

HERMETIC CIRCULAR CONNECTOR FOR INDUSTRIAL VACUUM APPLICATIONS



Positronic Industries
www.connectpositronic.com

CIVAC®



Without flange

With flange

TECHNICAL CHARACTERISTICS

MATERIAL AND FINISHES

Insulator:	Glass-filled DAP, type SDG-F, black color, UL 94V0.
Contacts:	Precision machined high tensile copper alloy.
Contact plating:	0,00030 inch (0,8 microns) gold plate over nickel plate
Shells:	- Aluminium alloy, golden brown conversion coating - Stainless steel
Flange:	- Aluminium Alloy - Stainless steel
O-ring:	Viton (fluorocarbone). Other material per request.

ELECTRICAL CHARACTERISTICS AT SEA LEVEL

Contact current rating:	25A nominal, size 12 13A nominal, size 16 7,5A nominal, size 20 5 A nominal, size 22
Initial contact resistance:	0,003 ohms max., size 12 0,003 ohms max., size 16 0,007 ohms max., size 20 0,012 ohms max., size 22
Insulator resistance:	5 G ohms
Clearance and Creepage:	See Front Runner Series Product catalog
Working voltage:	See Front Runner Series Product catalog
EMI/RFI shielding characteristics:	
Surface continuity:	< 0,1 ohm
Attenuation:	70-80dB at most frequencies

MECHANICAL CHARACTERISTICS

Fixed contacts:	Size 12 contact: 0,094 inch (2,4mm) diameter Size 16 contact: 0,063 inch (1,6mm) diameter Size 20 contact: 0,040 inch (1,02mm) diameter Size 22 contact: 0,030 inch (0,76mm) diameter Female contacts: closed entry design for highest reliability
Contact retention in insulator:	Size 12: 20 lbs (89 N) Size 16: 20 lbs (89 N) Size 20: 10 lbs (44 N) Size 22: 6 lbs (27 N)
Sequential contact mating:	
Systems:	One and two level systems. Consult the factory for ordering information.
Polarization:	Shell is with integral polarization system.
Coupling system:	Size 11 shell: M19 coupling nut Size 19 shell: M32 coupling nut
Mechanical operators:	500 coupling
CLIMATIC CHARACTERISTICS:	
Temperature range:	-40 to +125°C -40 to +125°C. The temperature range can be expended under certain conditions. Consult the factory.
Helium Leak Rate	< 5·10 ⁻⁹ mbar.l/s under a vacuum of 1.5x10 ⁻² mbar
Outgassing	: Total Mass Loss – TML < 1 % Collected Volatile Condensable Materials – CVCM < 0,1 %



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ORDERING INFORMATION – CODE NUMBERING SYSTEMS

STEP	1	2	3	4	5	6	7
	CIVAC	11	M/M	316	M	K63A	
							STEP 7 Consult the factory
STEP 1 CIVAC – Circular Vacuum Connector						STEP 6 – FLANGE TYPE 0A(S) ① – without flange S = Stainless steel A = Aluminium ① Consult the factory for panel thickness	
STEP 2 – HOUSING SIZE 11 – Size 11 Housing 19 – Size 19 Housing					STEP 5 – SERVICE CLASS O – Standard M – EMI/RFI Shielded		
STEP 3 – GENDER First letter is mounted outside Vacuum equipment M/M Male/Male F/F Female/Female M/F Male/Female F/M Female/Male							

STEP 4 – SIZE CONTACT ARRANGEMENT*

Size 11 Housing	Size 19 Housing
316 – 3 size 16	312 – 3 size 12
420 – 4 size 20	512 – 5 size 12
520 – 5 size 20	712 – 7 size 12
722 – 7 size 22	716 – 7 size 16
822 – 8 size 22	916 – 9 size 16
922 – 9 size 22	920 – 9 size 20
	1220 – 12 size 20
	1822 – 18 size 22
	1920 – 19 size 20
	2922 – 29 size 22

***See Front Runner Series Product Catalog for detailed dimensional information.**

K63A(S)② - Iso K63 flange with one size 11 or 19 connector
 F63A(S)② - Iso F63 flange with one size 11 or 19 connector

② Consult the factory for another flange dimensions