

600, 610 & 600 "S" SERIES SUBMINIATURE, HIGH RELIABILITY CONNECTOR

5 kVDC • -55°C to 125°C • 70,000 ft. • Space Use



INTRODUCTION

600 Series

A complete line of subminiature coaxial high voltage connectors. The series 600 is rated at 5 kVDC for altitude operation over the temperature range of -55°C to 125°C. Various adapters are available on special order.

610 Series

The series 610 has a larger coupling nut and threads than the series 600 and can therefore be used for polarization to prevent cross mating in multiple circuit applications.

600 "S" Space Use Series

Series 600 "S" Space Use connectors have been specifically designed to operate over a long period of time in the hard vacuum of space. The operating voltage is 5 kVDC at a minimum vacuum of 10 millitorr to deep space. Series 600 "S" connectors and cable assemblies are not interchangeable with series 600/610 connectors or cable assemblies and should not be used in any application other than one with a minimum vacuum of 10 millitorr or in deep space.

FEATURES

Small size for applications with tight space constraints

Rated for operation @ 70,000 feet and the hard vacuum of deep space

Shielded and Non-Shielded Versions

GENERAL SPECIFICATIONS

	600	600 "S"	610
Voltage Rating:	5 kVDC		
Altitude Rating:	70,000 ft.	250,000 ft. to Deep Space	70,000 ft.
Operating Temp. Range:	-55° to 125°C		
Receptacle Insulator Material:	Plastic or Ceramic	Plastic or Ceramic	Plastic
Lock Wire Holes on Hex:	Yes	Yes	No
Plug Body Material/Finish:	Brass/Gold		
Hex Threaded Coupling Material/Finish:	Stainless Steel/Passivated		
Knurled Threaded Coupling Mat./Finish:	Brass/Gold	N/A	N/A
Coupling Thread:	10-56 UNF	10-56 UNF	12-32 UNF
Male Contact Dia. (Receptacle) in./mm:	0.031(0.79)		
Male & Female Contact Mat./Finish:	BeCu/Gold		
Wire Type:	Coax or Non-Shielded	Coax	Coax or Non-shielded
Test Voltage @ 70,000 ft.	7.5 kVDC†		
Simulated Alt. & Ambient Temp:			

* Custom color combinations available upon request.

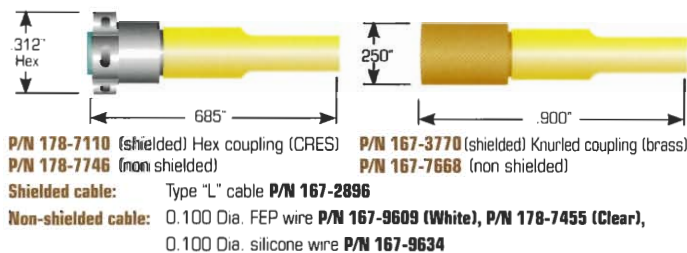
† 600 "S" tested with interface seal installed. Seal must be removed before use in reduced pressure applications.



600, 610 & 600 "S" SERIES SUBMINIATURE, HIGH RELIABILITY CONNECTOR

5 kVDC • -55°C to 125°C • 70,000 ft. • Space Use

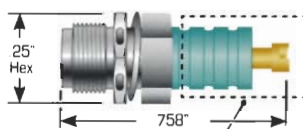
600 PLUG KITS AND RECEPTACLES



IMPORTANT: While plugs 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.

P/N 178-7111 & P/N 167-3771

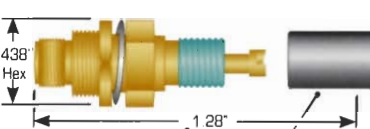
Mounting requires .197" dia. hole



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

P/N 167-4078

Mounting requires clearance for .250-56 UNS thread

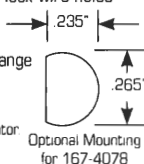


P/N 178-7111 Front mount, non-sealed connector. Stainless steel body. Lock wire holes
P/N 167-3771 Same as P/N 178-7111 except for gold plated brass body. No lock wire holes
P/N 167-4078 Rear mount sealed connector. Gold plated brass body. No lock wire holes
Rated for 15 PSI differential pressure.

Max. leak rate: 1×10^{-6} ccHe/sec.

P/N 467-7028 Front mount, hermetic, ceramic-to-metal braze with weld flange
(P/N 467-7009 solder flange version). **Max leak rate:** 1×10^{-6} ccHe/sec

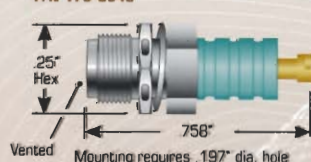
NOTE: Panel connectors require encapsulation at the junction of the terminal and insulator



600 "S" SPACE USE

A series of receptacles and cable assemblies designed to operate at a minimum vacuum of 10 millitorr to deep space. Connectors have no seals, both plug and receptacle are vented to release any air trapped during pressure reduction associated with launch to deep space. Receptacles are shipped with an interface seal which can be installed for necessary pre-launch voltage testing. The seal must be removed prior to launch with removal tool 178-8608. We strongly urge discussing any potential useage of these connectors with a Teledyne Reynolds applications engineer before purchasing or using the series 600 "S" in any space application.

P/N 178-6549



Receptacles

P/N 178-6549 - Front panel mount receptacle. Stainless steel vented body.

P/N 467-7094 - Front mounted, hermetic, ceramic-to-metal brazed, stainless steel vented body with weld flange.

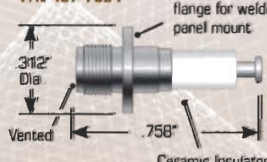
Max Leak Rate: 1×10^{-6} ccHe/sec.

Mating Connectors: Cable assembly (P/N 178-6027 and 178-5996 only)

Test Seal installation/removal tool:

P/N 178-8608

P/N 467-7094



Double-Ended Shielded Cable Assembly

(Using 167-2896 Coax Cable)

P/N 167-6027

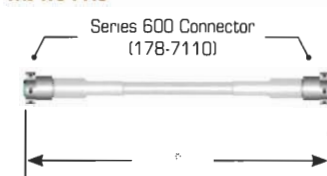


P/N 178-5996 - Single-Ended Cable Assembly (not shown)

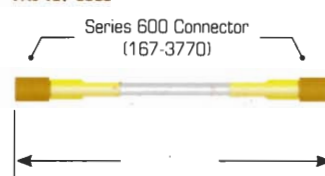
600 CABLE ASSEMBLIES

Doubled Ended Shielded Cable Assemblies (Using 167-2896 Coax Cable)

P/N 178-7113

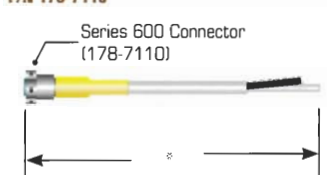


P/N 167-3306

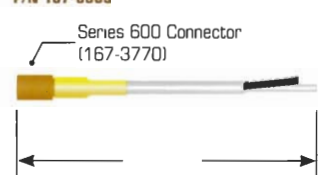


Single Ended Coaxial Cable Assemblies (Using 167-2896 Coax Cable)

P/N 178-7115



P/N 167-3305



P/N 178-8210 Non-Shielded Single-Ended Cable Assembly (not shown)
(uses .100 Dia. FEP wire **178-7455**)

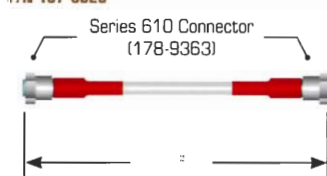
P/N 167-7667 Non-Shielded Single-Ended Cable Assembly (Not Shown)
(uses .100 Dia. Silicone wire **167-9634**)

610 CONNECTORS & CABLE ASSEMBLIES

Double-Ended Shielded Cable Assembly

(Using 167-2896 Coax Cable)

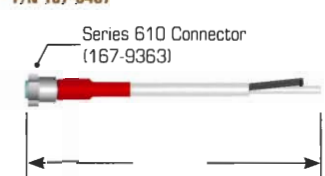
P/N 167-8920



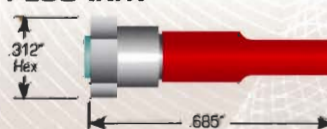
Single-Ended Shielded Cable Assembly

(Using 167-2896 Coax Cable)

P/N 167-9487



PLUG (KIT)



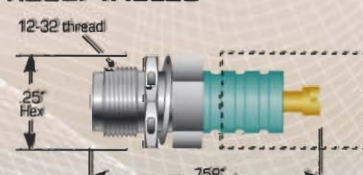
IMPORTANT:

While plugs (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

P/N 167-9363 610 Hex coupling (Cres)

Shielded cable: Type "L" cable P/N 167-2896.

RECEPTACLES



P/N 167-9364

Front mount, non-sealed connector. Brass body no lock holes.

Production Testing

Receptacles: 7.5 kVDC; @ 70,000 ft. simulated altitude and ambient temperature

Cable assemblies: 7.5 kVDC; @ 70,000 ft. simulated altitude and ambient temperature

*Cable Assembly Ordering Information: Use "F" for feet, "N" for inches. Example: Assembly 178-6027 10 feet 8 inches in length is ordered as **P/N 178-6027-10F-8N**

Note: Product part numbers, dimensions and specifications are 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 line. Contact Teledyne Reynolds Engineering to discuss custom designs. **WARNING:** Connectors should **NEVER** be handled mated or unmated when voltage is applied.



5005 MCCONNELL AVENUE • LOS ANGELES, CA 90066 • PHONE: 310.823.5491 • FAX: 310.822.8046 • TELEDYNEREYNOLDS.COM • REYNOLDSINC@TELEDYNE.COM