

Introduction

Product Facts

- Designed to meet relevant ARINC 600 Connector specifications
- Available in three sizes as well as custom versions
- Low mating-force contacts — suitable for ARINC 404 and ARINC 600 Connectors
- Full range of contact inserts
- Custom backshells available in configurations to suit any application. Contact TE Connectivity for detailed information.

Specifications

Temperature Range —
-85°F to 257°F [-65°C to 125°C]

Mating and Unmating Forces —
(Max. after 3 cycles)

Size 1 — 27 pounds [120 N]

Size 2 — 60 pounds [267 N]

Size 3 — 105 pounds [467 N]

Contact Retention against axial load —

Size 22 — 12 pounds [53 N]

Size 20 — 20 pounds [89 N]

Size 16 — 25 pounds [111 N]

Size 12 — 30 pounds [133 N]

Coaxial — 35 pounds [156 N]

(In testing, exposure to rated loads produced no contact damage and resulted in displacement less than .015 [0.38])

Voltage/Current Ratings —

Contact	AWG	Max. Current (A)
Size 22	22	5.0
Size 20	20	7.5
Size 16	16	13.0
Size 12	12	23.0

Durability — 500 cycles min. — mating and unmating (In testing, wired mated connectors cycled at a rate slower than 300 cycles per hour, showed no apparent damage or contact resistance greater than rated values)

High Temperature Tolerance —
1000 hours min. at 257°F [125°C]
(Wired, mated connectors)

Salt Spray Tolerance — As specified by MIL-STD-1344, method 1001, Condition B

Fluid Imperviousness — MIL-L-23699; MIL-H-5606: 1:3 mix isopropyl alcohol and mineral spirits (Test immersions of mated connectors in these fluids caused no evident deterioration)

Vibration and Shock Tolerance —
Per MIL-STD-1344, methods 2004-1 and 2005-1 (Testing to these conditions, including vibration for 8 hours in each of 3 mutually perpendicular axes, caused no visible cracking, breaking or loosening of parts, and no discontinuities exceeding 1 microsecond)



Humidity Tolerance — Insulation resistance 1 megohm min., 1-2 hours after exposure to humidity per MIL-STD-1344, Method 1002-1, Type II; 5000 megohm min. after 24 hours at 77°F [25°C].

Dielectric Withstanding Voltage — (Min.) 1500 VAC, RMS 60 Hz at sea level; 500 VAC, RMS 60 Hz at 50,000 ft. [15240 M] (Testing at rated voltages for 60 seconds produced no flash over and 1 mA leakage, max.)

Insulation Resistance — 1000 megohms min. (Test conducted on unmated connector after 30 min. exposure to 248°F-257°F [120°C-125°C])

Contact Resistance — Mated pairs tested per MIL-STD-1344, Method 3004-1

Technical Document — ARINC 600 Product Specification 108-10050

ARINC 600 Connectors are used in virtually all airframes and today's state-of-the-art avionics equipment. From collision avoidance (TCAS, TAWS) to in-flight entertainment/networking, new avionics equipment demands higher data transmission rates. Whether it's Fibre Channel, or 100-Base-T or 100-Base-FX Ethernet and beyond, TE has the insert

configurations and copper and fiber hardware (Quadrex contacts, RF, ARINC 801 inserts and Mini-Expanded Beam Fiber Optics) to meet the need. Standard industry configurations are available. For designs that require custom configurations, TE will work with you to provide the connector solution required.

ARINC 600 Connectors represent a new generation of standardized rack and panel connectors for aircraft applications. Compared to the preceding ARINC 404 standard, the new avionics connectors feature significantly reduced mating forces; increased numbers of contacts in housings proportioned to thinner black-box shapes; and floating, front-release keying.

ARINC 600 Connectors capitalize on the new design by adding unique features while maintaining intermateability. For instance, TE contact inserts

are field replaceable and manufactured to precise tolerances.

TE contacts for ARINC 600 Connectors are applied with standard crimping tools—the same ones used for ARINC 404 contacts. Automatic crimping equipment is available for higher productivity and lower applied costs. The benefits of ARINC 600 reduced engagement force contacts (for example: size 22 contacts averaging 1.5 ounces [0.42 N]) can be realized in ARINC 404 connectors through the use of the interchangeable ARINC 600 contacts. ARINC 600 coaxial contacts also are crimp applied for reliable, solder-free installation.

It is easy to specify ARINC 600 Connectors by descriptive part numbers. An example of a descriptive part number is shown on page 4-5, with an explanation of each component of the part number and page references for complete information.

ARINC 600 Next Generation Connector

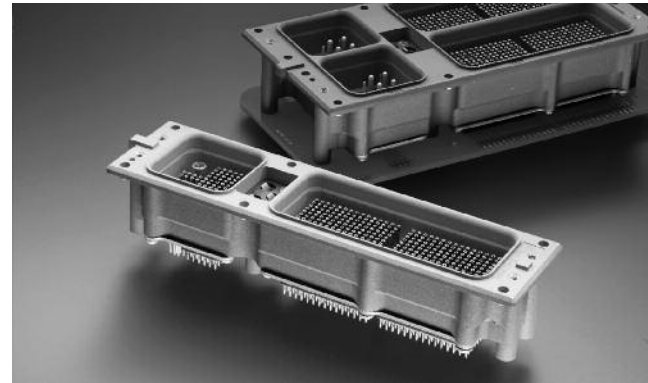
Product Facts

- Completely inter-mateable with existing ARINC 600 plug connectors
- “Monoblock” single-piece inserts that simplify the manufacturing process, saving cost
- Stamped and formed, selectively plated size 22 contacts provide substantial cost savings while delivery excellent performance and reliability
- Equivalent electrical performance vs. current design
- Available in either Solder Tail or Press-fit (eye of the needle) designs
- Up to 10% weight savings per connector (depending on insert arrangement)

Description

Whether it's collision avoidance, in-flight entertainment, or air-to-ground communications, today's Avionics manufacturers face a challenging economic environment and an ever-increasing demand for weight

reduction. In response to these market demands, TE has developed a revolutionary Next Generation ARINC 600 receptacle connector that offers the “perfect solution” for Avionics manufacturers seeking reduced cost and weight.

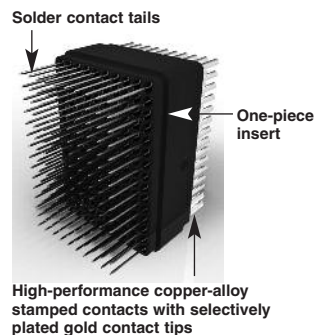


Applications

Avionics boxes: IFE, IFN, Flight control and communications
Military ground vehicles

Size 22 Stamped & Formed Solder Tail Contact System

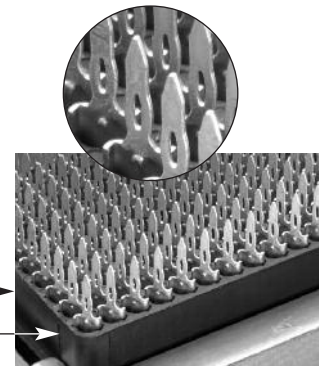
Solder tail contact design for complete backwards compatibility with legacy contact and PCB designs



Size 22 Stamped & Formed Press-fit Contact System

Press-fit, “eye-of-the-needle” contact tail design for applied cost savings during printed circuit board assembly

“Eye of Needle”
press fit contact tails
One-piece insert



Standards and Specifications

Product Specifications —
(Solder Tail): 108-2423
(EON Design): 108-2384

ARINC 600 - 18 — Air Transport
Avionics Equipment Interfaces

Product Validation Test Report —
502-1263

Application Specification (EON Design) — 114-13272

Mechanical

Mating and Unmating Forces (Max. after 3 cycles) —

Size 2 — 60 pounds (267 N)
Size 3 — 105 pounds (467 N)

Contact Retention against Axial Load —

Size 22 — 12 pounds (53 N)

Durability — 500 cycles min — mating and unmating (In testing, wired mated connectors cycled at a rate slower than 300 cycles per hour, showed no apparent damage or contact resistance greater than rated values)

Vibration and Shock Tolerance — Per MIL-STD-1344, methods 2004-1 and 2005-1 (Testing to these conditions, including vibration for 8 hours in each of 3 mutually perpendicular axes, caused no visible cracking, breaking or loosening of parts, and no discontinuities exceeding 1 microsecond)

Environmental

Temperature Range —

-85°F to 257°F (-65°C to 125°C)

Process capability rating: the contact and insert shall be capable of withstanding wave solder processing (270°C for 10

seconds) and vapor phase processing (260°C for 2 minutes)

High Temperature Tolerance — 1000 hours min. at 257°F (125°C) (Wired, mated connectors)

Salt Spray Tolerance — As specified by MIL-STD-1344, method 1001, Condition B

Fluid Imperviousness — MIL-L-23699; MIL-H-5606: 1:3 mix isopropyl alcohol and mineral spirits (Test immersions of mated connectors in these fluids caused no evident deterioration)

Humidity Tolerance — Insulation resistance 1 megohm min., 1-2 hours after exposure to humidity per MIL-STD-1344, Method 1002-1, Type II; 5000 megohms min. after 24 hours at 77°F (25°C)

Electrical

Dielectric Withstanding Voltage — (Min.) 1500 VAC rms 60 Hz at sea level; 500 VAC rms 60 Hz at 50,000 ft. (15240 m) — (Tested at rated voltages for 60 seconds produced no flash over and 1 mA leakage, max.)

Insulation Resistance — 1000 megohms min. (Test conducted on unmated connector after 30 min. exposure to 248°F-257°F (120°C-125°C))

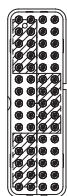
Contact Resistance — Mated pairs tested per MIL-STD-1344, Method 3004-1

Voltage/Current Ratings —

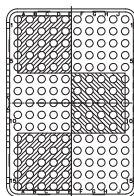
Contact	AWG	Max. Current (A)
Size 22	22	5.0

ARINC 600 Next Generation Connector (Continued)

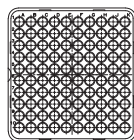
P/N	Connector Description	Module A	Module B	Module C	Module D	Module E	Module F
1218049-4	ARINC600,RCPT ASSY,SZ2,SPCL,MONOBLK	150	150	13C2			
1218098-3	ARINC600,CONN ASY,RCPT,SZ3,FR,NG	150	150	13C2	150	150	13C2
1218644-3	RCPT ASSY,SZ2,FR,ARINC600,NG	150	150	13C2			
1218657-2	RCPT ASSY,SZ2,FR,ARINC600,NG	150	150	13C2			
1484373-2	ARINC600,RCPT ASSY,SZ 2,NG	150	11Q11	13C2			
1663556-2	RCPT ASSY,SZ2,ARINC600,NG	120T2	120T2	11Q2			
1757544-3	ARINC600,RCPT ASSY,SZ2,150/36F36/13C2	150	36F36	13C2			
1757544-4	ARINC600,RCPT ASSY,SZ2,150/36F36/13C2	150	36F36	13C2			
1757691-2	A600R,SZ2,(C4/120T2/13C2),Next Gen	C4	120T2	13C2			
1757814-2	A600R,SZ3,150/150/13C/150/150/DUMM,NG	150	150	13C2	150	150	BLANK
1757875-2	A600,RCPT 120T2/150/13C2,NG	120T2	150	13C2			
1883712-2	A600R,SZ2,RCPT 150/150/85, Next Gen	150	150	85			
1883712-3	A600R,SZ2,RCPT 150/150/85, Next Gen	150	150	85			
1883910-2	A600R,SZ3,RCPT 150X4/13C2/100,NG	150	150	13C2	150	150	100
1996549-2	A600R,SZ3,150/150/13C2/150/150/13C2	150	150	13C2	150	150	13C2
1996655-2	A600R,SZ3,150/150/11Q2X2,sel. loading,NG	150	150	11Q2	150	150	11Q2
1996689-3	A600 RECEPT, SZ2,(11Q11/150/59) NG	11Q11	150	59			
2101123-2	A600 SZ2,RCPT150,110,11Q2,sel. loaded,NG	150	110	11Q2			
2101246-2	A600R,SZ2,150/150/13C2,sel.load,NG	150	150	13C2			
2101300-2	A600R,SZ2,150/11Q11/13C2,NG	150	11Q11	13C2			
2101472-2	A600R,SZ8,150/150/11Q2/150/150/11Q2,NG	150	150	11Q2	150	150	11Q2
2101697-1	ARINC600,SZ2,RDPT,150/150/13C2,s&f conts	150	150	13C2			
2101867-2	A600 SZ2,RECEPT,Q11/150/13C2,NG	11Q11	150	13C2			
2101882-2	A600 SZ3,150/85/150/150/Q6,CHRM,FR.250	150	BLANK	85	150	150	6Q6
2157023-2	A600 SZ1,RECEPTACLE ASSY,60/60/5Q2	60	60	5Q2			
2157232-1	ARINC600,RCPT,SZ2,150/150/100,STP/FRM	150	150	100			
2157609-2	ARINC600,RCPT,SZ3,150X4/11Q2X2,NG	150	150	11Q2	150	150	11Q2
2157736-1	ARINC600,RCPT,SZ1,30T2/60 (s/f)/4	30T2	60	4C4			
2157747-1	ARINC600,RCPT,SZ2,150/150/100	150	150	100			
2157778-1	ARINC600,RCPT,SZ3,150X4/100X2	150	150	100	150	150	100
2221242-2	SZ2, Rec Assy,150/150/13C2, Next Gen SL	150	150	13C2			
2221246-1	SZ2, Recept Assy,150/150/34, NG	150	150	34			
2221247-1	SZ2, Recept Assy,150/150/13C2, Next Gen	150	150	13C2			
2221248-1	SZ2, Recept Assy,150/150/Blank, Next Gen,SL	150	150	Blank			
2221249-1	SZ2, Recept Assy,150/150/100, Next Gen,SL	150	150	100			
2221251-1	SZ1, Recept Assy,60/60/Blank, Next Gen,SL	60	60	Blank			
2221252-1	SZ2, Recept Assy,150/150/13C2, Next Gen	150	150	13C2			
2221350-1	SZ2, Rec Assy,120T2/150/100, Select Load	120T2	150	100			
2221351-1	SZ3, Rec Assy,150/150/59/150/150/100,NG	150	150	59	150	150	100
2221352-1	SZ3, Rec,110/150/68Q2/11Q11/11Q11/6Q6,NG	110	150	68Q2	11Q11	11Q11	6Q6
2221353-1	SZ3, Rec,121/11Q11/100/150/11Q11/100,NG	121	11Q11	100	150	11Q11	100
2221354-1	SZ3, Rec,121/150/68Q2/150/11Q11/6Q6,NG	121	150	68Q2	150	11Q11	6Q6
2221355-1	SZ3, Rec,121/150/100/150/11Q11/6Q6,NG	121	150	100	150	11Q11	6Q6
2221356-1	SZ3, Rec,121/150/68Q2/11Q11/11Q11/6Q6,NG	121	150	68Q2	11Q11	11Q11	6Q6
2221376-1	SZ3, Rec,150/150/13C2/150/150/100,NG	150	150	13C2	150	150	100
2221379-1	SZ2, Rec. Assy,150/150/85,NG	150	150	85			
2221380-1	SZ2, Rec. Assy,150/150/13C2,NG	150	150	13C2			
2221424-1	SZ3, Rec,121/150/59/11Q11/11Q11/6Q6,NG	150	150	59	11Q11	11Q11	6Q6
2221473-1	SZ1, Rec Assy,30T2/60/4,SZ12	30T2	60	C4			
2221549-2	ARINC600,RCPT ASSY,SZ2,60/60/100, NG	60	60	100			
2221614-2	SZ3, Rec,10T10/121/100/121/121/13C2,NG	10T10	121	100	121	121	13C2
2221825-1	SZ2, Rec. Assy,150/126/100,NG	150	126	100			
2221902-1	SZ1, Rec. Assy,60/60/5C2	60	60	5C2			
2221904-1	SZ2, Rec. Assy,150/150/68Q2	150	150	68Q2			
2221905-1	SZ2, Rec. Assy,150/150/85	150	150	85			
2221906-1	SZ2, Rec. Assy,150/150/13C2	150	150	13C2			
2221908-1	SZ2, Rec. Assy,150/150/13C2	150	150	13C2			
2221951-3	SZ2, Rec. Assy,150/121/13C2 NG	150	121	13C2			
2221968-2	A600, Rec. Assy,SZ2, (C4/120T2/13C2), NG	C4	120T2	13C2			
2221981-1	SZ3, REC, 150/150/13C2/150/150/68Q2, NG	150	150	13C2	150	150	68Q2
2286064-1	ARINC600 RECEPT ASSY 150/150/13C2	150	150	13C2			
2286150-1	120T2/11Q11/11Q2 RECEPT	120T2	11Q11	11Q2			
2286395-1	ARINC600 RECEPT 121/150/6Q6	121	150	6Q6			
2286543-1	150/110/11Q2 SELECT LOAD	150	110	11Q2			



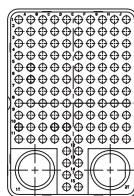
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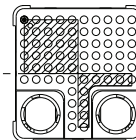
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100 pos



120 T2



68Q2

Ordering Information

Descriptive Part Numbering System

Use this guide to construct descriptive part numbers for ARINC 600 Connectors. Consult the referenced pages for additional information.

Materials

Shell — Die cast aluminum or machined aluminum per ASTM-B-85

Insert Retention Plates — Aluminum alloy

Finish — Chemical conversion coating per MIL-C-5541, Class 1A or 3 or electroless nickel per MIL-C-26074, Class 3 or 4, Grade B

Screws and Lockwashers — Steel with chromate over zinc or stainless steel

Polarizing Keyways — Zinc alloy

Polarizing Posts — Aluminum alloy or stainless steel

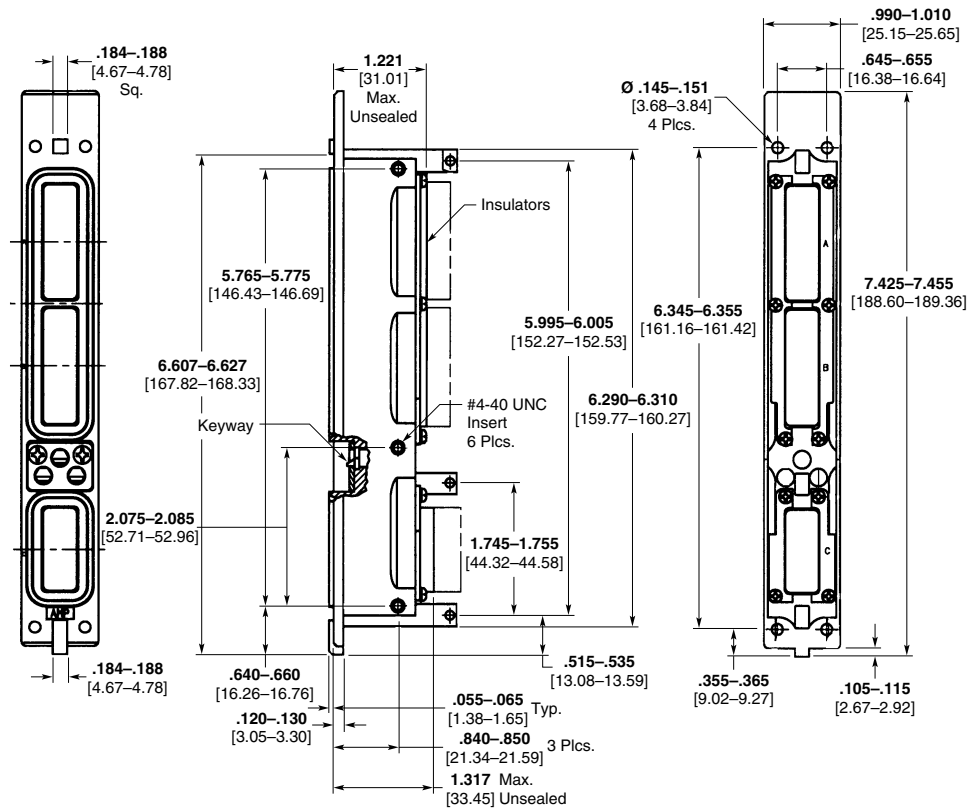
Insulators — Thermoset or Thermoplastic

Sample Descriptive Part Number

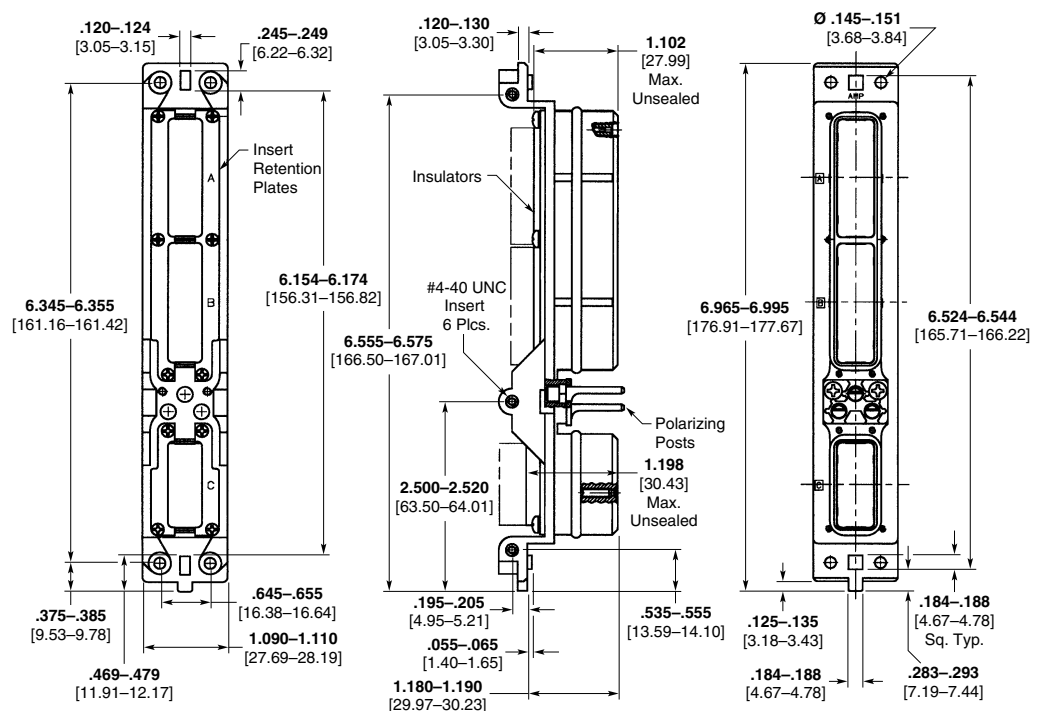
NIC66	E	11	A	01	AA	1
Series Designation All ARINC 600 Connectors (For "Single Mod" ARINC Connectors, see page 4-28.)	Shell Size/Plating (See pages 4-6 through 4-9) Shells With Chromate Conversion Coating E—Size 1 Receptacle F—Size 1 Plug G—Size 2 Receptacle H—Size 2 Plug J—Size 3 Receptacle K—Size 3 Plug Shells With Electroless Nickel Plating EN—Size 1 Receptacle FN—Size 1 Plug GN—Size 2 Receptacle HN—Size 2 Plug JN—Size 3 Receptacle KN—Size 3 Plug	Contact Inserts & Arrangement Codes (See pages 4-10 through 4-13) Describes size, number of contacts, style of contacts and arrangement of inserts. Insert styles are further defined by both Class and Contact Style/Shell Modifications below. Insert arrangement codes are not defined for connectors using either Quadrax or Expanded Beam Fiber Optic inserts. Contact TE Connectivity for specific part numbers.	Class A—Nonenvironmental, rear release (unsealed inserts) B—Environmental, rear release (sealed inserts) C—Environmental, rear release without O-ring or sealant around inserts (sealed inserts) F—Class C with cantilever style EMI/grounding spring (plug connectors only) G—Class A with cantilever style EMI/grounding spring (plug connectors only) H—Class C with canted coil style EMI/grounding spring (plug connectors only) J—Class A with canted coil style EMI/grounding spring (plug connectors only) FA—Nonenvironmental, front release/remove size 22 contacts (other contact sizes rear release/remove) FF—Nonenvironmental, all contact sizes front release/remove except size 1 COAX remains rear removal	Keying (See pages 4-15 and 4-16) Describes arrangement of keys	Contact Style/Shell Modifications (See pages 4-17 and 4-18) Describes connector mounting configuration and contact style. The insert style is further modified by the contact style specified. Even when the connectors are ordered unloaded, the appropriate code must be used so that contacts fit properly.	Contact Loading 0—Contacts included with connector, as indicated in contact style code above (no digit in this space also indicates connector includes contacts). COAXICON contacts must always be ordered separately. 1—Contacts not included with connector; must be ordered separately by TE Part Number.

Shell Size 1

Receptacle

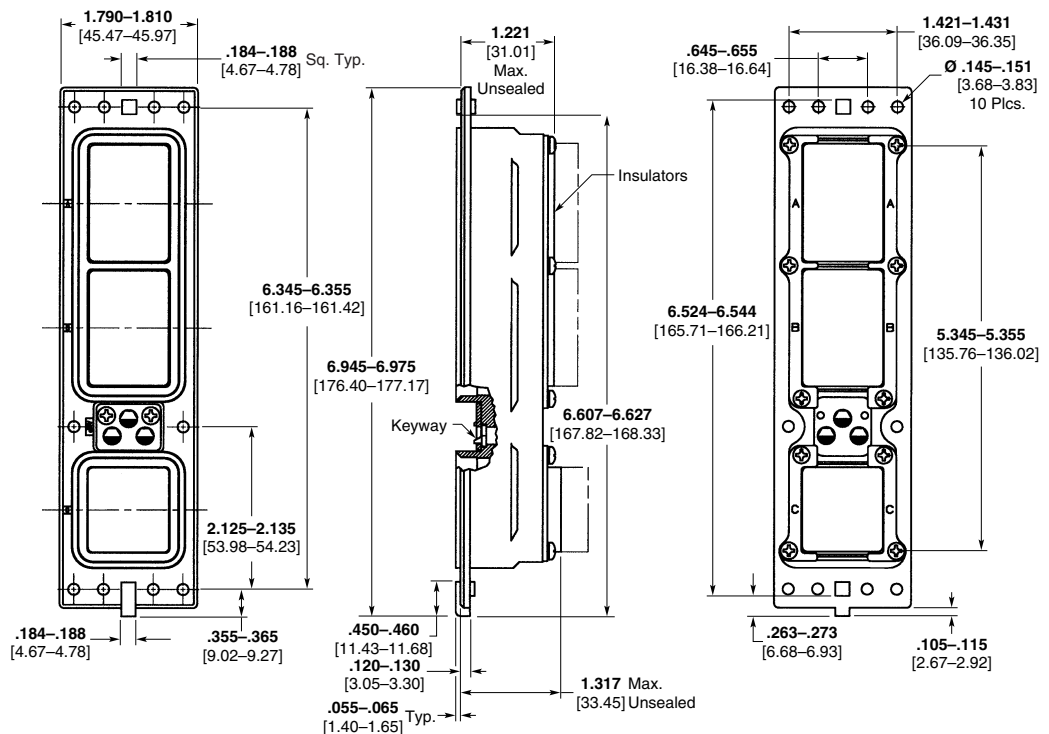


Plug

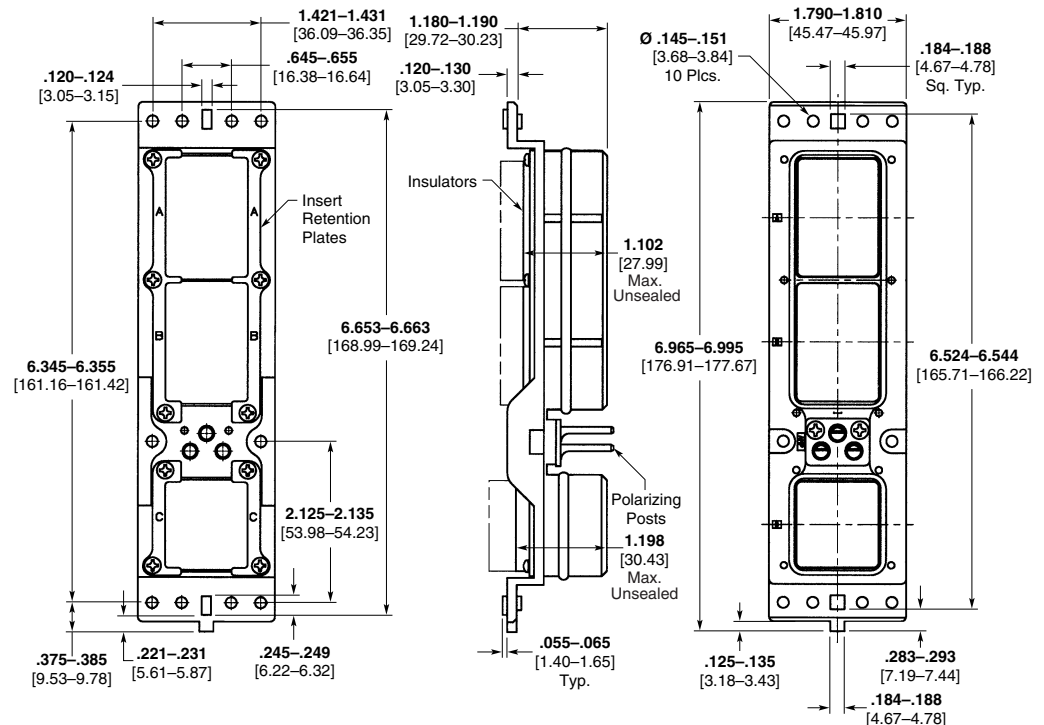


Shell Size 2

Receptacle

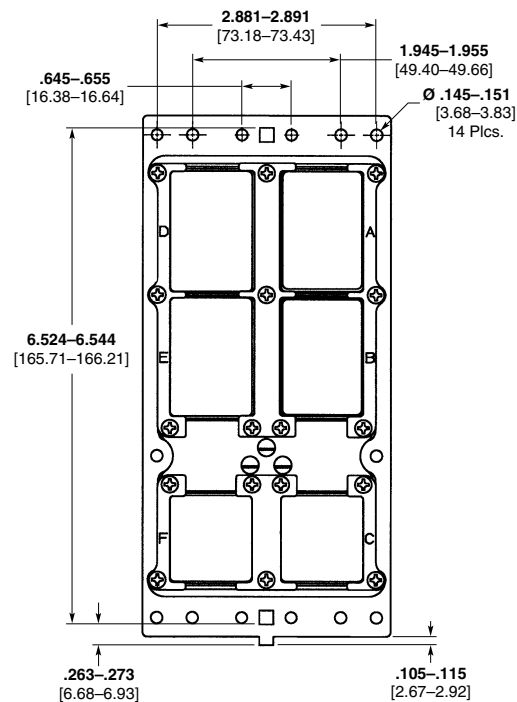
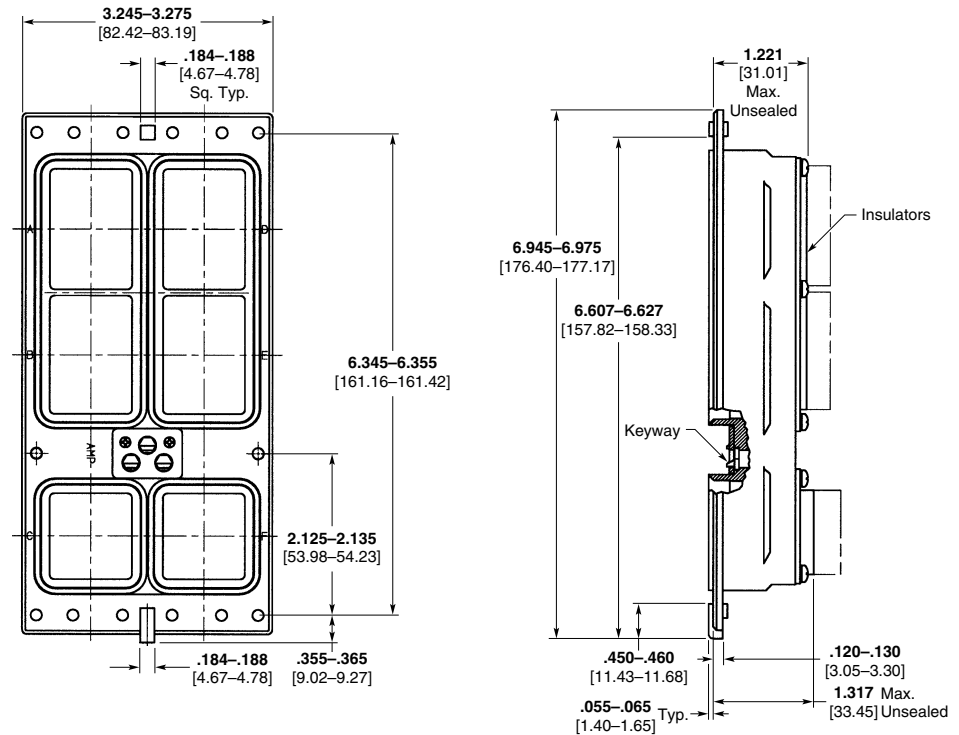


Plug



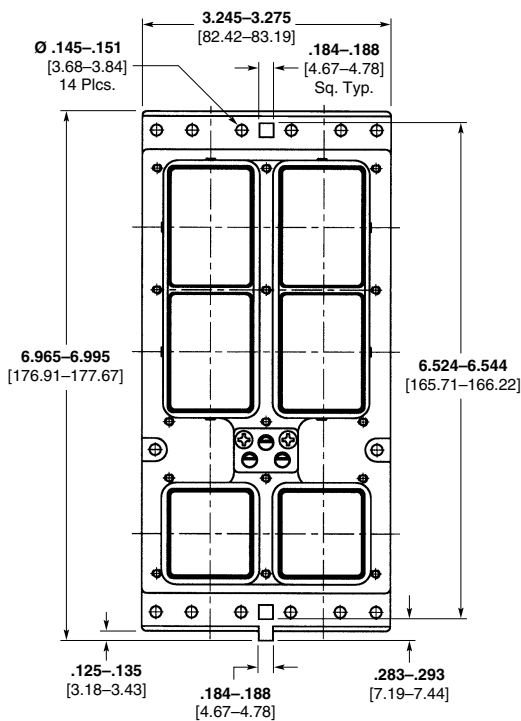
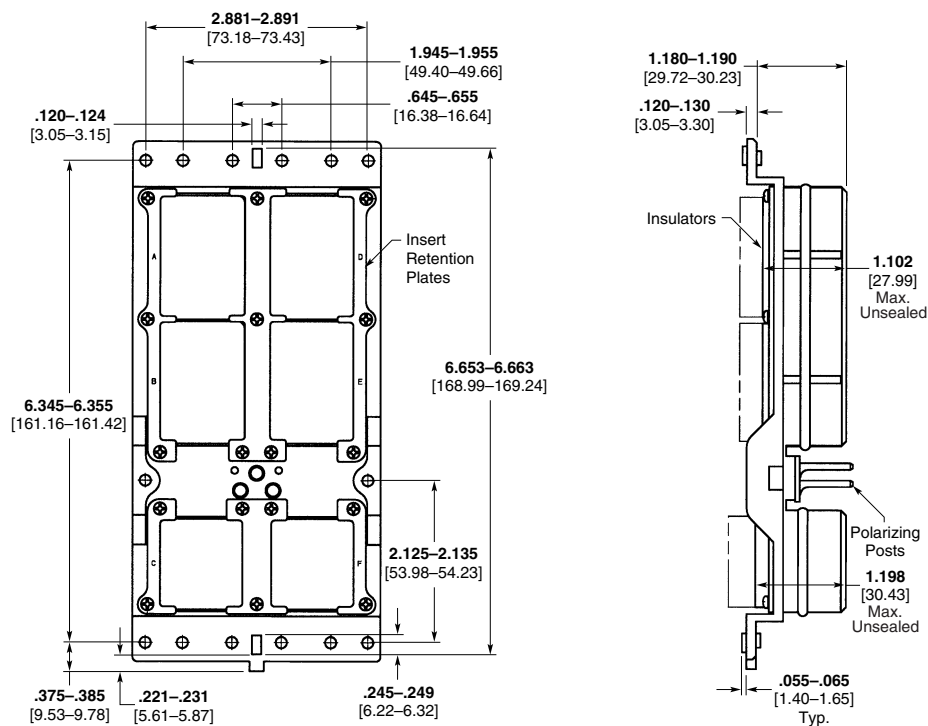
Shell Size 3

Receptacle



Shell Size 3 (Continued)

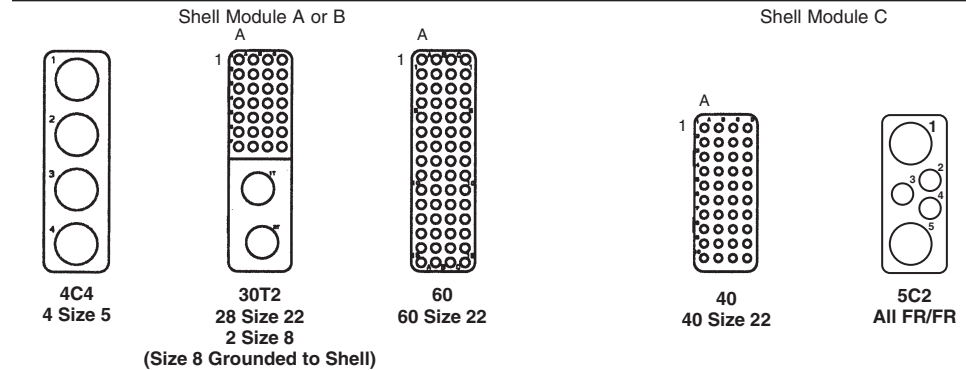
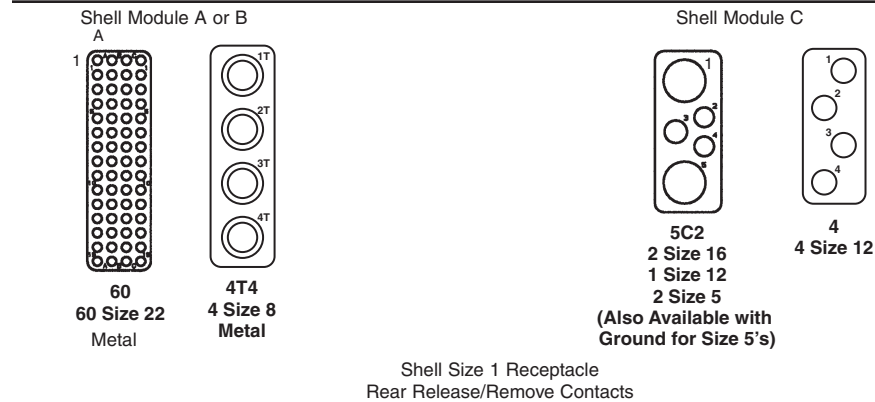
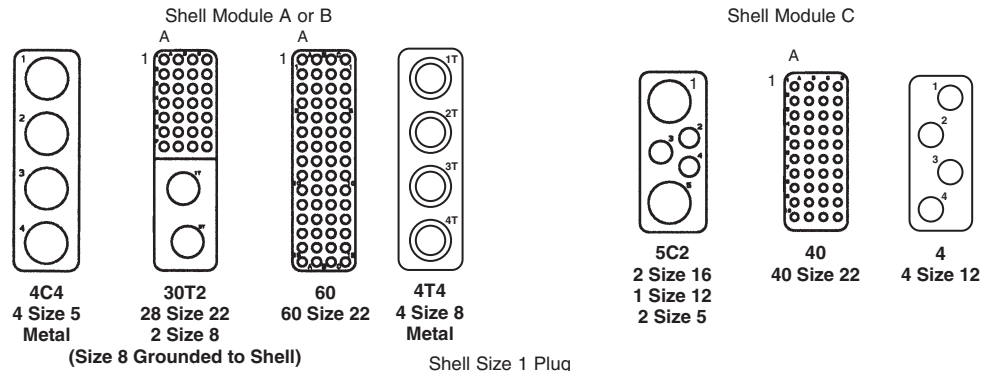
Plug



Contact Inserts and Arrangement Codes

Shell Size 1

Note: For Expanded Beam Fiber Optic Inserts, see page 4-14.



Shell Size	Arrangement Code	Module A	Module B	Module C
1	11	60	60	5C2
1	12	60	BLANK	BLANK
1	13	BLANK	60	BLANK
1	14	BLANK	60	5C2
1	15	60	60	40
1	16	OPEN	60	5C2
1	71	30T2	30T2	40
1	102	60	60	OPEN
1	104	60	OPEN	5C2
1	105	OPEN	OPEN	5C2
1	106	60	4C4	40
1	107	30T2	30T2	40
1	110	60	60	4
1	111	OPEN	30T2	40
1	112	60	4C4	5C2
1	113	60	OPEN	OPEN

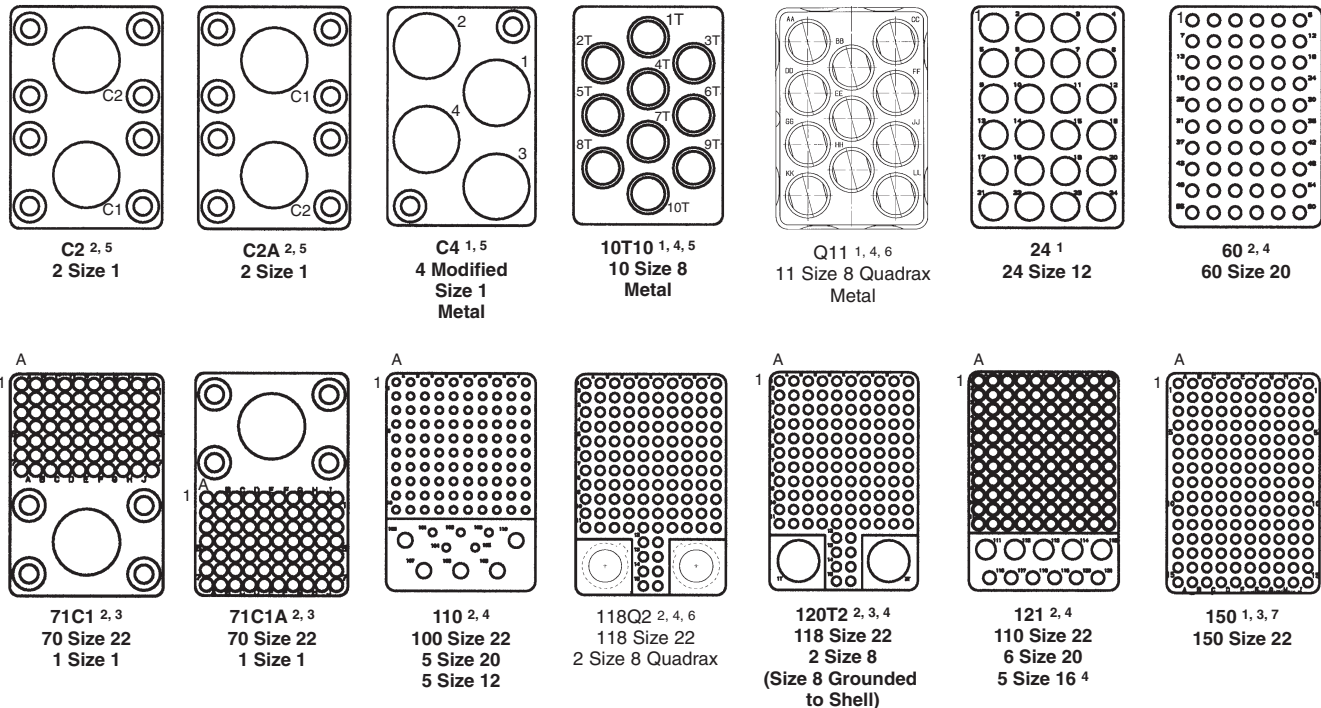
Arrangement codes not shown are available upon request. Contact TE Connectivity.

Contact Inserts and Arrangement Codes (Continued)

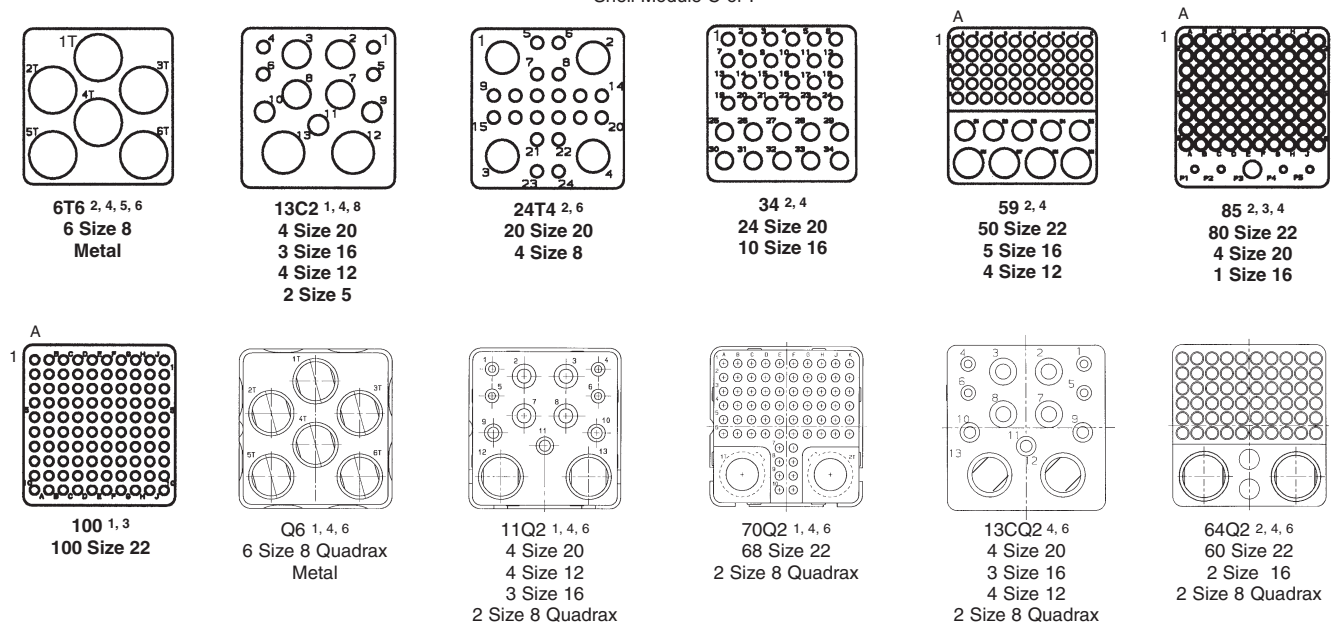
Shell Size 2 or 3

Note: For ARINC 801 Inserts and Expanded Beam Fiber Optic Inserts, see page 4-14.

Shell Module A, B, D or E



Shell Module C or F



- Notes:**
1. Available for plug or receptacle with rear release/remove contacts.
 2. Available for plug only with rear release/remove contacts.
 3. Available for receptacle only with front release/remove size 22 contacts and rear release/remove other size contacts.
 4. Available for receptacle only with all contacts front release/remove.

5. Available for receptacle only with all contacts front release/rear remove.
6. Standard size 8 contacts will not fit in Quadrax size 8 inserts. Also, Quadrax size 8 contacts will not fit into standard size 8 inserts.
7. Available for plug with front release/remove contacts.
8. Available with grounding for size 5's.

Note: Engaging faces of receptacle inserts are shown

Contact Inserts and Arrangement Codes (Continued)

Shell Size 2

Shell Size	Arrangement Code	Module A	Module B	Module C
2	20	71C1A	71C1	13C2
2	21	150	150	13C2
2	22	71C1	150	13C2
2	23	71C1	71C1	13C2
2	25	150	71C1	13C2
2	26	150	150	100
2	27	C2	71C1	13C2
2	28	C2	71C1A	85
2	29	150	150	BLANK
2	30	71C1A	71C1A	13C2
2	50	71C1	71C1A	13C2
2	51	BLANK	150	13C2
2	52	150	150	85
2	53	C4	150	13C2
2	54	150	73C3	13C2
2	55	150	BLANK	13C2
2	56	150	C2	13C2
2	57	24	150	13C2
2	58	24	24	6T6
2	59	C4	C4	13C2
2	72	120T2	120T2	100
2	74	121	121	6T6
2	75	121	10T10	6T6
2	80	120T2	150	100
2	81	120T2	120T2	6T6
2	82	71C1A	150	13C2
2	83	150	C4	34
2	84	C4	C4	34
2	85	150	150	34
2	86	150	121	100
2	207	71C1	150	100
2	208	150	71C1	100
2	209	71C1	71C1	100
2	212	71C1	71C1	OPEN
2	216	C2A	71C1A	85
2	220	71C1	C2A	85
2	234	60	60	13C2
2	237	150	120T2	100
2	240	120T2	10T10	13C2
2	241	150	150	6T6

Shell Size	Arrangement Code	Module A	Module B	Module C
2	242	150	10T10	13C2
2	245	71C1	71C1	85
2	253	C2A	150	13C2
2	254	C2A	71C1A	100
2	255	C2A	71C1A	13C2
2	256	C2A	71C1	13C2
2	257	C2A	C2A	13C2
2	259	C4	C4	85
2	262	150	60	34
2	266	121	121	85
2	268	60	121	59
2	269	10T10	150	13C2
2	270	150	150	59
2	271	C4	120T2	13C2
2	272	10T10	10T10	85
2	273	121	60	6T6
2	275	121	60	34
2	279	150	121	13C2
2	284	120T2	120T2	13C2
2	286	60	60	34
2	287	150	121	59
2	288	150	11Q11	13C2
2	289	C4	60	100
2	290	150	150	68Q2
2	291	121	121	59
2	292	121	121	6Q6
2	293	121	11Q11	6Q6
2	294	C4	11Q11	59
2	295	11Q11	150	13C2
2	296	11Q11	11Q11	11Q2
2	297	11Q11	60	68Q2
2	298	120T2	BLANK	85
2	299	F36	150	85
2	300	120T2	120T2	11Q2
2	401	150	100	11Q2
2	402	150	60	100
2	403	71C1A	118Q2	12F5C2
2	404	11Q11	150	59
2	405	24	24	100
2	406	120T2	150	13C2

Note: Arrangement codes not shown are available upon request. Contact TE Connectivity.

Contact Inserts and Arrangement Codes (Continued)

Shell Size 3

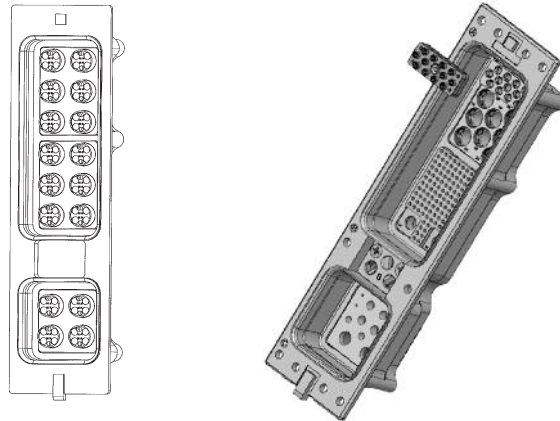
Shell Size	Arrangement Code	Module A	Module B	Module C	Module D	Module E	Module F
3	31	150	150	13C2	150	150	13C2
3	32	150	150	100	150	150	13C2
3	33	150	150	13C2	150	150	100
3	34	150	150	100	150	150	100
3	36	C4	C4	13C2	BLANK	150	100
3	37	150	150	85	150	150	85
3	76	120T2	150	34	120T2	150	34
3	77	121	121	6T6	121	121	6T6
3	306	150	71C1	13C2	150	71C1	13C2
3	307	71C1	71C1	13C2	71C1	71C1	13C2
3	308	C2A	C2A	13C2	C2A	150	100
3	309	150	150	13C2	150	71C1	100
3	319	121	120T2	6T6	121	120T2	6T6
3	320	150	60	100	150	60	100
3	322	150	150	100	150	150	34
3	323	150	150	100	71C1	71C1	100
3	325	150	150	13C2	C2A	C2A	13C2
3	326	150	71C1	100	150	150	100
3	327	150	71C1	100	150	150	13C2
3	328	C2A	C2A	13C2	150	150	13C2
3	331	71C1	150	100	150	150	100
3	332	C4	C4	13C2	C4	C4	85
3	333	71C1	71C1	100	71C1	71C1	100
3	335	71C1	C4	100	71C1	C4	100
3	338	C2A	150	100	150	150	100
3	339	C2A	C2A	100	C2A	C2A	100
3	340	C2A	C2A	13C2	C2A	C2A	13C2
3	341	C4	C4	100	C4	C4	100
3	342	C4	C4	13C2	C4	C4	13C2
3	344	24	150	13C2	24	150	13C2
3	346	150	24	100	150	150	34
3	347	150	150	6T6	121	10T10	13C2
3	348	150	150	11Q2	150	150	11Q2
3	349	150	150	13C2	120T2	120T2	100
3	350	C4	C4	13C2	150	150	100
3	351	150	150	13C2	150	6MS	BLANK
3	352	150	150	59	150	6MS	BLANK
3	353	150	150	59	150	6MS	100
3	354	150	150	59	150	150	59
3	355	150	150	59	150	150	100
3	356	150	150	34	150	150	34
3	357	24	24	34	150	150	100
3	358	C4	120T2	100	150	150	13C2
3	359	11Q11	11Q11	6Q6	11Q11	11Q11	6Q6
3	360	11Q11	11Q11	100	11Q11	121	6Q6
3	361	11Q11	150	11Q2	150	150	68Q2
3	362	110	11Q11	6Q6	24	150	6Q6
3	363	150	120T2	100	150	120T2	59
3	364	C4	118Q2	11Q2	C4	118Q2	11Q2
3	365	11Q11	11Q11	85	11Q11	11Q11	85

Note: Arrangement codes not shown are available upon request. Contact TE Connectivity.

Fiber Optic Inserts and Cavity Reducers

Inserts available to accept TE Connectivity Mini-Expanded Beam Fiber Optic Cable Assemblies and ARINC 801 1.25mm Optical Termini. Custom design configurations can be provided.

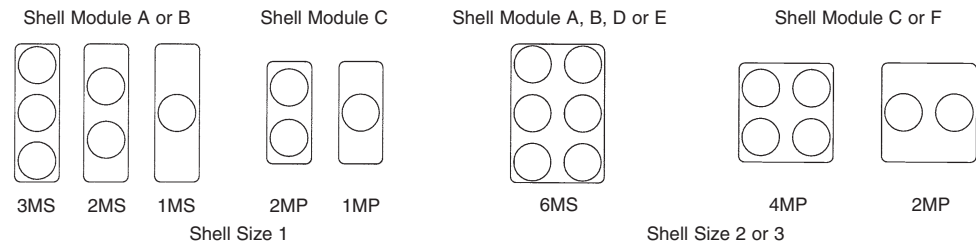
Contact TE for more information about Fiber Optic Connectors and Cable Assemblies, see Section 3.



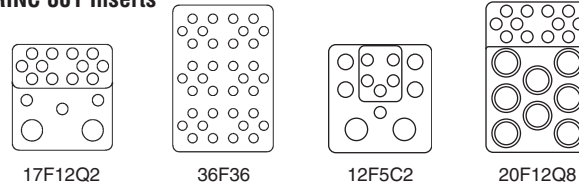
Product Facts

- For Mini-Expanded Beam inserts
- Insert holders designed to ARINC 600, Supplement 18 or to specific customer needs
- For use in 100 base-FX Ethernet LAN applications per ARINC 664 and 763
- Drop-in insert holders utilize standard ARINC 600 retainers
- Sealing available

Mini-Expanded Beam



ARINC 801 Inserts



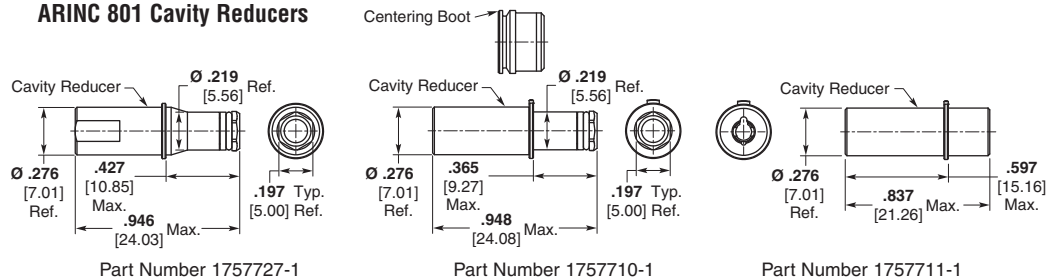
ARINC 801 Inserts and Cavity Reducers accept ARINC 801 Fiber Optic Termini.

ARINC 801 Optical Termini

Product Facts

- Optical termini for use with GPR, ARINC 600, circular MIL-DTL-38999 connectors
- Industry Standard 1.25mm ceramic ferrule
- Compatible with 1.5-2.2mm Tight jacket and loose tube cable construction:
 - MT - Tight jacket cable
 - ML - Loose tube cable
- SM / MM versions

ARINC 801 Cavity Reducers



Size 8 Quadrax	Part Number	ARINC 801 Cavity Reducer
Pin Quadrax adapter for ARINC 801 termini in Quadrax FR type cavity	1757727-1	Quadrax cavity reducer (FR/FR) for receptacle shell
Pin Quadrax adapter for ARINC 801 termini in Quadrax RR type cavity	1757710-1	Quadrax cavity reducer (RR/RR) for receptacle shell
Socket Quadrax adapter for ARINC 801 termini in Quadrax RR type cavity	1757711-1	Quadrax cavity reducer (RR/RR) for plug shell

ARINC 801 Optical Termini Part Numbers

Cable Dia.	Cable Structure ML (loose & tight) MT (ultra tight)	S/M Fiber 125,3 µm PC/UPC	S/M Fiber 125,3 µm APC	M/M Fiber 128 µm PC
0.9mm Buffer	—	*	*	*
1.5 - 2.2mm	ML	1918614-1	1918616-1	1828199-1
1.5 - 2.2mm	MT	1918615-1	1918617-1	1828200-1

Consult your local TE Sales Representative for additional options.

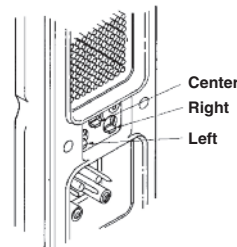
* Contact TE for availability.

Keying

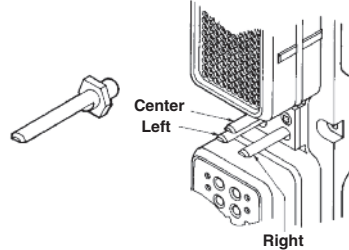
Notes:

1. Darkened portion of diagram indicates extended post of plug key; light portion indicates key hole in receptacle keyway.
2. If the keying code is omitted, keying is assembled in the 01 arrangement; the keying code is not stamped on the connector.
3. If the keying code is 00, keying is supplied unassembled.
4. Diagrams show mating face of connector, "Top" up.

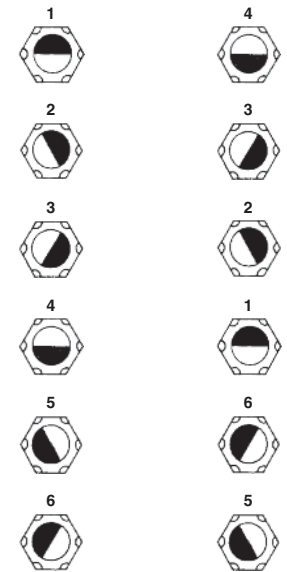
Receptacle



Plug



Extended Post of Plug Key → Mates to → Key Hole in Receptacle



Keying Components	Quantity Required Per Connector	Part Numbers	
		Receptacle	Plug
Male Key Post	3	—	1218693-2
Female Keyway	3	208019-1	—
Plate	1	1218692-1	1218692-1
Screw	2	208021-1	208021-1
Kit Containing Above	1	448013-1	448012-1

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Keyway	Center Keyway	Right Keyway
00	—	—	—	—	—	—
01	1	1	1	4	4	4
02	2	1	1	4	4	3
03	3	1	1	4	4	2
04	4	1	1	4	4	1
05	5	1	1	4	4	6
06	6	1	1	4	4	5
07	1	1	6	5	4	4
08	2	1	6	5	4	3
09	3	1	6	5	4	2
10	4	1	6	5	4	1
11	5	1	6	5	4	6
12	6	1	6	5	4	5
13	1	1	5	6	4	4
14	2	1	5	6	4	3
15	3	1	5	6	4	2
16	4	1	5	6	4	1
17	5	1	5	6	4	6
18	6	1	5	6	4	5
19	1	1	4	1	4	4
20	2	1	4	1	4	3
21	3	1	4	1	4	2
22	4	1	4	1	4	1
23	5	1	4	1	4	6
24	6	1	4	1	4	5
25	1	1	3	2	4	4
26	2	1	3	2	4	3
27	3	1	3	2	4	2
28	4	1	3	2	4	1
29	5	1	3	2	4	6
30	6	1	3	2	4	5
31	1	1	2	3	4	4
32	2	1	2	3	4	3
33	3	1	2	3	4	2
34	4	1	2	3	4	1
35	5	1	2	3	4	6
36	6	1	2	3	4	5
37	1	2	1	4	3	4
38	2	2	1	4	3	3

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Keyway	Center Keyway	Right Keyway
39	3	2	1	4	3	2
40	4	2	1	4	3	1
41	5	2	1	4	3	6
42	6	2	1	4	3	5
43	1	2	6	5	3	4
44	2	2	6	5	3	3
45	3	2	6	5	3	2
46	4	2	6	5	3	1
47	5	2	6	5	3	6
48	6	2	6	5	3	5
49	1	2	5	6	3	4
50	2	2	5	6	3	3
51	3	2	5	6	3	2
52	4	2	5	6	3	1
53	5	2	5	6	3	6
54	6	2	5	6	3	5
55	1	2	4	1	3	4
56	2	2	4	1	3	3
57	3	2	4	1	3	2
58	4	2	4	1	3	1
59	5	2	4	1	3	6
60	6	2	4	1	3	5
61	1	2	3	2	3	4
62	2	2	3	2	3	3
63	3	2	3	2	3	2
64	4	2	3	2	3	1
65	5	2	3	2	3	6
66	6	2	3	2	3	5
67	1	2	2	3	3	4
68	2	2	2	3	3	3
69	3	2	2	3	3	2
70	4	2	2	3	3	1
71	5	2	2	3	3	6
72	6	2	2	3	3	5
73	1	3	1	4	2	4
74	2	3	1	4	2	3
75	3	3	1	4	2	2
76	4	3	1	4	2	1
77	5	3	1	4	2	6

Keying (Continued)

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Keyway	Center Keyway	Right Keyway
78	6	3	1	4	2	5
79	1	3	6	5	2	4
80	2	3	6	5	2	3
81	3	3	6	5	2	2
82	4	3	6	5	2	1
83	5	3	6	5	2	6
84	6	3	6	5	2	5
85	1	3	5	6	2	4
86	2	3	5	6	2	3
87	3	3	5	6	2	2
88	4	3	5	6	2	1
89	5	3	5	6	2	6
90	6	3	5	6	2	5
91	1	3	4	1	2	4
92	2	3	4	1	2	3
93	3	3	4	1	2	2
94	4	3	4	1	2	1
95	5	3	4	1	2	6
96	6	3	4	1	2	5
97	1	3	3	2	2	4
98	2	3	3	2	2	3
99	3	3	3	2	2	2
100	4	3	3	2	2	1
101	5	3	3	2	2	6
102	6	3	3	2	2	5
103	1	3	2	3	2	4
104	2	3	2	3	2	3
105	3	3	2	3	2	2
106	4	3	2	3	2	1
107	5	3	2	3	2	6
108	6	3	2	3	2	5
109	1	4	1	4	1	4
110	2	4	1	4	1	3
111	3	4	1	4	1	2
112	4	4	1	4	1	1
113	5	4	1	4	1	6
114	6	4	1	4	1	5
115	1	4	6	5	1	4
116	2	4	6	5	1	3
117	3	4	6	5	1	2
118	4	4	6	5	1	1
119	5	4	6	5	1	6
120	6	4	6	5	1	5
121	1	4	5	6	1	4
122	2	4	5	6	1	3
123	3	4	5	6	1	2
124	4	4	5	6	1	1
125	5	4	5	6	1	6
126	6	4	5	6	1	5
127	1	4	4	1	1	4
128	2	4	4	1	1	3
129	3	4	4	1	1	2
130	4	4	4	1	1	1
131	5	4	4	1	1	6
132	6	4	4	1	1	5
133	1	4	3	2	1	4
134	2	4	3	2	1	3
135	3	4	3	2	1	2
136	4	4	3	2	1	1
137	5	4	3	2	1	6
138	6	4	3	2	1	5
139	1	4	2	3	1	4
140	2	4	2	3	1	3
141	3	4	2	3	1	2
142	4	4	2	3	1	1
143	5	4	2	3	1	6
144	6	4	2	3	1	5
145	1	5	1	4	6	4
146	2	5	1	4	6	3
147	3	5	1	4	6	2

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Keyway	Center Keyway	Right Keyway
148	4	5	1	4	6	1
149	5	5	1	4	6	6
150	6	5	1	4	6	5
151	1	5	6	5	6	4
152	2	5	6	5	6	3
153	3	5	6	5	6	2
154	4	5	6	5	6	1
155	5	5	6	5	6	6
156	6	5	6	5	6	5
157	1	5	5	6	6	4
158	2	5	5	6	6	3
159	3	5	5	6	6	2
160	4	5	5	6	6	1
161	5	5	5	6	6	6
162	6	5	5	6	6	5
163	1	5	4	1	6	4
164	2	5	4	1	6	3
165	3	5	4	1	6	2
166	4	5	4	1	6	1
167	5	5	4	1	6	6
168	6	5	4	1	6	5
169	1	5	3	2	6	4
170	2	5	3	2	6	3
171	3	5	3	2	6	2
172	4	5	3	2	6	1
173	5	5	3	2	6	6
174	6	5	3	2	6	5
175	1	5	2	3	6	4
176	2	5	2	3	6	3
177	3	5	2	3	6	2
178	4	5	2	3	6	1
179	5	5	2	3	6	6
180	6	5	2	3	6	5
181	1	6	1	4	5	4
182	2	6	1	4	5	3
183	3	6	1	4	5	2
184	4	6	1	4	5	1
185	5	6	1	4	5	6
186	6	6	1	4	5	5
187	1	6	6	5	5	4
188	2	6	6	5	5	3
189	3	6	6	5	5	2
190	4	6	6	5	5	1
191	5	6	6	5	5	6
192	6	6	6	5	5	5
193	1	6	5	6	5	4
194	2	6	5	6	5	3
195	3	6	5	6	5	2
196	4	6	5	6	5	1
197	5	6	5	6	5	6
198	6	6	5	6	5	5
199	1	6	4	1	5	4
200	2	6	4	1	5	3
201	3	6	4	1	5	2
202	4	6	4	1	5	1
203	5	6	4	1	5	6
204	6	6	4	1	5	5
205	1	6	3	2	5	4
206	2	6	3	2	5	3
207	3	6	3	2	5	2
208	4	6	3	2	5	1
209	5	6	3	2	5	6
210	6	6	3	2	5	5
211	1	6	2	3	5	4
212	2	6	2	3	5	3
213	3	6	2	3	5	2
214	4	6	2	3	5	1
215	5	6	2	3	5	6
216	6	6	2	3	5	5

Contact Style/Shell Modification Codes

- AA Crimp, Snap-In Contacts, Rear Release, Standard Mounting
 AB .025 [0.64] Square Post — 208215-1 Contacts, 1-Wrap High, Snap-In, Standard Mounting
 AC .025 [0.64] Square Post — 208215-2 Contacts, 2-Wrap High, Snap-In, Standard Mounting
 AD .025 [0.64] Square Post — 208215-3 Contacts, 3-Wrap High, Snap-In, Standard Mounting
 BA (4) Floating Bushings

#6-32 Clinch Nuts, see Table 1 on page 4-18 for clinch nut locations

- CA (10) #6-32 Clinch Nuts
 CB (4) #6-32 Clinch Nuts
 CC (6) #6-32 Clinch Nuts
 CD (8) #6-32 Clinch Nuts
 CE (14) #6-32 Clinch Nuts

Captivated Contact Codes

- DA Captivated Inserts — No Contacts
 DF 208275-7 (.150 [3.81] Extension), Standard Mounting
 DG 208275-3 (.190 [4.83] Extension), Standard Mounting
 DH 208275-4 (.250 [6.35] Extension), Standard Mounting

Clinch Nuts with Captivated Contacts, see Table 1 on page 4-18 for clinch nut locations

- EA (4) #6-32 Clinch Nuts, and 208275-7 Signal Contacts
 EB (4) #6-32 Clinch Nuts, and 208275-3 Signal Contacts
 EC (4) #6-32 Clinch Nuts, and 208275-4 Signal Contacts

Front Release, standard mounting

- FA Indicates Front Release Inserts without Contacts
 FB Standard Mounting, 211245-2 Contacts
 FC Standard Mounting, 211245-4 Contacts
 FD Standard Mounting, 211245-6 Contacts
 FE Standard Mounting, 211431-2 Contacts
 FF Standard Mounting, 211431-4 Contacts
 FG Standard Mounting, 211431-6 Contacts
 FH Standard Mounting, 211431-8 Contacts

Front Release Contacts and Clinch Nuts, see Table 1 on page 4-18 for clinch nut locations

- GA (4) #4-40 Clinch Nuts, 211431-4 Contacts
 GB (6) #4-40 Clinch Nuts, 211431-4 Contacts
 GC (6) #4-40 Clinch Nuts, 211431-6 Contacts
 GD (6) #6-32 Clinch Nuts, 211431-4 Contacts
 GE (10) #4-40 Clinch Nuts, 211431-8 Contacts
 GF (6) #6-32 Clinch Nuts, 211431-2 Contacts
 GG (4) #4-40 Clinch Nuts, 211431-2 Contacts
 GH (4) #6-32 Clinch Nuts, 211431-2 Contacts
 GJ (6) #6-32 Clinch Nuts, 211431-8 Contacts
 GK (4) #6-32 Clinch Nuts, 211431-8 Contacts
 GL (10) #6-32 Clinch Nuts, 211431-4 Contacts
 GM (4) #6-32 Clinch Nuts, 211431-4 Contacts
 GN (4) #6-32 Clinch Nuts, 211245-2 Contacts
 FJ (10) #6-32 Clinch Nuts, 211245-4 Contacts
 FK (6) #6-32 Clinch Nuts, 211245-4 Contacts

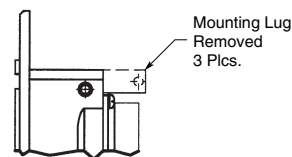
#4-40 Clinch Nuts, see Table 1 on page 4-18 for clinch nut locations

- SA (4) #4-40 Clinch Nuts
 SB (6) #4-40 Clinch Nuts
 SC (10) #4-40 Clinch Nuts
 SD (8) #4-40 Clinch Nuts
 SE (14) #4-40 Clinch Nuts
 SF (6) #4-40 Clinch Nuts (Special)

Size 1 Receptacle Shell with Lugs Removed, see drawing below.
 See Table 1 on page 4-18 for clinch nut locations.

- HA Size 1 Receptacle Shell
 HB Size 1 Receptacle Shell — (4) #4-40 Clinch Nuts
 HC Size 1 Receptacle Shell — with 211431-4 contacts, standard mounting

Size 1 Receptacle



Modification Code
 HA, HB, and HC only

Contact Style/Shell Modification Codes (Continued)

Table 1

Clinch Nut Locations on Mounting Flange (Unless otherwise noted with modification code)			
Quantity	Shell Size		
	1	2	3
4	All	4 corners	4 corners
6	N/A	4 corners and 2 at polarizing keys	4 corners and 2 at polarizing keys
6 code SF only	N/A	See Figure 3	N/A
8	N/A	See Figure 4	See Figure 1
10	N/A	All	See Figure 2
14	N/A	N/A	All

Size 3 Receptacle

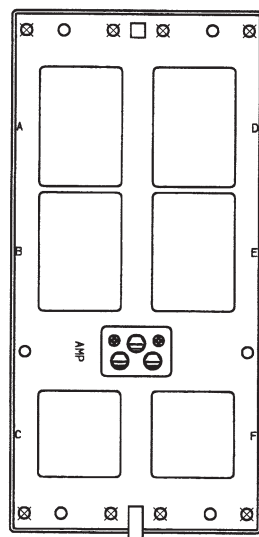


Figure 1
x = Clinch Nut Installed
in These Holes

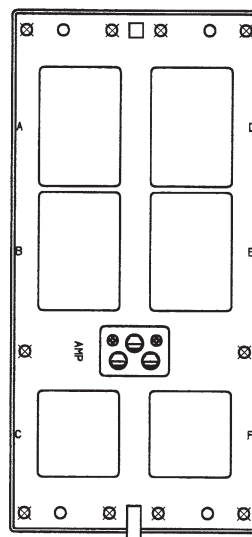


Figure 2
x = Clinch Nut Installed
in These Holes

Size 2 Receptacle

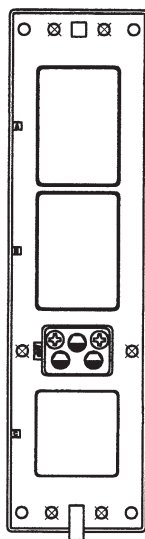


Figure 3
Modification Code SF Only
x = Clinch Nut Installed
in These Holes

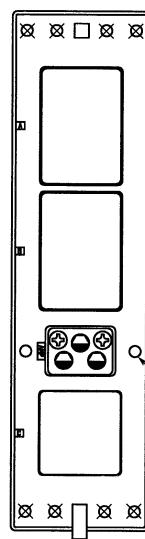


Figure 4
x = Clinch Nut Installed
in These Holes

Ø .186
[4.72]
2 Plcs.

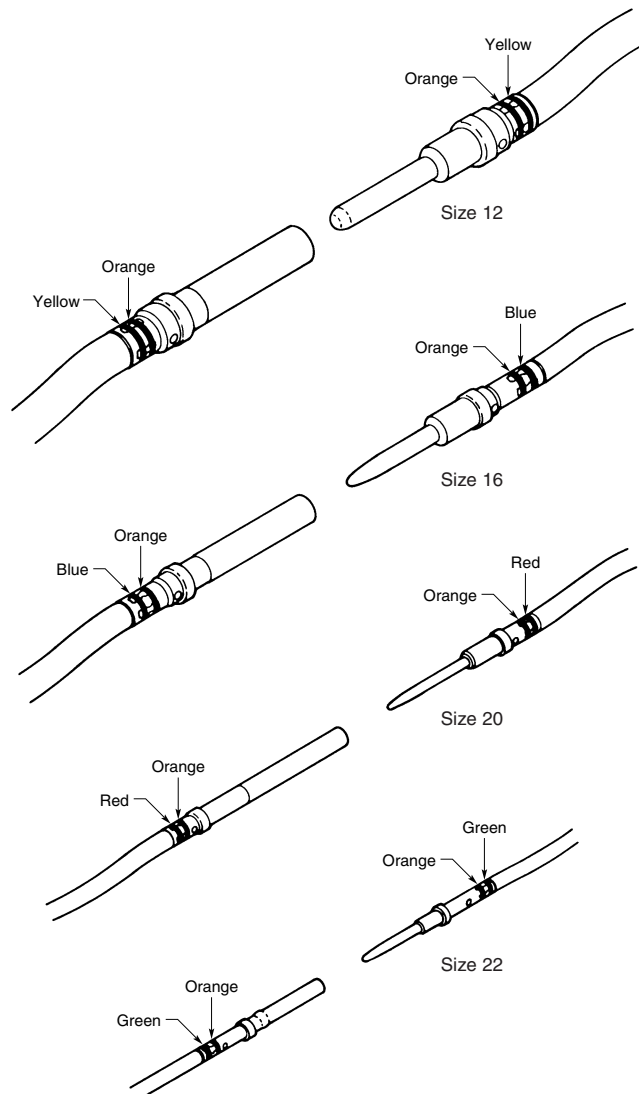
Crimp, Snap-In Contacts

Contact Loading Codes

0 (or blank) — Contacts included

1 — Contacts not included; must be ordered separately by TE Connectivity Part Number.

Note: When connectors are ordered with contacts, the contact style section (AA in the example code at the top of this page) must be specified so that the proper, unloaded inserts are included. COAXICON contacts are not supplied in connector kits and must be ordered separately.



Insertion and Extraction



Typical Tool

Crimp, Snap-In, Rear-Release Contacts (also suitable for ARINC 404)

Average Contact Size	Wire Size		Color Code	Average Engagement Force	Part Numbers		Tooling Part Numbers			Color Code
	AWG	mm ²			Pin Contact	Socket Contact	Crimp Tool	Positioner	Insertion/Extraction Tool	
22	26-22	0.12-0.4	Green	1.5 oz. [.42 N]	208262-3	208264-2	M22520/2-01	M22520/2-23	91066-1	Green
20	24-20	0.2-0.6	Red	2.0 oz. [.56 N]	208265-3	208267-2	M22520/2-01	M22520/2-08	91066-4	Red
16	20-16	0.5-1.4	Blue	3.0 oz. [.83 N]	208268-3	208270-2	M22520/1-01	M22520/1-02	91066-3	Blue
12	14-12	2-3	Yellow	12.0 oz. [3.34 N]	208271-3	208273-2	M22520/1-01	M22520/1-11	445147-1	—

Posted Contacts

Size 22 Posted Contacts

Contact Loading

0 (or blank) — Contacts included

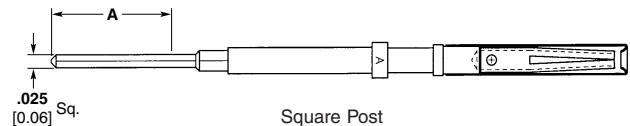
1 — Contacts not included; must be ordered separately.



Square or Rounded Posts



Round Post



Square Post

Size 22, Snap-In, Rear Release Socket Contacts

Use Insertion/Extraction Tool
Part Number 91066-1

with .025 [0.64] Square Posts

Number of Wraps	Post Extension from Rear of Insert (Dim. A)	Part Number
1	0.275 6.98	208215-1
2	0.390 9.91	208215-2
3	0.520 13.21	208215-3

with Round Posts

Minimum Post Extension from Rear (Dim. A)	Post Diameter (Dim. B)	Part Number
0.190 4.82	0.025 0.64	445814-1
0.230 5.84	0.025 0.64	445814-2
0.180 4.57	0.020 0.51	445814-3

Size 22, Snap-In, Front Release Socket Contacts

Use Insertion/Extraction Tool
Part Number 445815-1

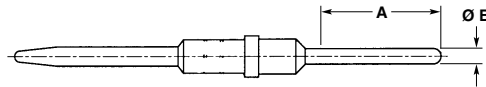
with Round Posts

Minimum Post Extension from Rear of Insert (Dim. A)	Post Diameter (Dim. B)	Part Number	Solder Dipped
0.150 3.81	0.025 0.64	211431-2	No
0.250 6.35	0.025 0.64	211431-4	No
0.375 9.52	0.025 0.64	211431-6	No
0.500 12.70	0.025 0.64	211431-8	No
0.150 3.81	0.0195 0.50	1-211431-0	No
0.250 6.35	0.0195 0.50	1-211431-2	No
0.150 3.81	0.030 0.76	1-211431-3	Yes
0.375 9.52	0.030 0.76	1-211431-4	Yes
0.250 6.35	0.025 0.64	1-211431-5	Yes

with .025 [0.64] Square Posts

Number of Wraps	Post Extension from Rear of Insert (Dim. A)	Part Number
1	0.250 6.35	211245-2
2	0.375 9.52	211245-4
3	0.500 12.70	211245-6

Posted Contacts (Continued)



Size 16
Part Number 448139

Front Release/Remove
Size 12, Posted Pin Contacts
Use Insertion/Extraction Tool
Part Number 445147-1

Minimum Post Extension from Rear of Insert (Dim. A)	Post Diameter (Dim. B)	Part Number	Solder Dipped
0.264 6.70	.079-.083 2.01-2.11	448140-3	No
0.379 9.62	.079-.083 2.01-2.11	448140-6	No
0.264 6.70	.079-.083 2.01-2.11	448140-9	Yes
0.143 3.63	.079-.083 2.01-2.11	448140-8	No

Front Release/Remove
Size 16, Posted Pin Contacts
Use Insertion/Extraction Tool
Part Number 91066-3

Minimum Post Extension from Rear of Insert (Dim. A)	Post Diameter (Dim. B)	Part Number	Solder Dipped
0.379 9.62	.048-.052 1.22-1.32	448139-6	No
0.264 6.70	.048-.052 1.22-1.32	1-448139-1	No
0.233 5.91	.048-.052 1.22-1.32	1-448139-4	No
0.264 6.70	.048-.052 1.22-1.32	1-448139-5	Yes
0.143 3.63	.061-.064 1.55-1.63	448139-8	No

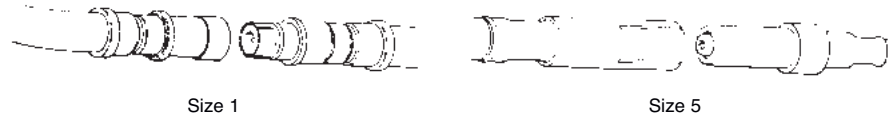
Front Release/Remove
Size 20, Posted Pin Contacts
Use Insertion/Extraction Tool
Part Number 91066-4

Minimum Post Extension from Rear of Insert (Dim. A)	Post Diameter (Dim. B)	Part Number	Solder Dipped
0.379 9.62	.030-.034 0.76-0.86	2-448138-3	No
0.236 5.99	.030-.034 0.76-0.86	1-448138-2	No
0.272 6.90	.030-.034 0.76-0.86	1-448138-5	No
0.272 6.90	.030-.034 0.76-0.86	1-448138-6	Yes
0.236 5.99	.030-.034 0.76-0.86	1-448138-7	Yes

COAXICON Contacts

COAXICON Contacts

COAXICON Contacts are not supplied in connector kits; they must be ordered separately.



Size 1 Contacts

Performance Characteristics

Nominal Impedance — 50 ohms

Frequency Range — 0 to 5 GHz

Operating Temperature — -85°F to +329°F [-65°C to +165°C]

Operating Voltage (Rated) — 1000 VAC rms, 60 Hz at Sea Level

Contact Resistance (Milliohms) — 1.0 max. — Center Contact
0.2 max. — Outer Contact

Insulation Resistance — 5,000 megohms min. @ 500 vdc per MIL-STD-1344, Method 3003 or MIL-STD-202, Method 302, Cond. B

Dielectric Withstanding Voltage (60 Hz, rms) —

RG 214/U

2500 at Sea Level

RG 142/U

1900 at Sea Level

VSWR — 1.35 to 1.00 at 5 GHz

Insertion/Withdrawal Force —

Insertion (max.) 15 lb [66.72 N]

Withdrawal (min.) 1 lb [4.45 N]

Cable Retention —

RG 214/U

125 lb [556 N] min.

RG 142/U

60 lb [266.9 N] min.

Thermal Shock — per MIL-STD-1344, Method 1003, Cond. A or MIL-STD-202, Method 107, Cond. A

Physical Shock — per MIL-STD-1344, Method 2004, Cond. D or MIL-STD-202, Method 213, Cond. D except 300 G max.

Vibration — per MIL-STD-1344, Method 2005, Cond. VI, Letter J or MIL-STD-202, Method 204, Cond. E except 42 G max.

Humidity Temperature Cycling — per MIL-STD-1344, Method 1002, Type II, Cond. A or MIL-STD-202, Method 106

Salt Spray — per MIL-STD-1344, Method 1001, Cond. B or MIL-STD-202, Method 101, Cond. B

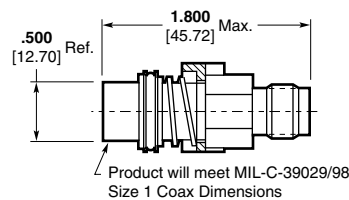
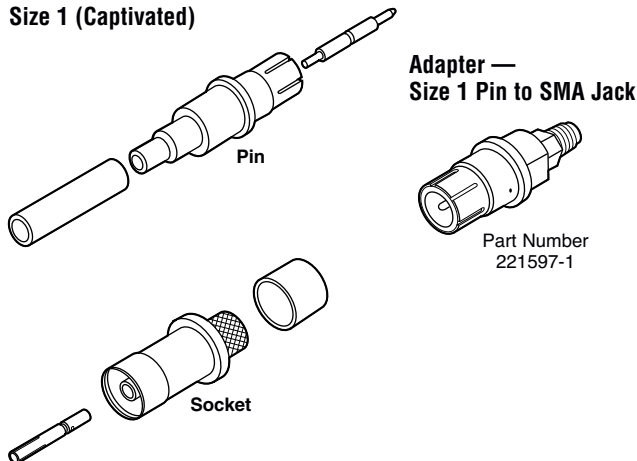
Temperature Life — per MIL-STD-1344, Method 1005, Cond. D or MIL-STD-202, Method 108, Cond. D

Material and Finish

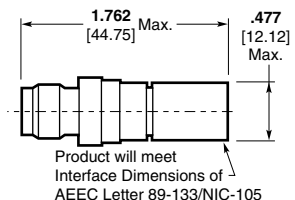
Contact — Beryllium Copper per ASTM-B-196/ASTM-B-197, Brass per ASTM-B-16, PTFE per ASTM-D-1710, Silicon Rubber per ZZ-R-765, Gold plate per MIL-G-45204, Nickel plate per QQ-N-290

Ferrule — Copper per ASTM-B-188, Tin plate per ASTM-B-545

Size 1 (Captivated)



Adapter Standard Size 1
Socket to TNC
Part Number 449908-1



TCAS Size 1
Socket to TNC Adapter
Part Number 447346-1

COAXICON Contacts (Continued)

Contact Size	RG/U Cable	Contact Part No.		“O” Crimp Tooling			Military Hex Crimp Tooling				Compression Crimp Tooling		
				Center Contact			Center Contact		Ferrule				
		Pin	Socket	Tool (M22520/)	Positioner/ Die	Ferrule	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Locator (M22520/)	Dies (M22520/)
O Crimp													
Size 1 (for use with 71C1, 71C1A, C2 and C2A inserts)	402 Semi-Rigid .141 [3.58]	225837-1	—	601966-1 (2-01)	1-601966-9	91905-11 or 91904-11	—	—	—	—	—	—	—
	402 Semi-Rigid .141 [3.58]	222018-1	—	—	—	—	—	—	—	—	59980-1 (36-01)	220220-2 (36-06)	312253-1 (36-03)
	405 Semi-Rigid .086 [2.18]	222018-2	—	—	—	—	—	—	—	—	59980-1 (36-01)	220220-2 (36-06)	312253-2 (36-02)
	214	—	225831-1 211229-1*	220015-1	—	220015-1	—	—	—	—	—	—	—
	142, 142A, 142B	—	225831-3 446709-1*	91902-11	—	91902-11	—	—	—	—	—	—	—
	393	—	225831-6 446709-3*	220015-1	—	220015-1	—	—	—	—	—	—	—
	Tflex 402	—	1757492-1	—	—	—	—	—	—	—	—	—	—
Military Hex Crimp													
Size 1 (for use with 71C1, 71C1A, C2 and C2A inserts)	214	447095-1	447087-1	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	213	447095-2	447087-2 446709-5*	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	142, 142A, 142B	447095-3	447087-3 446709-6*	—	—	—	608650-1 (5-01)	(5-11)	608650-1 (5-01)	(5-11)	—	—	—
	393	447095-4	447087-4 446709-7* 5-447087-4***	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	ECS 311201	—	447087-5 446709-2*	—	—	—	608650-1 (5-01)	(5-29)	608650-1 (5-01)	(5-29)	—	—	—
	SMA Adapter	1757180-1	—	—	—	—	—	—	—	—	—	—	—
Modified Size 1 Straight Exit (for use with C4 inserts)	214	—	446549-3*	—	—	—	M22520/5-01**	—	—	M22520/5-25	—	—	M22520/5-25
	142	—	446549-1 5-446549-1***	—	—	—	M22520/5-01**	—	—	M22520/5-11	—	—	M22520/5-11
	393	—	446549-5*	—	—	—	M22520/5-01**	—	—	M22520/5-25	—	—	M22520/5-25
	Times AA5886	—	446549-6*	—	—	—	M22520/5-01**	—	—	M22520/5-25	—	—	M22520/5-04
	Times AA5887	—	446549-2*	—	—	—	M22520/5-01**	—	—	M22520/5-29	—	—	M22520/5-29
	ESC 311201	—	446549-4*	—	—	—	M22520/5-01**	—	—	M22520/5-29	—	—	M22520/5-29
	SMA Adapter	446748-1	—	—	—	—	—	—	—	—	—	—	—
	OSP Adapter	1218713-1	—	—	—	—	—	—	—	—	—	—	—
	QMA Adapter	1757859-1	—	—	—	—	—	—	—	—	—	—	—
	Posted Contact	1757669-1	—	—	—	—	—	—	—	—	—	—	—

*Socket with mounting hardware. Mounting hardware for Size 1 Straight Exit Contacts includes: backup plate, spring, retaining ring, O-ring, washers and screws.

**TE Connectivity does not sell Hand Tool M22520/5-01. However, it can be purchased from: Daniels Manufacturing Corp, 6103 Anno Ave., Orlando, FL 32809, 800-327-2432.

***RoHS compliant Part Number.

Notes: 1. SDE die used with hand tool frame 354940-1.

2. Hardware kit for Size 1 COAXICON Socket Contacts (used on 71C1 or C2 inserts) includes all mounting hardware required (retention plate, washers, O-ring, spring, screws and retention clip). Kit Number 447118-1 (5-447118-1 RoHS Kit Number).

3. Size 1 COAXICON Pin Contacts require retention plate 211216-2 and four screws 211558-1.

4. Size 1 COAXICON Pin Contacts with SMA adapter require retention plate 1757203-2 and four screws 211558-1.

COAXICON Contacts (Continued)

Size 5 and 8 Contacts

Performance Characteristics for size 5 contacts

Nominal Impedance — 50 ohms

Frequency Range — 0 to 500 MHz

Operating Temperature — -85°F to +329°F [-65°C to +165°C]

Operating Voltage (Rated) — 325 VAC rms, 60 Hz

Contact Resistance (Milliohms) —

Size 5 with RG 58/U cable:

Center Contact — 10

Outer Contact — 1.5

Insulation Resistance

5,000 megohms min. @ 500 vdc per MIL-STD-1344, Method 3003 or MIL-STD-202, Method 302, Cond. B

Dielectric Withstanding Voltage (60 Hz, rms)

Sizes 5 with RG 58/U and 316/U cable:

750 - Sea Level

350 - 50,000 ft [15 240 m]

VSWR — 1.3 to 1.0 @ 500 MHz

Insertion/Withdrawal Force

Size 5:

Insertion Force Maximum		Withdrawal Force Minimum	
lb	[N]	lb	[N]
5	22.24	1	4.45

Cable Retention

Sizes 5:

60 lb [266.9 N]

Durability — 500 cycles

Thermal Shock — per MIL-STD-1344, Method 1003, Cond. A or MIL-STD-202, Method 107, Cond. A

Physical Shock — per MIL-STD-1344, Method 2004, Cond. A or MIL-STD-202, Method 213, Cond. A

Vibration — per MIL-STD-1344, Method 2005, Cond. IV or MIL-STD-202, Method 204, Cond. D

Moisture Resistance — per MIL-STD-202, Method 106, omit steps 7a and 7b

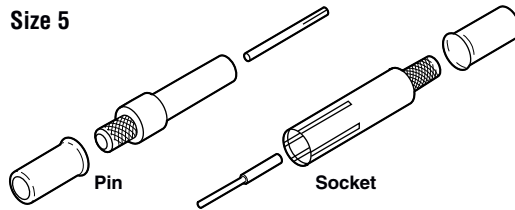
Salt Spray — 48 hours per MIL-STD-1344, Method 1001, Cond. B or MIL-STD-202, Method 101, Cond. B

Material and Finish

Contact — Beryllium copper per ASTM-B-196/ASTM-B-197, Brass per ASTM-B-16, PTFE per ASTM-D-1710, Gold plate per MIL-G-45204, Nickel plate per QQ-N-290

Ferrule — Copper per ASTM-B-188, tin plate per ASTM-B-545

Size 5



Size 5
Extraction Tool
Part Number 91074-1

Contact Size	RG/U Cable	Contact Part No.		“O” Crimp Tooling			Military Hex Crimp Tooling			
				Center Contact			Center Contact		Ferrule	
		Pin	Socket	Tool (M22520/)	Positioner/ Die	Ferrule	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Die (M22520/)
O Crimp										
5	58C	225790-1	225791-1	601966-1 (2-01)	1-601966-6 K345	91905-1*	—	—	—	—
	400, 142, 142A, 142B	225790-2	225791-2	91904-1*	—	91905-1*	—	—	—	—
	141A	225790-1	225791-1	91904-1*	—	91905-1*	—	—	—	—
	402 Semi-Rigid .141 [3.58]	225790-3	225791-6	91904-1*	—	91905-1*	—	—	—	—
	174, 188, 316	225790-5	225791-3	601966-1 (2-01)	1-601966-6 K345	91905-1*	—	—	—	—
	180, 195	225790-4	225791-8	601966-1 (2-01)	1-601966-6 K345	91905-1*	—	—	—	—
	179, 187	225790-6 5-225790-6**	225791-4 5-225791-4**	601966-1 (2-01)	1-601966-6 K345	91905-1*	—	—	—	—
	178, 196	225790-7	225791-5	601966-1 (2-01)	1-601966-6 K345	220020-1	—	—	—	—
	223	225790-2	225791-2	601966-1 (2-01)	1-601966-6 K345	91905-1*	—	—	—	—
	BMS 13-65-OF	—	1757892-1	—	—	—	—	—	—	—
Military Hex Crimp										
5	316 Double Shield 188 Double Shield	225790-8 5-225790-8**	1-225791-0	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(Y159)
	58C, 141A	447850-1	447851-1	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(5-45B)
	142, 142A, 142B	447850-2	447851-2	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(5-45B)
	402 Semi-Rigid .141 [3.58]	447850-3	447851-3	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(5-45A)
	174, 188, 316	447850-4	447851-4	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(5-37B)

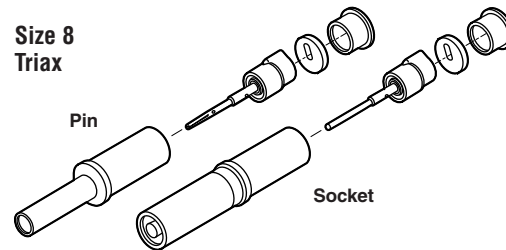
*SDE die used with hand tool frame 354940-1.

**RoHS compliant Part Number.

COAXICON Contacts (Continued)

Size 8 TWINAX/TRIAX/COAX Contacts

Size 8 Triax



Size 8 Contact Extraction Tooling

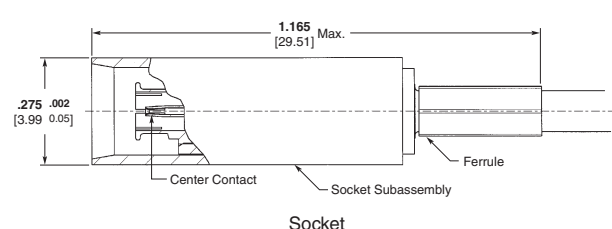
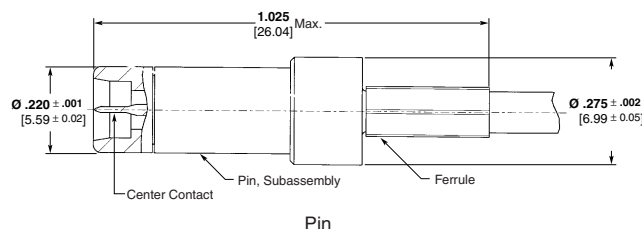
Contact Style	Tool Part Number
Rear Release/Rear Remove	58284-1
Front Release/Front Remove	58284-1
Front Release/Rear Remove	448703-1

Contact Size	Style	Cable	Contact Part No.		Crimp Tooling	Crimp Tooling	
			Pin	Socket		Center Contact	Ferrule
8 TWINAX	RR/RR	M17/176-00002	—	222191-4	Hand Tool Frame	—	—
	RR/RR	Tensolite 24463/9P025X-2(LD) or 24463/9B017X-2 (LD)	—	222191-5	M22520/5-01 (TE Connectivity 608650-1) Crimping Die TE 58316-1 or Daniels Y793 or Y793A or TE Hand Crimping Tool 91907-1*	—	—
	RR/RR	M17/176-00002	222190-4 (short engagement)	—		—	—
	RR/RR	Tensolite 24463/9P025X-2(LD) or 24463/9B017X-2 (LD)	222190-3 (short engagement)	—		—	—
	RR/RR	Tensolite 24463/9P025X-2(LD) or 24463/9B017X-2(LD)	448313-2 (long engagement)	—		—	—
	FR/RR	Tensolite 24463/9P025X-2(LD) or 24463/9B017X-2(LD)	448312-2 (long engagement)	—		—	—
8 TRIAX	FR/FR	Posted (.250 [6.35] min. post extension)	448541-1 (long engagement)	—	—	—	—
8 Coax	RR/RR	M/A-COM FC11Z	—	448543-1	—	—	91907-1*
	RR/RR	M/A-COM FC14Z	—	448543-2	—	—	91907-1*
	RR/RR	RG/U-316, 188	1218687-3 (long engagement)	1218820-1	—	M22520/2-01 (TE 601966-1)	91907-1*
	RR/RR	RG/U-142	1218689-1 (long engagement)	1218821-1	—	—	91907-1*
	RR/RR	BMS 13-65-OF	—	1757891-1	—	—	—
	RR/RR	Adams Russell FC14Z, BMS 13-65-OF	—	448543-2	—	—	—
	RR/RR	DMS2345-62AU	—	448543-3	—	—	—
	RR/RR	BMS 13-65-OF (.218 [5.54] hex crimp)	1757624-1**	—	—	—	—
	FR/RR	M/A-COM FC11Z	448542-1 (long engagement)	—	—	M22520/2-01 (TE 601966-1)	91907-1*
	FR/RR	M/A-COM FC14Z	448542-2 (long engagement)	—	—	—	91907-1*
	FR/FR	Posted (.250 [6.35] min. post extension)	448540-2 (long engagement)	—	—	—	—

*SDE die used with hand tool frame 354940-1.

**Designed for QuadraX cavity, no key on contact.

Note: Size 8 QUADRA X Contacts shown on pages 4-79 to 4-81.



Size 5 Coax Contacts, Spring Loaded 75 Ohm

Style	Cable	Contact Part No.		Crimp Tooling	
		Pin	Socket	Center Contact	Braid
Rear Release/Rear Remove	RG/U-179	443971-1	443972-1	Daniels HMR Tool AFM8 or TE Connectivity 601966-1 with Daniels positioner K1289 (socket) or K1288S (pin)	Daniels HX4 with Die-set Y196 cavity A or TE Connectivity 35940-1 with Die-set 58483-1 Cavity B

Traffic Alert and Collision Avoidance System (TCAS) Connectors and Mode S Transponder Connectors

Product Facts

Plug Connector

- **TE Connectivity modified Size 1 coaxial contacts use standard military crimp tooling for reliable connections without the need for special tooling**
- **TE plug allows repair or replacement of the coaxial contacts without connector disassembly. Two front-release captivated screws release the backup plate**
- **TE connector conforms to the ARINC 600 specification, for connector intermateability and contact interchangeability**

Receptacle Connector

- **TE modified Size 1 coaxial contact incorporates a SMA jack for easy assembly**
- **TE connector conforms to the ARINC 600 specification, for connector intermateability and contact interchangeability**

Connector	Description	Part Numbers	Descriptive Part Number
TCAS Plug	Semi-environmental w/o contacts	445717-1	NIC66 K 36 C 40 AA 1
	Semi-environmental w/contacts, w/o coaxial contacts	445717-2	NIC66 K 36 C 40 AA 0
	Non-environmental w/o contacts	445717-3 5-445717-3*	NIC66 K 36 A 40 AA 1
	Non-environmental w/contacts, w/o coaxial contacts	445717-4	NIC66 K 36 A 40 AA 0
	Non-environmental w/o contacts, (8) #6-32 clinch nuts	445717-5	NIC66 K 36 A 40 CD 1
	Semi-environmental w/o contacts, (10) #4-40 clinch nuts	445717-6	NIC66 K 36 A 40 SC 1
TCAS Receptacle	Front release w/o contacts	445718-1	NIC66 J 36 FA 40 FA 1
Mode S Plug	Non-environmental w/contacts, w/o coaxial contacts	208972-5	NIC66 H 23 A 01 AA 0
	Non-environmental w/o contacts	208972-7	NIC66 H 23 A 01 AA 1
	Environmental w/contacts, w/o coaxial contacts	208973-5	NIC66 H 23 B 01 AA 0
	Semi-environmental w/o contacts	208973-6	NIC66 H 23 C 01 AA 1
Mode S Receptacle	Front release w/o contacts	211991-1	NIC66 G 23 FA 01 FA 1

Note: All standard ARINC 600 shell modifications are available.

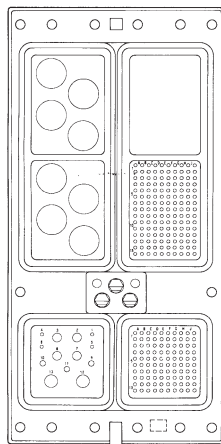
* RoHS compliant Part Number.

The TCAS System includes one mated pair of Size 3 ARINC 600 connectors, called TCAS Connectors. The plug connector is mounted in the rack, and the receptacle connector is in the avionics box.

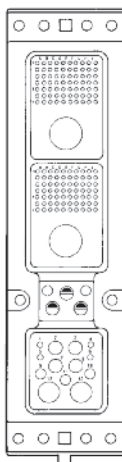
The TCAS System also includes one or two mated pairs of Size 2 ARINC 600 Connectors, called Mode S Transponder Connectors. The plug connectors are mounted in the rack, and the receptacle connectors are in the avionics box.

Traffic Alert and Collision Avoidance System (TCAS) Connectors and Mode S Transponder Connectors (Continued)

Contact Requirements



**TCAS Connector Insert Arrangement
(Receptacle Mating Face Shown)**



Mode S Transponder Insert Arrangement

Plug Contacts

No. of Contacts	Contact Size	Contact Sex	Part Number
250	22	pin	208262-3
4	20	socket	208267-2
3	16	socket	208270-2
4	12	socket	208273-2
2	5 coax	socket	***
8	1 coax-Mod.	socket	**

Receptacle Contacts

No. of Contacts	Contact Size	Contact Sex	Part Number
250	22	socket	*
4	20	pin	208265-3
3	16	pin	208268-3
4	12	pin	208271-3
2	5 coax	pin	***
8	1 coax-Mod.	pin	**

* See page 4-20 for part numbers.

** See page 4-25 for part numbers.

*** See page 4-24 for part numbers.

Plug Contacts

No. of Contacts	Contact Size	Contact Sex	Part Number
140	22	pin	208262-3
4	20	socket	208267-2
3	16	socket	208270-2
4	12	socket	208273-2
2	5 coax	socket	***
2	1 coax	socket	**

Receptacle Contacts

No. of Contacts	Contact Size	Contact Sex	Part Number
140	22	socket	*
4	20	pin	208265-3
3	16	pin	208268-3
4	12	pin	208271-3
2	5 coax	pin	***
2	1 coax	pin	**

* See page 4-20 for part numbers.

** See page 4-23 for part numbers.

*** See page 4-24 for part numbers.

Single Mod ARINC 600

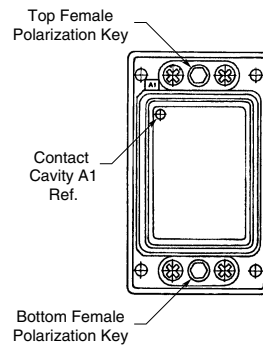
Descriptive Numbering

	NIC66S	P	A	150	A	01	A
Series Designation							
Shell Style/Plating							
P—Plug with Chromate Conversion Coating							
PN—Plug with Electroless Nickel Plating							
R—Receptacle with Chromate Conversion Coating							
RN—Receptacle with Electroless Nickel Plating							
Class							
A—Nonenvironmental, rear release							
B—Environmental, rear release							
C—Environmental, rear release without O-Ring or sealant around inserts							
FA—Nonenvironmental, front release size 22 contacts (other contact sizes rear release)							
FF—Nonenvironmental, all contact sizes front release except size 1 coax remains rear removal							
Insert*							
See inserts on pages 4-10 and 4-11							
Use size 2 or 3 Module A, B, D and E inserts							
Mounting Modifier							
A—Standard Mounting, .146–.156 [3.71–3.96] dia. holes							
B—(4) #4-40 Clinch Nuts							
C—(4) #6-32 Clinch Nuts							
Keying							
01-36, see keying codes on page 4-30							
Contact Loading							
X—Contacts Not Included With Connector (used also for Expanded Beam Fiber Optic Inserts)							
A—Rear release crimp contacts included							
B—Front release .025 [.64] dia. x .150 [3.81] solder post size 22 sockets loaded							
C—Front release .025 [.64] dia. x .250 [6.35] solder post size 22 sockets loaded							
D—Front release .025 [.64] dia. x .375 [9.53] solder post size 22 sockets loaded							
E—Front release .025 [.64] dia. x .500 [12.70] solder post size 22 sockets loaded							
F—Front release .025 [.64] square x .250 [6.35] (1 wrap) size 22 sockets loaded							
G—Front release .025 [.64] square x .375 [9.52] (2 wrap) size 22 sockets loaded							
H—Front release .025 [.64] square x .500 [12.70] (3 wrap) size 22 sockets loaded							
See Contacts on pages 4-19 to 4-25							

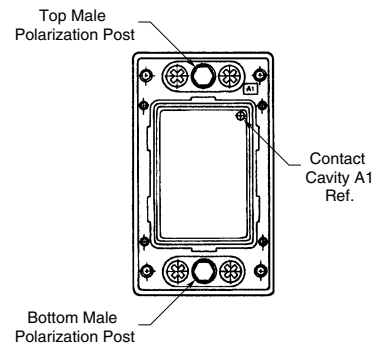
* Expanded Beam Fiber Optic inserts can also be used — must use signal cavity inserts identified as 1JS, 2JS, 3JS, or 6MS. See page 4-14 or contact TE Connectivity for more information.

Single Mod ARINC 600 (Continued)

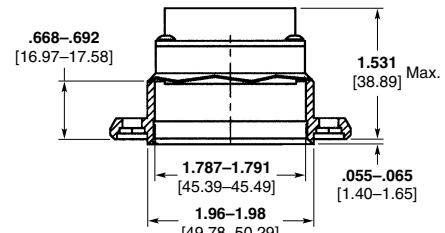
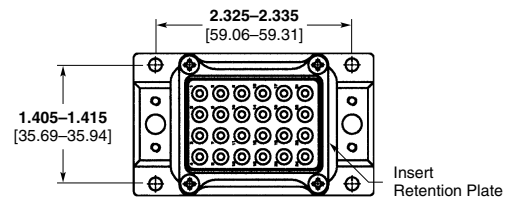
Keying and Polarization



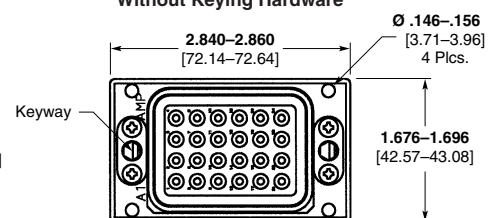
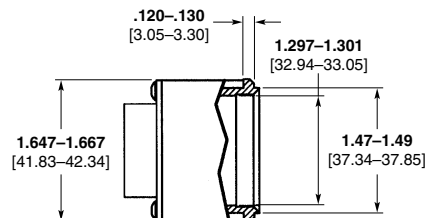
Receptacle (Box Side)



Plug (Rack Side)

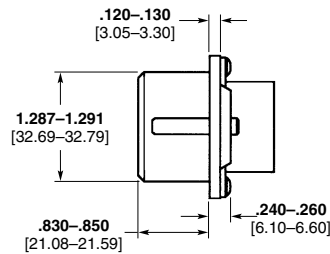


View Shown
Without Keying Hardware



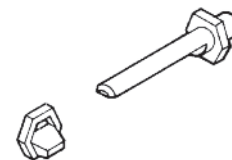
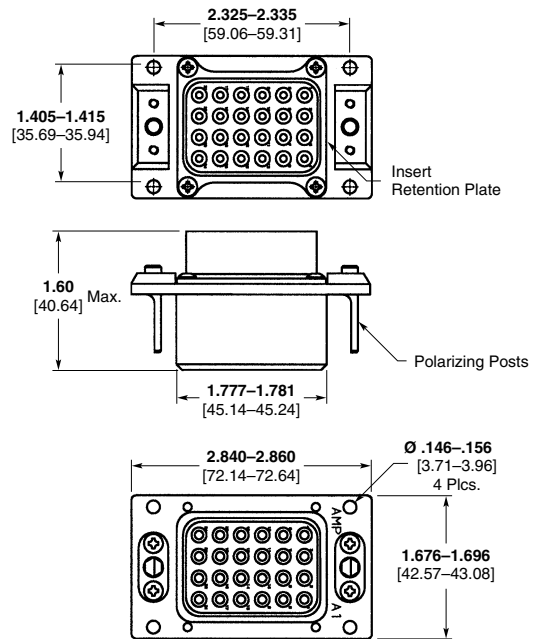
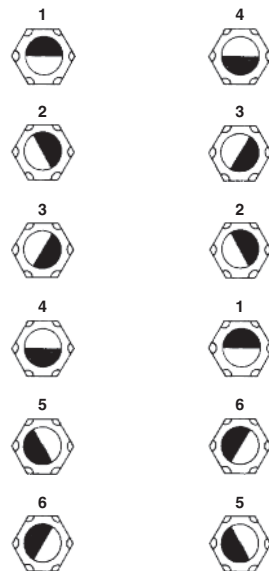
Single Mod Receptacle

Single Mod ARINC 600 (Continued)



Single Mod Plug

Extended Post of Plug Key → Mates to → Key Hole in Receptacle



Keying Code	Receptacle		Plug	
	Top Key	Bottom Key	Top Post	Bottom Post
01	1	1	4	4
02	3	4	2	1
03	2	4	3	1
04	1	4	4	1
05	6	4	5	1
06	5	4	6	1
07	4	5	1	6
08	3	5	2	6
09	2	5	3	6
10	1	5	4	6
11	6	5	5	6
12	5	5	6	6
13	4	6	1	5
14	3	6	2	5
15	2	6	3	5
16	1	6	4	5
17	6	6	5	5
18	5	6	6	5

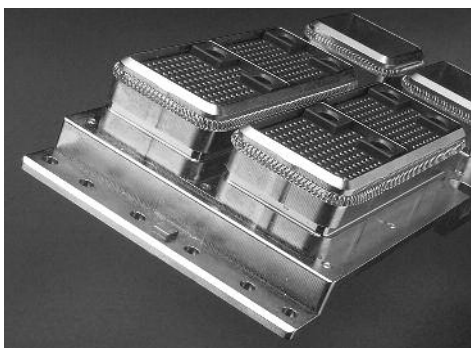
Keying Code	Receptacle		Plug	
	Top Key	Bottom Key	Top Post	Bottom Post
19	4	1	1	4
20	3	1	2	4
21	2	1	3	4
22	4	4	1	1
23	6	1	5	4
24	5	1	6	4
25	4	2	1	3
26	3	2	2	3
27	2	2	3	3
28	1	2	4	3
29	6	2	5	3
30	5	2	6	3
31	4	3	1	2
32	3	3	2	2
33	2	3	3	2
34	1	3	4	2
35	6	3	5	2
36	5	3	6	2

EMI/Ground Spring

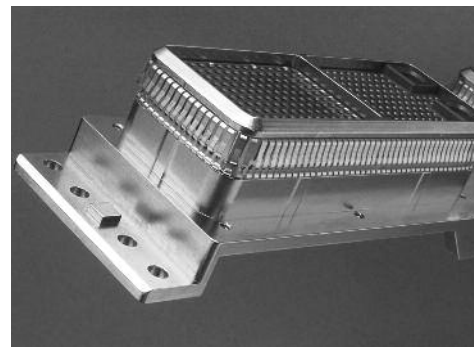
EMI/Ground Spring Performance Data Comparison

	Cantilever Style	Canted Coil Style
Mating/Un-mating Force Results Design Objective = < 15 lbs for size 2 shell	6 lbs/3 lbs	14 lbs/6 lbs
Durability	500 min. mating/un-mating cycles	
EMI Test Results (Size 2 Shell) 100 to 1,000 MHz Design Objective = 65 dB @ 100 MHz and 60 dB @ 1,000 MHz	89 dB min. 93 dB average	88 dB min. 92 dB average
Field Repairable	No	Yes

Canted Coil Spring Design



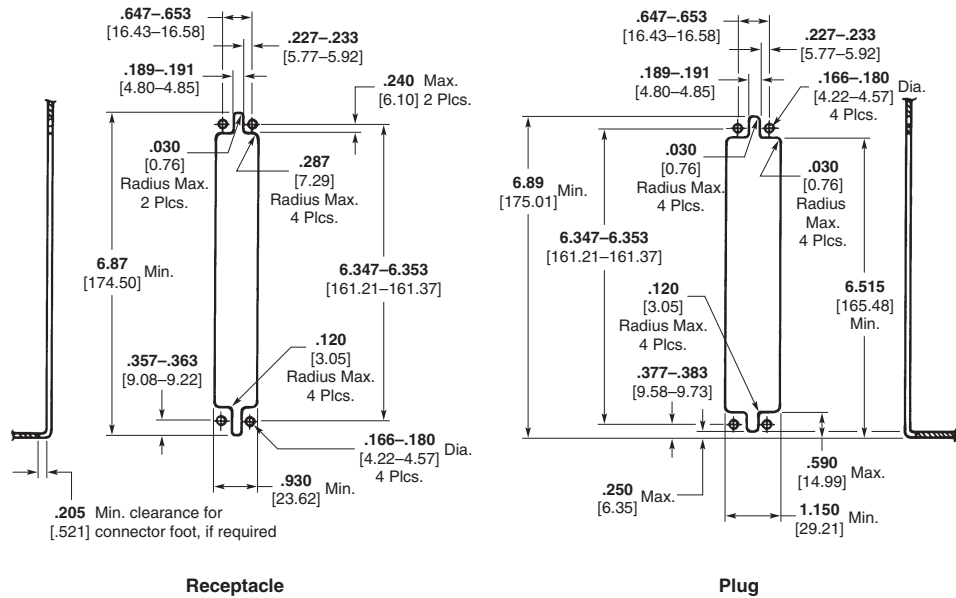
Cantilever Spring Design



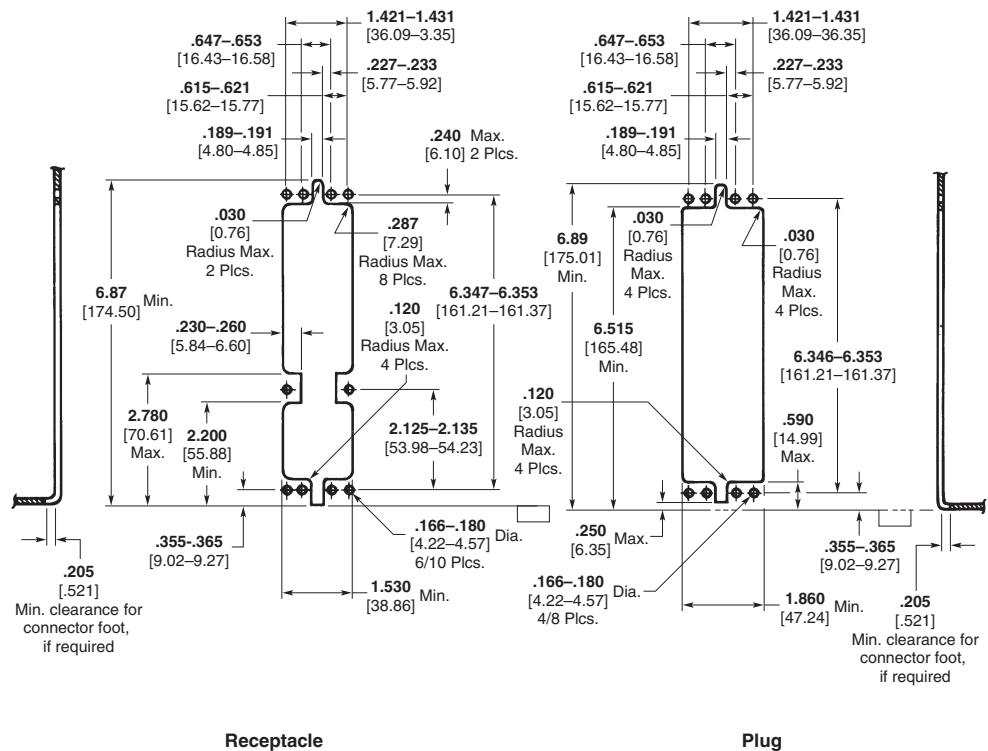
Note: ARINC 600 connectors can be supplied with either canted coil spring or cantilever spring design, contact TE Connectivity.

Recommended Panel Cutouts

Shell Size 1



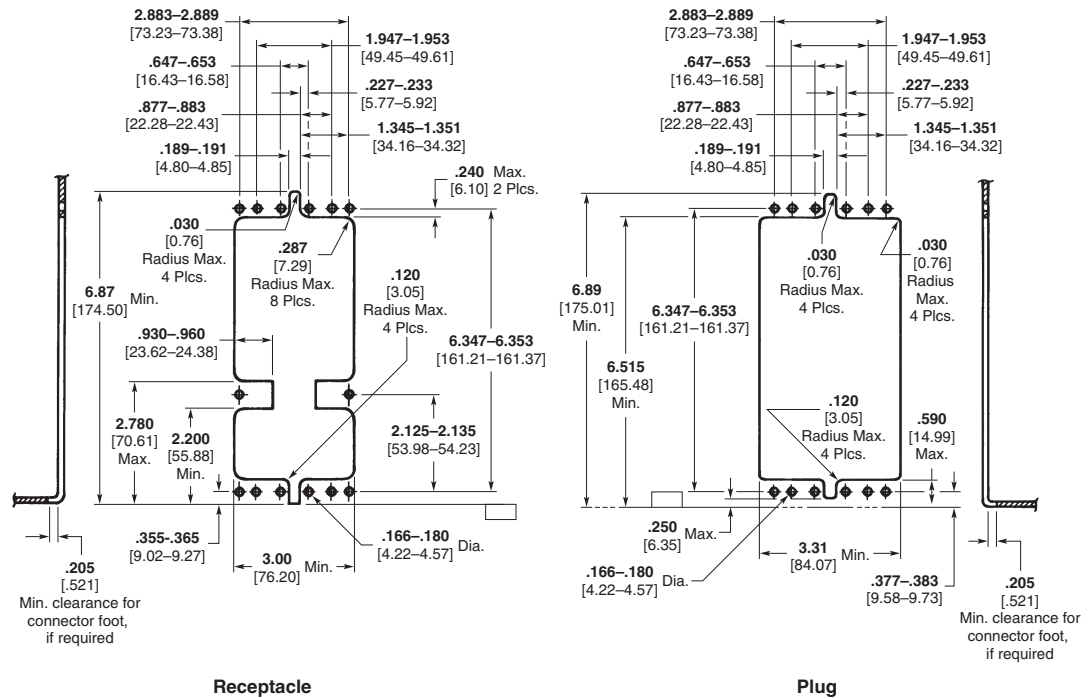
Shell Size 2



Note: These drawings are for reference only. For detailed mounting instructions, see the ARINC 600 specification.

Recommended Panel Cutouts (Continued)

Shell Size 3



4

Rack and Panel Connectors

Accessories

Materials and Finish

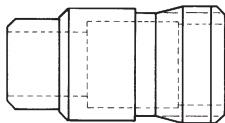
Body — Copper alloy, .000015 [0.000381] min. gold per MIL-G-45204 over .000040 [0.00102 min. nickel per QQ-N-290

End Cap — PTFE

PTFE is a trademark of E.I. du Pont de Nemours and Company.

Cavity Reducer Pin

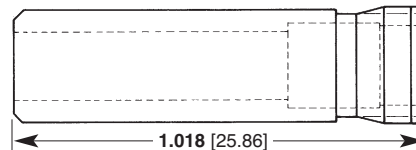
Part Number 446743-1



Size 5 coax to size 12 contact cavity reducer. Insert into size 5 coax cavity to convert to a size 12 power contact cavity.

Cavity Reducer Socket

Part Number 446744-1



Dust Covers, Conductive

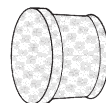


Connector Size(s)	Part Number
1	211600-1
2 & 3	211600-2

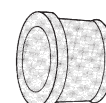
Coaxial Sealing Plug and Boot

Material — Silicone Rubber

Size 5



Plug—Part Number 205975-1



Boot for RG-58C cable—Part Number 205402-2
Boot for RG-180, -190 cable—Part Number 205402-3

Sealing Plugs

Size 22



Part Number 204760-1
White PTFE

Size 20



Part Number 203839-1
Red thermoplastic

Size 16



Part Number 203839-2
Blue thermoplastic

Size 12



Part Number 205574-1
Yellow thermoplastic

Application Tooling and Insertion/Extraction Tooling

Hand Crimping Tools

These standard military-type hand tools terminate screw-machined pins and sockets to wire with an 8-indent crimp per MIL-C-22520. They are ideal for prototype, field maintenance and other applications where volume is not a factor.

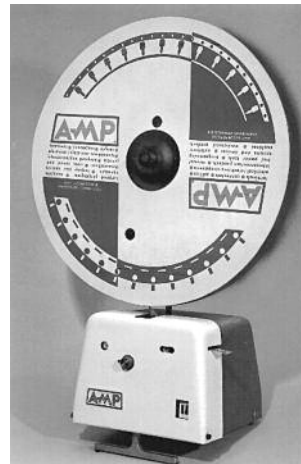
Tool Number 601967-1 is suitable for crimping wire range 26 AWG [0.12–0.15 mm²] to 12 AWG [3 mm²]. Tool Number 601966-1 is suitable for crimping wire range 32 AWG [0.03 mm²] to 20 AWG [0.5–0.6 mm²].



Part Number 601966-1
MIL Number M22520/2-01

AMP-TAPEMATIC 4/8 Indent Stripper-Crimper Machine, 599406-7

Portable bench machine that strips wire and crimps tape-mounted, closed-barrel pin and socket contacts for AMPLIMITE Military, ARINC and CPC connectors. The stripping and crimping heads are accessible through separate openings in the front of the machine. Wire strip length and crimp height are adjustable. The stripping head is pre-set to the proper cutting depth of four standard wire sizes.



Specifications

Width — 12.5 [317]
Depth — 12.5 [317]
Height — 10 [254] without reel
Weight — 45 lb [20 kg]
Electrical — 120 VAC, 60 Hz, 1.3 A
Wire Range — 28–20 AWG
[0.08–0.5 mm²]

Application Tooling Instruction Sheet Cross Reference

Tool Number	Instruction Sheet
601966-1	408-7516
601967-1	408-7516
599406-7	408-7516

Insertion/Extraction Tools, ARINC 600

Tool Part Number	Product Line	Contact Size	Contact Type	Color Code	Style
91066-1	ARINC 600	22	Signal	Green	Rear Release/Rear Remove
91066-4	ARINC 600	20	Signal	Red	Rear Release/Rear Remove and Front Release/Front Remove
91066-3	ARINC 600	16	Signal	Blue	Rear Release/Rear Remove and Front Release/Front Remove
445147-1	ARINC 600	12	Signal	—	Rear Release/Rear Remove and Front Release/Front Remove
445815-1	ARINC 600	22	Signal	—	Front Release/Front Remove
58284-1	ARINC 600	8	Twinax/Triax/Coax/Quadax	—	Rear Release/Rear Remove and Front Release/Front Remove
448703-1	ARINC 600	8	Twinax/Triax/Coax	—	Front Release/Rear Remove
91074-1	ARINC 600	5	Twinax/Triax/Coax	—	Rear Release/Rear Remove and Front Release/Front Remove

Cross Reference

For convenience, certain connectors have been assigned conventional TE Connectivity production part numbers, as shown in this table. These parts may be ordered using the TE numbers or by using descriptive part numbers.

Description	TE Designation	Part Number	RoHS Part Number
Size 1 Receptacle, Unsealed	NIC66E11A00AA0	1-208599-1	—
	NIC66E11A00AA1	1-208599-5	—
	NIC66E11A01AA0	208599-1	5-208599-1
	NIC66E11A01AA1	208599-2	—
	NIC66E11A03AA1	208599-7	5-208599-7
	NIC66E11A11AA0	1-208599-0	—
	NIC66E11A12AA0	1-208599-3	—
	NIC66E11A12CB0	208599-4	—
	NIC66E11A16AA0	208599-9	—
	NIC66E11A19CB1	208599-3	—
	NIC66E11A22AA1	208599-5	—
	NIC66E11A23AA0	208599-8	—
	NIC66E11A50AA0	208599-6	—
	NIC66E11B01AA0	208600-1	—
Size 1 Receptacle, Sealed	NIC66E11B01AA1	208600-2	—
	NIC66E11B54AA0	208600-3	—
Size 1 Receptacle, Front Release	NIC66E11FA01FA1	448482-1	—
	NIC66E11FA01FF0	448482-2	—
Size 1 Plug, Unsealed	NIC66F11A00AA0	208597-7	—
	NIC66F11A01AA0	208597-1	—
	NIC66F11A01AA1	208597-2	—
	NIC66F11A03AA0	208597-4	—
	NIC66F11A03CB1	208597-9	—
	NIC66F11A06CB1	1-208597-3	—
	NIC66F11A08AA1	1-208597-2	6-208597-2
	NIC66F11A08CB0	1-208597-5	—
	NIC66F11A10AA1	1-208597-6	6-208597-6
	NIC66F11A13AA0	208597-5	—
	NIC66F11A13AA1	208597-6	—
	NIC66F12A02AA0	208597-8	—
	NIC66F12A02CB0	1-208597-4	—
	NIC66F14A01AA0	1-208597-0	—
Size 1 Plug, Sealed	NIC66F11B01AA0	208598-1	—
	NIC66F11B01AA1	208598-2	5-208598-2
	NIC66F11B22AA1	208598-4	—
	NIC66F11C00AA1	1-208598-2	—
	NIC66F11C01AA1	208598-3	—
Size 2 Receptacle, Unsealed	NIC66G21A00AA0	1-208970-4	—
	NIC66G21A01AA0	208970-1	—
	NIC66G21A01AA1	208970-4	—
	NIC66G21A01AC0	208970-2	—
	NIC66G21A01BA1	208970-5	—
	NIC66G21A01CA0	1-208970-1	—
	NIC66G21A01CC0	2-208970-3	—
	NIC66G21A01CC1	208970-6	5-208970-6
	NIC66G21A01SB1	208970-3	5-208970-3
	NIC66G21A01SC1	1-208970-8	—
	NIC66G21A02AA0	1-208970-3	—
	NIC66G21A02AA1	1-208970-2	—
	NIC66G21A02CC0	2-208970-2	—
	NIC66G21A05CC0	2-208970-4	—
	NIC66G21A09CC0	1-208970-0	—
	NIC66G21A19AA0	1-208970-7	—
	NIC66G26A01AA0	1-208970-6	—
Size 2 Receptacle, Sealed	NIC66G21B01AA0	208971-1	—
	NIC66G21B01AA1	208971-2	—
	NIC66G21B04AA0	208971-4	—
	NIC66G21B05AA0	208971-3	—

Cross Reference (Continued)

Description	TE Designation	Part Number	RoHS Part Number
Size 2 Receptacle, Front Release	NIC66G20FA00FA1	3-211991-3	—
	NIC66G20FA01FA1	3-211991-4	—
	NIC66G20FA03FB0	2-211991-0	—
	NIC66G20FA08FB0	2-211991-1	—
	NIC66G21FA FA1	211991-2	—
	NIC66G21FA00CC1	211991-9	—
	NIC66G21FA01CC1	1-211991-0	—
	NIC66G25FA01FA1	211991-3	—
	NIC66G21FA01FC0	1-211991-1	—
	NIC66G21FA01GD0	211991-5	—
	NIC66G21FA01GJ0	3-211991-5	—
	NIC66G21FA01SB1	211991-6	—
	NIC66G21FA02FF0	1-211991-4	—
	NIC66G21FA04FF0	3-211991-0	—
	NIC66G21FA06GF0	2-211991-7	—
	NIC66G21FA07GD0	3-211991-7	—
	NIC66G21FA09GD0	1-211991-6	—
	NIC66G22FA00CC1	2-211991-4	—
	NIC66G23FA00CC1	2-211991-2	—
	NIC66G23FA01FA1	211991-1	—
	NIC66G23FA02FA1	1-211991-7	—
	NIC66G23FA09FA1	211991-4	—
	NIC66G25FA00CC1	2-211991-3	—
	NIC66G26FA01FA1	211991-8	—
	NIC66G26FA68GD0	1-211991-2	—
	NIC66G29FA01FA1	1-211991-8	—
	NIC66G29FA02FA1	3-211991-6	—
Size 2 Plug, Unsealed	NIC66H20A AA0	2-208972-8	—
	NIC66H20A00AA0	3-208972-5	8-208972-5
	NIC66H20A08AA1	4-208972-0	9-208972-0
	NIC66H21A00AA0	1-208972-6	—
	NIC66H21A01AA0	208972-1	5-208972-1
	NIC66H21A01AA1	208972-2	—
	NIC66H21A02AA0	1-208972-4	—
	NIC66H21A02AA1	1-208972-2	—
	NIC66H21A03AA0	3-208972-6	—
	NIC66H21A06AA0	3-208972-7	—
	NIC66H21A14AA0	1-208972-1	—
	NIC66H22A01AA1	208972-8	—
	NIC66H22A13AA0	2-208972-0	—
	NIC66H23A00CB1	3-208972-2	—
	NIC66H23A01AA0	208972-5	—
	NIC66H23A01AA1	208972-7	5-208972-7
	NIC66H23A01CB1	1-208972-8	—
	NIC66H23A02AA0	2-208972-3	—
	NIC66H23A05AA0	2-208972-1	—
	NIC66H25A01AA0	208972-9	—
	NIC66H25A01AA1	1-208972-0	—
	NIC66H26A00AA1	3-208972-4	—
	NIC66H26A01AA0	1-208972-5	—
	NIC66H26A01AA1	1-208972-3	—
	NIC66H26A01SA1	2-208972-2	—
	NIC66H51A00AA0	2-208972-4	—
	NIC66H52A00AA0	3-208972-0	8-208972-0
	NIC66H52A03AA0	3-208972-9	8-208972-9
	NIC66H53A01AA0	2-208972-5	—
	NIC66H53A08AA0	449836-1	—
	NIC66H54A01AA1	2-208972-9	—
	NIC66H56A09AA0	449837-1	—
	NIC66H272A00AA0	1218867-2	—

Cross Reference (Continued)

Description	TE Designation	Part Number	RoHS Part Number
Size 2 Plug, Sealed	NIC66H20B03AA0	2-208973-8	—
	NIC66H20B08AA0	2-208973-9	—
	NIC66H20B40AA1	3-208973-8	—
	NIC66H20C00AA0	3-208973-1	—
	NIC66H21B01AA0	208973-1	—
	NIC66H21B01AA1	1-208973-0	—
	NIC66H21B04AA0	1-208973-3	—
	NIC66H21B05AA0	1-208973-2	—
	NIC66H21B06CD0	3-208973-3	—
	NIC66H21B06CD1	3-208973-4	—
	NIC66H21B40AA1	3-208973-9	—
	NIC66H21C00AA0	3-208973-0	—
	NIC66H21C01AA0	208973-3	—
	NIC66H21C06CD0	3-208973-5	8-208973-5
	NIC66H21C09AA0	3-208973-2	—
	NIC66H21C29AA0	2-208973-0	—
	NIC66H23B01AA0	208973-5	—
	NIC66H23B08AA0	1-208973-4	—
	NIC66H23C01AA1	208973-6	—
	NIC66H25C01AA0	208973-7	—
	NIC66H25C01AA1	208973-8	—
	NIC66H26B01AA1	2-208973-2	—
	NIC66H26B02AA1	1-208973-1	—
	NIC66H52B03AA0	4-208973-0	9-208973-0
Size 3 Receptacle, Unsealed	NIC66J31A00AA0	208974-4	—
	NIC66J31A01AA0	208974-1	—
	NIC66J31A01AA1	208974-3	—
	NIC66J34A01AA0	208974-5	—
Size 3 Receptacle, Sealed	NIC66J31B01AA0	208975-1	—
	NIC66J31B01AA1	208975-3	—
Size 3 Receptacle, Front Release	NIC66J31FA00CA1	1-211992-1	—
	NIC66J31FA01FA1	211992-1	—
	NIC66J31FA01FF0	211992-4	—
	NIC66J31FA01FH0	211992-5	—
	NIC66J31FA03FA1	211992-6	—
	NIC66J31FA27FA1	211992-7	—
	NIC66J32FA00FA1	211992-3	—
Size 3 Plug, Unsealed	NIC66K31A00AA0	208976-5	—
	NIC66K31A01AA0	208976-1	—
	NIC66K31A01AA1	208976-3	—
	NIC66K32A01AA0	208976-7	—
	NIC66K33A01AA0	208976-6	5-208976-6
	NIC66K33A01AA1	208976-2	—
	NIC66K34A01AA0	208976-8	—
	NIC66K36A40CD1	445717-5	—
Size 3 Plug, Sealed	NIC66K31B01AA0	208977-1	—
	NIC66K31B01AA1	208977-3	—
	NIC66K31B01BA0	208977-8	—
	NIC66K31C01AA1	208977-5	—
	NIC66K33B01AA1	208977-2	—
	NIC66K33C01AA1	208977-4	—
	NIC66K34C01AA1	208977-7	—
	NIC66K36C40CD1	1-445717-7	6-445717-7

MIL 600 Style Connectors

Product Facts

- **Conforms to MIL-DTL-83527**
- **Sizes: 2, 3, 4**
- **Variety of contact inserts available**
- **Sealing features include grommets, interfacial seals, and wedge stabilizers**
- **Provides EMI shielding**

Material and Finish

Shell — Aluminum 2024 T4
Retainer Plates — Aluminum alloy
Finish — Chemical chromate conversion over cadmium plate per QQ-P-416
Polarizing Posts — Zinc alloy per ASTM B-86 with electroless nickel plating
Polarizing Keys — Stainless steel 303, passivated
Inserts — Thermoset or Thermoplastic
Grommets, Seals — Fluorosilicone rubber

Specifications

Temperature Range —
-65°C to +125°C
Mating and Unmating Forces —
Max after 10 cycles; connectors have a full complement of contacts
Size 2 — 325 lbs
Size 3 — 400 lbs
Size 4 — 475 lbs
Contact Retention against axial load —
Per MIL-STD-1344, Method 2007
Size 22 — 12.0 lbs
Size 20 — 20.0 lbs
Size 16 — 25.0 lbs
Size 12 — 30.0 lbs
Size 8 — 25.0 lbs (twinax)
Size 5 — 25.0 lbs (coax)

Voltage/Current Ratings —

Contact	AWG	Max Current (A)
Size 22	22	5.0
Size 20	20	7.5
Size 16	16	13.0
Size 12	12	23.0

Dielectric Withstanding Voltage —

Per MIL-STD-1344, Method 3001		
Altitude	AC Volts	60 Hz rms
	Mated	Unmated
Sea level	—	1300 (size 22)
Sea level	—	1500 (others)
50,000 ft	800	550
70,000 ft	800	350
100,000 ft	800	200

Insulation Resistance —

Per MIL-STD-1344, Method 3003
1000 megohms min. at ambient and at 150°C

Contact Resistance — Per MIL-STD-1344, Method 3004 and 3002

Durability — Per MIL-STD-1344, Method 2016; 500 cycles minimum

Salt Spray Tolerance — Per MIL-STD-1344, Method 1001, test condition A; no evidence of exposure of base metal or build-up of corrosion that affects connector testing

Humidity Tolerance — Per MIL-STD-1344, Method 1002, Type II
Insulation Resistance greater than 1000 megohms before, during and after test

Fluid Immersion — Per MIL-STD-1344, Method 1016, fluids tested:
i) isopropyl alcohol, j) 1-1-1 trichloroethane, k) Freon TMC; no evidence of deterioration, distortion or material reversion

Temperature Cycling — Per MIL-STD-1344, Method 1003 except steps 2 and 4 are 2 minutes maximum duration; step 1 is -65°C; step 3 is +150°C

High Temperature Tolerance —
1000 hours min. at 150°C for wired, mated connectors

Vibration Testing — Per MIL-STD-1344, Method 2005 (Functional Test Curve: 2 hrs in each of 3 axes; Endurance Test Curve: 2.5 hrs in each of 3 axes); no discontinuity exceeding 1 microsecond, no visible evidence of cracking, breaking or loosening of parts

Shock Testing — Per MIL-STD-1344, Method 2004 (Test condition H: 30G, 11 ms, half sine); no discontinuity exceeding 1 microsecond, no visible evidence of cracking, breaking or loosening of parts

EMI Shielding — Per DOD-83527 (for a Size 2 shell)

EMI Shielding Eff. Frequency (MHz)	Leakage Attenuation (dB)
100	65
200	63
300	63
400	62
800	60
1000	60

Shell-to-Shell Conductivity — Per MIL-STD-1344, Method 3007; Potential drop does not exceed 2.5 millivolts

MIL-DTL-83527 Style Connectors

Descriptive Number	TE Connectivity Part Number
M6E2RC150-34WAA01A	1218044-1
M6E2PC150-34WAA01A	443965-1
M6E2PC150-34WAA01A	443102-1
M6E2RC150-100WAA01A	447142-1
M6E2PC24-34WAA01Z	447280-1
M6E2PC150-34WAA01A	443102-1
M6E2PC150-34WAA01A	443965-1
M6E2PC150-100WAA01A	447141-1
M6E3PC150-100-150-100WAA01A	447143-1
M6E3RC150-100-150-100WAA01A	447144-1

MIL 600 Style Connectors (Continued)

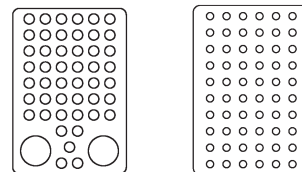
MIL-DTL-83527 Connector
Sample Descriptive
Part Number

M6 E	4RC	150-100-24-34-60-100	W	AA	001	A
MIL 600 connector in accordance with MIL-DTL-83527 Sealing E = Sealed per M83527: rear grommet, interfacial seal [rcpt only], o-ring around insert F = Interfacial seal [rcpt only], o-ring around insert (no grommet) G = O-ring around insert (no interfacial seal or grommet) U = unsealed Shell size & plating (see pages 4-42 to 4-44) 2 = shell size 2 with two insert cavities (A, B) 3 = shell size 3 with four insert cavities (A, B, C, D) 4 = shell size 4 with six insert cavities (A, B, C, D, E, F) Shell Type R = receptacle (for box) P = plug (for rack or chassis) Shell Plating C = Cadmium plating (MIL-DTL-83527 standard plating) N = Nickel plating Insert Arrangement Indicates the insert arrangements used within the shell. See available M83527 inserts below. If the shell has six inserts (as in this example) then six insert arrangements are identified. In this example, 150 is for the A cavity, 100 is for B cavity, 24 is for C cavity and so on. Insert style (rear release/remove only) W = All contacts rear release/rear remove, Military contacts per MIL-DTL-83527 Shell Modifications AA = standard .151 inch [3.8 mm] diameter mounting holes Keying (see page 4-15 and 4-16 for keying codes) Contact Order Code (Contact part numbers listed on page 4-40) Z = no contacts provided A = rear release crimp signal & power contacts (size 22 through size 12) included; coax/triax/quadrax contacts ordered separately						

Custom designs can be configured. Contact TE Connectivity for custom versions not defined above.

MIL-DTL-83527 Inserts

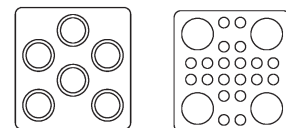
Available Insert Arrangements for Cavities A, C & E



47T2
(47) #20
(2) #8 Twinax

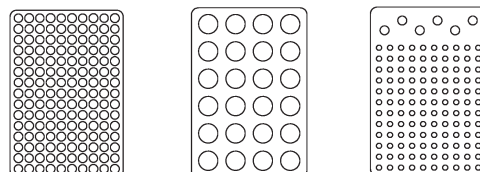
60
(60) #20

Available Insert Arrangements for Cavities B, D & F



T6
(6) #8 Twinax

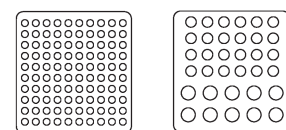
20T4
(20) #20
(4) #8 Twinax



150
(150) #22

24
(24) #12

126
(120) #22
(6) #16



100
(100) #22

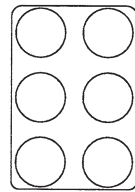
34
(24) #20
(10) #16

MIL 600 Style Connectors (Continued)

Insert Arrangements — Fiber Optics

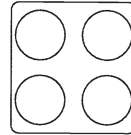
Mini-Expanded Beam

Shell Module A, B, D or E

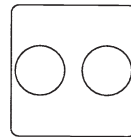


6MS

Shell Module C or F

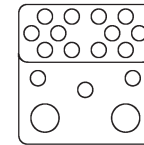


4MP



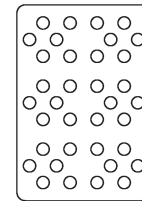
2MP

Contact Arrangement



17F12Q2

Contact Arrangement



36F36

For ARINC 801 Optical Termini details, see page 4-14

For Mini Expanded Beam insert details, see section 3.

Military 600 Connector Contact Selection Guide Crimp, Snap-In, Rear-Release Contacts

Pin Contacts

Contact Size	Wire Size AWG	Color Code	Contact Part Number	MIL Part Number (Reference)	Ins/Ext Tool Part Number
22	22-26	Gm/Wh/Violet	211901-5	MIL-C-39029/93-597	91066-1
20	20-24	Grn/Wh/Gray	208265-5	MIL-C-39029/93-598	91066-4
16	16-20	Grn/Or/Wh	213122-5	MIL-C-39029/93-539	91066-3
12	12-14	Grn/Ye1/Blk	213123-5	MIL-C-39029/93-540	445147-1

Socket Contacts

Contact Size	Wire Size AWG	Color Code	Contact Part Number	MIL Part Number (Reference)	Ins/Ext Tool Part Number
22	22-26	Blu/Blk/Brn	208264-4	MIL-C-39029/94-601	91066-1
20	20-24	Blu/Blk/Red	208267-4	MIL-C-39029/94-602	91066-4
16	16-20	Blu/Blk/Or	208270-4	MIL-C-39029/94-603	91066-3
12	14-Dec	Blu/Blk/Yel	208273-4	MIL-C-39029/94-604	445147-1

Size 8 Concentric Twinax Contacts

Contact Style	For Cable	Contact Part Number	Ins/Ext Tool Part Number
Pin	M17-176-00002	222190-4	58284-1
Socket	M17-176-00002	222191-4	58584-1

Size 12 Shielded Contacts

Contact Style	For Cable	Contact Part Number	MIL Part Number (Reference)	Ins/Ext Tool Part Number
Pin	M17-176-00002	213156-1	M39029/74-400	445147-1
Socket	M17-176-00002	213157-1	M39029/73-397 (with exceptions)	445147-1

MIL 600 Style Connectors (Continued)

MIL-DTL-83527 Shell Configurations with ARINC 600 Style Inserts and Contacts Sample Descriptive Part Number

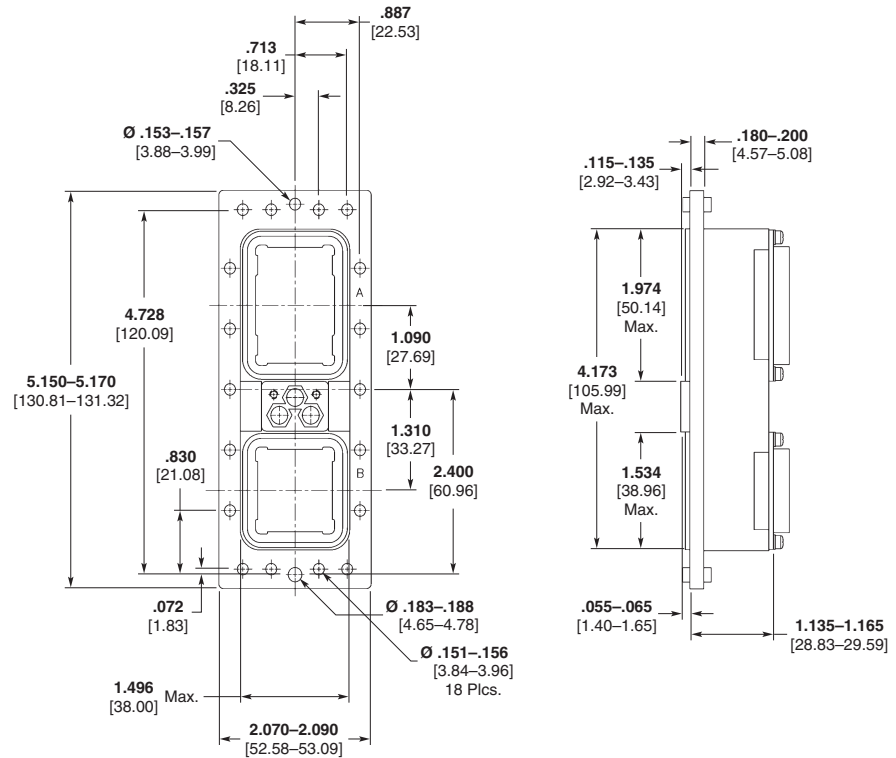
Note: These connectors do not meet the performance requirements of MIL-DTL-83527.

A6 P 4RN 150-13C2-Q11-24-6MP-100 W AA 01 A									
MIL-DTL-83527 shell with ARINC 600 inserts and contacts Sealing (no interfacial seals available) P = Rear grommet only, no RTV sealant between insert & shell R = Rear grommet, RTV sealant between insert & shell S = RTV sealant between insert & shell, no grommet U = unsealed Shell size & plating (see pages 4-42 to 4-44) 2 = shell size 2 with two insert cavities (A, B) 3 = shell size 3 with four insert cavities (A, B, C, D) 4 = shell size 4 with six insert cavities (A, B, C, D, E, F) Shell Type R = receptacle (for box) P = plug (for rack or chassis) Shell Plating C = Cadmium plating (MIL-DTL-83527 standard plating) N = Nickel plating Insert Arrangement (See available ARINC 600 style inserts on pages 4-10 and 4-11) Indicates the insert arrangements used within the shell. If the shell has six inserts (as in this example) then six insert arrangements are identified. In this example, 150 is for the A cavity, 13C2 is for B cavity, Q11 is for C cavity and so on. Note: ARINC 600 style inserts do not include interfacial seals or o-rings and do not meet the MIL-DTL-83527 contact locations. Insert style (front release/remove or rear release/remove); all contacts are ARINC 600 style contacts W = All contacts rear release/rear remove (plug or receptacle) X = All contacts front release/front remove (receptacle only) Y = All signal (size 22) front release/front remove; all other sizes rear release/rear remove (receptacle only) Note: ARINC 600 contacts are not Military qualified contacts and do not meet the MIL-DTL-83527 contact locations. Shell Modifications AA = standard .151 inch [3.8 mm] diameter mounting holes Keying (see page 4-15 for keying codes) Contact Order Code (see pages 4-19 to 4-25 and 442 to 4-47 for ARINC 600 style contacts) Z = no contacts provided A = rear release crimp signal & power contacts (size 22 through size 12) included; coax/triax/quadrax contacts ordered separately. B = .250 post extension front release contacts loaded into connector; all other contacts are ordered separately. C = .250 post extension front release contacts loaded into connector; rear release crimp contacts (size 20 through size 12) included with connector kit; rear release crimp coax/triax/quadrax contacts ordered separately. D = same as B except .150 post extension. E = same as C except .150 post extension. F = same as B except .375 post extension. G = same as C except .375 post extension. H = same as B except .500 post extension. J = same as C except .500 post extension.									

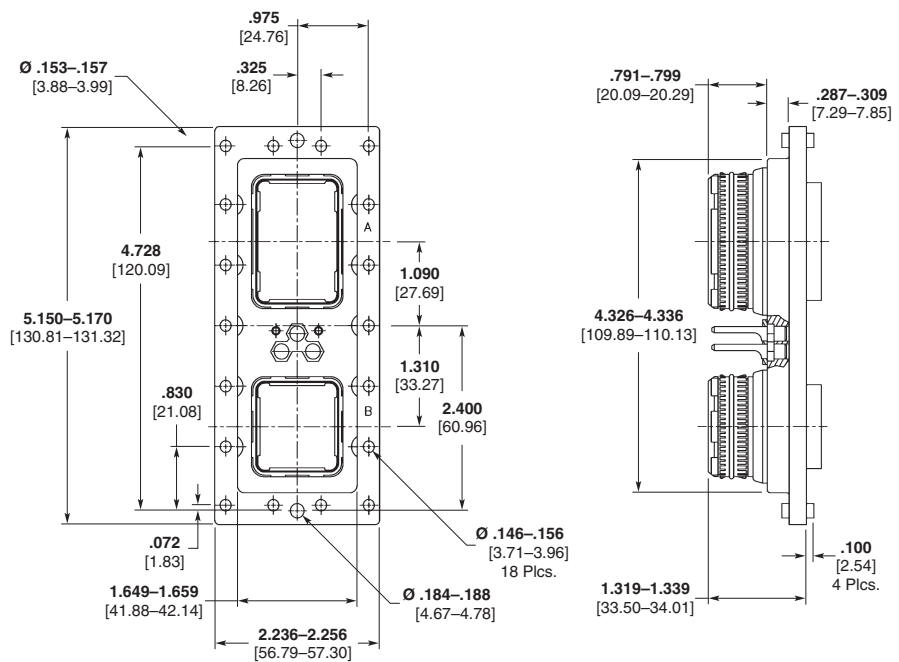
Custom designs can be configured. Contact TE Connectivity for custom versions not defined above.

MIL 600 Style Connectors (Continued)

Receptacle Size 2

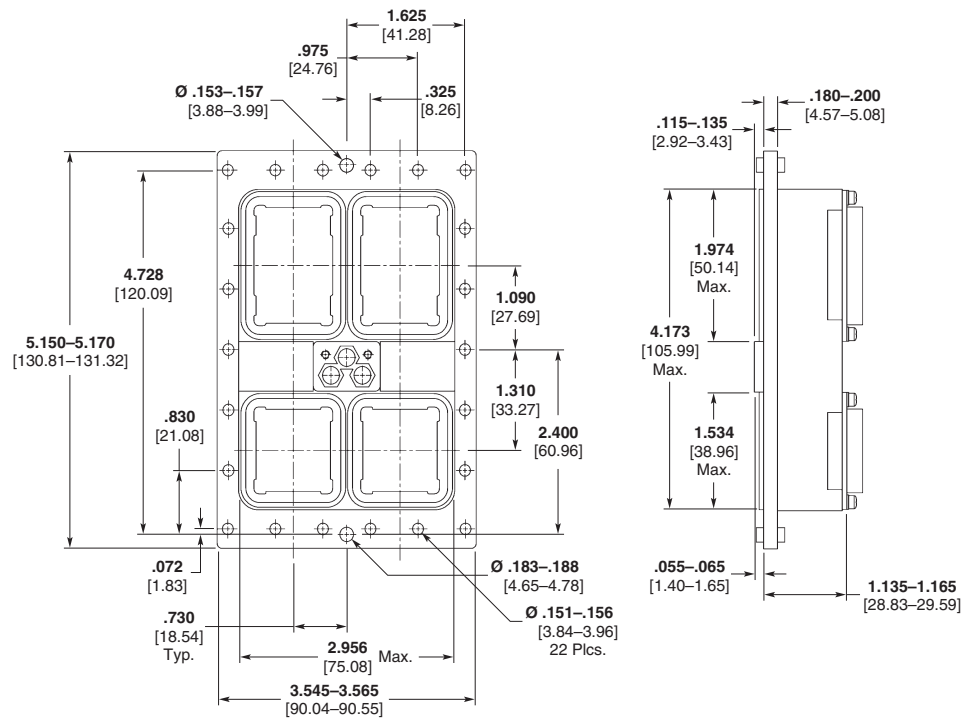


Plug Size 2

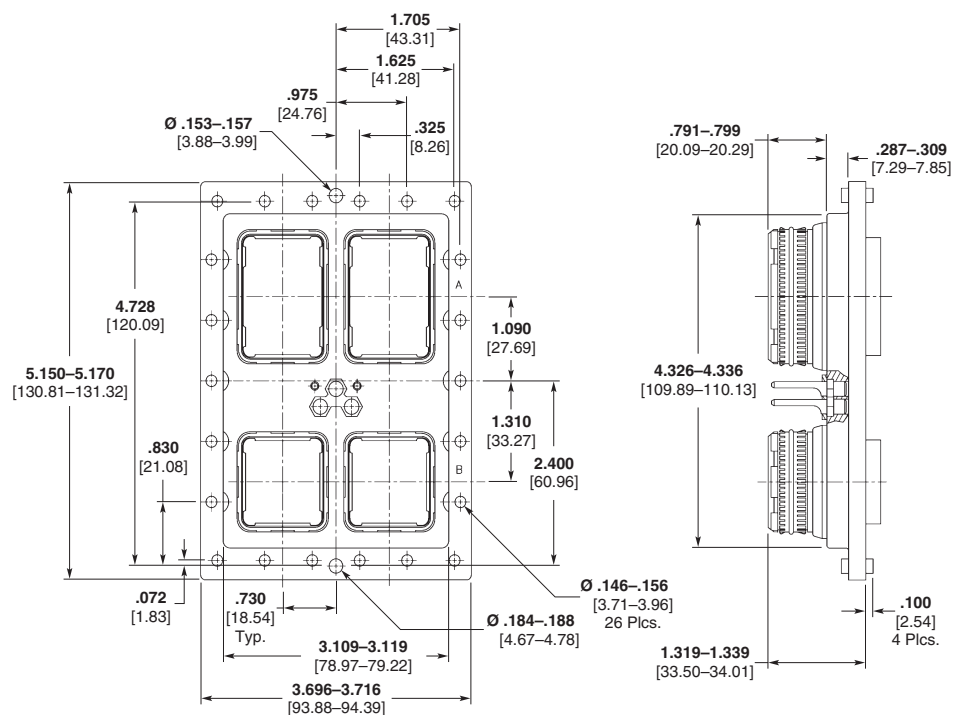


MIL 600 Style Connectors (Continued)

Receptacle Size 3

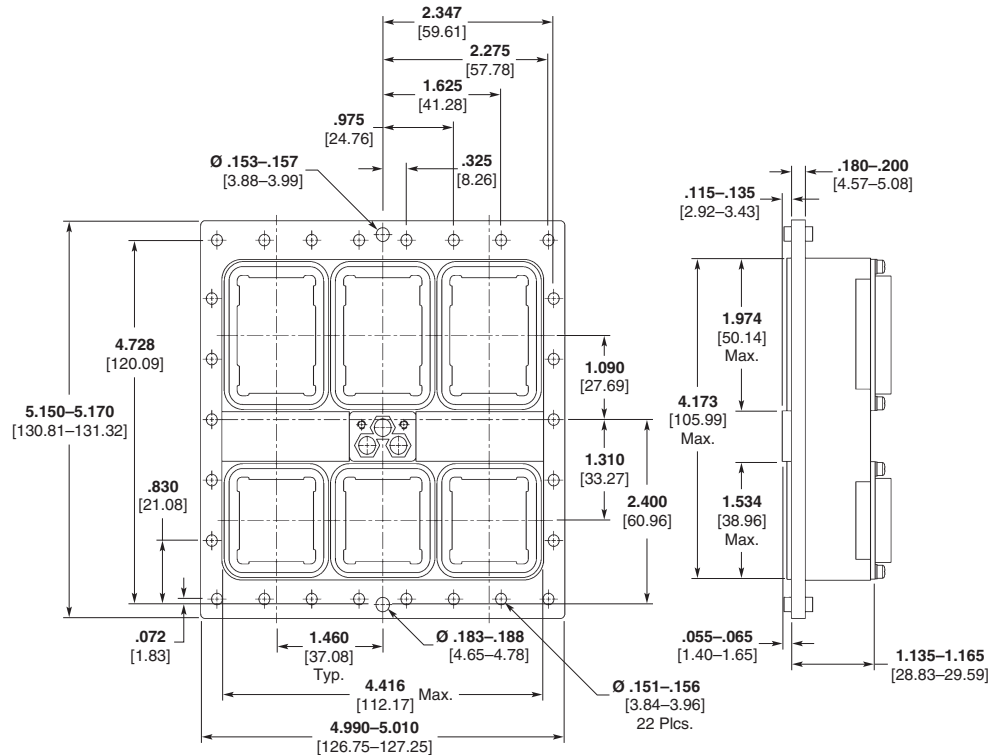


Plug Size 3



MIL 600 Style Connectors (Continued)

Receptacle Size 4



Plug Size 4

