

COAXICON Contacts

Product Facts

- Tyco Electronics provides a variety of contacts for coaxial connectors
- Contacts are available in a range of sizes that may be used with the various types of coaxial cable on the market
- COAXICON contacts are of the crimp, snap-in type and are available in the following designs: Miniature Contacts, Subminiature Contacts and Size 8 Contacts

Miniature Contacts are designed for high density multiple circuit connector applications. A wide range of cable sizes is accommodated by using three sizes of outer shell termination ends and three sizes of contacts.

Subminiature Contacts are used in high density applications and are ideal for mixing coaxial and other styles of pin and socket contacts in the same connector housing.

Size 8 Contacts are compatible with industry standard size 8 connectors such as Subminiature D and AMP-HDI connector housings. Straight and right-angle styles, as well as pc board versions for AMP-HDI connectors are available.



Miniature Contacts

Performance Characteristics

Insulation Resistance — 5000 megohms min

Dielectric Withstanding Voltage — 1,000 volts rms for 1 minute

Contact Resistance — 2.0 milliohms @ 1 ampere

Low-Level Conductivity — 10 milli-volts DC min.

VSWR — 1.3 to 1.0 @ 1,000 MHz max.

Cable Retention —

| RG/U Cable | Retention lbs [N] |
|------------|-------------------|
| 58C | 50 [222] |
| 188A | 30 [133] |
| 180B | 28 [125] |
| 195A | 16 [71] |

Durability — 500 cycles @ 10 cycles per minute max.

Vibration — 2 hrs. per MIL-STD-202, Method 201

Shock — 50 G's per MIL-Std-202, Method 213, Cond. G

Temperature Cycling — 5 cycles per MIL-STD-202, Method 102, Cond C.

Temperature Range — -55°C to +125°C

Test Method for Electronic and Electrical Component Parts — MIL-STD-202

Material

Outer Shell — Brass per MIL-C-50

Center Conductor — Brass per QQ-B-626, or Beryllium copper per QQ-C-533

Note:

A ferrule and retention spring (201142-2) are required for each pin and socket.
Extraction Tool No. 305183-8

Inner Dielectric — Polypropylene, nylon, or polymethylpentene, general purpose

Retention Spring — Stainless steel per QQ-S-766

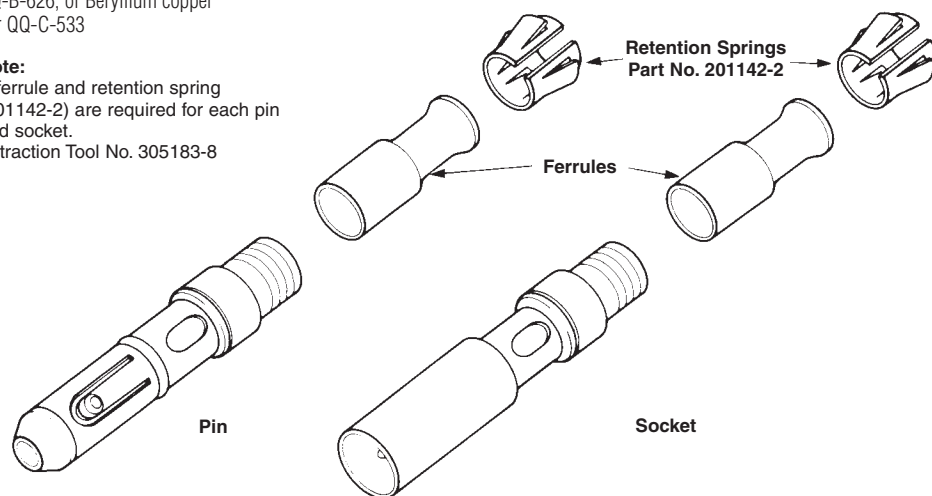
Ferrule — Copper per QQ-C-576

Finish

Outer Shell, Center Conductor — 0.00076 [.000030] gold over 0.00076 [.000030] nickel

Retention Spring — Nickel per QQ-N-290

Ferrule — Bright tin per MIL-T-10727



| RG/U Cable | Ferrule No. | Integral Die Hand Tool | PRO-CRIMPER | Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365-2, 69365-3 ² | Part Numbers | |
|--|-------------|------------------------|-------------|---|--------------|-----------|
| | | | | | Pin | Socket |
| 316, 188, 188A 174 | 328666 | — | — | 69227-2 | 201143-5 | 201144-5 |
| 179, 179A, 179B 161, 187, 187A Belden 9221 | 328666 | — | — | 69227-2 | 201143-1 | 201144-1 |
| 188 Double Braid 316 Double Braid | 221848-3 | 58290-1 | — | 69227-2 | 201143-5 | 201144-5 |
| 122 | 328664 | 45639-2 | 91912-3 | 69222-2 | 201145-1 | — |
| 180, 180A, 180B 195, 195A, 21-597 | 328664 | 45639-2 | 91912-3 | 69222-2 | 201145-2 | 201146-2 |
| Belden 8218 | 328664 | 45639-2 | 91912-3 | 69222-2 | 201145-2 | 201146-2 |
| 58, 58A, 58B, 58C | 328663 | 45740-2 | — | 69220-2 | 201145-4 | 201146-4 |
| 141 55, 55A, 55B, 223 | 330478 | 69248-4 | — | 69315-4 | 201145-4 | 201146-4 |
| 124, 140, 210 62, 62A, 62B 59, 59A, 59B | 329006 | — | — | 69675-1 | 201097-1* | 201098-1* |
| Twisted Pair | | | | | | |
| 24-22 AWG [0.2-0.4 mm ²] (Stranded) ¹ | 328666 | 91912-4 | — | 69672 | 201143-5 | 201144-5 |
| Shielded Wire 22, NAS-702, Class B | 328663 | 45740-2 | — | 69220-2 | 201145-4 | 201146-4 |
| Brand Rex T5788A 26 AWG [0.12-0.155 mm ²] ³ | 328664 | 45639-2 | 91912-3 | 69222-2 | 201145-2 | 201146-2 |

*These contacts are for use in the 4-position G Series connector modules only.

¹Maximum insulation diameter—2.92 [.115] (two wires combined).

²Includes bench mount and foot control; requires Manual Take-Up Attachment No. 69689.

³Dielectric O.D.—2.69 [.106] max.; Cable O.D.—4.06 [.160].

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

Miniature PC Board Sockets

Material

Shell and Center Contact—Brass
per MIL-C-50 and QQ-B-626

Dielectric—Polypropylene, or
Polymethylpentene, general purpose

Finish

Center Contact—0.00076 [.000030]
gold over copper

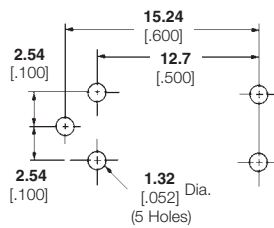
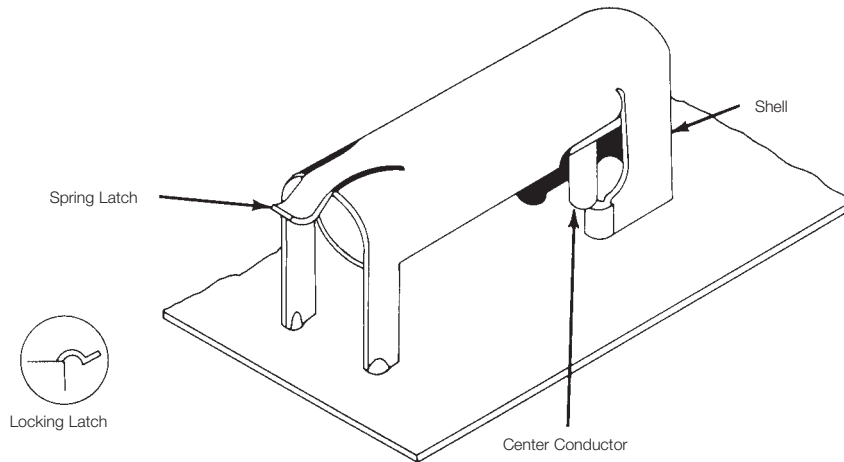
Shell—Gold plated per MIL-G-45204

Performance Characteristics

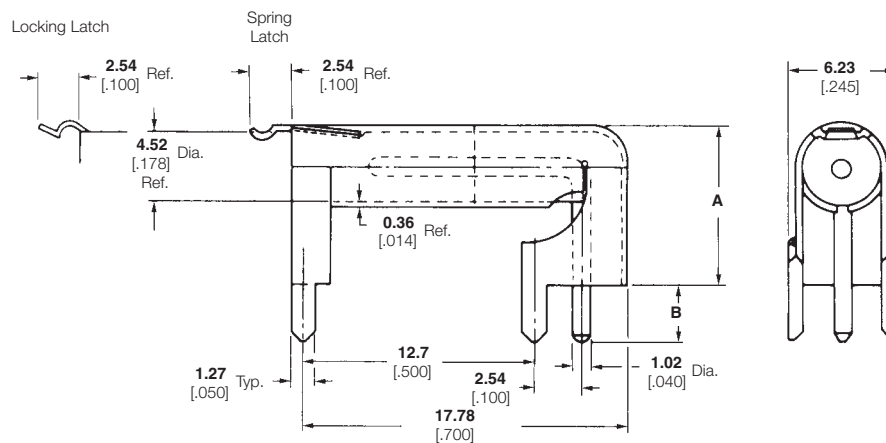
Dielectric Withstanding Voltage—
1,000 volts, rms

Impedance—Non-constant

Operating Temperature Range—
-55°C to +85°C



**Recommended
Mounting Hole Layout**



| Type | PC Board Thickness | Retention | | Dimensions | | Part No. |
|---------------|--------------------|-----------|------|--------------|--------------|----------|
| | | lb. | [N] | A | B | |
| Spring Latch | 1.57 .062 | 1.25 | 5.56 | 9.07 .357 | 3.18 .125 | 50084-1 |
| Spring Latch | 3.18 .125 | 1.25 | 5.56 | 7.49 .295 | 4.75 .187 | 50095-1 |
| Locking Latch | 3.18 .125 | 7 | 31.1 | 7.49 .295 | 4.75 .187 | 50105-1 |
| Locking Latch | 1.57 .062 | 7 | 31.1 | 9.07 .357 | 3.18 .125 | 50107-1 |

Note: For mateable Miniature Contacts, see page 245.

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

Subminiature PC Board Sockets

Material

Shell and Center Contact — Brass per MIL-C-50 and QQ-B-626

Dielectric — Polypropylene, or polymethylpentene, general purpose

Finish

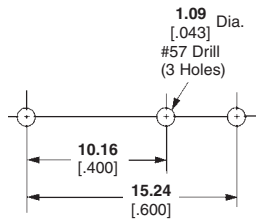
Center Contact — 0.00076[.000030] gold per MIL-G-45204 over copper per MIL-C-14550

Shell — Gold

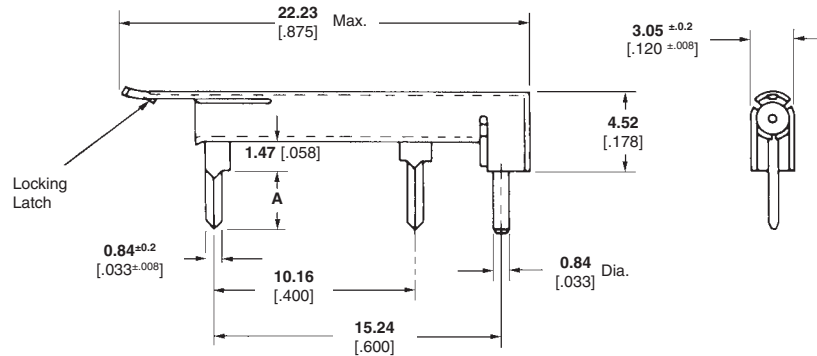
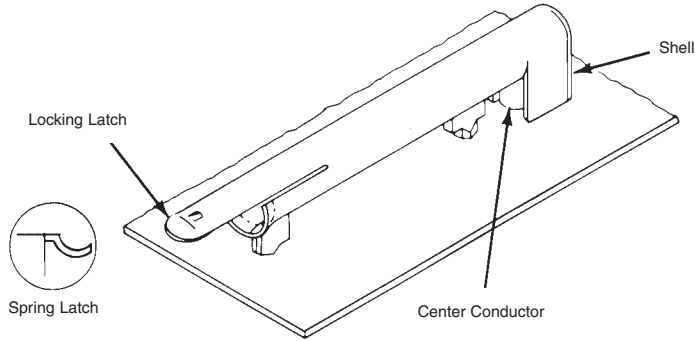
Performance Characteristics

Dielectric Withstanding Voltage — 600 volts, rms

Operating Temperature Range — -55°C to +85°C



**Recommended
Mounting Hole Layout**

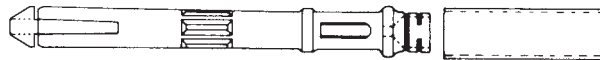


| Type | PC Board Thickness | Dim. L | Part No. |
|---------------|--------------------|--------------|----------|
| Spring Latch | 1.57 .062 | 2.54 .100 | 226023-1 |
| Locking Latch | 1.57 .062 | 2.54 .100 | 226060-1 |

Mating Subminiature COAXICON Pins

These short Subminiature COAXICON Pins are recommended for use with any of the sockets listed above.

Note: Alignment springs are not required for this application and are not included with the pin assemblies.



| RG/U Cable | Ferrule No. | Integral Die Hand Tool | Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365-2, 69365-3 | Part No. |
|------------------------------|-------------|------------------------|--|----------|
| 174 316, 188, 188A | 1-332056-0 | 91911-3 | 69690 | 51563-8 |
| 179, 179A, 179B 187, 187A | 1-332056-0 | 91911-4 | 69690-1 | 51563-8 |
| 161 | 1-332056-0 | 69656-5 | — | 51563-8 |

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

Subminiature Contacts

Material

Outer Shell — Brass per MIL-C-50

Center Conductor — Beryllium copper per QQ-C-533 (Pin);
Brass per QQ-B-626 (Socket)

Inner Dielectric — Polypropylene, nylon, or polymethylpentene, general purpose

Retention Spring — Stainless steel per QQ-S-766

Ferrule — Copper per QQ-C-576

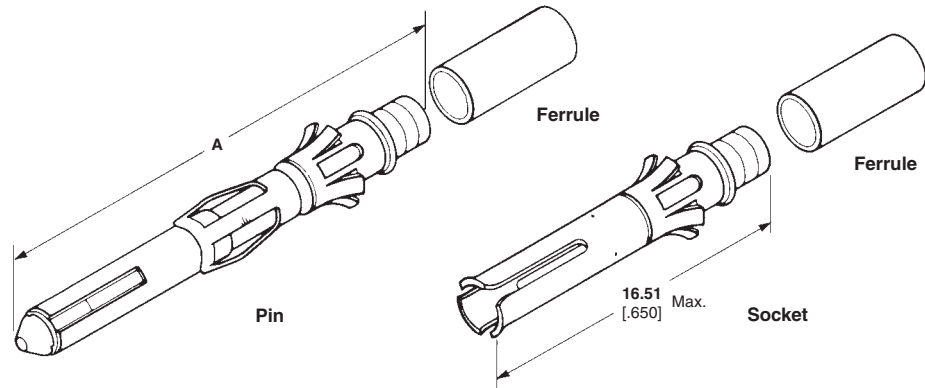
Finish

Outer Shell and Socket

Center Conductor — 0.00076
[.000030] gold over 0.00127 [.000050] nickel

Pin Center Conductor — 0.00076
[.000030] gold over
0.00254 [.000100] copper

Ferrule — Bright tin per MIL-T-10727



A = Multimate Pin **25.65** [1.010]
Short Pin **22.66** [.892]

Selection Chart for Coaxial Cable

| RG/U Cable | Integral Die Hand Tool | PRO-CRIMPER | Die Insert for Tools: Hand Tool 69710-1 Pneu. Tool 69365-2, 69365-3* | Contact Part Numbers | | | |
|---|------------------------|-------------|---|----------------------|-----------|----------------|------------|
| | | | | Multimate Pin | Short Pin | Socket | Ferrule |
| 178, 178A, 178B 196, 196A | 69656-2 | | 69690-2 | 226537-2 | — | 51565-2 | 1-332057-0 |
| 196 (Double Braid) | 69656-9 | | — | 226537-2 | — | 51565-2 | 225088-1 |
| 174, 316 188, 188A | — | 91911-3 | 69690 | 226537-1 | — | 51565-1 | 1-332056-0 |
| 179, 179A, 179B 187, 187A Belden 9221 | — | 911911-4 | 69690-1 | 226537-1 | — | 51565-1 | 1-332056-0 |
| RD-316 | 69656-7 | | — | 226537-1 | — | 51565-1 | 225088-3 |
| 187 (Double Braid) | 69656-8 | | — | 226537-1 | — | 51565-1 | 225088-1 |
| 161 | 69656-5 | | — | 226537-1 | — | 51565-1 | 1-332056-0 |

Selection Chart for Twisted Pairs and Shielded Wire

| Wire Size | | Integral Die Hand Tool | PRO-CRIMPER | Die Insert for Tools: Hand Tool 69710-1 Pneu. Tool 69365-2, 69365-3* | Contact Part Numbers | | | |
|--|--------------------|------------------------|-------------|---|----------------------|----------------|----------------|------------|
| AWG | [mm ²] | | | | Multimate Pin | Short Pin | Socket | Ferrule |
| 30 (Twisted Pair, Solid) | 0.05 | 69656-2 | — | 69690-2 | 226537-3 | 51563-3 | 51565-3 | 1-332057-0 |
| 28 (Twisted Pair, Solid) | 0.08-0.09 | — | 91911-3 | 69690 | 226537-3 | 51563-3 | 51565-3 | 1-332057-0 |
| 28 (Twisted Pair, Stranded; 7 str., .005 [0.13] Dia.) | 0.08-0.09 | — | 91911-4 | 69690-1 or 69690-2 | 226537-3 | 51563-3 | 51565-3 | 1-332057-0 |
| 26 (Twisted Pair, Solid or Stranded; 7 str., .0063 [0.16] Dia.) | 0.12-0.15 | — | 91911-3 | 69690 | 226537-3 | 51563-3 | 51565-3 | 1-332057-0 |
| 26 (Shielded, 0.75 [1.91] Max. O.D.) | 0.12-0.15 | 69656-3 | — | 69690-3 | 226537-1 | — | 51565-1 | 1-332057-0 |

*Includes bench mount and foot control.

Extraction Tool 305183

Note: A ferrule is required for each pin and socket.

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

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