

Performance Data Summary
For LEPRA/CON Connectors

LEPRA/CON Ultra-Miniature Connectors

Mechanical

Captive Contacts — Terminated connector contacts captivated from movement in both directions.

Cable Retention — 10 lb. min. when properly assembled to RG196/U and RG178/U cable.

Recommended Coupling Torque (Threaded Interface) — 24 inch/ounces max.

Recommended Receptacle Mounting Torque (All Series) — 24 inch/ounces max.

Typical Cable Acceptance Dimensions — Inner conductor: .012 [0.31] nom. Dielectric: .039 [0.99] max. Shield: .059 [1.50] max. Jacket: .081 [2.06] max.

Contact Protection (Unmated) — Twist pin contact protected from damage by insulator. Tube socket protected by connector housing.

Assembly Methods

Straight Plugs & Jacks — Cable Inner Conductor: Crimped to contact. Cable Shield: Crimped under housing.

Right-Angle Plugs — Cable Inner Conductor: Soldered to contact. Cable Shield: Crimped under housing.

Environmental

Temperature Range (Continuous Service) — -85°F to +392°F [-65°C to +200°C].

Vibration^{1,2} — MIL-STD-202, Method 204, Test Condition B (15 G peaks). No physical damage or electrical discontinuities in excess of 1 microsecond.

Shock^{1,2} — MIL-STD-202, Method 213, Test Condition H. No physical damage or electrical discontinuity after shock.

Thermal Shock — MIL-STD-202, Method 107, Test Condition C.

Moisture Resistance¹ — MIL-STD-202, Method 106.

Salt Spray¹ — MIL-STD-202, Method 101, Test Condition B (48 hours).

Electrical

Impedance — Designed to be compatible with 50 Ohm coaxial cable RG178/U.

Dielectric Withstanding Voltage — 450 volts RMS at sea level, 250 volts RMS at 50,000 ft [15,240 m], 150 volts RMS at 70,000 ft. [21,336 m]

Contact Resistance — 8 milliohms max., D.C.

Contact Capacity — 3 amps, D.C.

Insulation Resistance — 10⁹ Megohms min. @ 500 volts D.C.

Voltage Standing Wave Ratio³ (VSWR) — Typical 50 Ohm Series, 1.2 Maximum to 2 GHz.

Materials

Housing, Nut, Ferrule — Brass per ASTM-B-16.

Insulator — TEFLON per ASTM-D-1710.

Pin & Socket Contact — Copper Alloy.

Crimp Sleeve — Copper Alloy.

Lockwasher — #425 Bronze Alloy.

Plating

Contacts, Housing, Nut, Ferrule, Crimp Sleeve, Lockwasher — Gold per MIL-G-45204, Type II, Grade C, Class 1.

Notes:

¹Screw-On Series, threaded interface.

²Tyco Electronics recommends the use of safety wired connectors in vibration and shock environments. See individual specifications with wire holes.

³VSWR is a system specification. Where performance is critical, purchase Tyco Electronics cable assemblies with Screw-On connectors (See page 129) and specify VSWR testing and mating connector part numbers.

Electronics

LEPRA/CON Ultra-Miniature Connectors — Screw-On Series

Featuring Twist Pin, Pin and Socket Contacts, Standard Interface

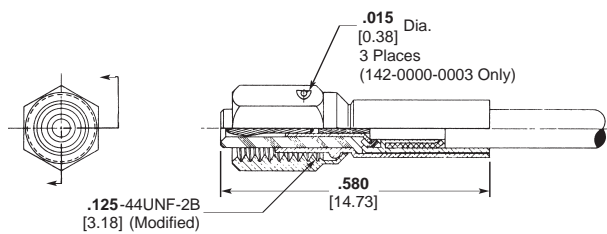


MICRODOT twist pin, pin and socket contacts are used in LEPRA/CON connectors. Twist pin contact pins are produced from beryllium copper material with a gold-plated finish and constructed with helically-wound stress free cable of spring copper around a highly conductive soft copper core, terminated with a hemispherical weld. Twist pin

contacts contain seven self-wiping spring surfaces, designed for consistent continuity and very low noise level. Twist pin contacts are self-aligning because of the contact-engaging-end configuration. The sockets are a closed entry tubular-type contact, made of gold-plated copper alloy.

The connectors are designed to be used with coaxial cables RG196/U and RG178/U.

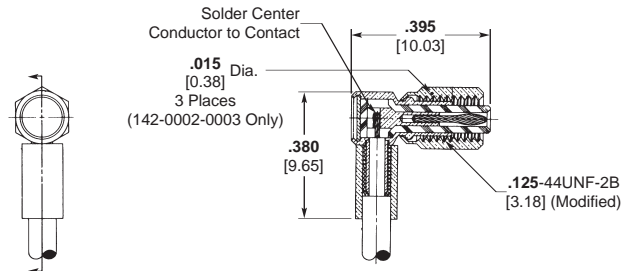
The connectors are designed with the contacts completely protected for reliability. The use of twist pin contacts makes the connectors very rugged for their size.



Straight Plugs¹

Part No.	Nut Style
142-0000-0001	.156 [3.96] Hex.
142-0000-0002	.160 [4.06] Dia. Knurl
142-0000-0003	.156 [3.96] Hex. w/ Safety Wire Holes

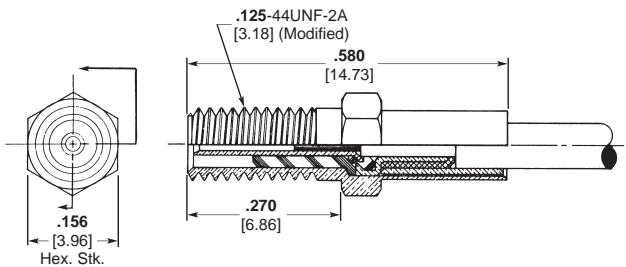
Assembly instructions: RF-ASMB-12



Right-Angle Plug¹

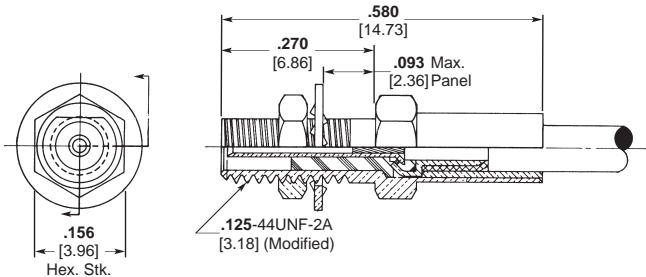
Part No.	Nut Style
142-0002-0001	.156 [3.96] Hex.
142-0002-0002	.160 [4.06] Dia. Knurl
142-0002-0003	.156 [3.96] Hex. w/ Safety Wire Holes

Assembly instructions: RF-ASMB-13



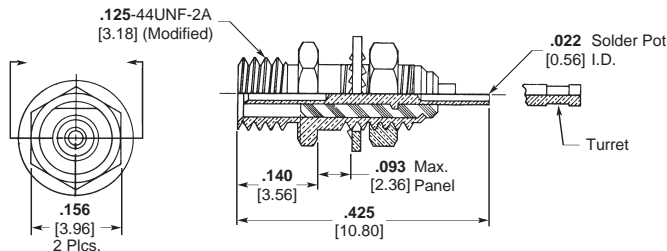
Jack¹

Part Number 141-0000-0001
Instruction Sheet Number 408-08510
Former MICRODOT I.S. Number RF-ASMB-12



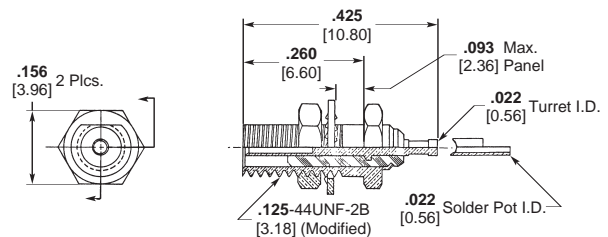
Bulkhead Jack¹

Part Number 141-0001-0001
Instruction Sheet Number 408-08510
Former MICRODOT I.S. Number RF-ASMB-12



Front Mount Receptacle¹

Part No.	Contact Tail
141-0002-0001	Turret
141-0002-0002	Solder Pot

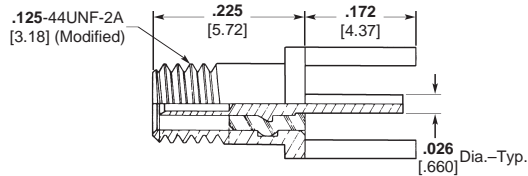


Rear Mount Receptacle¹

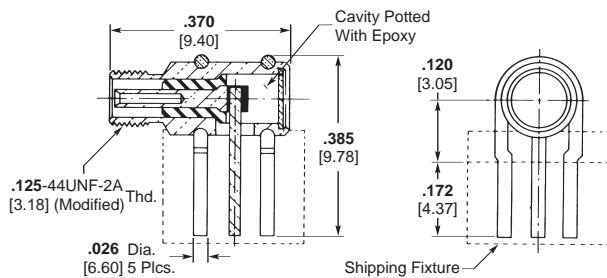
Part No.	Contact Tail
141-0003-0001	Turret
141-0003-0002	Solder Pot

¹Mounting hole pattern and assembly tools shown on page 123.

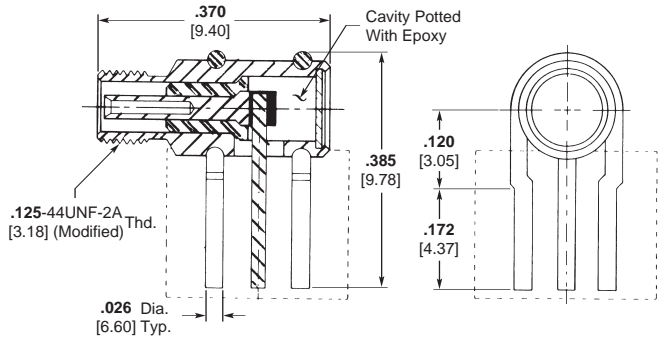
Featuring Twist Pin,
Pin and Socket Contacts,
Standard Interface (Continued)



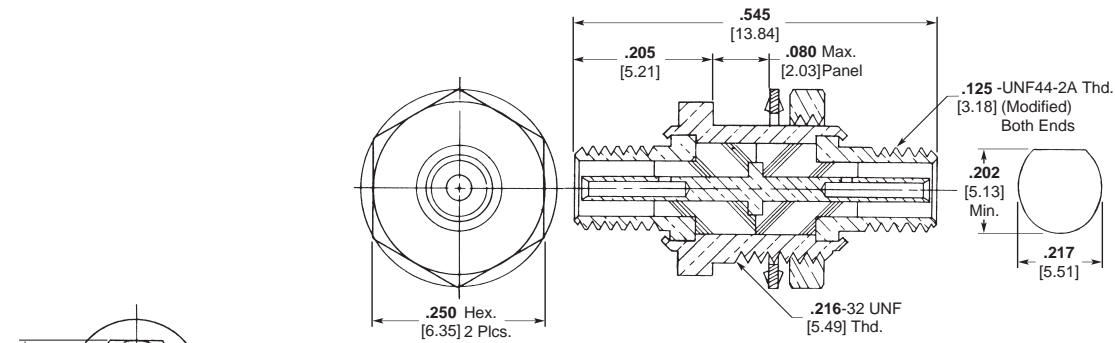
Straight Printed Circuit Receptacle¹
Part No. 141-0004-0001



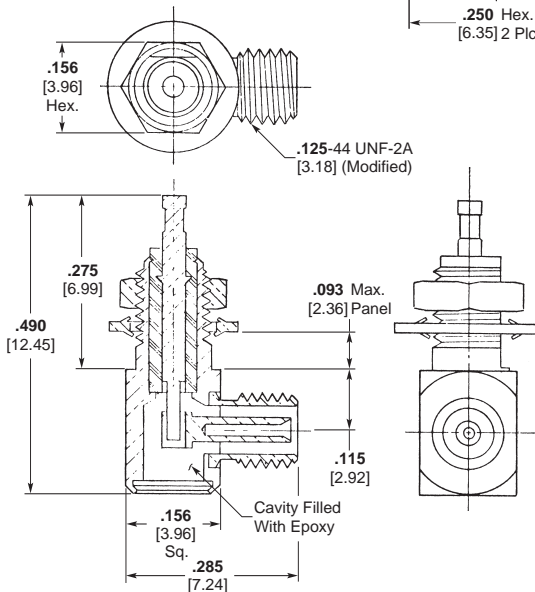
Right-Angle Printed Circuit Receptacle¹
(Small Mounting Pattern)
Part Number 141-0019-0001



Right-Angle Printed Circuit Receptacle¹
(Standard Mounting Pattern)
Part Number 141-0010-0001



Feed-Thru Bulkhead Adapter
(Both Ends are Receptacle Interface)
Part Number 143-0005-0001



Right-Angle Receptacle¹
Part Number 141-0013-0001



Straight Plug

¹Mounting hole pattern and assembly tools shown on page 123.

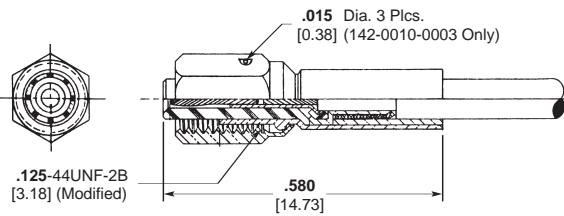
Electronics

LEPRA/CON Ultra-Miniature Connectors — Screw-On Series (Continued)

Featuring Twist Pin, Pin and Socket Contacts with Locking Interface

The MICRODOT LEPRA/CON coaxial connector series is now offered with a unique locking interface feature. This new coupling design permits the user to lock the coaxial plug, when mated to its receptacle, preventing any axial rotation. This

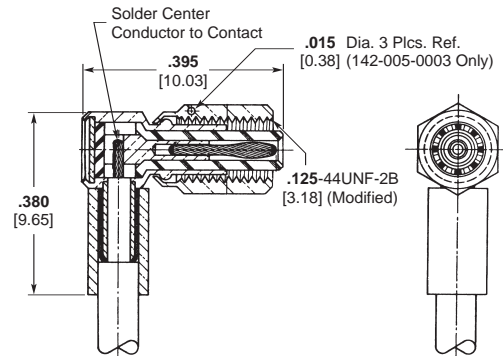
adaptation is especially popular on connector installations requiring straight or 90° cable terminations firmly held in a fixed position. The locking interface is especially suited for telecommunications and instrumentation applications. This



Straight Plug¹

Part No.	Nut Style
142-0010-0001	.156 [3.96] Hex.
142-0010-0002	.160 [4.06] Dia. Knurl
142-0010-0003	.156 [3.96] Hex. w/ Safety Wire Holes

Assembly instructions: RF-ASMB-12, 142-0010-0001



Right-Angle Plug¹

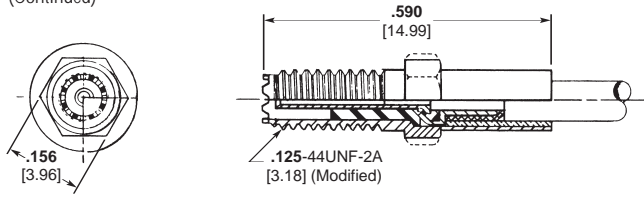
Part No.	Nut Style
142-0005-0001	.156 [3.96] Hex.
142-0005-0002	.160 [4.06] Dia. Knurl
142-0005-0003	.156 [3.96] Hex. w/ Safety Wire Holes

Assembly instructions: RF-ASMB-13, 142-0005-0001

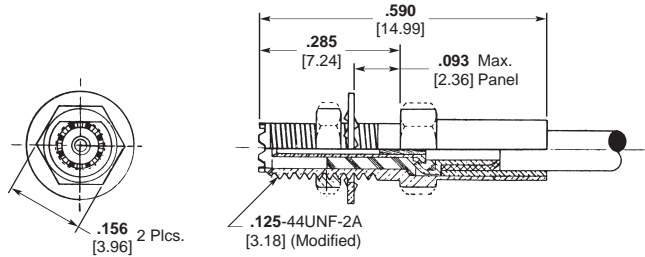
¹Assembly tools; page 123.

Featuring Twist Pin,
Pin and Socket Contacts
with Locking Interface

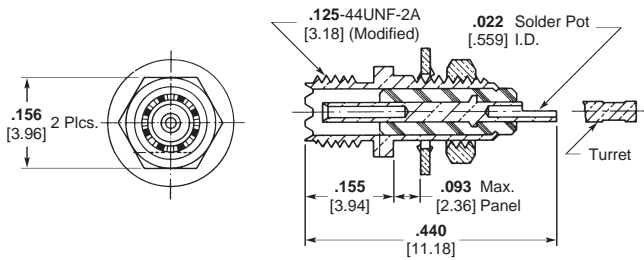
(Continued)



Straight Jack¹
Part Number 141-0017-0001
Instruction Sheet Number 408-08510
Former MICRODOT I.S. Number RF-ASMB-12

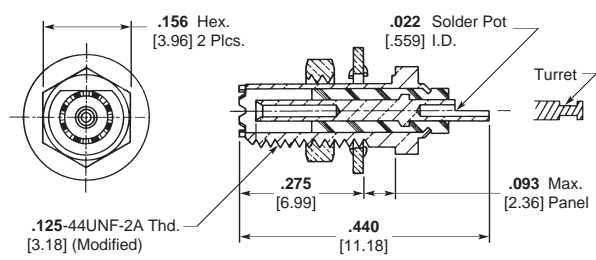


Bulkhead Jack¹
Part Number 141-0014-0001
Instruction Sheet Number 408-08510
Former MICRODOT I.S. Number RF-ASMB-12



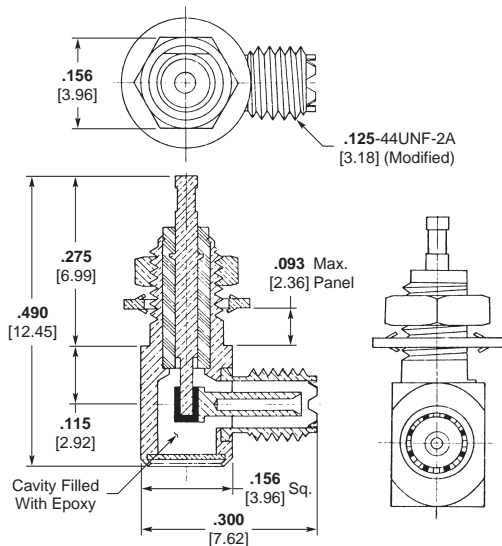
Front Mount Receptacle¹

Part No.	Contact Tail
141-0012-0001	Solder Pot
141-0012-0002	Turret

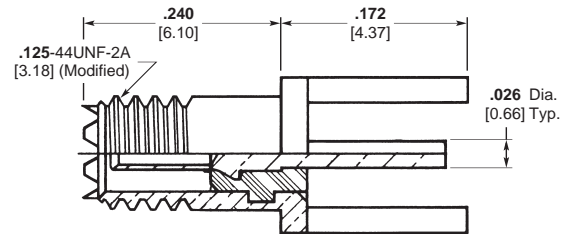


Rear Mount Receptacle w/ Locking Interface¹

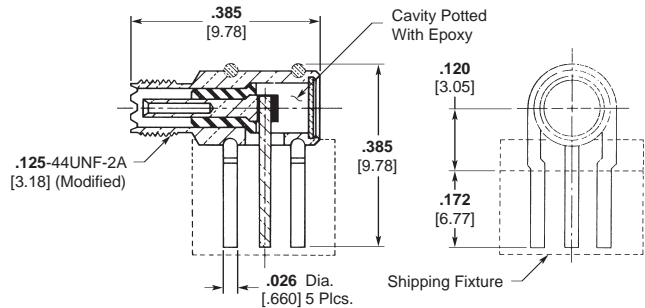
Part No.	Contact Tail
141-0011-0001	Turret
141-0011-0002	Solder Pot



Right-Angle Receptacle¹
Part Number 141-0020-0001



Straight Printed Circuit Receptacle¹
Part Number 141-0015-0001



Right-Angle Printed Circuit Receptacle¹
Part Number 141-0023-0001

¹Mounting hole pattern and assembly tools shown on page 123.