

INCH-POUND

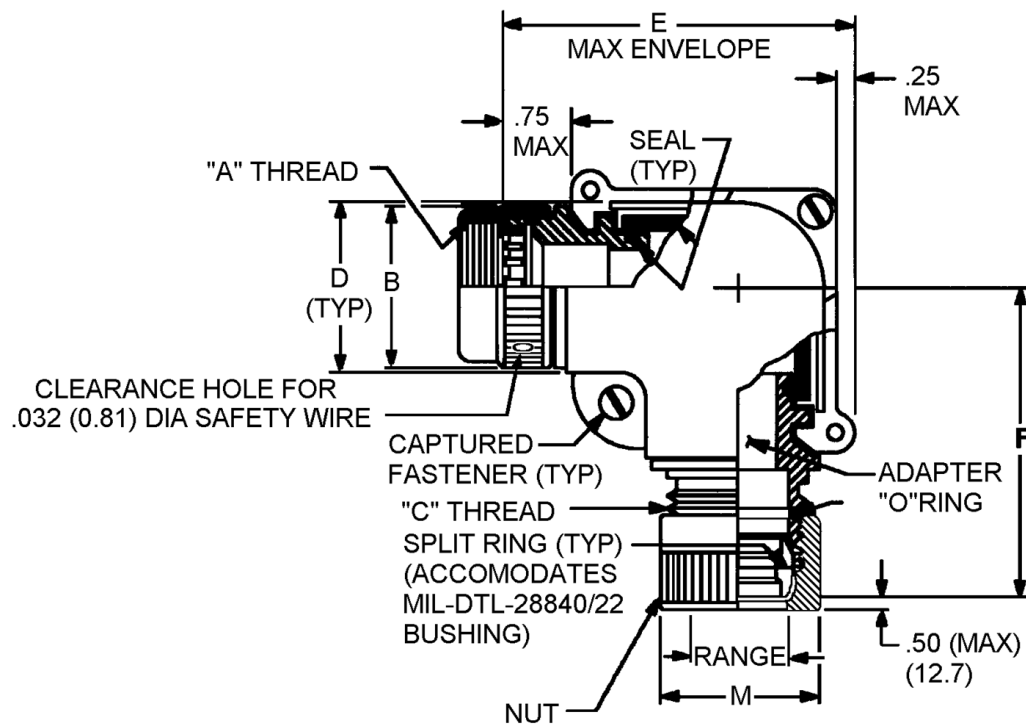
MIL-DTL-28840/25D
w/AMENDMENT 2
03 March 2021
SUPERSEDING
MIL-DTL-28840/25D
w/AMENDMENT 1
1 July 2019

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, CIRCULAR, THREADED, HIGH SHOCK,
HIGH DENSITY, SHIPBOARD, BACKSHELL, 90 DEGREE, METAL CONDUIT
FOR EMI SHIELDING

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification sheet and MIL-DTL-28840.



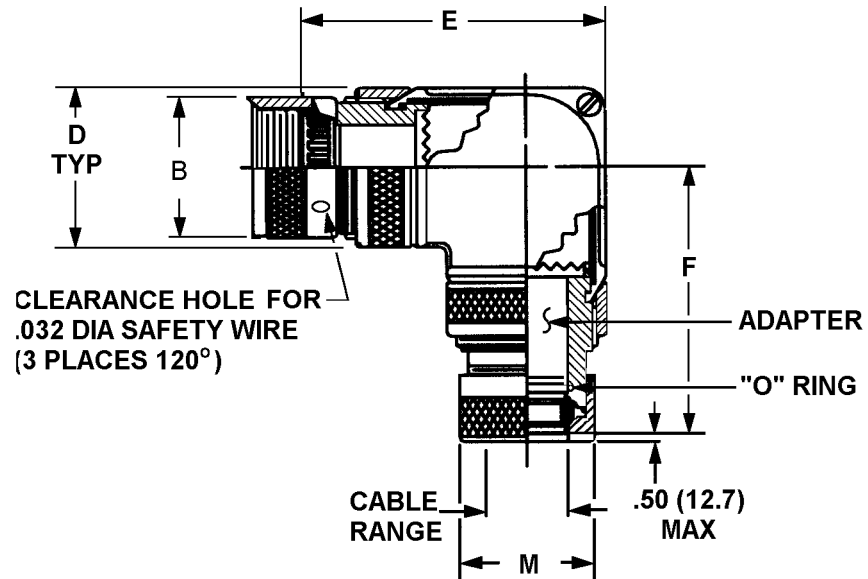
STYLE A

(FOR MIL-DTL-28804/4-***A PLAIN CONDUIT)

FIGURE 1. Dimensions and configurations.



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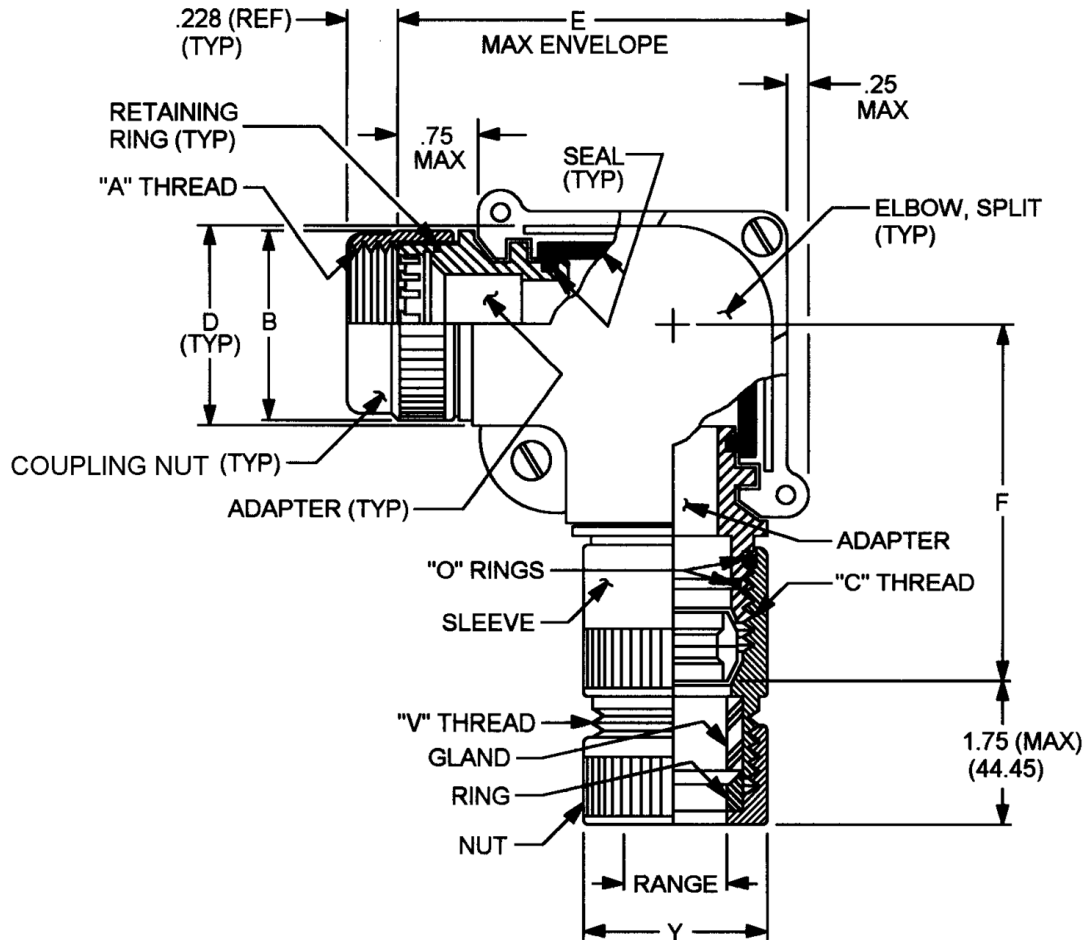


ALTERNATE STYLE A

(FOR MIL-DTL-28804/4-***A PLAIN CONDUIT)

FIGURE 1. Dimensions and configurations - Continued.

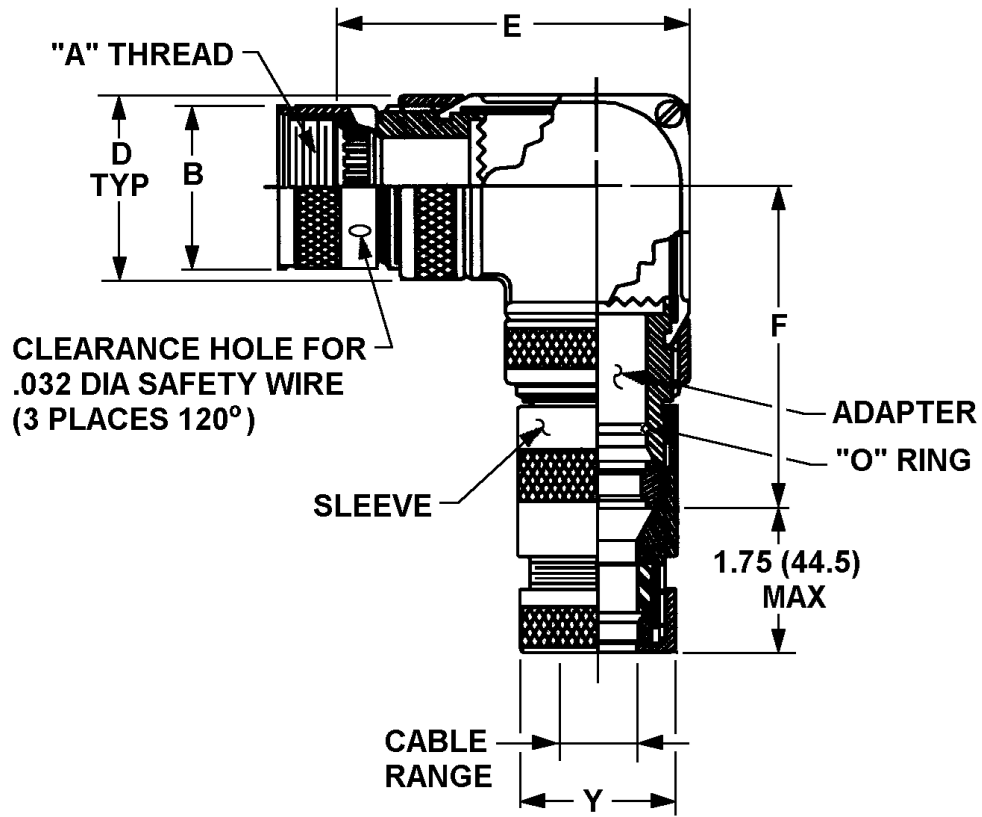
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STYLE B

(FOR MIL-DTL-28804/4-**B JACKET CONDUIT)

FIGURE 1. Dimensions and configurations - Continued.



ALTERNATE STYLE B

(FOR MIL-DTL-28804/4-**B JACKET CONDUIT)

FIGURE 1. Dimensions and configurations - Continued.

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Dash no.	Designator (see note 1)	A thread class 2B	B dia max	C thread class 2
1	A (11)	.750-20UNEF	1.028 (26.11)	.875-20UNEF
2	B (13)	.875-20UNEF	1.141 (28.98)	.875-20UNEF
3				1.000-20UNEF
4	C (15)	1.000-20UNEF	1.263 (32.08)	.875-20UNEF
5				1.000-20UNEF
6				1.125-18UNEF
7				1.250-18UNEF
8	D (17)	1.125-18UNEF	1.387 (35.23)	1.125-18UNEF
9				1.250-18UNEF
10				1.625-18UNEF
11	E (19)	1.250-18UNEF	1.513 (38.43)	1.125-18UNEF
12				1.250-18UNEF
13				1.625-18UNEF
14	F (23)	1.438-18UNEF	1.703 (43.26)	1.250-18UNEF
15				1.625-18UNEF
16				1.875-18UNS
17	G (25)	1.562-18UNEF	1.825 (46.35)	1.250-18UNEF
18				1.625-18UNEF
19				1.875-18UNS
20				2.125-16UN
21	H (29)	1.875-16UN	2.143 (54.43)	1.875-18UNS
22				2.125-16UN
23	J (33)	2.062-16UNS	2.329 (59.16)	2.125-16UN
24				2.750-16UN
25	A (11)	.750-20UNEF	1.028 (16.19)	.875-20UNEF

FIGURE 1. Dimensions and configurations - Continued.

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Dash no.	Designator (see note 1)	D dia max	Sealing range		Conduit size MIL-DTL-28840/4	E max dim
			max	min		
1	A (11)	1.031 (26.19)	.63 (16.0)	.50 (12.7)	03	2.36 (59.9)
2	B (13)		.63 (16.0)	.50 (12.7)	03	
3			.75 (19.1)	.63 (16.0)	04	
4	C (15)	1.281 (32.58)	.63 (16.0)	.50 (12.7)	03	2.56 (65.0)
5			.75 (19.1)	.63 (16.0)	04	
6			.88 (22.4)	.75 (19.1)	05	
7	D (17)	1.531 (38.89)	1.00 (25.4)	.88 (22.4)	06	2.67 (67.8)
8			.88 (22.4)	.75 (19.1)	05	
9			1.00 (25.4)	.88 (22.4)	06	
10			1.38 (35.1)	1.19 (30.2)	08	
11	E (19)	1.531 (38.89)	.88 (22.4)	.75 (19.1)	05	
12			1.00 (25.4)	.88 (22.4)	06	
13	F (23)	1.781 (45.24)	1.38 (35.1)	1.19 (30.2)	08	3.05 (77.5)
14			1.00 (25.4)	.88 (22.4)	06	
15			1.38 (35.1)	1.189 (30.2)	08	
16			1.63 (41.4)	1.44 (36.6)	10	
17	G (25)	1.781 (45.24)	1.00 (25.4)	.88 (22.4)	06	
18			1.38 (35.1)	1.19 (30.2)	08	
19			1.63 (41.4)	1.44 (36.5)	10	
20	H (29)	2.031 (51.59)	1.88 (47.8)	1.63 (41.4)	12	3.33 (84.6)
21			1.63 (41.4)	1.44 (36.6)	10	
22			1.33 (33.8)	1.63 (41.4)	12	
23	J (33)	2.531 (64.29)	1.88 (47.8)	1.63 (41.4)	12	3.70 (94.0)
24			2.38 (60.5)	2.13 (54.1)	16	
25	A (11)	1.031 (26.19)	.75 (19.1)	.63 (16.0)	04	2.36 (59.9)

FIGURE 1. Dimensions and configurations - Continued.

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Dash no.	Designator (see note 1)	F max dim	V thread class 2	M dia max	Y dia max
1	A (11)	3.50 (88.9)	1.000-20UNEF	1.12 (28.5)	1.19 (30.23)
2	B (13)		1.000-20UNEF	1.12 (28.5)	1.19 (30.23)
3			1.188-18UNEF	1.25 (31.8)	1.38 (35.1)
4	C (15)	3.69 (93.7)	1.000-20UNEF	1.12 (28.5)	1.19 (30.23)
5			1.188-18UNEF	1.25 (31.8)	1.38 (35.1)
6			1.438-18UNEF	1.43 (36.3)	1.63 (41.4)
7		3.81 (96.8)	1.750-18UNS	1.62 (41.2)	1.94 (49.3)
8	D (17)		1.438-18UNEF	1.43 (36.3)	1.63 (41.4)
9			1.750-18UNS	1.62 (41.2)	1.94 (49.3)
10			2.00-18UNS	1.81 (46.0)	2.19 (55.6)
11	E (19)	3.81 (96.8)	1.438-18UNEF	1.43 (36.3)	1.63 (41.4)
12			1.750-18UNS	1.62 (41.2)	1.94 (49.3)
13			4.19 (106.4)	2.00-18UNS	1.81 (46.0)
14	F (23)	1.750-18UNS		1.62 (41.2)	1.94 (49.3)
15		2.00-18UNS		1.81 (46.0)	2.19 (55.6)
16		2.250-18UN		2.18 (55.4)	2.44 (62.0)
17	G (25)	4.19 (106.4)	1.750-18UNS	1.62 (41.2)	1.94 (49.3)
18			2.00-18UN	1.81 (46.0)	2.19 (55.6)
19			2.250-18UN	2.18 (55.4)	2.44 (62.0)
20			4.50 (114.3)	2.500-16UN	2.56 (65.0)
21	H (29)	2.250-16UN		2.18 (55.4)	2.44 (62.0)
22		2.500-16UN		2.56 (65.0)	2.69 (68.3)
23	J (33)	4.43 (112.5)	2.500-16UN	2.56 (65.0)	2.69 (68.3)
24			3.00-16UN	3.06 (77.8)	3.19 (81.0)
25	A (11)	3.50 (88.9)	1.188-18UNEF	1.25 (31.8)	1.38 (35.1)

NOTES:

1. Shell sizes provided within parentheses are for information only and are not a part of the designator.
2. Dimensions are in inches.
3. Metric equivalents are given for information only.
4. Dimensions apply after plating.

FIGURE 1. Dimensions and configurations - Continued.

MIL-DTL-28840/25D
w/AMENDMENT 2

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Interface dimensions shall conform to MIL-DTL-28840.

Material and finish: See table I and MIL-DTL-28840. Elastomers, silicone rubber shall be in accordance with A-A-59588.

TABLE I. Material and finish.

Material and finish designator	Material	Finish
W	Aluminum alloy in accordance with ASTM B85/B85M, ASTM B26/B26M, ASTM B108/B108M, ASTM B209, ASTM B211, or ASTM B221	Cadmium plate, olive drab over electroless nickel <u>2/</u> <u>3/</u>
D	Corrosion resistant steel in accordance with ASTM A276, ASTM A473, or ASTM A580/A580M, type 316	Cadmium plate, black <u>1/</u> <u>2/</u> <u>3/</u>
F	Aluminum alloy in accordance with ASTM B85/B85M, ASTM B26/B26M, ASTM B108/B108M, ASTM B209, ASTM B211, or ASTM B221	Pure electro-deposited aluminum, non-reflective
L		Tin-zinc, non-reflective
S		Zinc nickel, non-reflective <u>3/</u>

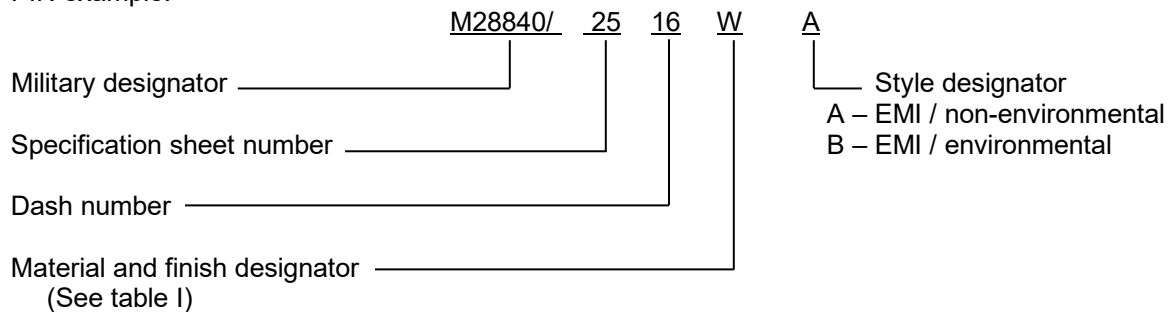
1/ Lock washers and telescoping screws shall be stainless steel and passivated in accordance with SAE-AMS2700.

2/ See restrictions.

3/ See application notes.

Marking: The backshell shall be identified with the manufacturer's name or trademark and the Part or Identifying Number (PIN).

PIN example:



QUALIFICATION: Two samples in each shell size for which qualification is desired shall be tested in accordance MIL-DTL-28840.

Qualification of MIL-DTL-28840/8 will qualify MIL-DTL-28840/25 by similarity for group 5 tests.

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RESTRICTIONS:

Material and finish designators W and D are inactive for NAVSEA new design, unless approved by NAVSEA. Designators W and D are inactive for aircraft new design. Designators W and D shall not be used in oxygen or potable water systems. Additional restrictions are listed in the MIL-DTL-28840.

APPLICATION NOTES:

Material and finish designators W and D have a hexavalent chromium conversion coat and are not recommended for Army ground systems. Finishes are extensively tested for fluid resistance in accordance with MIL-DTL-28840, including a water-glycol fluid in accordance with SAE-AMS1424. Reference ASTM MNL37, Fuels and Lubricants Handbook, for applications in which fluid compatibility with connector surface finish is a concern. Additional application notes are listed in MIL-DTL-28840.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL DTL-28840, this document references the following:

MIL-DTL-28840/4
MIL-DTL-28840/8
MIL-DTL-28840/22
A-A-59588
ASTM A276
ASTM A473
ASTM A580/A580M
ASTM B26/B26M
ASTM B85/B85M
ASTM B108/B108M
ASTM B209
ASTM B211
ASTM B221
ASTM MNL37
SAE-AMS2700
SAE-AMS1424

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CONCLUDING MATERIAL

Custodians:

Army - AT
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-2021-016)

Review activities:

Army – AV, MI

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.