

smiths connectors

STANDARD COAXIAL CONNECTORS



Smiths Connectors' coaxial contacts provide flexibility in the design of high frequency RF and microwave applications. The contacts, including sizes 5, 8, 9, 12 and 16 and have the same outline dimensions as traditional power contacts that fit various insert arrangements for d-sub, circular, and rack and panel connectors. The coaxial cable type contacts are designed for low-loss concentric 50 and 75 Ohm cable types. These contacts are available in 50 Ohm for flexible RG-178 and RG-316 and semi rigid of SR.047 and SR. 080 cables. Flexible cables such as RG-179 for 75 Ohm applications are also available.

An innovative design of coax contacts opens a whole new world of design options. These small, rugged contacts have a VSWR rating of 1.3:1 max with a frequency range from DC to 5 GHz and fit standard connector contact cavities for MIL-DTL-38999, ARINC 404, and ARINC 600.

FEATURES

- ▶ Small size for high density packaging
- ▶ Ideal for RF and microwave applications for instruments, radar, communications, and RF shielding.

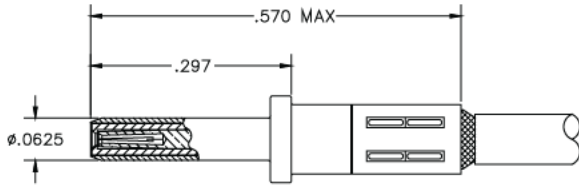
INTERFACE DIMENSIONS

- ▶ MIL-DTL-38999 ARINC 404 and ARINC 600 Per SAE-AS39029

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS	
Temperature Rating	-65°C to +165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1000 mate/unmate cycles min.
ELECTRICAL SPECIFICATIONS	
Dielectric Withstanding Voltage	500 VDC @ sea level with 70% relative humidity
Insulation Resistance	5000 mega-ohms min. @ 200 VDC
Contact Current Rating	2.0 Amps max.
Characteristic Impedance	50 Ohm constant airline impedance
RH HI Potential Withstanding Voltage	125 VRMS @ 5 MHz
Corona Level @ 70,000 ft.	Center contact to intermediate contact: 125 VAC
Permeability	2.0 max
Frequency Range	DC to 5 GHz
VSWR	1.3:1 max. (mated pair)
MATERIAL & FINISHES	
Center & Outer Spring Contacts	Brass per ASTM B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 Gold plate per MIL-DTL-45204, Type II, Class 1
Shell	Brass per ASTM B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 or Leaded Nickel Copper, alloy UNS C19500, C19600 Gold plate per MIL-DTL-45204, Type II, Class 1
Hood	305 CRES per ASTM-A240, passivated per ASTM-A967
Insulators	PTFE per ASTM D-1710

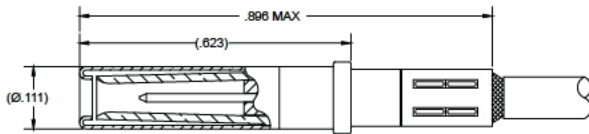
All specifications subject to change without notice.

▶ MIL-DTL-38999 SIZE 16 COAX PIN CONTACT



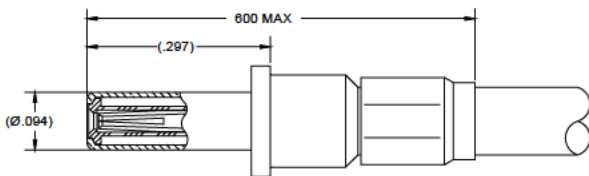
PART NUMBER	CABLE TYPE	CABLE
018512-2100	Flexible Coax	RG-178
018512-2101	Flexible Coax	RG-316

▶ MIL-DTL-38999 SIZE 16 COAX SOCKET CONTACT



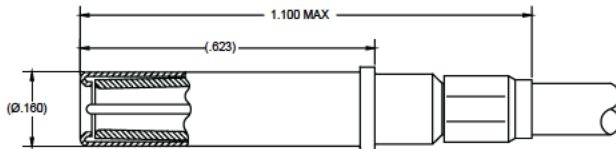
PART NUMBER	CABLE TYPE	CABLE
018412-2100	Flexible Coax	RG-178
018412-2101	Flexible Coax	RG-316

▶ MIL-DTL-38999 SIZE 12 COAX PIN CONTACT



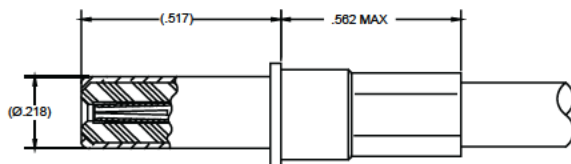
PART NUMBER	CABLE TYPE	CABLE
018612-2118	Flexible Coax	RG-178
018612-2119	Flexible Coax	RG-316

▶ MIL-DTL-38999 SIZE 12 COAX SOCKET CONTACT



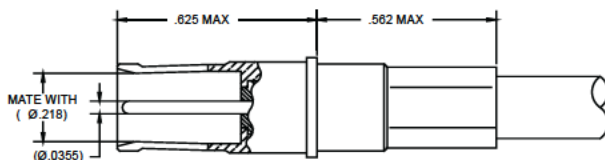
PART NUMBER	CABLE TYPE	CABLE
018712-2118	Flexible Coax	RG-178
018712-2119	Flexible Coax	RG-316

▶ MIL-DTL-38999 SIZE 8 COAX PIN CONTACT



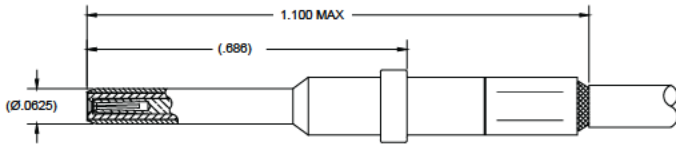
PART NUMBER	CABLE TYPE	CABLE
019612-2100	Flexible Coax	RG-58
019612-2101	Flexible Coax	RG-316

▶ MIL-DTL-38999 SIZE 8 COAX SOCKET CONTACT



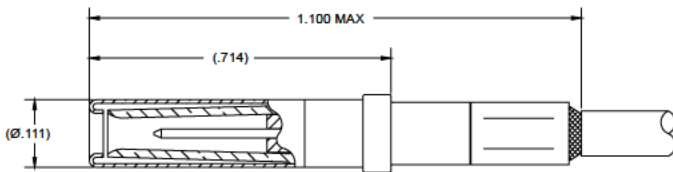
PART NUMBER	CABLE TYPE	CABLE
019512-2100	Flexible Coax	RG-58
019512-2101	Flexible Coax	RG-316

▶ ARINC 600 SIZE 16 COAX PIN



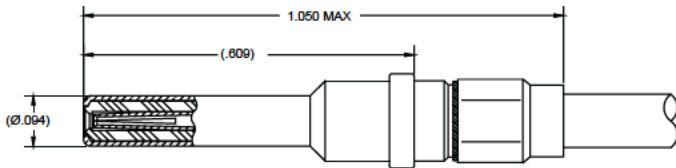
PART NUMBER	CABLE TYPE	CABLE
018512-2200	Flexible Coax	RG-178
018512-2201	Flexible Coax	RG-316

▶ ARINC 600 SIZE 16 COAX SOCKET



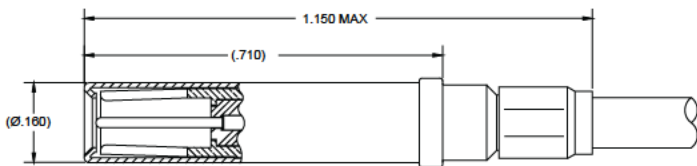
PART NUMBER	CABLE TYPE	CABLE
018412-2200	Flexible Coax	RG-178
018412-2201	Flexible Coax	RG-316

▶ ARINC 600 SIZE 12 COAX PIN



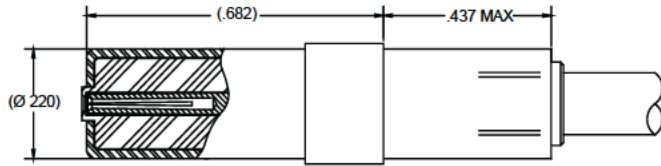
PART NUMBER	CABLE TYPE	CABLE
018612-2200	Flexible Coax	RG-178
018612-2201	Flexible Coax	RG-316

▶ ARINC 600 SIZE 12 COAX SOCKET



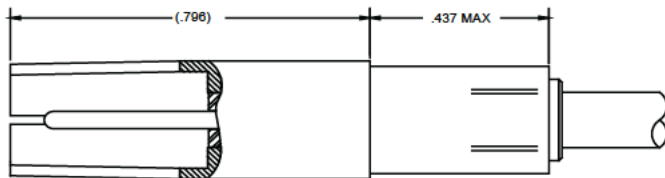
PART NUMBER	CABLE TYPE	CABLE
018712-2200	Flexible Coax	RG-178
018712-2201	Flexible Coax	RG-316

▶ ARINC 404/600 SIZE 5 COAX PIN



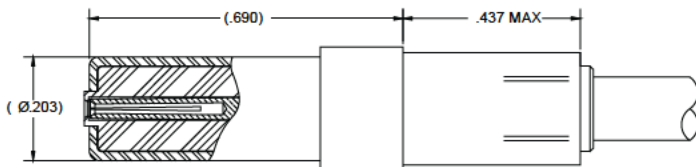
PART NUMBER	CABLE TYPE	CABLE
019412-2200	Flexible Coax	RG-58
019412-2201	Flexible Coax	RG-316

▶ ARINC 404/600 SIZE 5 COAX SOCKET



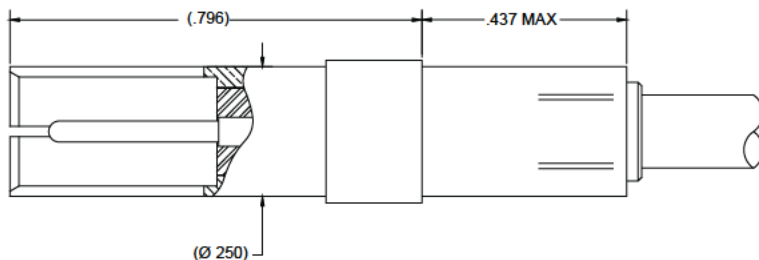
PART NUMBER	CABLE TYPE	CABLE
019312-2200	Flexible Coax	RG-178
019312-2201	Flexible Coax	RG-316

▶ ARINC 404 SIZE 9 COAX PIN



PART NUMBER	CABLE TYPE	CABLE
019212-2016	Flexible Coax	RG-58
019212-2017	Flexible Coax	RG-316

▶ ARINC 404 SIZE 9 COAX SOCKET



PART NUMBER	CABLE TYPE	CABLE
019112-2016	Flexible Coax	RG-58
019112-2017	Flexible Coax	RG-316

HOW TO ORDER



1 ▶ CONNECTOR #1

2 ▶ CABLE GROUP #

Semi-Rigid Coax

27 = SR.047

28 = SR.086

29 = .141.Flex

30 = .086 Flex

Flexible Coax

31 = RG-178

32 = RG-316

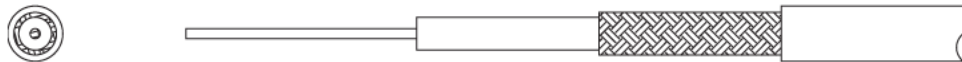
36 = RG-58

3 ▶ CONNECTOR #2 OL for Open Lead

4 ▶ CABLE LENGTH IN INCHES (XXX)



SEMI-RIGID COAX CABLES				
CABLE GROUP	CABLE DESIGNATION	IMPEDANCE (OHMS)	JACKET	INNER CONDUCTOR
27	SR.047	50	0.047"	0.0362"
28	SR.086	50	0.0865"	0.0201"



FLEXIBLE COAX CABLES				
CABLE GROUP	CABLE DESIGNATION	IMPEDANCE (OHMS)	JACKET	INNER CONDUCTOR
29	.141 Flex	50	0.160"	0.036"
30	.086 Flex	50	0.104"	0.020"
31	RG-178	50	0.071"	0.012"
32	RG-316	50	0.098"	0.0201"
33	RG-58	50	0.195"	0.0355"



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Please contact one
of the ISRs.

Courtney Darrah

Inside Sales Representative
cdarrah@keiconn.com
512-339-3324

Daegan Richmond

Inside Sales Representative
drichmond@keiconn.com
512-339-3331

Francisco Buxareo

Inside Sales Representative
fbuxareo@keiconn.com
512-339-3302

Gabby Bozeman

Inside Sales Representative
gbozeman@keiconn.com
512-339-3325

John Davis

Inside Sales Representative
jdavis@keiconn.com
512-339-3311

North American Sales Support Coverage



Gabby Bozeman

Inside Sales Representative
gbozeman@keiconn.com
512-339-3325

Francisco Buxareo

Inside Sales Representative
fbuxareo@keiconn.com
512-339-3302

Daegan Richmond

Inside Sales Representative
drichmond@keiconn.com
512-339-3331

Courtney Darrah

Inside Sales Representative
cdarrah@keiconn.com
512-339-3324

John Davis

Inside Sales Representative
jdavis@keiconn.com
512-339-3311