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For high-performance sealing and strain relief, the perfect mate for a TE Connectivity molded part in a wiring application is a Raychem brand adapter.

TE offers a variety of adapters for applications in many industries, including aerospace, marine, and mass transit.

These adapters are:

- Available in many configurations to match applications
- Easy to install
- Ideal for high-reliability applications
- Kitted for customer convenience.

In this section we present Raychem brand spin-coupling adapters and Tinel-Lock adapters.

The Tinel-Lock adapter utilizes Raychem brand Tinel rings to terminate the overall shield to the adapter. The Tinel ring is a low-profile, high-strength, shape-memory-alloy shield-termination device available in many sizes to accommodate various entry sizes and shield configurations.

Tinel-Lock adapters are ideal for lightweight aerospace applications requiring repeated high-to-low temperature cycles.

Note: Users should independently evaluate the suitability of the product for their application. Before ordering, check with TE for most current data.

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Adapter Selection

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Definitions

Introduction

For high-performance sealing and strain relief, the perfect mate for a TE molded part in a wiring application is a Raychem brand adapter.

TE offers a variety of Raychem brand adapters for applications in many industries, including aerospace, marine, and mass transit.

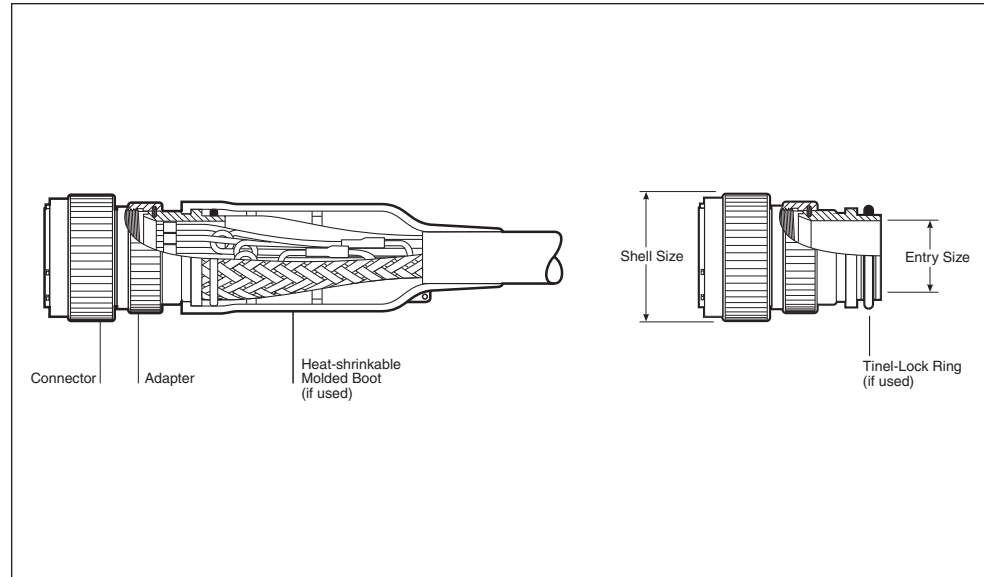
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The Tinel-Lock adapter utilizes TE Tinel ring to terminate the overall shield to the adapter. The Tinel ring is a low-profile, high-strength, shape-memory-alloy shield-termination device available in many sizes to accommodate various entry sizes and shield configurations.

Tinel-Lock adapters are ideal for lightweight aerospace applications requiring repeated high-to-low temperature cycles.



Adapter Type

TE offers four adapter types: solid (sometimes called “fixed”), spin-coupling, braided, and Tinel-Lock. Each is designed to offer a suitable interface between a connector and a heat-shrinkable molded part.

Adapter Code

A numerical code is used to identify connectors with similar adapter interfaces. This code is used to determine the adapter family and part number.

Adapter Part Number

The part number is the sequence of numbers and letters that describes the adapter family (or series), size, material, finish, and modifications. The part numbering system is explained on pages 6-17 and 6-18.

Adapter Family

TE offers several families (or series) of Raychem adapter products. Each Raychem adapter part number begins with an alphanumeric prefix denoting the Raychem product family.

Entry Size

Entry size is the diameter of the hole through which the cable enters into the adapter. For example, the 08 entry is 12.7 [0.5]. Entry sizes are specified on braided and Tinel-Lock adapters only.

Ring Designator

This is a two-letter code that is part of each Tinel-Lock adapter part number. It specifies the size of the Tinel-Lock ring suited to specific types of cable braid.

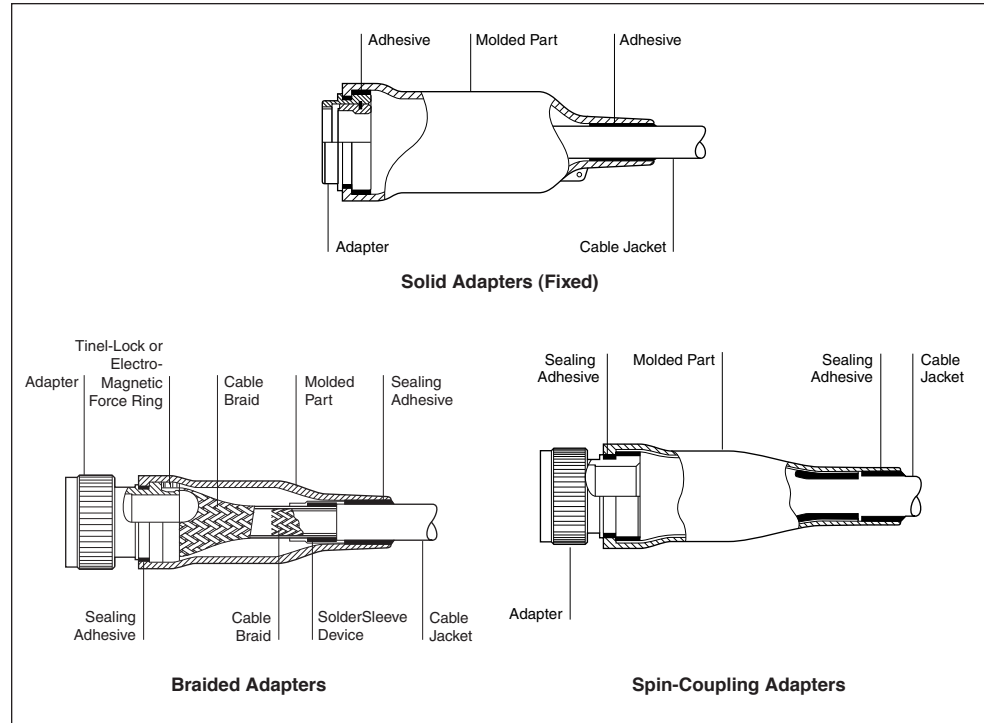
Shell Size

This is the size of a connector as specified by the connector manufacturer. It is normally a two-digit number between 08 and 24, although certain connectors are obtainable in either larger or smaller sizes and some use letter codes.

Order Number

This is a two-digit number that specifies the size of the adapter that will mate to the corresponding shell size of a connector. The order number is frequently the same as the connector shell size, but should be checked by reference to the appropriate product page(s) in this catalog.

Types of Adapters



Adapter Types

TE offers several types of Raychem brand adapters for unscreened and screened termination systems. The choice is largely dependent upon the screening level required and the braid termination method.

The four principal adapter types are:

- Solid (fixed)
- Spin-Coupling
- Braided
- Tinel-Lock

Solid Adapters (Fixed)

Solid adapters are designed for use where no access is required; for example, when potting is necessary or a lower space profile is needed.

These adapters have a boot groove to accommodate a lipped heat-shrinkable boot. Repair cannot be made without removing the boot.

Spin-Coupling Adapters

Spin-coupling adapters are two-part components that have a rotatable coupling nut and a grooved body designed to accommodate lipped-type heat-shrinkable boots.

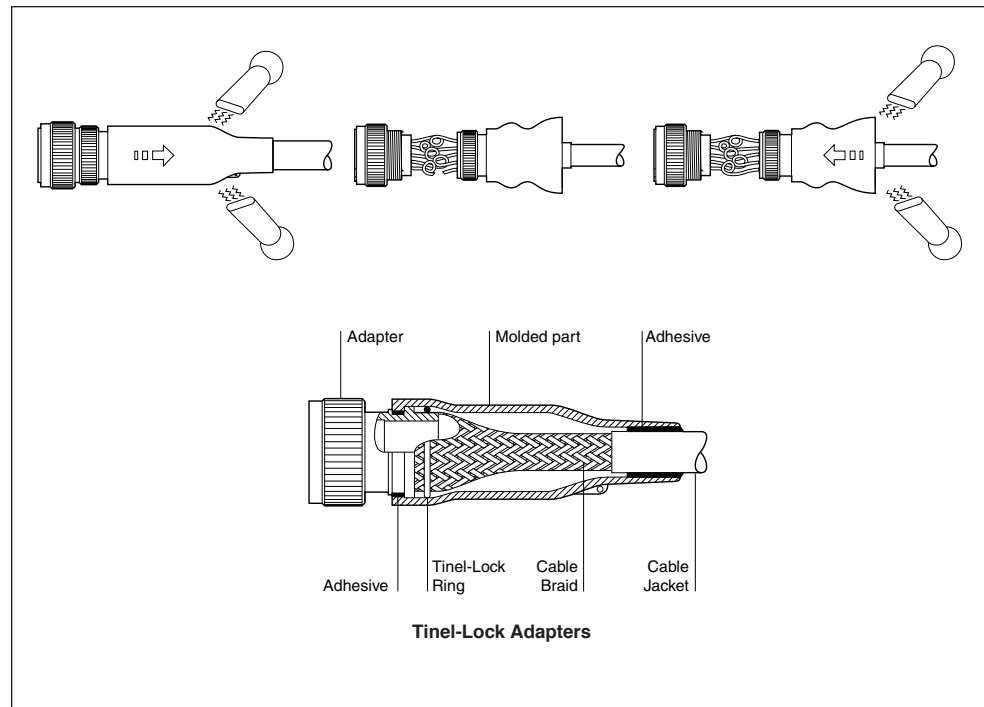
Spin-couplings with an appropriate molded part are used for environmental protection and strain relief of unscreened cable terminations. Cable repairs can be made without damaging the boot.

Braided Adapters

These are spin-coupling adapters that have a short length of tubular braided shield attached to the rear of the adapter. The braid is constructed from tinned copper wire and has a handling characteristic that enables it to be pulled down onto a wide range of cable diameters. This allows a standard entry size to be used with most cable sizes.

The shield is terminated to the cable braid using a SolderSleeve device, which provides screen continuity through to the connector. Straight, 45°, and 90° configurations are available.

Types of Adapters (Continued)



Tinel-Lock Adapters

This termination system consists of a modified spin-coupling adapter with a Tinel-Lock ring. The Tinel-Lock ring is made from a special shape memory metal that shrinks uniformly when heated (see Application Tooling, section 10).

The Tinel-Lock ring is used to terminate copper cable braid directly onto the rear of the adapter. The adapter entry size and ring designator must be selected to suit the cable diameter and braid type.

The resulting 360° termination withstands severe shock, vibration, temperature cycling, and corrosion. Straight, 45°, and 90° configurations are available.

Roll-back Repair with Adapters

More than 85 percent of cable repairs are made within 75 mm [3.0] of the connectors—usually because of a broken pin or wire. By reheating the heat-shrinkable boot and unscrewing the adapter coupling nut, the boot can be “rolled back,” providing access to the rear of the connector for repair. This technique is applicable to spin-coupling, shielded, and Tinel-Lock adapters.

Adapter Selection Process

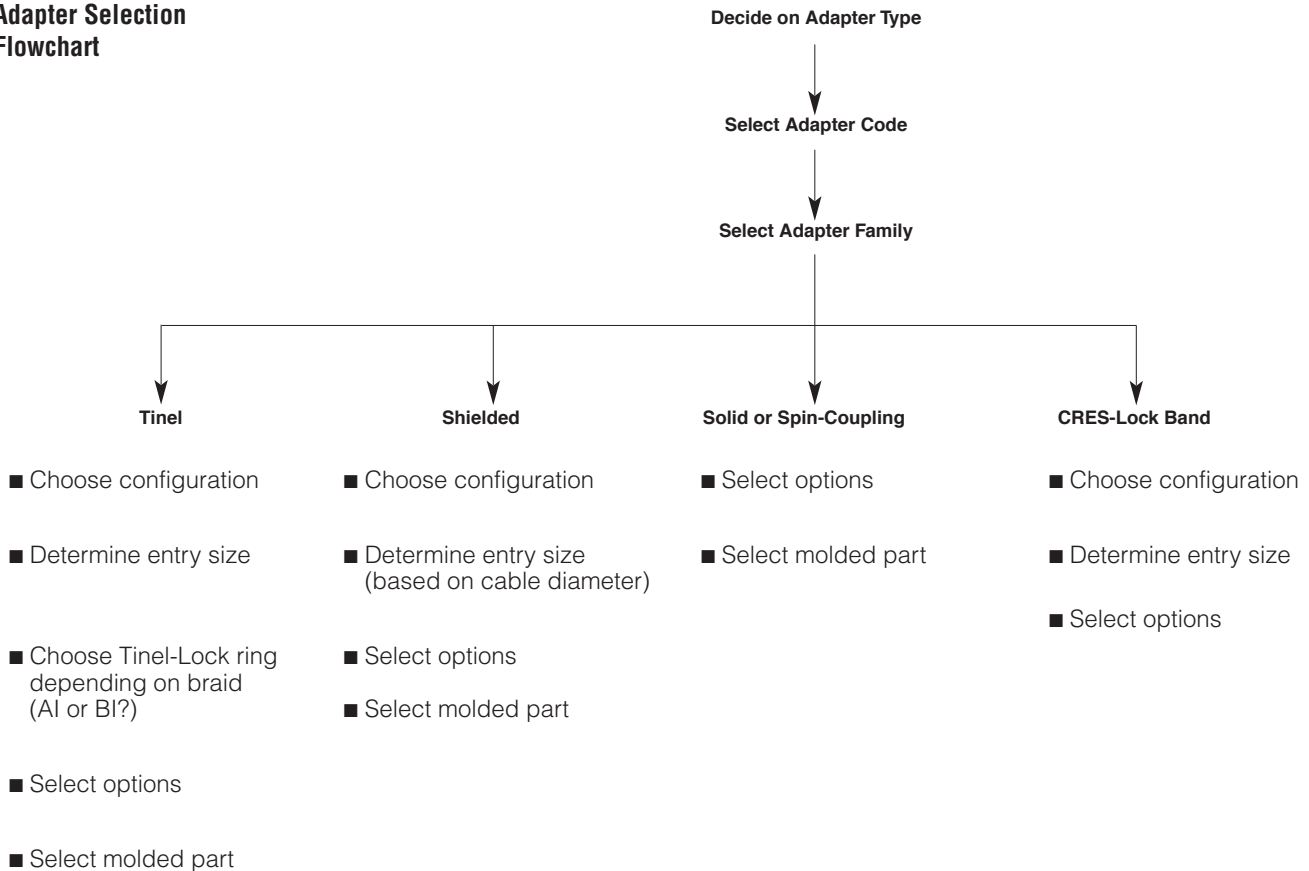
Step-by-Step Selection Process

Selecting an adapter for your application involves a five-step process:

1. From the connector number, determine:
 - Order number (shell size)
 - Material
 - Plating
2. Decide what adapter type you need for the connector.
3. Determine the connector code for that adapter type. (Use Table A, B, or C on pages 6-6 to 6-15).
4. Determine the adapter family for that connector code. (Use Table D on page 6-16).
5. Build the adapter part number. (See page 6-17).

The chart below will lead you through these steps.

Adapter Selection Flowchart



Adapter Code

Table A. Adapter Code by Military Part Number

Selecting the Adapter Code

Tables A, B, and C that follow provide adapter codes for typical connectors.

If you know the military part number for the connector, you can obtain the adapter code from Table A that begins on this page.

If you know the manufacturer's prefix for the connector, you can obtain the adapter code from Table B that begins on page 6-10.

If you know the connector specification, you can obtain the adapter code from Table C on page 6-15

Military Part No.	Connector Specification	Series/Class	Adapter Code
D38999/20	MIL-C-38999	Series III: Class C, F, K, W	40
D38999/24	MIL-C-38999	Series III: Class C, F, K, W	40
D38999/26	MIL-C-38999	Series III: Class C, F, K, W	40
D38999/40	MIL-C-38999	Series IV: Class C, F, W	40
D38999/42	MIL-C-38999	Series IV: Class C, F, W	40
D38999/44	MIL-C-38999	Series IV: Class C, F, W	Contact TE
D38999/46	MIL-C-38999	Series IV: Class F, W	40
D38999/47	MIL-C-38999	Series IV: Class C, W	40
M28840/10	MIL-C-28840	Class D, DS	30
M28840/11	MIL-C-28840	Class D, DS	30
M28840/14	MIL-C-28840	Class D, DS	30
M28840/16	MIL-C-28840	Class D, DS	30
M81511/01	MIL-C-81511	Series 2: Class A, E, F	61
M81511/03	MIL-C-81511	Series 2: Class A, E, F	61
M81511/05	MIL-C-81511	Series 2: Class A, E, F	61
M81511/06	MIL-C-81511	Series 2: Class A, E, F	61
M81511/21	MIL-C-81511	Series 1: Class A, E, F	61
M81511/23	MIL-C-81511	Series 1: Class A, E, F	61
M81511/25	MIL-C-81511	Series 1: Class A, E, F	61
M81511/26	MIL-C-81511	Series 1: Class A, E, F	61
M81511/31	MIL-C-81511	Series 2: Class C, P, T	61
M81511/32	MIL-C-81511	Series 2: Class C, P, T	61
M81511/33	MIL-C-81511	Series 2: Class C, P, T	61
M81511/34	MIL-C-81511	Series 2: Class C, P, T	61
M81511/35	MIL-C-81511	Series 1: Class C, P, T	61
M81511/36	MIL-C-81511	Series 1: Class C, P, T	61
M81511/37	MIL-C-81511	Series 1: Class C, P, T	61
M81511/38	MIL-C-81511	Series 1: Class C, P, T	61
M81511/41	MIL-C-81511	Series 3: Class A, E, F	61
M81511/45	MIL-C-81511	Series 3: Class A, E, F	61
M81511/46	MIL-C-81511	Series 3: Class A, E, F	61
M81511/49	MIL-C-81511	Series 3: Class A, E, F	61
M81511/51	MIL-C-81511	Series 4: Class A, E, F	61
M81511/53	MIL-C-81511	Series 4: Class A, E, F	61
M81511/55	MIL-C-81511	Series 4: Class A, E, F	61
M81511/56	MIL-C-81511	Series 4: Class A, E, F	61
M83723/01	MIL-C-83723	Series I: Class A, G, R	54
M83723/02	MIL-C-83723	Series I: Class A, G, R	54
M83723/03	MIL-C-83723	Series I: Class A, G, R	54
M83723/04	MIL-C-83723	Series I: Class A, G, R	54
M83723/05	MIL-C-83723	Series I: Class A, G, R	54
M83723/06	MIL-C-83723	Series I: Class A, G, R	54
M83723/07	MIL-C-83723	Series I: Class A, G, R	54
M83723/08	MIL-C-83723	Series I: Class A, G, R	54
M83723/13	MIL-C-83723	Series I: Class A, G, R	54
M83723/14	MIL-C-83723	Series I: Class A, G, R	54
M83723/17	MIL-C-83723	Series II: Class A, G, R	19
M83723/18	MIL-C-83723	Series II: Class A, G, R	19
M83723/19	MIL-C-83723	Series II: Class A, G, R	19
M83723/20	MIL-C-83723	Series II: Class A, G, R	19
M83723/23	MIL-C-83723	Series II: Class A, G, R	19
M83723/24	MIL-C-83723	Series II: Class A, G, R	19
M83723/27	MIL-C-83723	Series II, Class A, G, R	19
M83723/36	MIL-C-83723	Series I: Class A, G, R	54
M83723/37	MIL-C-83723	Series I: Class A, G, R	54
M83723/38	MIL-C-83723	Series I: Class A, G, R	54
M83723/39	MIL-C-83723	Series I: Class A, G, R	54
M83723/40	MIL-C-83723	Series I: Class A, G, R	54
M83723/41	MIL-C-83723	Series I: Class A, G, R	54
M83723/42	MIL-C-83723	Series I: Class G, R	54
M83723/43	MIL-C-83723	Series I: Class G, R	54

Adapter Code (Continued)

Table A. Adapter Code by Military Part Number

(Continued)

Military Part No.	Connector Specification	Series/Class	Adapter Code
M83723/48	MIL-C-83723	Series I: Class G, R	54
M83723/49	MIL-C-83723	Series I: Class G, R	54
M83723/52	MIL-C-83723	Series II: Class K	19
M83723/53	MIL-C-83723	Series II: Class K	19
M83723/65	MIL-C-83723	Series III: Class H	54
M83723/66	MIL-C-83723	Series III: Class A, G, R	54
M83723/67	MIL-C-83723	Series III: Class A, G, R	54
M83723/68	MIL-C-83723	Series III: Class A, G, R	54
M83723/69	MIL-C-83723	Series III: Class A, G, R	54
M83723/71	MIL-C-83723	Series III: Class A, G, R	54
M83723/72	MIL-C-83723	Series III: Class A, G, R	54
M83723/73	MIL-C-83723	Series III: Class A, G, R	54
M83723/74	MIL-C-83723	Series III: Class A, G, R	54
M83723/75	MIL-C-83723	Series III: Class A, G, R	54
M83723/76	MIL-C-83723	Series III: Class A, G, R	54
M83723/77	MIL-C-83723	Series III: Class G, R	54
M83723/78	MIL-C-83723	Series III: Class G, R	54
M83723/82	MIL-C-83723	Series III: Class A, G, K, R, S	54
M83723/83	MIL-C-83723	Series III: Class A, G, K, R, S	54
M83723/84	MIL-C-83723	Series III: Class A, G, K, R, S	54
M83723/85	MIL-C-83723	Series III: Class A, G, K, R, S	54
M83723/86	MIL-C-83723	Series III: Class A, G, K, R	54
M83723/87	MIL-C-83723	Series III: Class A, G, K, R	54
M83723/91	MIL-C-83723	Series III: Class G, R, W	54
M83723/92	MIL-C-83723	Series III: Class G, R, W	54
M83723/95	MIL-C-83723	Series III: Class A, G, K, R	54
M83723/96	MIL-C-83723	Series III: Class A, G, K, R	54
M83723/97	MIL-C-83723	Series III: Class S	54
M83723/98	MIL-C-83723	Series III: Class S	54
MS17343	MIL-C-22992	Class C, J, R	32
MS17344	MIL-C-22992	Class C, J, R	32
MS17345	MIL-C-22992	Class C, J, R	32
MS17346	MIL-C-22992	Class C, R	32
MS17347	MIL-C-22992	Class C, J, R	32
MS17348	MIL-C-22992	Class C, R	32
MS24264	MIL-C-26500 (AL)	Class F, G, R Type B&T aluminum shell	51
MS24264	MIL-C-26500 (SST)	Class E Type B&T stainless steel shell	52
MS24265	MIL-C-26500 (AL)	Class F, G, R Type B&T aluminum shell	51
MS24265	MIL-C-26500 (SST)	Class E Type B&T stainless steel shell	52
MS24266	MIL-C-26500 (SST)	Class E Type B&T stainless steel shell	52
MS24266	MIL-C-26500 (AL)	Class F, G, R Type B&T aluminum shell	51
MS27466	MIL-C-38999	Series I: Class E, P, T	41
MS27467	MIL-C-38999	Series I: Class E, P, T	41
MS27468	MIL-C-38999	Series I: Class E, P, T	41
MS27469	MIL-C-38999	Series I: Class Y	Contact TE
MS27472	MIL-C-38999	Series II: Class T	41
MS27473	MIL-C-38999	Series II: Class E, P, T	41
MS27474	MIL-C-38999	Series II: Class T	41
MS27475	MIL-C-38999	Series II: Class Y	Contact TE
MS27479	MIL-C-38999	Series II: Class T	41
MS27480	MIL-C-38999	Series II: Class E, T	41
MS27481	MIL-C-38999	Series II: Class T	41
MS27482	MIL-C-38999	Series II: Class Y	Contact TE
MS27484	MIL-C-38999	Series II: Class E, T	41
MS27497	MIL-C-38999	Series II: Class T	41

Adapter Code (Continued)

Table A. Adapter Code by Military Part Number

(Continued)

Military Part No.	Connector Specification	Series/Class	Adapter Code
MS27515	MIL-C-38999	Series I: Class E	Contact TE
MS27613	MIL-C-26500 (SST)	Class K Type B&T stainless steel shell	52
MS27614	MIL-C-26500 (SST)	Class K Type B&T stainless steel shell	52
MS27615	MIL-C-26500 (SST)	Class K Type B&T stainless steel shell	52
MS27652	MIL-C-38999	Series I: Class E, T	41
MS27653	MIL-C-38999	Series I: Class E, T	41
MS27654	MIL-C-38999	Series I: Class E, T	Contact TE
MS27656	MIL-C-38999	Series I: Class E, T	41
MS27661	MIL-C-38999	Series I	41
MS27665	MIL-C-38999	Series I	41
MS3100	MIL-C-5015	Class A, E, F, R less endbell; solder contact	18
MS3101	MIL-C-5015	Class A, E, F, R less endbell; solder contact	18
MS3106	MIL-C-5015	Class A, E, F, R less endbell; solder contact	18
MS3107	MIL-C-5015	Class A, E, F, R less endbell; solder contact	18
MS3108	MIL-C-5015	Solder contact with endbell	15
MS3110	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3111	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3114	MIL-C-26482	Series 1: Class E, F, P	24 ¹
MS3116	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3120	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3121	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3124	MIL-C-26482	Series 1: Class E, F, P	24 ¹
MS3126	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3128	MIL-C-26482	Series 1: Class E, F, J, P	21
MS3130	MIL-C-81703	Series 1: Class E, P, J	71
MS3132	MIL-C-81703	Series 1: Class E	71
MS3134	MIL-C-81703	Series 1: Class E, P, J	71
MS3137	MIL-C-81703	Series 1: Class E, P, J	71
MS3138	MIL-C-81703	Series 1: Class E, P, J	71
MS3140	MIL-C-81703	Series 1: Class E, J	71
MS3144	MIL-C-81703	Series 1: Class E, J	71
MS3147	MIL-C-81703	Series 1: Class E, J	71
MS3148	MIL-C-81703	Series 1: Class E, J	71
MS3400	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3401	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3404	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3406	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3408	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3409	MIL-C-5015	Crimp contact	54
MS3412	MIL-C-5015	Class D, L, U, W crimp contact less endbell	54
MS3424	MIL-C-81703	Series 3: Class E, L	54
MS3445	MIL-C-81703	Series 2: Class E	71
MS3446	MIL-C-81703	Series 3: Class E, L	54
MS3450	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3451	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3454	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3456	MIL-C-5015	Class D, L, U, W crimp contact	54
MS3459	MIL-C-5015	Class L, W crimp contact	54
MS3464	MIL-C-81703	Series 3: Class E, L	54
MS3467	MIL-C-81703	Series 3: Class E, L	54
MS3468	MIL-C-81703	Series 3: Class E, L	54
MS3470	MIL-C-26482	Series 2: Class A, L	54
MS3471	MIL-C-26482	Series 2: Class A, L	54
MS3472	MIL-C-26482	Series 2: Class A, L	54
MS3474	MIL-C-26482	Series 2: Class A, L	54
MS3475	MIL-C-26482	Series 2: Class A, L	54
MS3476	MIL-C-26482	Series 2: Class A, L	54
NAS1599	MIL-C-81703	Series 3:	54
NAS1641	MIL-C-81703	Series 3:	54
NAS1642	MIL-C-81703	Series 3:	54

¹Code 24 connectors have an internal accessory thread.

Adapter Code (Continued)

Table A. Adapter Code by Military Part Number

(Continued)

Military Part No.	Connector Specification	Series/Class	Adapter Code
NAS1643	MIL-C-81703	Series 3:	54
NAS1650	MIL-C-81703	Series 3:	54
NAS1651	MIL-C-81703	Series 3:	54
NAS1652	MIL-C-81703	Series 3:	54
NAS1653	MIL-C-81703	Series 3:	54
NAS1692	MIL-C-81703	Series 3:	54
NAS1693	MIL-C-81703	Series 3:	54
NAS1694	MIL-C-81703	Series 3:	54
NAS1699	MIL-C-81703	Series 3:	54
NAS1700	MIL-C-81703	Series 3:	54
NAS1701	MIL-C-81703	Series 3:	54
NAS1702	MIL-C-81703	Series 3:	54

Adapter Code (Continued)

Table B. Adapter Code by Manufacturer's Prefix

Manufacturer's Prefix	Manufacturer ⁶	Connector Specification	Series/Class	Adapter Code
10-214	Bendix	MIL-C-5015	MS3100 Class A, E, R	18
10-475	Bendix	40M38277	—	41
10-720	Bendix	MIL-C-5015	MS3100 Class A, E, R	18
118	Amphenol	MIL-C-26482	Series 2	54
149	Deutsch	MIL-C-81703	Series 1	71
162GB	Amphenol	MIL-C-26482	Series 1	76, 77 ⁴
164GB	Amphenol	BS9522 F0023	—	Contact TE
165	Amphenol	None	—	Contact TE
172	Amphenol	MIL-C-5015	—	Contact TE
179	Amphenol	MIL-C-5015	—	Contact TE
182	Amphenol	None	—	Contact TE
246	Amphenol	MIL-C-5015	MS3100 Class E, F, R	18
251	Cannon	MIL-C-26482	Series 1	21
2PPN	Plessey	MIL-C-26482	Series 1	21
2PPN-07	Plessey	MIL-C-26482	Series 1	24 ³
2PSN	Plessey	BS9522 F0017	Patt 105	76, 77 ⁴
2PSN-07	Plessey	MIL-C-26482	Series 1	24 ³
348	Amphenol	MIL-C-81511	Series 1 and 2	61
381	Deutsch	40M39569	—	54
418	Amphenol	MIL-C-38999	Series I and II	41
45/PT	Socapex	MIL-C-26482	Series 1	21
450	Deutsch	MIL-C-26482	Series 1	21
451	Socapex	PRL 54125	—	21 or 24 ³
460	Deutsch	MIL-C-26482	Series 1	21
48	Amphenol	MIL-C-26500	Alum Class F, G, R	51
486	Amphenol	MIL-C-26482	Series 2	54
518	Amphenol	MIL-C-83723	Series III	54
5MS	FKI ²	Def. Stan. 59-35	Patt 121A	75
602	Amphenol	Def. Stan. 59-56	Patt 602	54
602GB	Amphenol	Def. Stan. 59-56	Patt 602	54
62AB-14	Amphenol	MIL-C-26482	Series 1	Contact TE
62GB	Amphenol	Def. Stan. 59-35	Patt 105	76, 77 ⁴
650	Schaltbau	VG 95329	—	61
652	Amphenol	LN 29504	—	54
652	UMD	PRL 54125	—	21 or 24 ³
674	Schaltbau	VG 95328	—	Contact TE
675	Schaltbau	VG 95328	—	Contact TE
679	Schaltbau	VG 95329	—	61
69	Amphenol	MIL-C-5015	MS3100 Class E, F, R	18
71	Bendix	MIL-C-5015	MS3100 Class A, E, R	18
711	Amphenol	BS9522 F0042	—	54
801	Amphenol	None	—	54
837	Deutsch	MIL-C-83723	Series III	54
83723	Souriau	MIL-C-83723	Series III	54
83730	Deutsch	MIL-C-83723	Series III	54
845	Souriau	NFL 54120	—	Contact TE
847	Souriau	NFL 54120	—	Contact TE
850	Souriau	MIL-C-26482	Series 1	21
851	Souriau	MIL-C-26482	Series 1	21
8520	Souriau	MIL-C-26482	Series 2	54
8525	Souriau	NAS 1599	—	54
8526	Souriau	PAN 6432-1	—	54
853	Souriau	MIL-C-83723	Series III	54
857	Souriau	LN 29728	—	54
89	Souriau	NFL 54140	—	54

²FKI was previously Thorn.

³Code 24 connectors have an internal accessory thread.

⁴Code 77 braided version.

Adapter Code (Continued)

Table B. Adapter Code by Manufacturer's Prefix

(Continued)

Manufacturer's Prefix	Manufacturer ⁶	Connector Specification	Series/Class	Adapter Code
891	Souriau	MIL-C-5015	Class K	Contact TE
892	Souriau	MIL-C-5015	Class K	Contact TE
8LT	Souriau	MIL-C-38999	Series I	41
8ST	Souriau	VG 96912	Series 1	47
8T	Souriau	MIL-C-38999	Series II	41
9-815	Deutsch	MIL-C-81511	Series 3 and 4	61
91-483	Bendix	MIL-C-26482	Series 2	54
944	Matrix	MIL-C-5015	MS3400 Class L, U, W	54
951	Deutsch	LN 29500	—	Contact TE
97	Amphenol	MIL-C-5015	MS3100 Class A	18
981	Matrix	MIL-C-5015	MS3400	54
A815	Deutsch	MIL-C-81511	Series 3	61
AA70	Deutsch	Not known	—	71
AB05	AB Elec	Def. Stan. 59-35	Patt 105	76, 77 ⁴
AB06	AB Elec	Def. Stan. 59-35	Patt 105	76, 77 ⁴
ABB	AB Elec	BS9522 F0032	—	78
ABJ	AB Elec	MIL-C-38999	Series I and II	41
ADS	Deutsch	MIL-C-81703	—	71
AFD	Deutsch	MIL-C-83723	Series I	54
AFD5	Deutsch	MIL-C-26482	Series 2	54
B815	Deutsch	MIL-C-81511	Series 4	61
BE	Pyle	MIL-C-83723	Series III	54
BG	Bendix	MIL-C-26482	Series I	21
BL	G&H Tech	MIL-C-38999	Series IV	40
BL	TRW	MIL-C-38999	Series IV	40
BT	Burndy	MIL-C-26482	Series 1	21
BT	Pyle	MIL-C-83723	Series III	54
BTK	Deutsch	MIL-C-26482	Series 1	21
BY1	Pyle	MIL-C-83723	Series III	54
C48	TRW	MIL-C-26500	Aluminum	51
CA (Bayonet)	Cannon	VG 95234	—	58
CA3101	Cannon	MIL-C-5015	MS3100 class E, F, R	18
CA3101	Cannon	MIL-C-5015	MS3100 Class A	18
CA3101KE	Cannon	MIL-C-5015	Class K	Contact TE
CA3106	Cannon	MS3106A	—	58
CIR	VEAM	VG 95234	—	64 ^{***} , 66 ^{**} , 78 [*]
CN0930	TRW	MIL-C-83723	Series III	54
CT	Burndy	MIL-C-38999	Series II	41
CT	Plessey	MIL-C-38999	Series II	41
CV-R	Cannon	MIL-C-83723	Series II	19
CV34	Cannon	MIL-C-5015	MS3400 Class L, U, W	54
CVA	Cannon	MIL-C-83723	Series II	19
CWL	Cannon	None	—	31
CWLD	Cannon	MIL-C-22992	Class C, J, R	32
D817	Deutsch	MIL-C-81703	Series 3	54
DA	Deutsch	None	—	71
DBAD	Deutsch	MIL-C-81703	—	Contact TE
DBAS	Deutsch	MIL-C-81703	Series 3	54
DD	Deutsch	MIL-C-81703	Series 2	71
DFE	Deutsch	MIL-C-26482	Series 2	54
DKM	Deutsch	VG 95328	—	Contact TE
DL	Deutsch	MIL-C-83723	Series III	54
DM	Deutsch	MIL-C-81703	Series 1	71
DPX	Cannon	—	—	Contact TE
DS	Deutsch	None	—	71
DTS	Deutsch	MIL-C-38999	Series III	40

* AB connectors only
 ** VEAM standard
 ***VEAM panel mount
⁴Code 77 braided version.

Adapter Code (Continued)

Table B. Adapter Code by Manufacturer's Prefix

(Continued)

Manufacturer's Prefix	Manufacturer ⁶	Connector Specification	Series/Class	Adapter Code
EA	Pyle	None	—	54
EB	Pyle	NAS 1599	—	54
EEG	Pyle	MIL-C-83723	Series I	54
ES	Pyle	None	—	54
ESC004	Various	MIL-C-5015	Class K	Contact TE
ET	Pyle	NAS 1599	—	54
FC	Flight	MIL-C-5015	Rev E only	Contact TE
FDBA	Deutsch	LN 29504	—	54
FF	Flight	MIL-C-5015	MS3400 Class D, L, U, W	54
FH	Flight	MIL-C-83723	Series III	54
FPK	Pyle	MIL-C-26500	Class K	52
FP5K	Pyle	MIL-C-26500	Class K	Contact TE
FYL	Pyle	MIL-C-26500	Class K	52
G	Burndy	None	—	21
GC-E	General	MIL-C-26482	Series 1	21
GTA	Hughes	MIL-C-28840	—	30
GTC06	Amphenol	—	—	64
HAN	Deutsch	MIL-C-5015	MS3100 Class E, KE	Contact TE
HD	SAE	MIL-C-28840	—	30
HTMAS	Cannon	MIL-C-5015	Class K	Contact TE
HTMF	Cannon	MIL-C-83723	Series III: Class K	54
HTMS	AB Elec	MVEE 695	—	75
JT	Amphenol	MIL-C-38999	Series II	41
JT	Bendix/FKI	MIL-C-38999	Series II	41
JT	Socapex	MIL-C-38999	Series II	41
JT-R	FKI ²	PAN 6433-1	—	41
JT-R	Teldix	PAN 6433-1	—	41
KFS	Cannon	MIL-C-28840	—	30
KJ	Cannon	MIL-C-38999	Series II	41
KJA	Cannon	MIL-C-38999	Series III	40
KJJ	Cannon	MIL-C-38999	Series II	Contact TE
KJL	Cannon	MIL-C-38999	Series I	Contact TE
KJL	Cannon	MIL-C-38999	Series I	41
KPSE	Cannon	MIL-C-26482	Series 1	21
KPT	Cannon	MIL-C-26482	Series 1	21
KV-R	Cannon	NAS 1599	—	54
L	Burndy	MIL-C-26482	Series 1	21
LJT	Bendix	MIL-C-38999	Series I	41
LJT	Socapex	MIL-C-38999	Series I	41
LL3	Deutsch	MIL-C-81511	—	61
LL5/6	Deutsch	BS9540 F0001	Patt 602	Contact TE
LMB	Litton-Veam	Def. Stan. 59-35	Patt 121A	75
LPT	Deutsch	MIL-C-26482	Series 1	21
LS	Pyle	None	—	54
LTT	FKI ²	BS9522 F0029	Patt 616	41
M-T	Burndy	MIL-C-26482	Series 1	21
M723	Matrix	MIL-C-83723	Series II	19
MB1	Matrix	MIL-C-26482	Series 2	54
MB3	Matrix	MIL-C-83723	Series III	54
MB9	Matrix	MIL-C-38999	Series I and II	41
MD	Matrix	MIL-C-26482	Series 2	54
MDR	Deutsch	None	—	71
MF	Cannon	MIL-C-83723	Series III	54
MK12	Plessey	Def. Stan. 59-35	Patt 603	76, 77 ⁴
MK18	Plessey	Def. Stan. 59-35	Patt 608	79 ⁵
MK38	Plessey	MIL-C-38999	Series I	41

²FKI was previously Thorn.

⁴Code 77 braided version.

⁵Free connectors only.

Adapter Code (Continued)

Table B. Adapter Code by Manufacturer's Prefix

(Continued)

Manufacturer's Prefix	Manufacturer ⁶	Connector Specification	Series/Class	Adapter Code
MK25	Plessey	MIL-C-38999	Series II	41
MK7	Plessey	DEF 5325-2	Patt 104	Contact TE
MK8	Plessey	Def. Stan. 59-35	Patt 105	76, 77 ⁴
ML94	Matrix	MIL-C-38999	Series IV	40
MQ3	Matrix	MIL-C-83723	Series III	54
MT3	Matrix	MIL-C-83723	Series III	54
MT93	Matrix	MIL-C-38999	Series III	40
P5	Plessey	NFL 54 125	—	76 or 24 ³ , 77 ⁴
PAT104D	AB Elec	Def. Stan. 59-35	Patt 104	Contact TE
PT	Socapex	MIL-C-26482	Series 1	76, 77 ⁴
PT	Teldix	MIL-C-26482	Series 1	76, 77 ⁴
PT-CE	Bendix	None	—	22
PT-G	Teldix	VG 95328	—	Contact TE
PT-SE	Socapex	MIL-C-26482	Series 1	76, 77 ⁴
PT-SE	Teldix	MIL-C-26482	Series 1	76, 77 ⁴
PT07	Bendix	MIL-C-26482	Series 1	24 ³
PT07SE	FKI ²	MIL-C-26482	Series 1	24 ³
PT33	FKI ²	BS9522 F0017	Patt 105	76, 77 ⁴
PT33SE	FKI ²	BS9522 N0001	Patt 603	76, 77 ⁴
PT44	FKI ²	BS9522 F0017	Patt 105	76, 77 ⁴
PT44SE	FKI ²	BS9522 N0001	Patt 603	76, 77 ⁴
PT55	FKI ²	BS9522 F0017	Patt 105	76, 77 ⁴
PT55SE	FKI ²	BS9522 N0001	Patt 603	76, 77 ⁴
PT77	FKI ²	BS9522 F0017	Patt 105	76, 77 ⁴
PT77SE	FKI ²	BS9522 N0001	Patt 603	76, 77 ⁴
PTG55	FKI ²	BS9522 F0017	Patt 105	76, 77 ⁴
PTG55SE	FKI ²	BS9522 N0001	Patt 603	76, 77 ⁴
PTS-DR	Bendix	MIL-C-26482	Series 2	54
PV7	Cannon	MIL-C-26482	Series 2	54
PVJ	Cannon	MIL-C-26482	Series 2	54
PVW	Cannon	—	—	54
PVX	Cannon	Def. Stan. 59-56	Patt 602	54
QDP	Bendix	None	—	32
QRP	AB Elec	—	—	78
QWL	Bendix	None	—	31
QWLD	Bendix	MIL-C-22992	Class C, J, R	32
RD1	Raychem	MIS-20065	—	54
RR	Deutsch	Def. Stan. 59-56	Patt 602	54
RR20	Deutsch	PAN 6432-2	—	54
RR50	Deutsch	PAN 6432-1	—	54
RR70	Deutsch	PAN 6432-2	—	54
RSM	Deutsch	None	—	71
RTK	Deutsch	None	—	71
SA	SAE	MIL-C-5015	MS3400	54
SB	Bendix	MIL-C-5015	Class E	18
SB-104	AB Elec	Def. Stan. 59-35	Patt 104	Contact TE
SB-M4	AB Elec	Def. Stan. 59-35	Patt 104	Contact TE
SB-MS	AB	BS9522 F0030	—	75
SC	Bendix	MIL-C-5015	MS3100 Class A	18
SCB	SICEM	VG 95234	—	Contact TE
SF	Bendix	MIL-C-5015	MS3100 Class E	18
SG	Bendix	MIL-C-5015	MS3100 Class E	18
SJT	Various	PAN 6433-2	—	47
SJT07	Various	PAN 6433-2	—	Contact TE
SLPT	Deutsch	MIL-C-26482	Series 1	76, 77 ⁴

²FKI was previously Thorn.

³Code 24 connectors have an internal accessory thread.

⁴Code 77 braided version.

Adapter Code (Continued)

Table B. Adapter Code by Manufacturer's Prefix

(Continued)

Manufacturer's Prefix	Manufacturer ⁶	Connector Specification	Series/Class	Adapter Code
SM	Bendix	MIL-C-5015	MS3100 Class A, E, R	18
SPT	Bendix	MIL-C-26482	Series 1	76, 77 ⁴
SPT	Socapex	MIL-C-26482	Series 1	76, 77 ⁴
SPT07	Various	MIL-C-26482	Series 1	24 ³
STK	Deutsch	None	—	71
STT	FKI ²	BS9522 F0012	Patt 615	47
STT07	FKI ²	BS9522 F0012	Patt 615	Contact TE
T3'	Pyle	MIL-C-38999	Series III	40
TRIM TRIO	Burndy	None	—	Contact TE
TT	FKI ²	BS9522 N0003	Patt 614	41
TV	FKI ² /Bendix	MIL-C-38999	Series III	40
TV-O-R	Bendix	MIL-C-38999	Series III and IV	40
TVP	FKI ² /Bendix	MIL-C-38999	Series III	40
TVPS	FKI ² /Bendix	MIL-C-38999	Series III	Contact TE
TVS	FKI ² /Bendix	MIL-C-38999	Series III	Contact TE
Tri-Start	Bendix	MIL-C-38999	Series III and IV	40
VPT	VEAM	MIL-C-26482	Series 1	21
VTT	FKI ²	MIL-C-38999	Series III	40
ZZY/ZZW	Pyle	MIL-C-26500	Class R, G (AL)	51
ZZY/ZZW	Pyle	MIL-C-26500	Class E (SST)	52

¹May be a number or letter depending upon connector style.

²FKI was previously Thorn.

³Code 24 connectors have an internal accessory thread.

⁴Code 77 braided version.

⁵Free connectors only.

⁶Some of the connector manufacturers names may have changed and may not exist. They are listed here to assist users who know them as listed names.

Adapter Code (Continued)

Table C. Adapter Code by Connector Specification

Connector Specification	Series/Class	Adapter Code
40M38277	—	41
40M39569	—	54
BS9520	G0001	41
BS9520	G0002	41
BS9520	G0003	40
BS9522 F0012	Patt 615	47
BS9522 F0014	Patt 104	Contact TE
BS9522 F0017	Patt 105	76
BS9522 F0020	Patt 608	79 ²
BS9522 F0023	—	Contact TE
BS9522 F0029	Patt 616	41
BS9522 F0030	Patt 121A	75
BS9522 F0032	Patt 121B	78
BS9522 F0042	—	54
BS9522 N0001	Patt 603	76
BS9522 N0003	Patt 614	41
BS9540 F0001	Patt 602	54
LN 29500	—	21
LN 29504	—	54
LN 29728	—	54
LN 29729	—	47
MIL-C-22992	Class C, J, R	32
MIL-C-26482	Series 1	21, 24 ¹
MIL-C-26482	Series 2	54
MIL-C-26500	Aluminum, Class F, G, R	51
MIL-C-26500	Stainless steel, Class E, K	52
MIL-C-28840	Class D	30
MIL-C-38999	Series I and II	41
MIL-C-38999	Series III and IV	40
MIL-C-5015	MS3400	54
MIL-C-5015	MS3100	18, 15 (with endbell)
MIL-C-5015	5MS	75
MIL-C-81511	Series 1, 2, 3, and 4	61
MIL-C-81703	Series 1, 2	71
MIL-C-81703	Series 3	54
MIL-C-83723	Series II	19
MIL-C-83723	Series I and III	54
MIL-C-85049/59	—	32
MIL-C-85049/60	—	54
MIL-C-85049/62	—	41
MIL-C-85049/69	—	40
MIS-20065	—	54
MVEE	5MS	75
NAS 1599	—	54
NFL 54120	—	Contact TE
NFL 54140	—	54
PAN 6432-1	—	54
PAN 6432-2	—	54
PAN 6433-1	—	41
PAN 6433-2	—	47
PRL 54125	—	21, 24 ¹
VG 95234	—	64 ^{***} , 66 ^{**} , 78 [*]
VG 95328	—	Contact TE
VG 95329	—	61
VG 96912	Series 2	41
VG 96912	Series 1	47

¹Code 24 connectors have an internal accessory thread.

²Free connectors only.

* AB connectors only

** VEAM standard

***VEAM panel mount

Adapter Family

Selecting the Adapter Family

Using Table D below and the adapter code you selected in Table A, B, or C, select the adapter family for the adapter type you chose (spin-coupling or Tinel-Lock).

With the alphanumeric prefix for that family you can then build the part number for your TE adapter.

Table D. Identification of Adapter Family Prefix by Adapter Code

TE Connector Code	Boot Adapter		Shielded Adapter			Tinel-Lock Adapter Straight, 45°, and 90°	CRES-Lock Band Strap Adapter
	Solid (Fixed)	Spin-Coupling	Straight	45°	90°		
15	210M5	202M5	219M0	219M1	219M2	TXR 15	—
18	218M5	218M6	218M7	218M8	218M9	TXR 18	BND 18
19	201M7	201M4	—	—	—	—	—
21	203M6	203M9	206M0	206M1	206M2zx	TXR 21	BND 21
24	208M5	208M6	216M0	216M1	206M5	—	—
30	211M8	211M9	211M5	211M6	211M7	TXR 30	—
32	—	204M3	207M3	212M4	212M5	TXR 32	BND 32
40	209M3	209M4	208M7	208M8	208M9	TXR 40	BND 40
41	202M1	202M2	204M0	204M1	204M2	TXR 41	BND 41
47	202M8	202M7	210M0	210M1	210M2	TXR 47	BND 47
51	207M4	205M5	207M0	207M1	207M2	TXR 51	—
52	208M3	209M6	208M0	208M1	208M2	TXR 52	—
54	201M9	201M1	203M0	203M1	203M2	TXR 54	BND 54
61	202M3	202M4	205M0	205M1	205M2	TXR 61	—
71	203M5	202M9	217M0	217M1	217M2	TXR 71	—
75	228M5	228M7	227M0	227M1	227M2	TXR 75	—
76	225M6	225M5	—	—	—	TXR 76	—
77	228M6	228M8	228M0	228M1	228M2	—	—
78	225M4	225M3	225M0	225M1	225M2	TXR 78	—
79	—	229M3	229M1	229M2	229M0	TXR 79	—
80	215M4	213M5	213M6	213M7	213M8	TXR 80	—
81	214M3	214M4	214M5	214M6	214M7	TXR 81	—

Having Selected the Right Adapter Type and Adapter Family, You Can Now Construct a Part Number for the Adapter.

Part Number

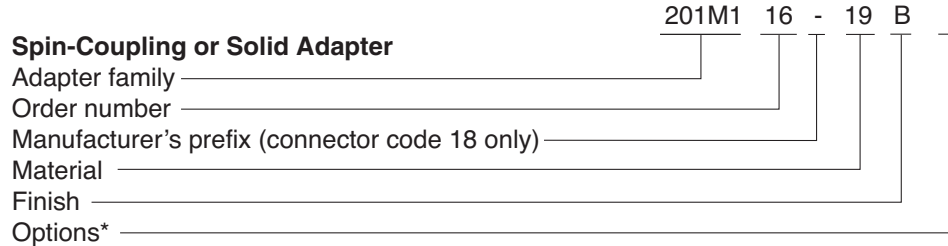
1. Start with the alphanumeric prefix you selected in Table D. This will be the basis of your part number.
2. Add to the prefix the codes and designators required for your adapter type and application. These may include several or all of the following:

- Order number
- Manufacturer's prefix
- Material
- Finish
- Entry size
- Ring designator
- Option codes

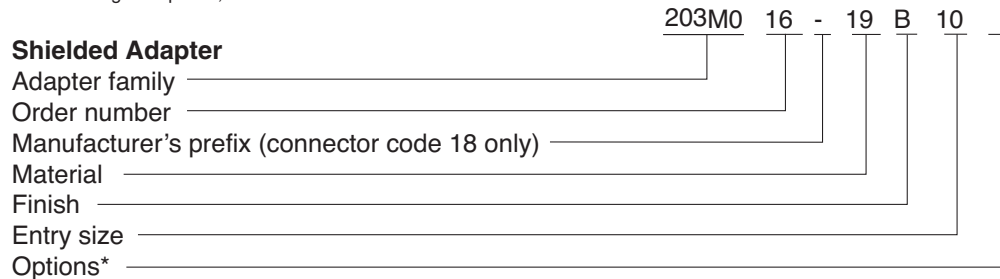
Using the right codes and designators helps ensure that the adapter you select will meet the application requirements.

To determine which codes and designators you will need, use the Part numbering system shown below. To select the right codes and designators, turn to the pages that follow.

Part Numbering System

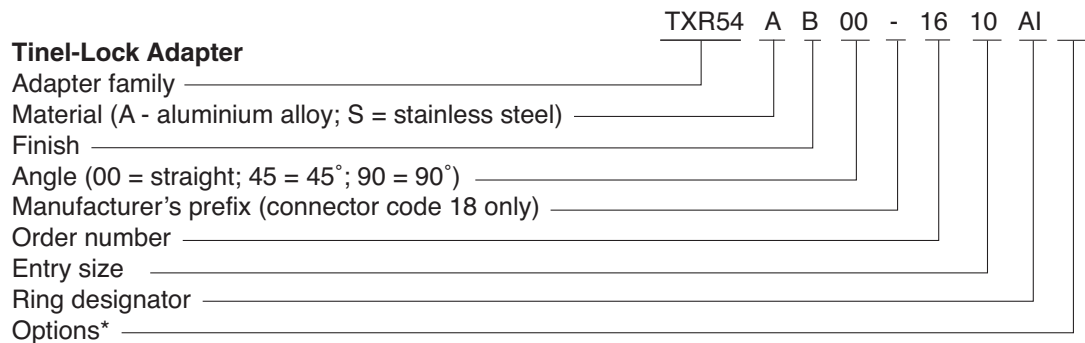


*For full range of options, consult TE.



- Standard braid length (6") requires no modification code.
- Nonstandard braid length is stated in inches (12 = 12" length)

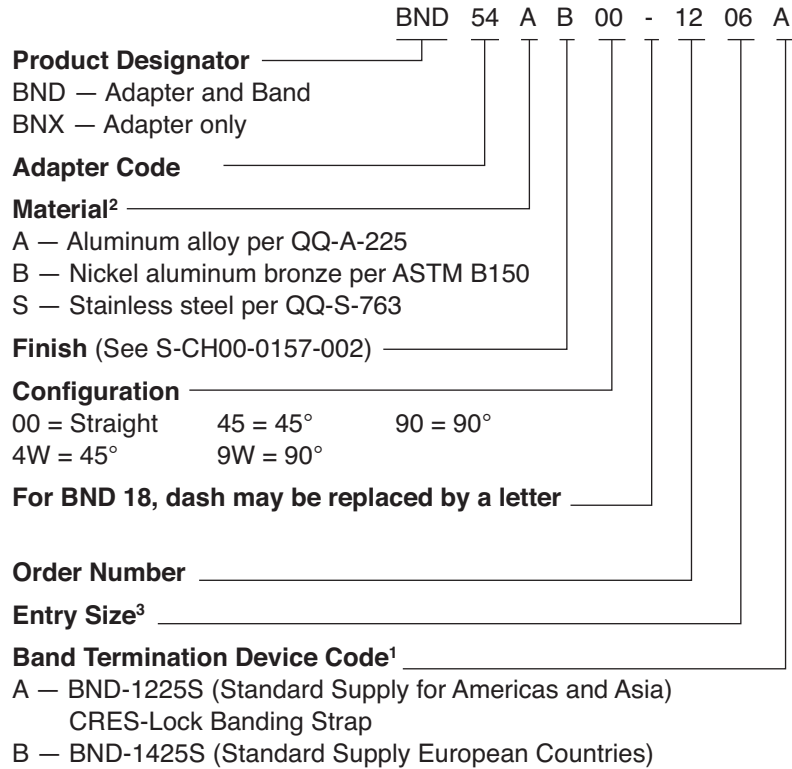
*For full range of options, consult TE.



*For full range of options, consult TE.

Part Number (Continued)

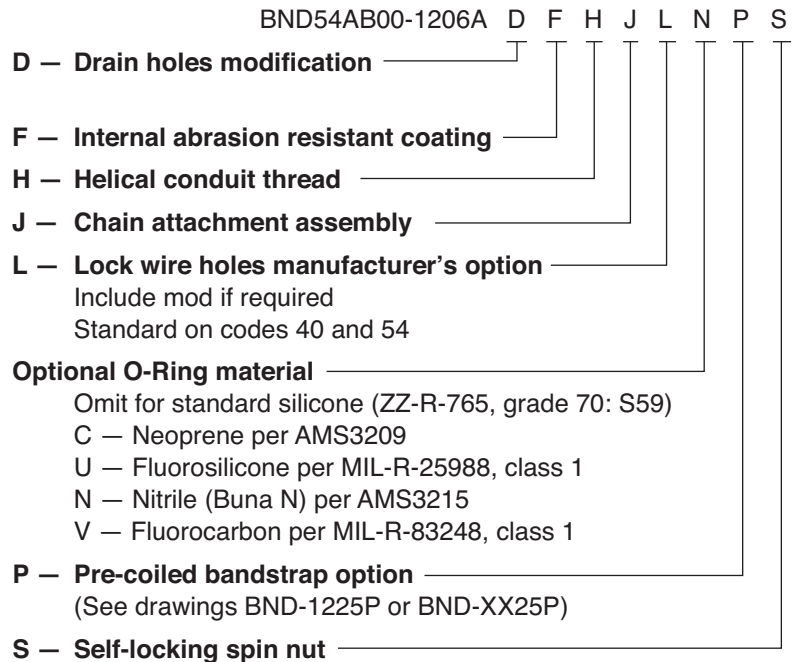
**CRES-Lock Band
Strap Adapters
Part Numbering System**



Notes:

1. See Drawings BND-1225S or BND-XX25S for information on bands. Adapter dimensions for "A" designation may be different than those listed in this catalog. Contact Tyco Electronics for Specification Control Drawing (SCD) for these adapters.
2. Alternative equivalent material specifications to those shown may be supplied at Tyco Electronics' discretion.
3. For standard entry sizes see relevant specification control drawing. For entry sizes larger than standard (Type II Adapters), see sheets 3 and 4.

**Band Strap Adapter
Modification Option Field
(Omit if not required)**



Selecting the Material and Finish

To ensure optimum compatibility, select the adapter material and finish to match those of the connector.

Most circular connectors are manufactured from aluminum with a cadmium finish.

Material Codes

Material* Description	Material Code Solid, Spin-Coupling, and Shielded Adapters	Tinel-Lock Adapters	Typical Applications
Aluminum alloy	19	A	Standard material for normal applications
Stainless steel	62	S	Corrosion-resistant and high-temperature (firewall) applications
Nickel aluminum bronze	01	B	Exposed marine environments

*Other materials available upon request.

Finish Codes

Finish* Description	Color	Finish Code	Typical Applications
Cadmium, per QQ-P-416, Type II, Class 3 over electroless nickel (500-hour salt-spray-resistant finish)	Olive drab	B	Corrosion resistance for exposed environments
Electroless nickel, per AMS-C-26074, Class 4, Grade B	Bright Silver	C	High conductivity for optimum screening performance
Anodized, hard, per MIL-A-8625, Type III, Class 2	Black	G	Nonconductive finish for aluminum adapters
Passivated, per QQ-P-35 or MIL-S-5002	—	J	Surface treatment for corrosion-resistant steel
Unplated, shotblast	—	W	Nonreflective finish for nickel aluminum bronze adapters
Zinc Nickel	Black	Z	Cadmium free plating

*Other finishes available upon request.

Entry Size

Determining the Wire Bundle Size

The entry size of an adapter is based on the size of the wire bundle. If you don't know the size of the wire bundle, measure a prototype or calculate the size.

Calculation of the wire bundle size is based on three values:

- Cable outside diameter (COD)
- Cable jacket thickness
- Jacketed cable diameter

Instructions for calculating these values follow.

COD Calculation

To calculate the cable outside diameter, first determine whether the wires in the bundle are of the same size or of different sizes.

COD Calculation for Wires of the Same Size

For bundles with wires that are all of the same size, follow these steps:

1. Determine the number of wires in the wire bundle.
2. Find the multiplication factor for that number in Table E shown on the next page.
3. Find the wire diameter in the Wire and Cable section (Section 9) of this catalog.
4. Multiply the wire diameter (from Step 3) by the multiplication factor (from Step 2) as shown below.

Formula: $D = Fd$

Where:

D = Bundle diameter

F = Multiplication factor

d = Wire diameter

Example: A bundle of wires containing 27 x 44A0111-22

F = 6.00 (the multiplication factor for 27 wires from Table E)

d = 1.19 mm (.049 in)*

D = 6 x 1.19 mm (6 x .049 in)

D = 7.14 mm (.294 in)

*Diameter of 44A0111-22 wire obtained from the Wire and Cable Section 9 of this catalog.

COD Calculation for Wires of Different Sizes

To determine the wire bundle diameter when using wires of different sizes, follow these steps:

1. Determine the number of wires in the wire bundle.
2. Find the diameter of the wires in the Wire and Cable section of this catalog.
3. Calculate the cable outside diameter by using this formula:

$$D = 1.2\sqrt{N1d1^2 + N2d2^2 + N3d3^2}$$

Where:

D = Bundle diameter

N = Number of wires

d = Diameter of wires

Example: A bundle of wires containing

3 x 44A0111-221* (1.192-mm dia.)

5 x 44A0111-201* (1.42-mm dia.)

1 x 44A0111-181* (1.65-mm dia.)

$$D = 1.2\sqrt{3 \times 1.192^2 + 5 \times 1.42^2 + 1 \times 1.65^2}$$

$$D = 1.2\sqrt{3 \times 1.4 + 5 \times 2.02 + 1 \times 2.7}$$

$$D = 1.2\sqrt{4.2 + 10.1 + 2.7}$$

$$D = 1.2\sqrt{17}$$

$$D = 1.2 \times 4.12$$

$$D = 4.95 \text{ mm}$$

*For wire information see the Wire and Cable Section 9 of this catalog.

Entry Size (Continued)

Table E. Multiplication Factors for Wire Bundles with Equal Size Wires

This table provides multiplication factors for wire bundles of 1 to 61 wires.

To determine the approximate diameter of a wire bundle when the wires are all the same size, find the factor for the number of wires in the bundle and multiply the wire diameter by that factor.

Number of Wires	Multiplication Factor	Number of Wires	Multiplication Factor
1	1.00	32	6.70
2	1.60	33	6.70
3	2.00	34	7.00
4	2.41	35	7.00
5	2.70	36	7.00
6	3.00	37	7.00
7	3.00	38	7.31
8	3.60	39	7.31
9	4.00	40	7.31
10	4.00	41	7.61
11	4.00	42	7.61
12	4.00	43	7.61
13	4.41	44	7.61
14	4.41	45	8.00
15	4.70	46	8.00
16	4.70	47	8.00
17	5.00	48	8.00
18	5.00	49	8.41
19	5.00	50	8.41
20	5.31	51	8.41
21	5.31	52	8.41
22	5.61	53	8.70
23	5.61	54	8.70
24	5.61	55	8.70
25	6.00	56	8.70
26	6.00	57	9.00
27	6.00	58	9.00
28	6.41	59	9.00
29	6.41	60	9.00
30	6.41	61	9.00
31	6.70	—	—

Entry Size (Continued)

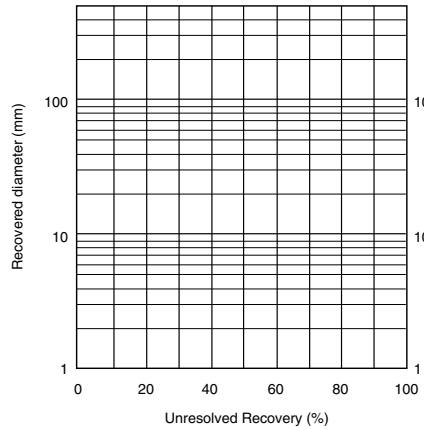


Figure 1.

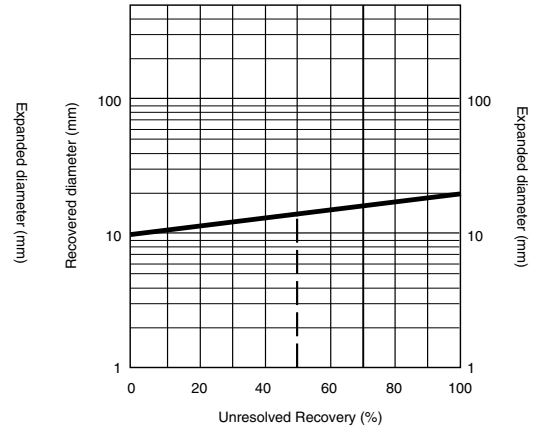


Figure 2.

Cable Jacket Thickness Calculation

To determine the wall thickness of a jacket over a wire bundle:

1. Use the chart in Figure 1 to determine the unresolved recovery of the tubing jacket
2. Use the chart in Figure 3 to determine the wall thickness reduction factor.
3. Calculate the jacket wall thickness by multiplying the fully shrunk wall thickness (as detailed in the Tubing section — Section 3 — of this catalog) by the wall thickness reduction factor.

Step 1. Determine the Unresolved Recovery of the Tubing Jacket.

1. Locate the recovered and expanded diameters of the chosen tubing size on the chart in Figure 1.
2. Lay a straight edge between the two values and pencil in a straight line connecting them.
3. Find the wire bundle diameter on the Expanded Diameter scale of the chart in Figure 1.
4. From the wire bundle diameter value, draw a straight horizontal line across the chart.
5. From the intersection of the line from step 3 and the line from step 2, read down vertically to the “Unresolved Recovery” for this combination.

Example (see Figure 2):

- Recovered tubing diameter = 10 mm
- Expanded tubing diameter = 20 mm
- Wire bundle diameter = 13 mm
- Unresolved recovery = 50%

Entry Size (Continued)

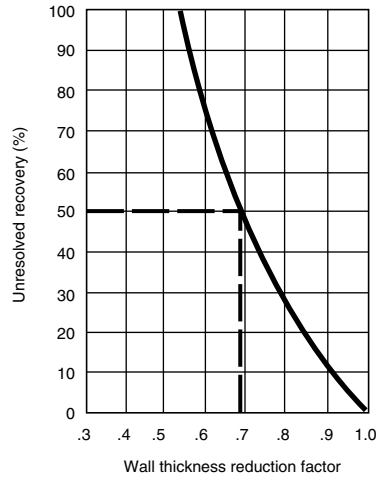


Figure 3.

Step 2. Find the Wall Thickness Reduction Factor.

1. On the Unresolved Recovery scale of the chart in Figure 3 above, find the unresolved recovery value determined in Step 1.
2. From the unresolved recovery value, draw a straight line across the chart to the curved line.
3. At the point where that line intersects the chart's curved line, read vertically down to the wall thickness reduction factor.

Example shown:

Unresolved recovery = 50%

Reduction factor = 0.68

Step 3. Calculate the Jacket Wall Thickness.

Multiply the fully shrunk wall thickness of the tubing by the reduction factor.

Example:

Fully shrunk wall thickness of tubing = 1.45 mm

Wall thickness reduction factor (from Figure 3) = 0.68

Jacket wall thickness = 1.4 x 0.68 = 0.99 mm

Note:

If the cable is to be shielded (screened), an addition must be made to the wire bundle diameter for the braid. In the example, 0.8 mm would be added to the wire bundle diameter for a single layer of RAY 101 (36 AWG) braid to make a total wire bundle diameter of 13.8 mm.

Entry Size (Continued)

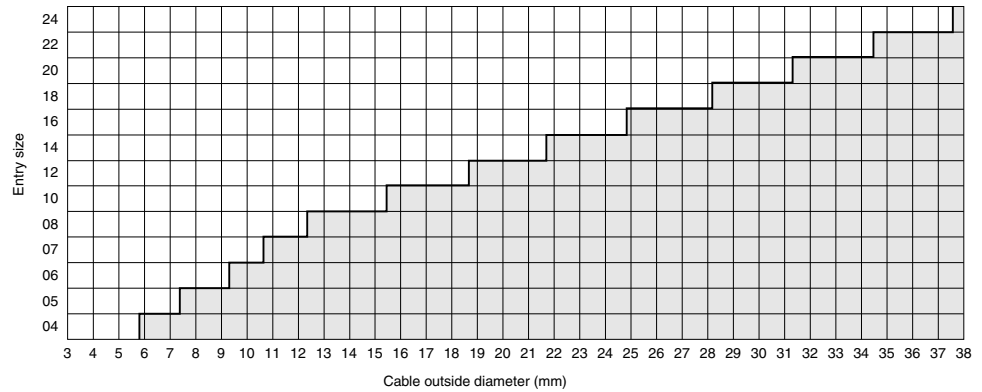


Figure 4. Entry Size by Cable Outside Diameter (in millimeters)

Determining the Entry Size

Once you have the wire bundle size, you can use the chart in Figure 4 to select the entry size. This chart shows the minimum entry sizes for cables from 3 to 38 mm [.118 to 1.496 in] in diameter. In other words, the white spaces on the chart represent all of the cable outside diameters each entry size will fit.

Follow these steps:

1. Find the cable diameter on the chart.
2. Note the lowest entry size that will fit the cable diameter

Braided Adapters

The extreme flexibility of the braid on these adapters accommodates a large range of cable diameters. It is therefore recommended that the standard entry size for any given adapter part number be specified as indicated on the relevant data sheet. Nonstandard entry sizes are available on special order.

Use the selection chart in Figure 4 to ensure that the standard entry size will pass over the jacketed cable diameter.

Tinel-Lock Adapters

With Tinel-Lock adapters, the cable braid must be opened up to fit onto the outside diameter of the adapter entry. For optimum performance, select the smallest entry size that will pass over the jacketed cable diameter. Repair of the connector will be easier using the boot and shield rollback if a slightly larger than minimum entry size is used.

The selection chart in Figure 4 shows the minimum entry sizes for cable diameters in the range of 3 mm to 38 mm. This will ensure that the jacketed cable passes through the adapter for easy assembly.

It should be checked to be sure the braid will open sufficiently to fit the entry size selected and to ensure that the braid and boot can be rolled back.

Entry Size (Continued)

Ray 101 Tinned-Copper Braid

TE manufactures a range of Raychem tubular braided shields (sometimes called "screens") that are used for shielding hand-built harnesses.

These braids are specially designed to have:

- Good surface transfer impedance
- Large opening ratio
- Good handling characteristics
- Compatibility with Tinel-Lock adapters

Sizes are available to cover wire bundle diameters from 2.5 to 38 [.10 to 1.50]. The table below shows the wire bundle diameter range for each braid size and also shows which adapter entry sizes are compatible with each of these braids and bundle diameters.

The entry sizes do not allow for the additional thickness of the braid and the heat-shrunk cable jacket.

Ray 101 Data

Part No.	Number of Carriers	Number of Ends/Carrier	Individual Strand Size (mm/AWG)	Wire Bundle Diameter Range			Tinel Adapter Entry Size (Single-Layer Braid)
				Min.	Max.	Wall Thickness (Nom.)	
RAY 101-3.0	16	10	0.1 [38]	2.5 [.10]	5.0 [.20]	N/A	N/A
RAY 101-4.0	24	7	0.13 [36]	3.5 [.14]	7.5 [.30]	0.4 [.02]	04*
RAY 101-6.0	24	9	0.13 [36]	4.0 [.16]	9.5 [.37]	0.4 [.02]	04, 05, 06*, 07
RAY 101-7.5	24	14	0.13 [36]	6.0 [.24]	14.0 [.55]	0.4 [.02]	05, 06, 07, 10*
RAY 101-10.0	36	12	0.13 [36]	8.0 [.31]	22.0 [.87]	0.4 [.02]	07, 08, 10 12*
RAY 101-12.5	36	15	0.13 [36]	10.0 [.39]	24.0 [.94]	0.4 [.02]	08, 10, 12, 14, 16*
RAY 101-20.0	48	16	0.13 [36]	16.0 [.63]	38.0 [1.50]	0.4 [.02]	12, 14, 16, 18, 20, 22

*Combination is not preferred; use only if absolutely necessary.