

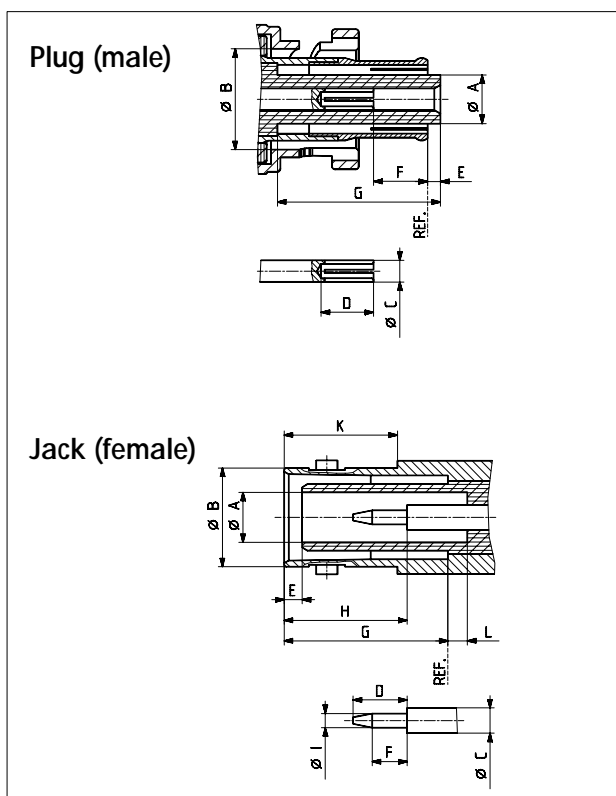
SERIES SHV HIGH VOLTAGE CONNECTORS

Description

SUHNER SHV (Safe High Voltage) connectors provide more secure handling: center contacts are well recessed to prevent shock hazards in unmated condition. All inner contacts are fully captivated and will withstand axial forces of 100 N minimum. When mating a connector pair the outer conductor contact is made prior to the inner conductor contacts.

SHV connectors are suitable for all high voltage applications up to 5 kV DC or 3.5 kV rms. These connectors are typically used in nuclear instruments or test and measurement equipment. Voltages are valid for both, the mated and the unmated condition.

Interface Dimensions



Interface Dimensions in mm / inches

	Plug		Jack	
	min.	max.	min.	max.
A	4.57 / .180	4.72 / .186	4.83 / .190	4.98 / .196
B	9.78 / .385	9.91 / .390	9.60 / .378	9.70 / .382
C	2.06 / .081	--	2.06 / .081	--
D	5.44 / .214	--	5.26 / .207	5.44 / .214
E	1.17 / .046	1.63 / .064	1.55 / .061	1.98 / .078
F	4.42 / .174	--	3.30 / .130	--
G	15.90 / .626	16.10 / .634	15.90 / .626	16.00 / .630
H	--	--	11.59 / .456	12.70 / .500
I	--	--	1.32 / .052	1.37 / .054
K	--	--	10.85 / .427	--
L	--	--	1.63 / .064	2.18 / .086

Interface dimensions conformable to the Standards:

International: IEC 498, NIM ND-545
 USA: MIL-STD-348A/314
 ANSI N 24.4

Technical Data

ELECTRICAL DATA	REQUIREMENTS
Impedance	50 Ω
Frequency range	DC ... 300 MHz
Dielectric withstanding voltage (at sea level)	5.0 kV rms, 50 Hz (depending on cable)
Working voltage (at sea level) - unmated	\leq 3.5 kV rms, 50 Hz (depending on cable)
Corona extinction voltage (at 21000 m)	\geq 350 V rms, 50 Hz (depending on cable)
Insulation resistance	\geq 10 ⁶ M Ω
Contact resistance - centre contact - outer contact	\leq 2 m Ω \leq 1.5 m Ω
Current rating, continuous	\leq 10 A

MECHANICAL DATA	REQUIREMENTS
Coupling nut torque	7 Ncm ... 28 Ncm / 0.6 in. lbs ... 2.5 in. lbs
Coupling nut retention force	\geq 450 N / 101.2 lbs
Contact captivation	\geq 27 N / 6.1 lbs
Durability (matings)	\geq 500

ENVIRONMENTAL DATA	TEST CONDITIONS	TEST CONDITIONS
Dielectric	PTFE	Polystyrene (XP)
Temperature range	- 65°C .. +165°C / - 85° F .. + 329° F	- 55°C .. + 100°C / - 67° F .. + 212° F
Climatic category	IEC \rightarrow 55/155/21	
Thermal shock	MIL-STD-202, Method 107, Condition B	
moisture resistance	MIL-STD-202, Method 103, Condition B	
Corrosion	Saltspray test acc. to MIL-STD-202, Method 101, Condition B	
Vibration	MIL-STD-202, Method 204, Condition A	
Shock	MIL-STD-202, Method 213, Condition I	
Radiation resistance, polystyrene dielectric	\geq 10 ⁹ rad	

MATERIAL DATA

CONNECTOR PART	STANDARDS	MATERIAL	PLATING
Bodies Pin contact	QQ-B-626	brass	SUCOPLATE® gold
Outer spring contact, Socket contact	QQ-C-530	beryllium-copper, hardened	SUCOPLATE® gold
Crimp ferrules (full crimp)	SUHNER® specification	copper	SUCOPLATE®
Insulators		PTFE or PFA	
Insulators, radiation resistant types		polystyrene, crosslinked	

Some connectors may have a specification that differs from the above mentioned data.