105	2.67
13	2M809-108F17	2M809-108V17	2M809-108X17	.812	20.62	.842	21.39	1.030	26.16	.125	3.18	.105	2.67
16	2M809-108F18	2M809-108V18	2M809-108X18	.981	24.92	1.030	26.16	1.219	30.96	.125	3.18	.105	2.67
17	2M809-108F19	2M809-108V19	2M809-108X19	1.060	26.92	1.092	27.74	1.280	32.51	.125	3.18	.105	2.67
21	2M809-108F43	2M809-108V43	2M809-108X43	1.205	30.61	1.332	33.83	1.427	36.25	.125	3.18	.105	2.67

Flange Gaskets for Series 2M803 Receptacles

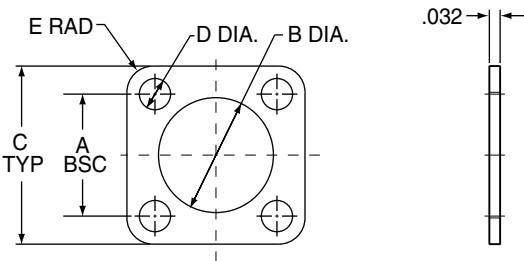


Shell Size	Part Number			A Bsc.		B Dia.		C Max.		D Ref.	
	Fluorosilicone	Viton®	Conductive Fluorosilicone	in.	mm.	in.	mm.	in.	mm.	in.	mm.
5	2M809-108F31	2M809-108V31	2M809-108X31	.513	13.03	.345	8.00	.710	18.03	.460	11.68
6	2M809-108F32	2M809-108V32	2M809-108X32	.598	15.19	.405	10.29	.795	20.19	.522	13.26
7	2M809-108F33	2M809-108V33	2M809-108X33	.708	17.98	.475	12.07	.900	22.86	.590	14.99
8	2M809-108F34	2M809-108V34	2M809-108X34	.964	24.51	.545	13.84	1.160	29.46	.670	17.02
9	2M809-108F35	2M809-108V35	2M809-108X35	1.017	25.83	.605	15.37	1.215	30.86	.721	18.31
10	2M809-108F36	2M809-108V36	2M809-108X36	1.101	37.97	.682	17.32	1.295	32.89	.795	20.19
12	2M809-108F37	2M809-108V37	2M809-108X37	1.204	30.58	.757	19.23	1.400	35.56	.874	22.20
14	2M809-108F38	2M809-108V38	2M809-108X38	1.280	32.51	.910	23.11	1.555	39.50	1.050	26.67
15	2M809-108F39	2M809-108V39	2M809-108X39	1.370	34.80	.970	24.64	1.640	41.66	1.150	29.21

2M Backshells and Accessories

Flange Gaskets 2M809-108

Flange Gaskets for Series 2M805 Receptacles



Shell Size	Part Number			A Bsc.		B Dia.		C Typ.		D Dia.		E Rad.	
	Fluorosilicone	Viton®	Conductive Fluorosilicone	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
8	2M809-108F20	2M809-108V20	2M809-108X20	.660	16.76	.530	13.46	.850	21.46	.093	2.36	.078	1.98
9	2M809-108F21	2M809-108V21	2M809-108X21	.723	18.36	.590	14.99	.913	23.19	.093	2.36	.078	1.98
10	2M809-108F22	2M809-108V22	2M809-108X22	.785	19.94	.660	16.76	.975	24.77	.093	2.36	.078	1.98
11	2M809-108F23	2M809-108V23	2M809-108X23	.848	21.54	.720	18.29	1.039	26.39	.093	2.36	.078	1.98
12	2M809-108F24	2M809-108V24	2M809-108X24	.909	23.09	.780	19.81	1.099	27.91	.093	2.36	.078	1.98
15	2M809-108F25	2M809-108V25	2M809-108X25	1.058	26.87	.970	24.64	1.288	32.72	.125	3.18	.105	2.67
18	2M809-108F26	2M809-108V26	2M809-108X26	1.255	31.88	1.160	29.46	1.475	37.47	.125	3.18	.105	2.67
19	2M809-108F27	2M809-108V27	2M809-108X27	1.327	33.71	1.220	30.99	1.537	39.04	.125	3.18	.105	2.67
23	2M809-108F28	2M809-108V28	2M809-108X28	1.570	39.88	1.458	37.03	1.797	45.64	.125	3.18	.105	2.67

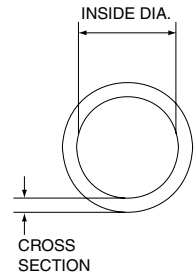
2M Backshells and Accessories

O-Rings 2M809-109



O-Rings Series 2M801 Jam Nut Receptacles

Shell Size	Part Number				Inside Dia.		Cross-Section	
	Fluorosilicone	EPDM	Conductive Silicone Cho-Seal 1285	Conductive Fluoro-Silicone Cho-Seal 1298	in.	mm.	in.	mm.
5	2M809-054-05F	2M809-054-05E	249-003-2M801-05B	249-003-2M801-05C	.395	10.03	.048	1.22
6	2M809-054-06F	2M809-054-06E	249-003-2M801-06B	249-003-2M801-06C	.458	11.63	.048	1.22
7	2M809-054-07F	2M809-054-07E	249-003-2M801-07B	249-003-2M801-07C	.595	15.11	.048	1.22
8	2M809-054-08F	2M809-054-08E	249-003-2M801-08B	249-003-2M801-08C	.595	15.11	.048	1.22
9	2M809-054-09F	2M809-054-09E	249-003-2M801-09B	249-003-2M801-09C	.660	16.76	.048	1.22
10	2M809-054-10F	2M809-054-10E	249-003-2M801-10B	249-003-2M801-10C	.710	18.03	.048	1.22
13	2M809-054-13F	2M809-054-13E	249-003-2M801-13B	249-003-2M801-13C	.900	22.86	.048	1.22
16	2M809-054-16F	2M809-054-16E	249-003-2M801-16B	249-003-2M801-16C	1.090	27.69	.048	1.22
17	2M809-054-17F	2M809-054-17E	249-003-2M801-17B	249-003-2M801-17C	1.135	28.83	.048	1.22
21	2M809-054-21F	2M809-054-21E	249-003-2M801-21B	249-003-2M801-21C	1.535	38.99	.048	1.22



O-Rings Series 2M804 Rear Mount Jam Nut Receptacles

Shell Size	Part Number				Inside Diameter		Cross Section	
	Fluorosilicone	EPDM	Conductive Silicone Cho-Seal 1285	Conductive Fluorosilicone Cho-Seal 1298	in.	mm.	in.	mm.
5	2M809-055-05F	2M809-055-05E	249-003-2M804-05B	249-003-2M804-05C	.489	12.42	.070	1.78
6	2M809-055-06F	2M809-055-06E	249-003-2M804-06B	249-003-2M804-06C	.525	13.34	.070	1.78
7	2M809-055-07F	2M809-055-07E	249-003-2M804-07B	249-003-2M804-07C	.630	16.00	.070	1.78
8	2M809-055-08F	2M809-055-08E	249-003-2M804-08B	249-003-2M804-08C	.676	17.17	.070	1.78
9	2M809-055-09F	2M809-055-09E	249-003-2M804-09B	249-003-2M804-09C	.739	18.77	.070	1.78
10	2M809-055-10F	2M809-055-10E	249-003-2M804-10B	249-003-2M804-10C	.801	20.35	.070	1.78
12	2M809-055-12F	2M809-055-12E	249-003-2M804-12B	249-003-2M804-12C	.926	23.52	.070	1.78
14	2M809-055-14F	2M809-055-14E	249-003-2M804-14B	249-003-2M804-14C	1.051	26.70	.070	1.78
15	2M809-055-15F	2M809-055-15E	249-003-2M804-15B	249-003-2M804-15C	1.114	28.30	.070	1.78

O-Rings Series 2M805 Jam Nut Receptacles

Shell Size	Part Number				Inside Diameter		Cross Section	
	Fluorosilicone	EPDM	Conductive Silicone Cho-Seal 1285	Conductive Fluorosilicone Cho-Seal 1298	in.	mm.	in.	mm.
8	2M809-150-08F	2M809-150-08E	249-003-2M805-08B	249-003-2M805-08C	.595	15.11	.048	1.22
9	2M809-150-09F	2M809-150-09E	249-003-2M805-09B	249-003-2M805-09C	.710	18.03	.048	1.22
10	2M809-150-10F	2M809-150-10E	249-003-2M805-10B	249-003-2M805-10C	.710	18.03	.048	1.22
11	2M809-150-11F	2M809-150-11E	249-003-2M805-11B	249-003-2M805-11C	.785	19.94	.048	1.22
12	2M809-150-12F	2M809-150-12E	249-003-2M805-12B	249-003-2M805-12C	.900	22.86	.048	1.22
15	2M809-150-15F	2M809-150-15E	249-003-2M805-15B	249-003-2M805-15C	1.030	26.16	.048	1.22
18	2M809-150-18F	2M809-150-18E	249-003-2M805-18B	249-003-2M805-18C	1.200	30.48	.048	1.22
19	2M809-150-19F	2M809-150-19E	249-003-2M805-19B	249-003-2M805-19C	1.250	31.75	.048	1.22
23	2M809-150-23F	2M809-150-23E	249-003-2M805-23B	249-003-2M805-23C	1.535	38.99	.048	1.22