

600 SERIES

| 5 kVDC

| 70,000 FT

| -55° TO 125°C

600 SL SERIES

| 10 kVDC

| SEA LEVEL

The 600 and 600 SL series are a complete line of subminiature, coaxial, high voltage connectors. In production since 1964, these connectors have proven to be extremely reliable in a variety of both, Aerospace/Defense and high-end commercial applications. The 600 series is also, possibly, the smallest coaxial, high voltage connector rated for use at 70,000 ft available on the market.

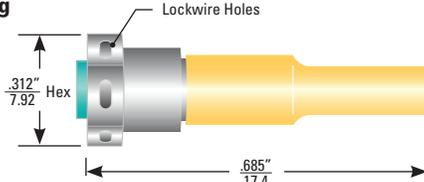
Various adapters are available on special order.

PLUG KITS

(Dimensions shown as in/mm)

Shielded, Hex Coupling

178-7110



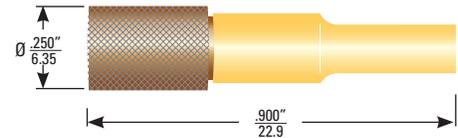
- Stainless steel coupling nut, lockwire holes
- Plug kits mate both 600 and 600 SL receptacles

Uses Shielded Wire: 167-2896

- Non-shielded version available.
 - While plug kits are available for customer-fabricated cable assemblies, Teledyne Reynolds highly recommends purchasing cable assemblies because of difficulties customers may experience in assembly and testing.
 - Assembly instructions can be found at www.teledynereynolds.com or by contacting Teledyne Reynolds' Engineering.
- Note: It is not recommended to mate the stainless steel coupling nut plugs with the gold plated, brass body receptacles. Likewise with the gold plated coupling nut plugs and stainless steel receptacles.

Shielded, Knurled Coupling

167-3770



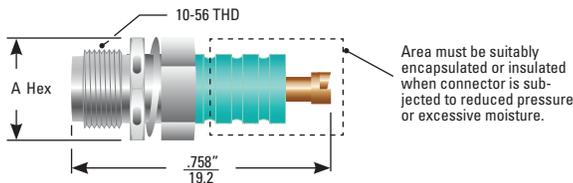
- Gold-plated, brass body and knurled coupling nut, no lockwire holes

RECEPTACLES

Non-Sealed, Front Panel Mount

600 178-7111 & 167-3771

600 SL 700032 & 700041

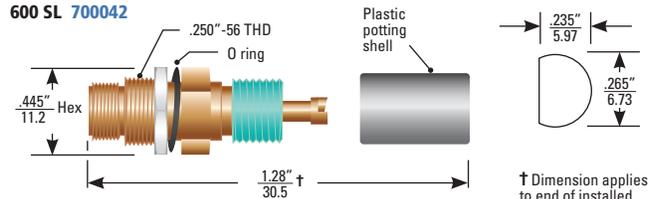


- 178-7111 & 700032 Stainless steel body, lockwire holes. "A" is .312" (7.92mm)
 167-3771 & 700041 Same as 178-7111 & 700032 except for "A" is .250" (6.35mm), gold plated, brass body and no lockwire holes
- **Mating Torque:** 2 to 3 in-lbs
 - **Mounting:** Requires .197" (5.0 mm) diameter hole
 - **Panel Mounting Torque:** 8 to 10 in-lbs

Sealed, Rear Panel Mount

600 167-4078

600 SL 700042

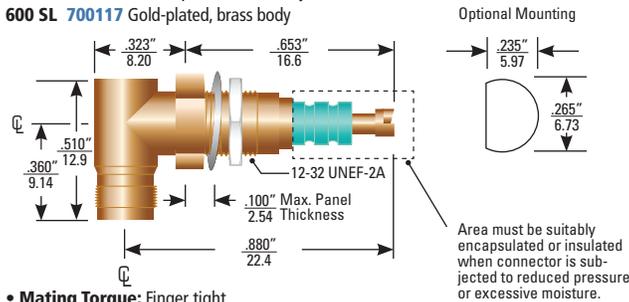


- 167-4078 & 700042 Gold-plated, brass body, no lockwire holes
- Sealed for 1 ATM differential pressure
 - **Max. Leak Rate:** 1x10⁶ cc/s He @ 1 ATM differential pressure
 - **Mating Torque:** Finger tight
 - **Mounting:** Requires clearance for .250"-56 UNS thread or optional "D" hole (shown)
 - **Panel Mounting Torque:** 8 to 10 in-lbs

Right Angle, Non-Sealed, Front Mount

600 167-9220 Gold-plated, brass body

600 SL 700117 Gold-plated, brass body



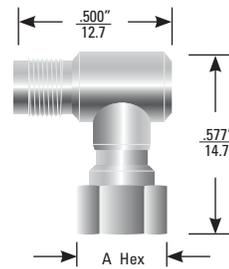
- **Mating Torque:** Finger tight
- **Mounting:** See optional D-hole mounting
- **Panel Mounting Torque:** 8 to 10 in-lbs

Right Angle Adapter

600 178-7414

167-9063 (Not shown)

600 SL 700116 (Not shown)

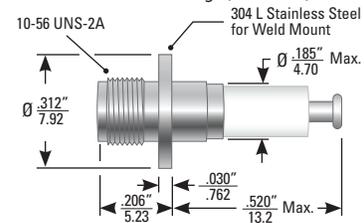


- **Mating Torque:** 2 to 3 in-lbs

Ceramic-to-Metal, Brazed Hermetic

600 467-7029 Weld Flange

467-7009 Solder Flange (Not shown)



- Sealed for 1 ATM differential pressure
- **Max. Leak Rate:** 1x10⁸ cc/s He @ 1 ATM differential pressure
- **Mating Torque:** 2 to 3 in-lbs

178-7414 Stainless steel body, hex nut, no lockwire holes. "A" is .312" (7.92mm)

167-9063 Same as 178-7414 except for "A" is .250" (6.35mm), gold-plated, brass body, knurled coupling nut

700116 Same as 167-9063

CABLE ASSEMBLIES

Single-Ended Shielded, Pigtailed

Hex Plug

600 178-7115

600 SL 700035

Knurled Plug

600 167-3305

600 SL 700039

Double-Ended Shielded

Hex Plug

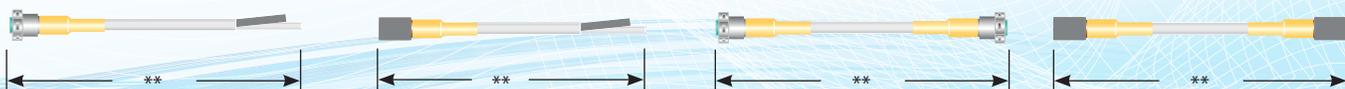
600 178-7113

600 SL 700034

Knurled Plug

600 167-3306

600 SL 700036



Single-Ended, Non-Shielded (Not shown)

Hex Plug

600 178-8210

600 SL 700043

Uses .100" (2.54 mm) Dia. FEP Wire 167-9609

Knurled Plug

600 167-7667

600 SL 700044

Uses .100" (2.54 mm) Dia. Silicone Wire 167-9634

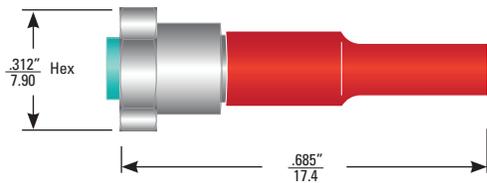
- **Note:** Product numbers and specs subject to change without notice.
- Products listed represent only a small selection of Teledyne Reynolds' products please visit www.teledynereynolds.com for the most up to date product information.
- Contact Teledyne Reynolds' Engineering to discuss custom designs. **WARNING: Connectors should NEVER be handled mated or unmated when voltage is applied.**

The 610 and 610 SL series have a larger coupling nut and threads than the 600/600 SL series and are recommended for airborne applications or any application where numerous mating operations are required. The difference in threads between the 600/600 SL and 610/610 SL connectors can be used as "polarization" to prevent cross mating in multiple circuit applications, since they are not intermateable.

Series 610 cable assemblies effect an altitude seal through the use of internal seals. This design feature allows the mated assemblies to operate at altitudes up to 70,000 ft with no encapsulation within a temperature range of -55° to 125°C.

PLUG KITS

Shielded, Hex Coupling
167-9363



- Stainless steel body, no lockwire holes
- Plug kits mate both 610 and 610 SL receptacles

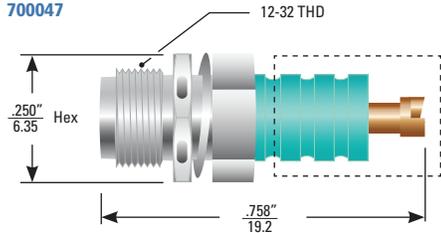
Uses Shielded Wire: 167-2896

While plug kits are available for customer-fabricated cable assemblies, Teledyne Reynolds highly recommends purchasing cable assemblies because of difficulties customers may experience in assembly and testing.

RECEPTACLES

(Dimensions shown as in/mm)

Non-Sealed, Front Panel Mount
610 167-9364
610 SL 700047



Area must be suitably encapsulated or insulated when connector is subjected to reduced pressure or excessive moisture.

- **Mating Torque:** 3 to 4 in-lbs
- **Mounting:** Requires .197" (5.0 mm) dia. hole
- **Panel Mounting Torque:** 12 to 14 in-lbs

CABLE ASSEMBLIES

Single-Ended, Shielded, Pigtailed
610 167-9487
610 SL 700049



Double-Ended, Shielded
610 167-8920
610 SL 700048



**** CABLE ASSEMBLY ORDERING INFORMATION**

All cable assembly cable lengths are to be specified in inches only. For example, to order part number 178-6027 with a cable length of 10 feet 8 inches the cable assembly part number would be specified as 178-6027-128N.

For any cable assemblies starting with a "700" prefix the part number is designated using the following part number sequence: **Base Part Number - Color Code - Cable Length (inches)**

The Color Code, or cable color, is specified by adding a dash and a two digit code (per Table 1) to the Base Part Number.

The Cable Length is specified in inches by adding a dash and four digits after the Color Code. For example, 700039-09-0120 is a 120 inch cable assembly built with white wire.

Please contact Teledyne Reynolds' Engineering department if you have any questions or need further clarification.

00 BLACK	02 RED	04 YELLOW	06 BLUE	08 GRAY	10 NATURAL
01 BROWN	03 ORANGE	05 GREEN	07 VIOLET	09 WHITE	

Table 1: Cable Color codes

SERIES SPECIFICATIONS

(• = Same value as above)

Series	Voltage Rating (kVDC)	Altitude Rating (ft)	Operating Temp. (°C)	Current Rating (Amp)	Receptacle Insulator Material	Plug Insulator Material	Coupling Style	Coupling Nut Material/Finish	Plug Contact Material/Finish (Socket)	Recept. Contact Material/Finish (Pin)	Wire Type	Wire Insulation	Braid Termination	(kVDC) Test Voltage @ 70,000 ft	(kVDC) Test Voltage @ Sea Level
600	5	70,000	-55 to 125	1	Plastic or Ceramic	Plastic	Threaded	Brass/Au or CRES	BeCu/Au with CRES hood	Brass/Au or Kovar®	Shielded or Non-shielded	FEP or Silicone	Solder	7.5	N/A
600 SL	10	Sea Level	•	•	•	•	•	•	•	•	Shielded	FEP	•	N/A	15
610	5	70,000	•	•	Plastic	•	•	•	•	•	•	•	•	7.5	N/A
610 SL	10	Sea Level	•	•	•	•	•	•	•	•	•	•	•	N/A	15

WIRE SPECIFICATIONS

Part #	Operating Voltage (kVDC)	Conductor			Insulation		Shielding			Jacket		Impedance Ω	Attenuation dB/100 ft @ 400mhz	Capacitance pF/FT (Nom.) @1k HZ
		AWG	Strands	Plating	Material	σ in./mm	AWG	Plating	σ in./mm	Material	σ in./mm			
167-9634	10	20	19/30	SPC	Silicone	0.100 / 2.54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
167-2896*	18	26	19/38	•	FEP	0.050 / 1.27	36	SPC	0.075 / 1.91	FEP	0.095 / 2.41	46	25	33.7
167-9609	30	20	19/32	TPC	•	0.100 / 2.54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* For reference, part number 167-2896 is known as "Type L" cable. Kovar is a registered trademark of the Carpenter Technology Corporation.