



# HERMETIC FEEDTHROUGH FOR SPACE OR INDUSTRIAL VACUUM APPLICATIONS

**CIVAC®**



## TECHNICAL CHARACTERISTICS

### MATERIAL AND FINISHES

**Insulator:** Glass-filled DAP, type SDG-F, black color, UL 94V0.  
**Contacts:** Precision machined copper alloy.  
**Contact Plating:** 0,000030 inch (0,76 microns) gold plate over nickel plate.  
**Shells:** Aluminium alloy, golden brown conversion coating.  
**Flange:** Aluminium Alloy.  
**O-ring:** Viton (fluorocarbon). Other material per request. One mounting and one for spare part.

### ELECTRICAL CHARACTERISTICS AT SEA LEVEL

**Contact Current Rating:** 25A nominal, size 12.  
 13A nominal, size 16.  
 7,5A nominal, size 20.  
 5A 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.  
**EM/RFI Shielding Characteristics:** Consult factory.

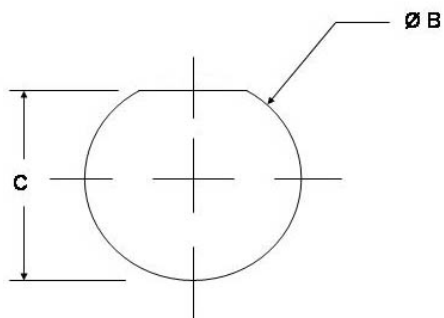
### MECHANICAL CHARACTERISTICS

**Fixed Contacts:** Size 12 contact: 0,094 inch (2,4mm) mating diameter.  
 Size 16 contact: 0,0625 inch (1,588mm) mating diameter.  
 Size 20 contact: 0,040 inch (1,02mm) mating diameter.  
 Size 22 contact: 0,030 inch (0,76mm) mating 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).  
 500 coupling.  
**Mechanical Operators:**

### CLIMATIC CHARACTERISTICS

**Temperature Range:** -40 to +125°C.  
 The temperature range can be expended under certain conditions. Consult factory.  
**Helium Leak Rate At Ambient Temperature:** < 5x10<sup>-9</sup> mbar.l/s under a vacuum of 1.5x10<sup>-2</sup> mbar.  
**Outgassing:** Total Mass Loss – TML < 1 %.  
 Collected Volatile Condensable Materials – CVCM < 0,1 %.

## PANEL MOUNTING CUTOUTS FOR CIVAC WITHOUT FLANGE



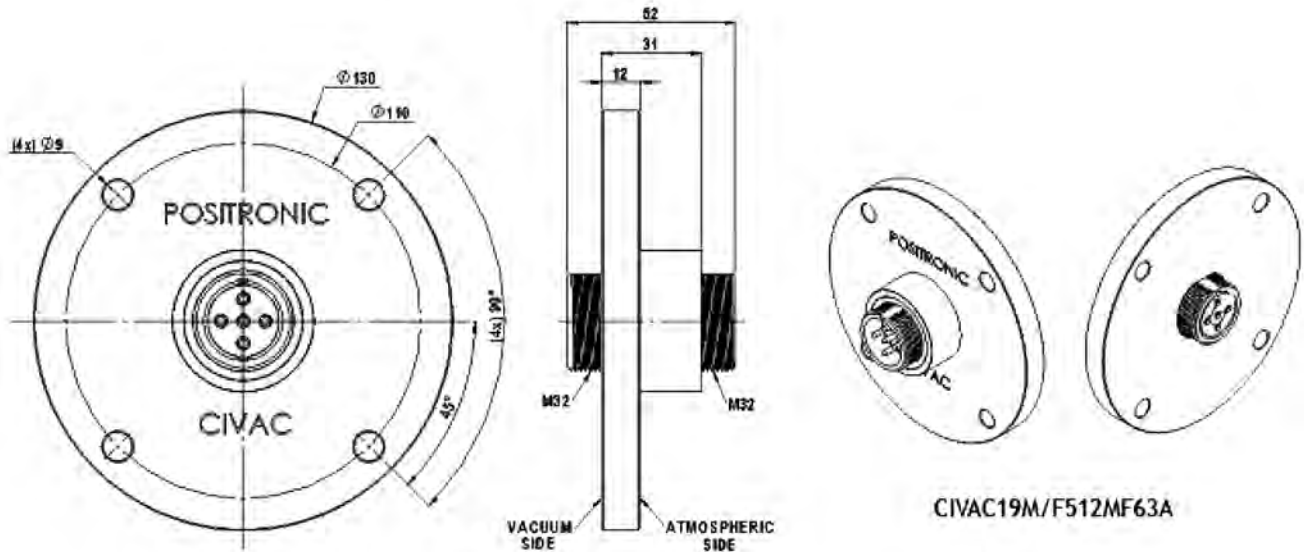
Dimension	Size 11 Housing	Size 19 Housing
Ø B	0.760 ± 0.003 (19.30 ± 0.08)	1.275 ± 0.003 (32.39 ± 0.08)
C	0.715 ± 0.003 (18.16 ± 0.08)	1.227 ± 0.003 (31.17 ± 0.08)

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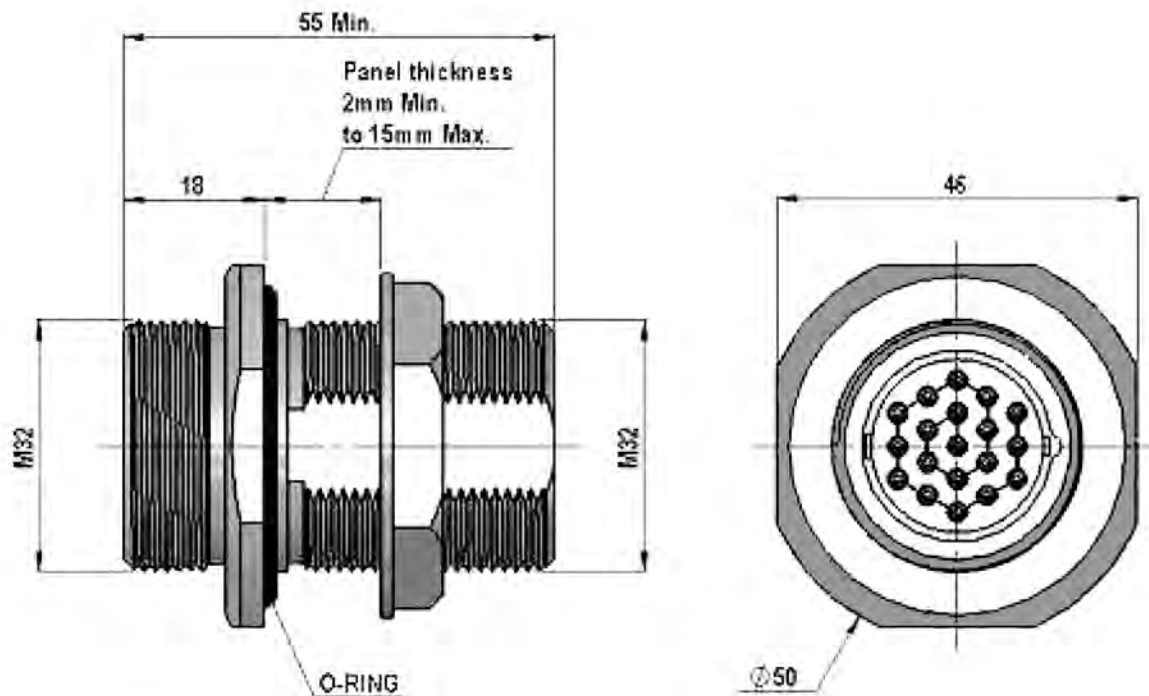


Positronic Industries  
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## CIVAC® WITH FLANGE F63



## CIVAC® WITHOUT FLANGE



CIVAC19M/F1920005



# HERMETIC FEEDTHROUGH FOR SPACE OR INDUSTRIAL VACUUM APPLICATIONS

## ORDERING INFORMATION – CODE NUMBERING SYSTEMS

STEP	1	2	3	4	5	6	7
EXAMPLE	CIVAC	11	M/M	316	M	K63A	S****
<b>STEP 1</b> CIVAC – Circular Vacuum Connector							<b>STEP 7</b> Consult factory
<b>STEP 2 – HOUSING SIZE</b> 11 – Size 11 Housing 19 – Size 19 Housing							
<b>STEP 3 – GENDER</b> First letter is mounted outside Vacuum equipment M/M Male/Male F/F Female/Female M/F Male/Female F/M Female/Male							
							<b>STEP 6 – FLANGE TYPE</b> <b>0A(S) ① – without flange</b> A = Shell in aluminium steel S = Shell in Stainless steel ① Consult factory for panel thickness <b>K63A(S)② - with flange</b> <b>F63A(S)② - with flange</b> K63 : Flange DN63 - ISO-K equipped with one size 11 or one size 19 connector. F63 : Flange DN63 - ISO-F equipped with one size 11 or one size 19 connector. A : Flange in aluminium alloy S : Flange in stainless steel ② Consult factory for another flange dimensions
							<b>STEP 5 – SERVICE CLASS</b> O – Standard M – EMI/RFI Shielded: consult factory.

### 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.