

# COAXIAL

Coaxial is the description for electrical feedthroughs with parallel and concentric conductor paths, and with the inner most conductor path electrically isolated from the vacuum flange. Grounded Shield versions have one isolated path, and Floating Shield versions have two. Coaxial feedthroughs are single-ended or double-ended, and all types include air-side connectors.

MPF offers several mounting options for coaxial feedthroughs: Weldable, Quick Flange (QF), and Conflat Flange (CF). Most designs are also configured for Baseplate and NPT style adapters. Custom adapters, plates and flange configurations are available by request.

## **BNC and MHV**

Bayonet Naval Connector (BNC) feedthroughs are very popular due to their quick connect coupling and compact overall size. BNC series are commonly used for low power transmission and are rated to 500 Volts DC.

Miniature High Voltage (MHV) feedthroughs are very similar to the BNC series, but the MHV series is capable of handling much higher power transmission. Although they are very similar in design, MHV and BNC connectors are not compatible. MHV feedthroughs and mating connectors are rated to 5000 Volts DC.



## **SHV-5 and SHV-10**

Safe High Voltage (SHV) feedthroughs are like the MHV series, with the primary difference being the pin and contact configuration. SHV cable connectors have a recessed female contact which helps prevent shock hazards when the connector is disengaged.

This recessed contact design is an improvement over the MHV design, and becomes increasingly important in higher power applications. The SHV-5 and SHV-10 series are rated for up to 5 Amps and 5000 or 10,000 Volts DC respectively. Both are offered in single and double-ended versions.



## **SHV-20 and SHV-B**

SHV-20 feedthroughs are rated for 20,000 Volts DC and up to 15 Amps. These specially designed interfaces incorporate standard high voltage contacts, and are designed for increased performance in pulsed high voltage applications.

SHV-B feedthroughs are designed for bakeout at higher temperatures than the other SHV series. The air-side cable connectors included with these feedthroughs utilize a ceramic dielectric material. SHV-B feedthroughs and connectors are rated for 7500 Volts DC and up to 3 Amps.





### **Type N and SMA - Standard**

Type N feedthroughs combine the most popular medium-sized high frequency connector with a feedthrough designed to perform in high and ultra-high vacuum applications. The standard Type N series is suitable for use to 1 GHz. Type N feedthroughs and mating connectors are rated for 500 Volts DC and up to 3 Amps.

Subminiature Type-A (SMA) feedthroughs are compact designs suited for medium-to-high frequency applications. Similar to the Type N series, the standard SMA series is suitable for use to 1 GHz. SMA feedthroughs and connectors are rated for 700 Volts DC and up to 1 Amp. The floating shield version is rated to 2500 Volts DC.

### **Type N and SMA - 50 Ohm - Matched Impedance**

Both Type N and SMA feedthroughs are also offered with increased signal transmission performance. These high-vacuum feedthrough designs have been engineered for improved RF performance in high frequency applications up to 8 GHz.

Unlike the standard Type N and SMA feedthroughs which are intended for UHV applications, these matched impedance versions utilize a Teflon dielectric spacer. This design parameter optimizes electrical performance but requires consideration in some vacuum environments.

High Performance SMA rated to 18 GHz also available.

### **Microdot and Between Series**

Microdot style feedthroughs are the smallest UHV design with a threaded connector interface. This connector style is commonly used in vacuum coating applications, particularly in the construction of crystal sensor deposition monitors.

Crystal Sensor assemblies often utilize a BNC-Microdot 'between series' feedthrough, which is designed with a BNC connection on the air-side and a Microdot connection on the vacuum-side. Standard configurations available.

Type N to SMA feedthroughs are typically used in Beam Position Monitor (BPM) applications. Single, double, and custom configurations are available.

### **Operating Conditions**

The electrical and thermal ratings specified are safe operating limits determined by various factors including material properties, mechanical design, and the intended operating environment. All electrical ratings are based on operation with one side in dry atmosphere and the other side in vacuum of  $1 \times 10^{-4}$  Torr maximum pressure. Temperature ratings for various mounting options may reduce the operating range of an assembly. All assemblies have a maximum thermal gradient of 25°C per minute and may be damaged if this limit is exceeded.

# COAXIAL

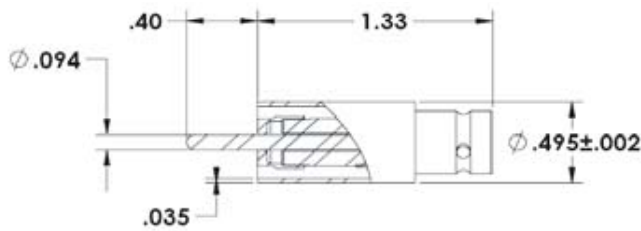
## Section 5:

Section	Type	Sub-type	Grounded / Floating Shield	Single / Double Ended
5.1	BNC		Grounded	Single / Double
			Floating	Single / Double
5.2	MHV		Grounded	Single / Double
			Floating	Single / Double
5.3	SHV	SHV-5	Grounded	Single / Double
		SHV-5	Floating	Single
		SHV-10	Grounded	Single / Double
		SHV-20	Grounded	Single
		SHV-B	Grounded	Single
5.4	Type N	Standard	Grounded	Single
		High Frequency	Grounded	Single / Double
5.5	SMA	Standard	Grounded	Single
		Standard	Floating	Single
		High Frequency	Grounded	Single / Double
5.6	Microdot		Grounded	Single
5.7	Between Series	BNC to Microdot	Grounded	Double
		Type N to SMA	Grounded	Double

# Contents

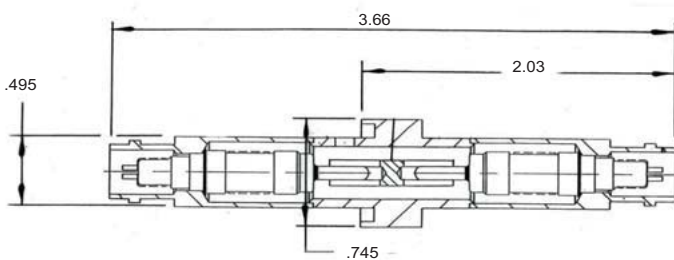
Electrical Rating	Thermal Rating	Conductor	Impedance	Pages
Voltage: 500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	<b>124-135</b>
Voltage: 2500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	
Voltage: 5000 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	<b>136-146</b>
Voltage: 2500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	
Voltage: 5000 Volts DC Current: 5 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	Nickel	Non-constant	<b>147-163</b>
Voltage: 2500 Volts DC Current: 5 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	Nickel	Non-constant	
Voltage: 10,000 Volts DC Current: 5 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	Nickel	Non-constant	
Voltage: 20,000 Volts DC Current: 15 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	Nickel	Non-constant	
Voltage: 7500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -200 to 300°C	304 Stainless Steel	Non-constant	
Voltage: 500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	<b>164-166</b>
Voltage: 500 Volts DC Current: 3 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	50 Ohms	
Voltage: 700 Volts DC Current: 1 Amp	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	<b>167-171</b>
Voltage: 2500 Volts DC Current: 1 Amp	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	
Voltage: 700 Volts DC Current: 1 Amp	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	50 Ohms	
Voltage: 500 Volts DC Current: 2 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	Molybdenum	Non-constant	<b>172</b>
Voltage: 500 Volts DC Current: 2 Amps	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	<b>173-177</b>
Voltage: 500 Volts DC Current: 1 Amp	Feedthrough: -200 to 450°C Air-side Connector: -65 to 165°C	304 Stainless Steel	Non-constant	

**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**Grounded Shield – Single-ended**  
**WELDABLE**



PART #	PRICE
A0059-1-W	32.00
A0059-2-W (w/o connector)	25.00

**Grounded Shield – Double-ended**  
**WELDABLE**



PART #	PRICE
A0471-1-W	165.00

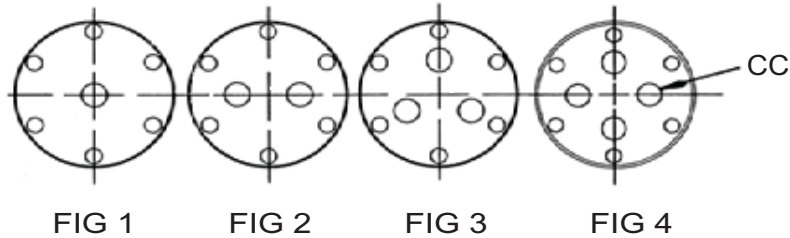
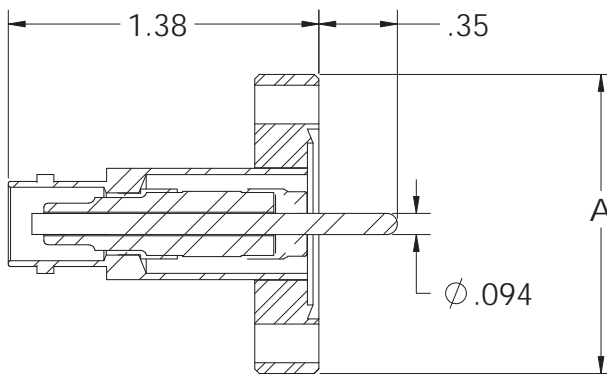
See Section 7 for connectors, wiring, and other accessories.



**BNC**

**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Single-ended**  
**CONFLAT FLANGE**



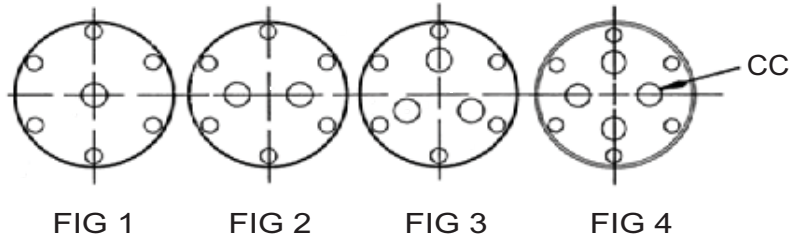
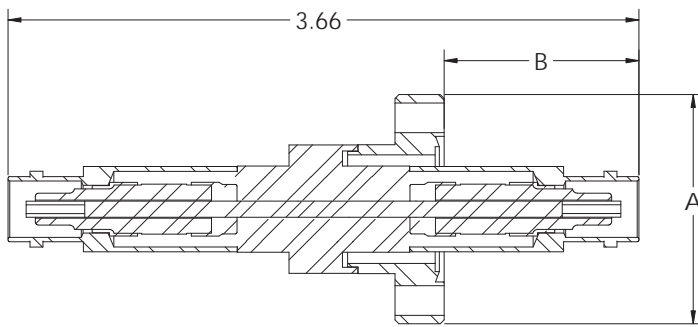
PINS	FIG	CF FLANGE	A	CC	PART #	PRICE
1	1	CF16	1.33	---	A0237-1-CF	70.00
1	1	CF40	2.75	---	A0289-1-CF	90.00
2	2	CF40	2.75	.75	A0291-1-CF	135.00
3	3	CF40	2.75	.95	A0293-1-CF	180.00
4	4	CF40	2.75	.95	A0295-1-CF	225.00



**BNC**

**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**CONFLAT FLANGE**



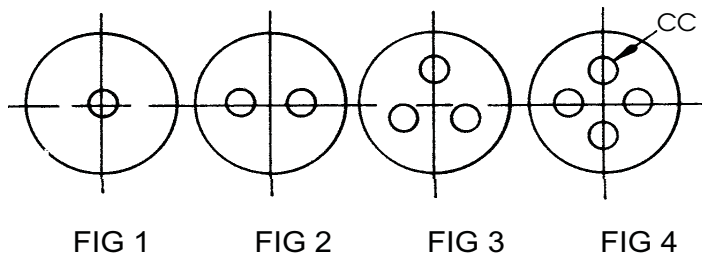
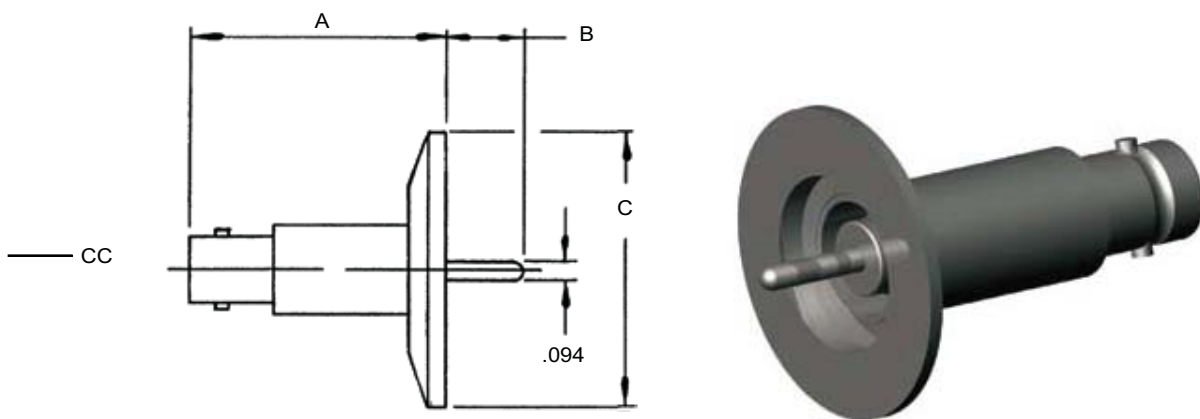
PINS	FIG	CF FLANGE	A	B	CC	PART #	PRICE
1	1	CF16	1.33	1.14	---	A0472-1-CF	220.00
1	1	CF40	2.75	1.58	---	A0473-1-CF	230.00
2	2	CF40	2.75	1.58	.75	A0473-3-CF	400.00
3	3	CF50	3.38	1.58	.95	A0473-5-CF	580.00
4	4	CF63	4.50	1.58	.95	A7231-1-CF	740.00

See Section 7 for connectors, wiring, and other accessories.



**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Single-ended**  
**QUICK FLANGE**



PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.43	.30	1.18	---	A0476-1-QF	70.00
1	1	1.33	.40	2.16	---	A0476-2-QF	90.00
2	2	1.33	.40	2.16	.75	A0476-3-QF	125.00
3	3	1.33	.40	2.95	.95	A0476-4-QF	180.00
4	4	1.33	.40	2.16	.75	A6984-1-QF	225.00
4	4	1.33	.40	2.95	.95	A0476-5-QF	225.00





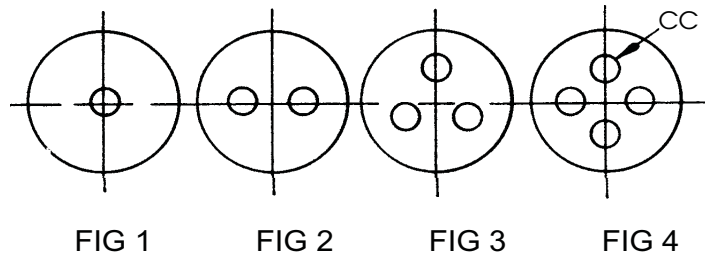
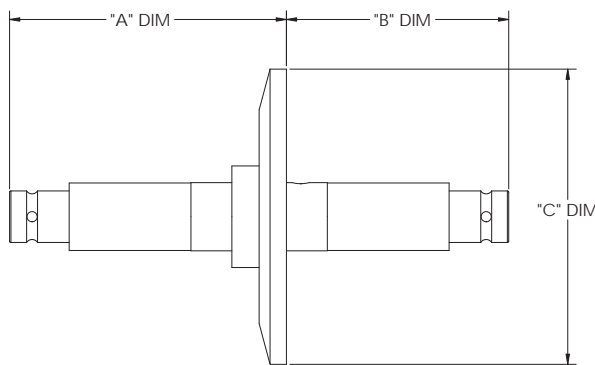
## BNC

### 500 Volts DC / 3 Amps

*Air-side Connector Included*

### Grounded Shield – Double-ended

### QUICK FLANGE

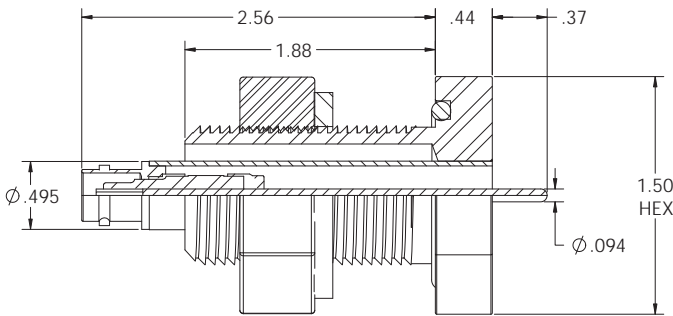


PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.13	2.53	1.18	---	A0479-1-QF	220.00
1	1	2.03	1.63	2.16	---	A0478-3-QF	230.00
2	2	2.03	1.63	2.95	.75	A0478-5-QF	400.00
3	3	2.03	1.63	2.95	.95	A0478-7-QF	580.00
4	4	2.03	1.63	2.95	.95	A7111-1-QF	740.00



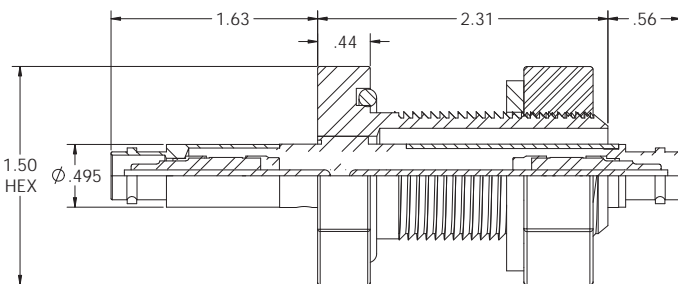
**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield**  
**1" BASEPLATE**



PART #	PRICE
A0482-2-BP	175.00

**Grounded Shield – Double-ended**  
**1" BASEPLATE**



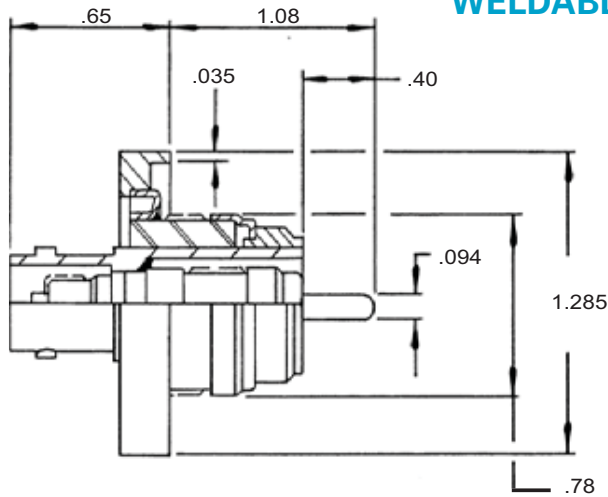
PART #	PRICE
A0484-1-BP	325.00

See Section 7 for connectors, wiring, and other accessories.



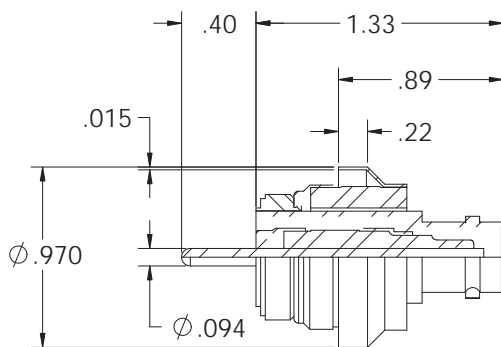
**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield**  
**WELDABLE**



PART #	PRICE
A0302-1-W	115.00

**Floating Shield**  
**WELDABLE**

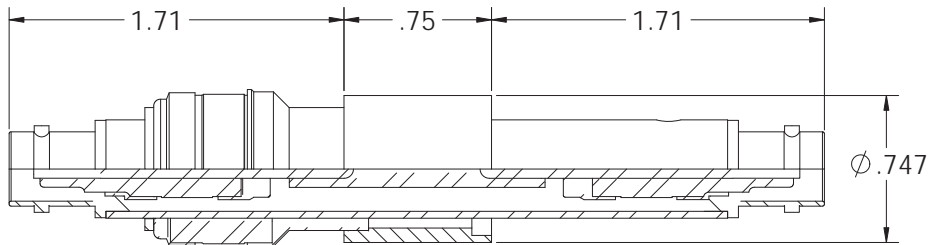


PART #	PRICE
A1301-1-W	115.00

See Section 7 for connectors, wiring, and other accessories.



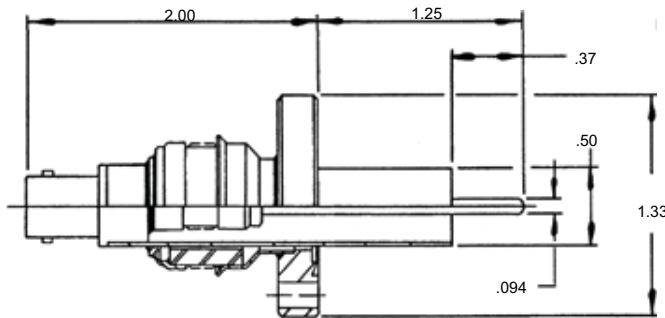
**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**Floating Shield – Double-ended**  
**WELDABLE**



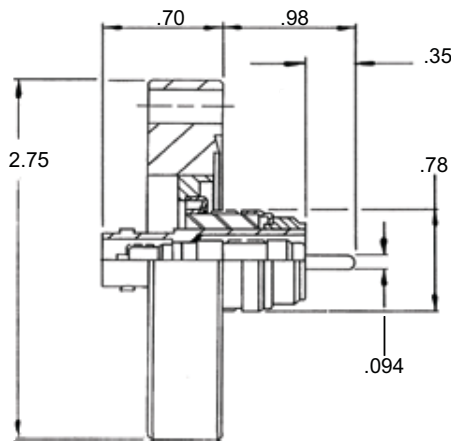
PART #	PRICE
A0466-1-W	270.00



**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**Floating Shield – Single-ended**  
**CONFLAT FLANGE**



PART #	PRICE
A0310-1-CF	160.00



PART #	PRICE
A0304-1-CF	160.00

See Section 7 for connectors, wiring, and other accessories.

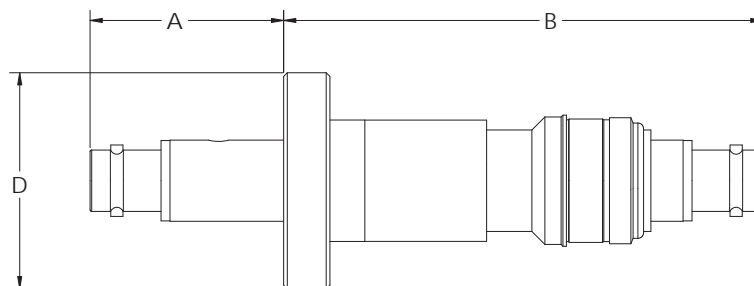


**BNC**

**500 Volts DC / 3 Amps**

*Air-side Connector Included*

**Floating Shield – Double-ended  
CONFLAT FLANGE**



PINS	CF FLANGE	A	B	D	PART #	PRICE
1	CF16	1.21	2.96	1.33	A0474-1-CF	320.00
1	CF40	1.66	2.51	2.75	A0475-1-CF	325.00

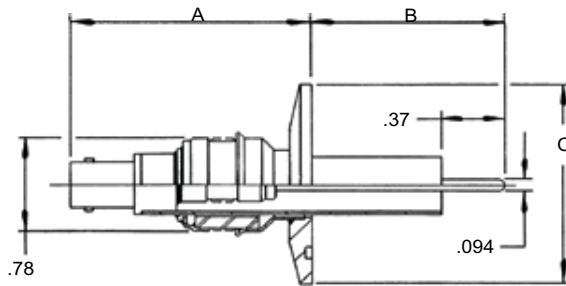
See Section 7 for connectors, wiring, and other accessories.



**BNC**

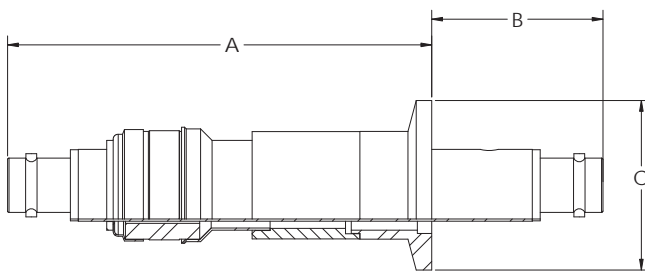
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**QUICK FLANGE**



PINS	A	B	C	PART #	PRICE
1	2.59	0.67	1.18	A0315-1-QF	160.00
1	2.09	1.17	2.16	A0315-3-QF	160.00

**Floating Shield – Double-ended**  
**QUICK FLANGE**



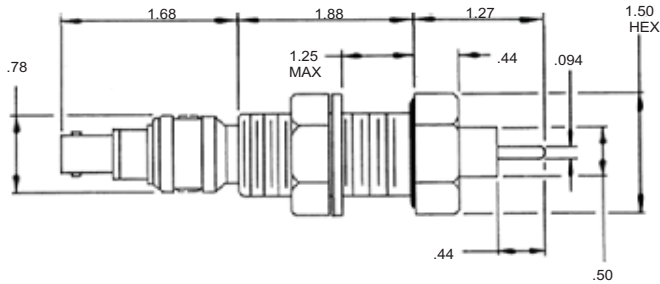
PINS	A	B	C	PART #	PRICE
1	2.96	1.21	1.18	A0480-1-QF	320.00
1	2.46	1.71	2.16	A0481-1-QF	325.00

See Section 7 for connectors, wiring, and other accessories.



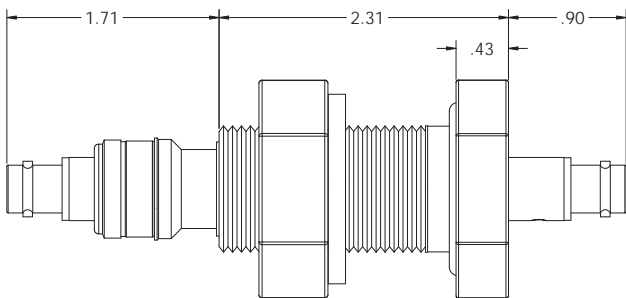
**BNC**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield**  
**1" BASEPLATE**



PART #	PRICE
A0485-1-BP	260.00

**Floating Shield – Double-ended**  
**1" BASEPLATE**



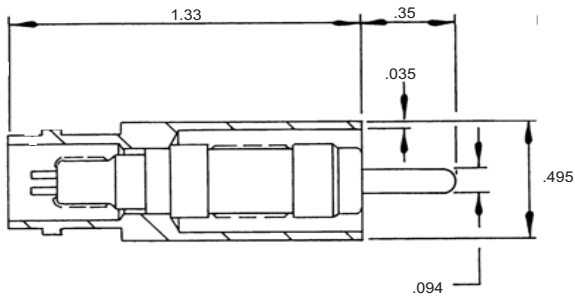
PART #	PRICE
A0487-1-BP	415.00





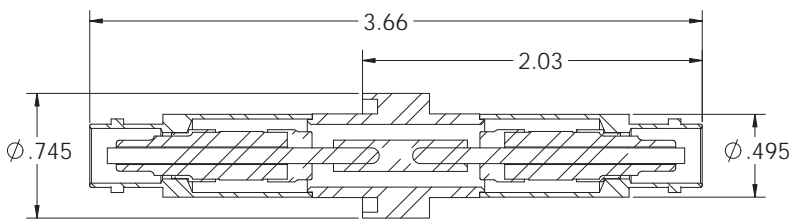
**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield**  
**WELDABLE**



PART #	PRICE
A0058-1-W	32.00
A0058-2-W (w/o connector)	25.00

**Grounded Shield – Double-ended**  
**WELDABLE**



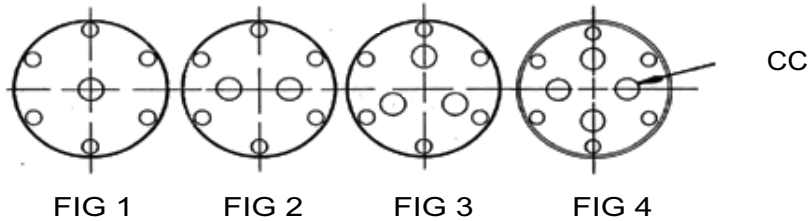
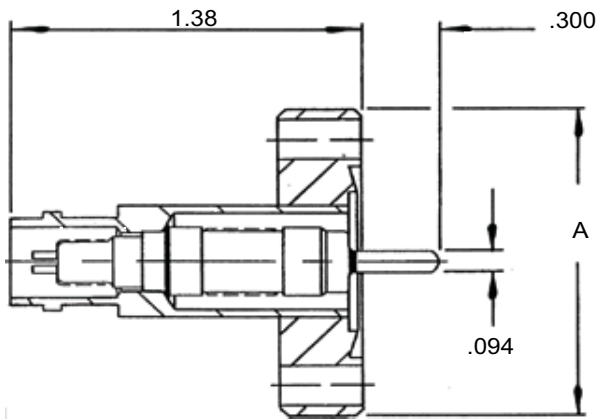
PART #	PRICE
A0471-2-W	170.00

See Section 7 for connectors, wiring, and other accessories.



**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Single-ended**  
**CONFLAT FLANGE**

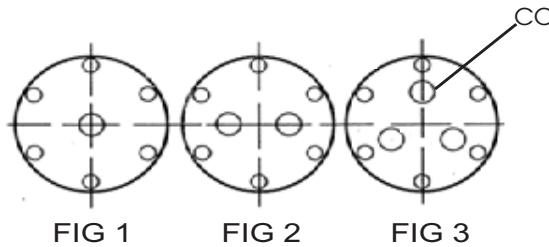
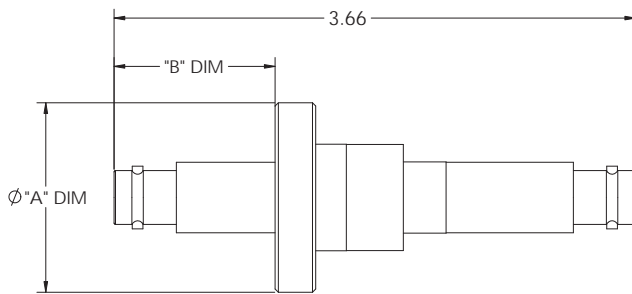


PINS	CF FLANGE	A	CC	PART #	PRICE
1	CF16	1.33	---	A0238-1-CF	80.00
1	CF40	2.75	---	A0290-1-CF	90.00
2	CF40	2.75	.75	A0292-1-CF	135.00
3	CF40	2.75	.95	A0294-1-CF	190.00
4	CF40	2.75	.95	A0296-1-CF	245.00



**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**CONFLAT FLANGE**

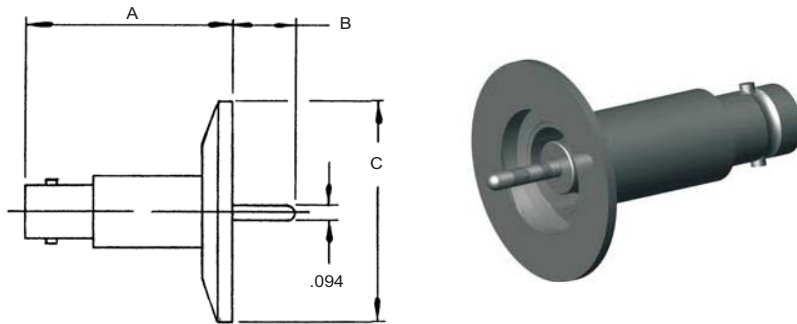


PINS	FIG	CF FLANGE	A	B	CC	PART #	PRICE
1	1	CF16	1.33	1.13	---	A0472-2-CF	225.00
1	1	CF40	2.75	1.58	---	A0473-2-CF	235.00
2	2	CF40	2.75	1.58	.75	A0473-4-CF	425.00
3	3	CF50	3.38	1.58	.95	A0473-6-CF	615.00



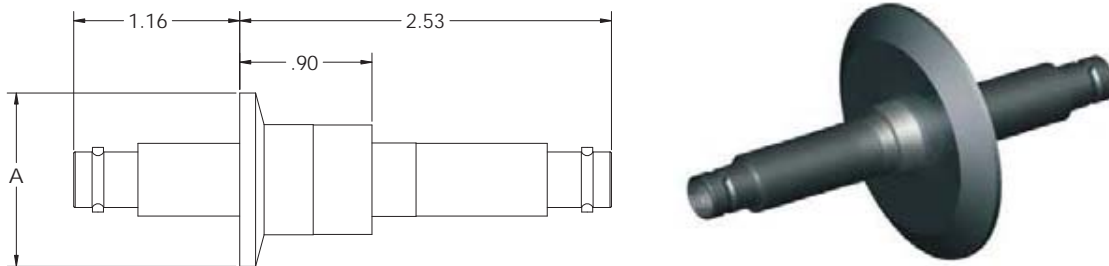
**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Single-ended**  
**QUICK FLANGE**



PINS	A	B	C	CC	PART #	PRICE
1	1.43	.25	1.18	---	A0477-1-QF	85.00
1	1.33	.35	2.16	---	A0477-2-QF	90.00
2	1.33	.35	2.16	.75	A0477-3-QF	135.00
3	1.33	.35	2.95	.95	A0477-4-QF	190.00
4	1.33	.35	2.16	.75	A6984-2-QF	245.00
4	1.33	.35	2.95	.95	A0477-5-QF	245.00

**Grounded Shield – Double-ended**  
**QUICK FLANGE**



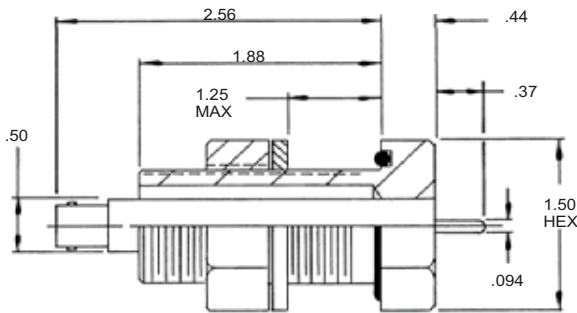
PINS	A	CC	PART #	PRICE
1	1.18	---	A0479-2-QF	225.00
1	2.16	---	A0478-4-QF	235.00
2	2.16	.75	A0478-10-QF	425.00
3	2.95	.95	A0478-8-QF	615.00

See Section 7 for connectors, wiring, and other accessories.



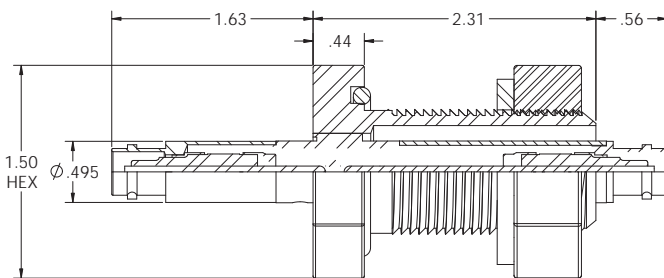
**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Grounded Shield – Single-ended**  
**1" BASEPLATE**



PART #	PRICE
A0482-1-BP	175.00

**Grounded Shield – Double-ended**  
**1" BASEPLATE**



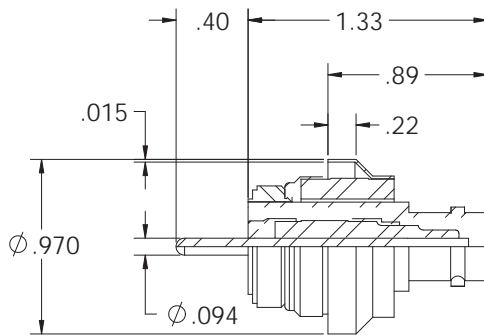
PART #	PRICE
A0484-2-BP	325.00

See Section 7 for connectors, wiring, and other accessories.

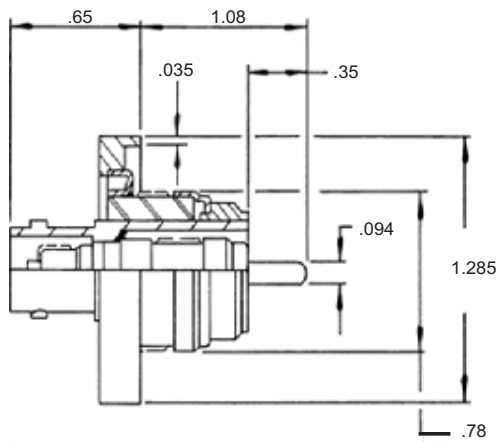


**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**WELDABLE**



PART #	PRICE
A1301-3-W	120.00

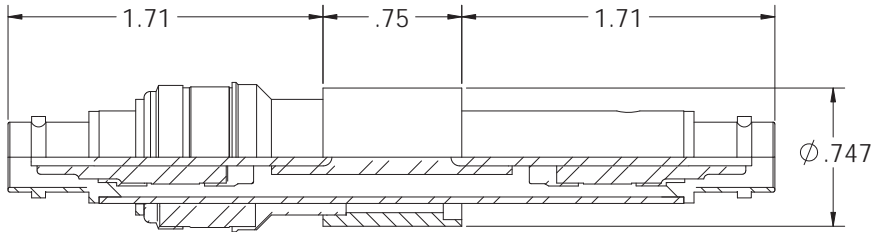


PART #	PRICE
A0303-1-W	120.00

See Section 7 for connectors, wiring, and other accessories.



**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**Floating Shield – Double-ended**  
**WELDABLE**

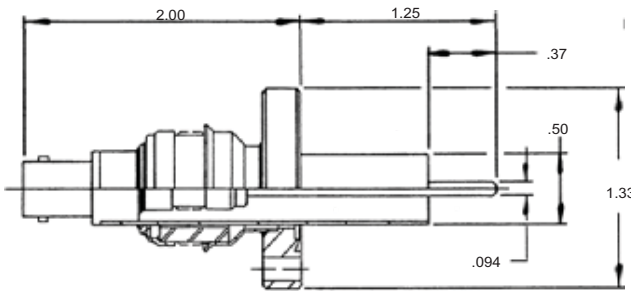


PART #	PRICE
A0466-2-W	280.00

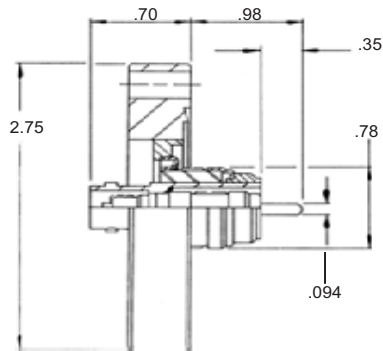


**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**CONFLAT FLANGE**



PART #	PRICE
A0311-1-CF	175.00



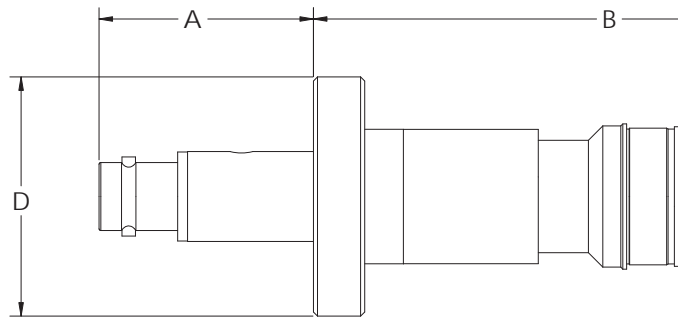
PART #	PRICE
A0305-1-CF	175.00

See Section 7 for connectors, wiring, and other accessories.





**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**Floating Shield – Double-ended**  
**CONFLAT FLANGE**



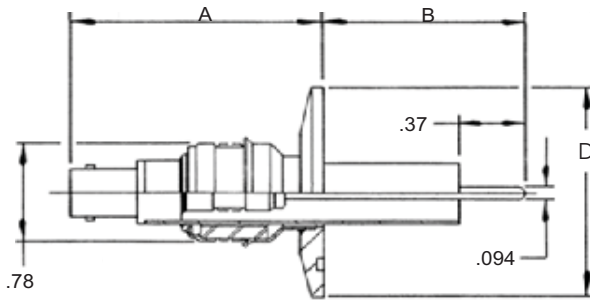
PINS	CF FLANGE	A	B	D	PART #	PRICE
1	CF16	1.21	2.96	1.33	A0474-2-CF	335.00
1	CF40	1.66	2.51	2.75	A0475-2-CF	360.00

See Section 7 for connectors, wiring, and other accessories.



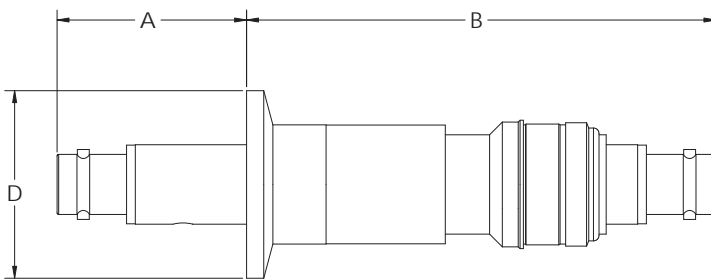
**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**QUICK FLANGE**



PINS	A	B	D	PART #	PRICE
1	2.59	.67	1.18	A0316-1-QF	175.00
1	2.09	1.17	2.16	A0316-3-QF	175.00

**Floating Shield – Double-ended**  
**QUICK FLANGE**



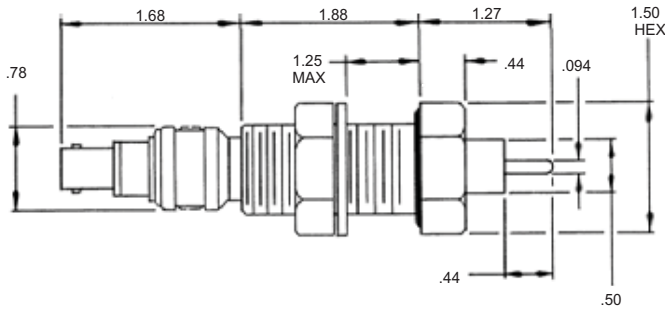
PINS	A	B	D	PART #	PRICE
1	1.21	2.96	1.18	A0480-2-QF	335.00
1	1.71	2.46	2.16	A0481-2-QF	360.00

See Section 7 for connectors, wiring, and other accessories.



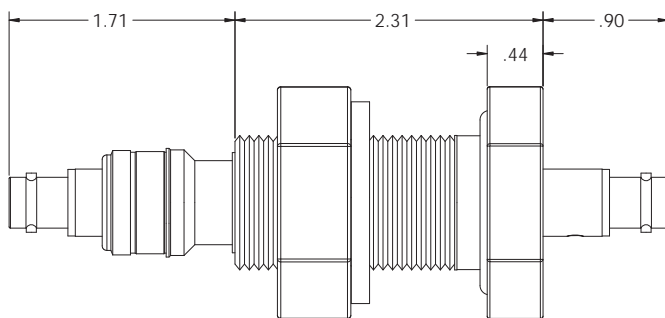
**MHV**  
**5000 Volts DC / 3 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**1" BASEPLATE**



PART #	PRICE
A0485-2-BP	260.00

**Floating Shield – Double-ended**  
**1" BASEPLATE**



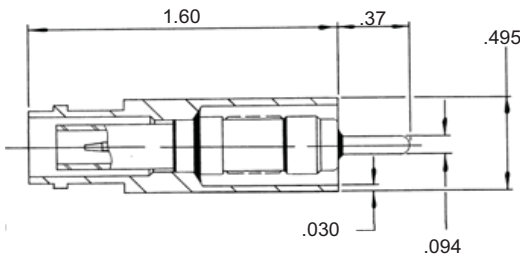
PART #	PRICE
A0487-2-BP	415.00

See Section 7 for connectors, wiring, and other accessories.



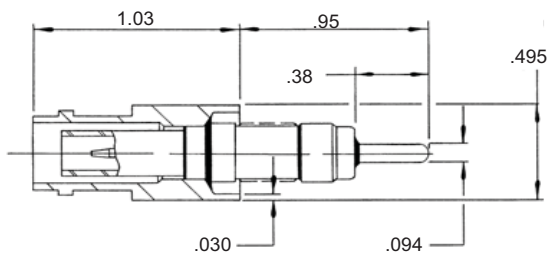
**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Recessed**  
**WELDABLE**



PART #	PRICE
A0152-1-W	60.00

**Grounded Shield – Exposed**  
**WELDABLE**

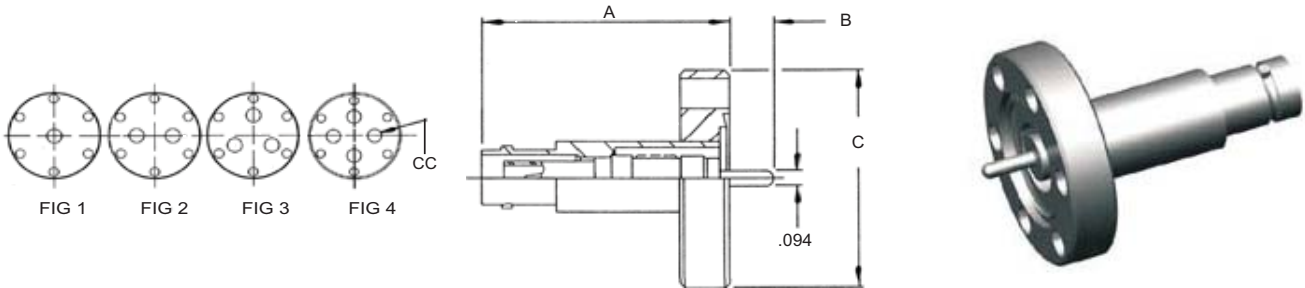


PART #	PRICE
A0328-1-W	75.00



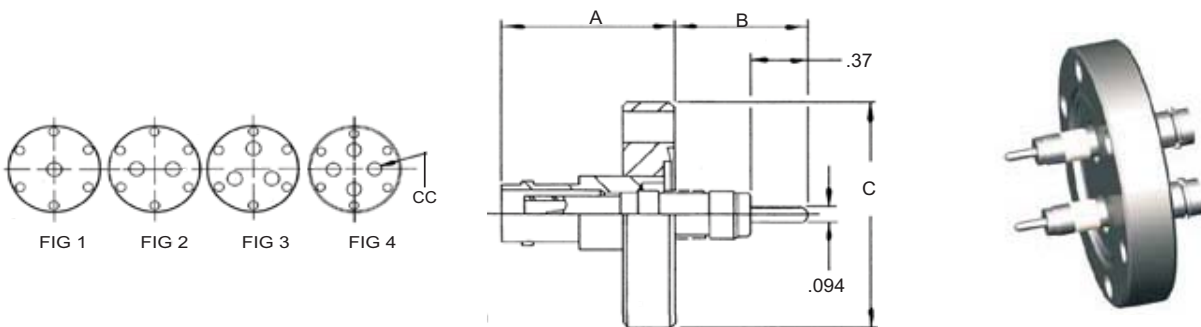
## SHV-5 5000 Volts DC / 5 Amps *Air-side Connector Included*

### Grounded Shield – Recessed CONFLAT FLANGE



PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.65	.32	1.33	---	A0330-1-CF	110.00
1	1	1.65	.32	2.75	---	A0331-1-CF	130.00
2	2	1.65	.32	2.75	.75	A0332-1-CF	200.00
3	3	1.65	.32	2.75	.95	A0333-1-CF	290.00
4	4	1.65	.32	2.75	.95	A0334-1-CF	365.00

### Grounded Shield – Exposed CONFLAT FLANGE



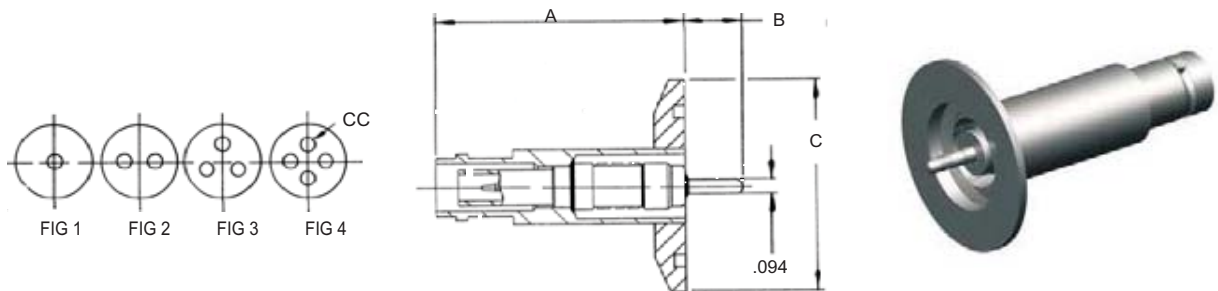
PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.08	.86	1.33	---	A0335-1-CF	125.00
1	1	1.08	.86	2.75	---	A0336-1-CF	145.00
2	2	1.08	.86	2.75	.75	A0337-1-CF	230.00
3	3	1.08	.86	2.75	.95	A0338-1-CF	335.00
4	4	1.08	.86	2.75	.95	A0339-1-CF	430.00

See Section 7 for connectors, wiring, and other accessories.



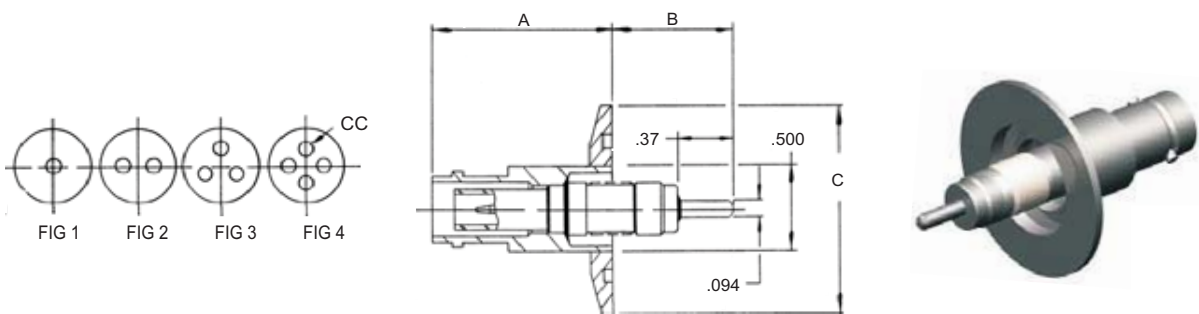
**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Recessed**  
**QUICK FLANGE**



PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.70	.27	1.18	---	A0340-1-QF	110.00
1	1	1.60	.37	2.16	---	A0341-1-QF	120.00
2	2	1.60	.37	2.16	.75	A0342-1-QF	185.00
3	3	1.60	.37	2.95	.95	A0343-1-QF	320.00
4	4	1.60	.37	2.16	.75	A6984-3-QF	365.00
4	4	1.60	.37	2.95	.95	A0344-1-QF	365.00

**Grounded Shield – Exposed**  
**QUICK FLANGE**

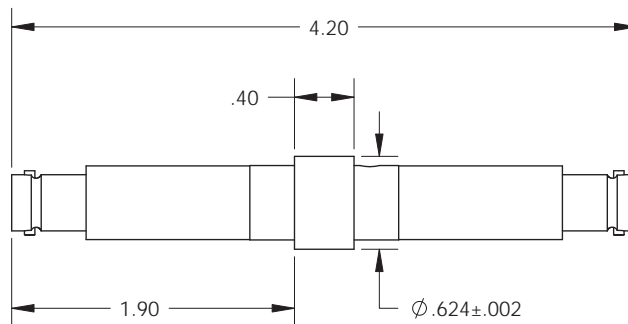


PINS	FIG	A	B	C	CC	PART #	PRICE
1	1	1.13	.81	1.18	---	A0345-1-QF	125.00
1	1	1.03	.91	2.16	---	A0346-1-QF	145.00
2	2	1.03	.91	2.16	.75	A0347-1-QF	230.00
3	3	1.03	.91	2.95	.95	A0348-1-QF	335.00
4	4	1.03	.91	2.95	.95	A0349-1-QF	430.00

See Section 7 for connectors, wiring, and other accessories.



**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*  
**Grounded Shield – Double-ended**  
**WELDABLE**

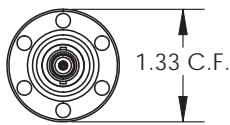
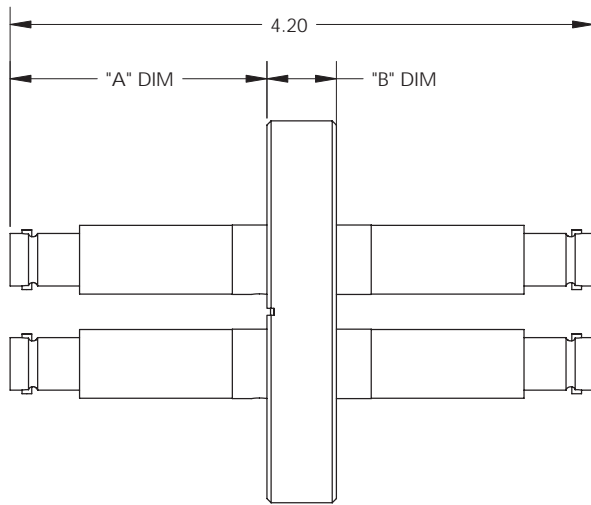


PART #	PRICE
A0858-1-W	220.00

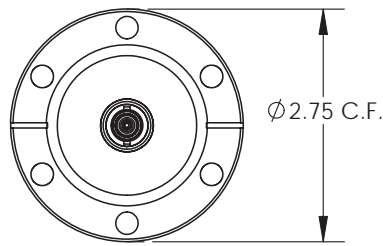


**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*

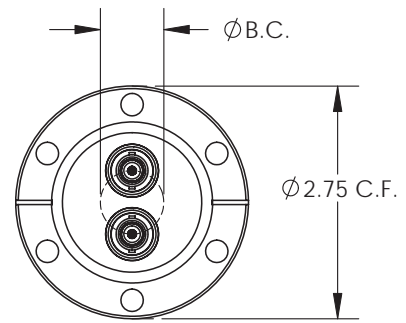
**Grounded Shield – Double-ended**  
**CONFLAT FLANGE**



**Fig. 1**



**Fig. 2**



**Fig. 3**

FIG	PINS	Ø B.C.	"A" DIM	"B" DIM	PART #	PRICE
1	1	---	1.40	.285	A0472-5-CF	275.00
2	1	---	1.85	.500	A0473-7-CF	285.00
3	2	.75	1.85	.500	A0473-8-CF	440.00





**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**QUICK FLANGE**

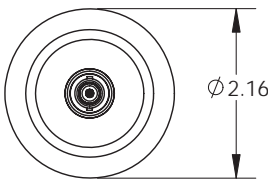
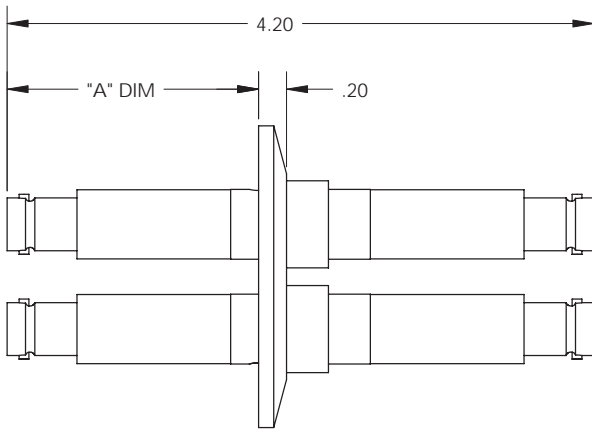


Fig. 1

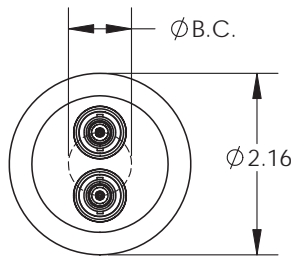


Fig. 2

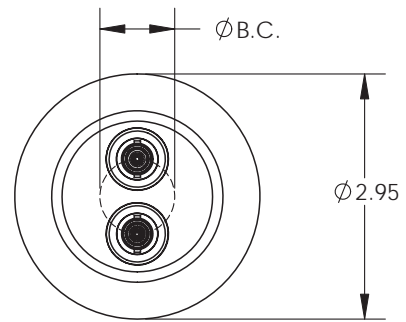


Fig. 3

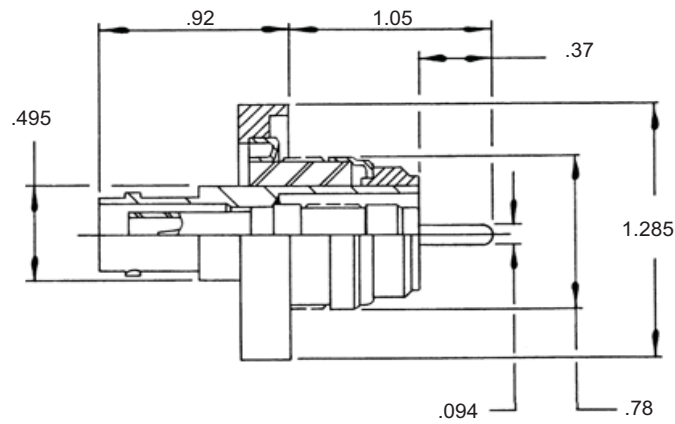
FIG	PINS	Ø B.C.	"A" DIM	PART #	PRICE
1	1	---	1.80	A8271-1-QF	275.00
2	2	.75	1.80	A0859-1-QF	430.00
3	2	.90	1.90	A6974-1-QF	440.00

See Section 7 for connectors, wiring, and other accessories.



**SHV-5**  
**5000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Floating Shield – Single-ended**  
**WELDABLE**

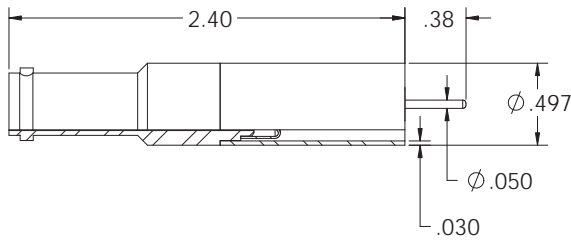


PART #	PRICE
A0329-1-W	150.00



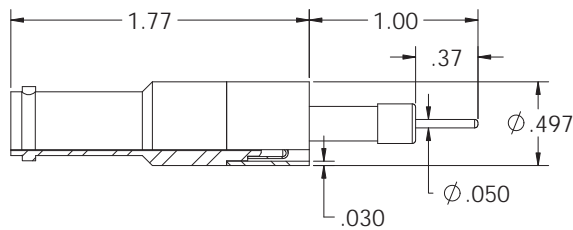
**SHV-10**  
**10,000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Recessed**  
**WELDABLE**



TYPE	PART #	PRICE
RECESSED	A1499-1-W	140.00

**Grounded Shield – Exposed**  
**WELDABLE**



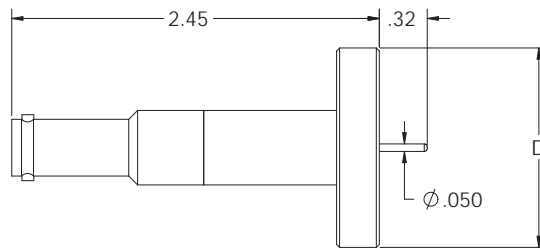
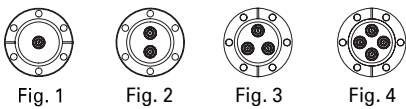
TYPE	PART #	PRICE
EXPOSED	A1497-1-W	155.00

See Section 7 for connectors, wiring, and other accessories.



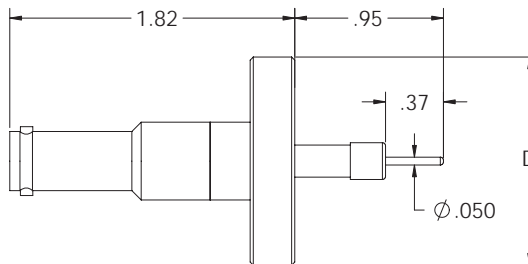
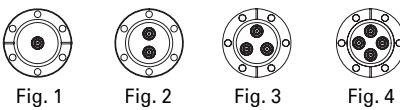
**SHV-10**  
**10,000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Recessed**  
**CONFLAT FLANGE**



PINS	FIG	D	CC	PART #	PRICE
1	1	1.33 / CF16	---	A1600-1-CF	180.00
1	1	2.75 / CF40	---	A1600-2-CF	190.00
2	2	2.75 / CF40	.75	A1600-3-CF	345.00
3	3	2.75 / CF40	.75	A1600-4-CF	500.00
4	4	2.75 / CF40	.95	A1600-5-CF	650.00

**Grounded Shield – Exposed**  
**CONFLAT FLANGE**



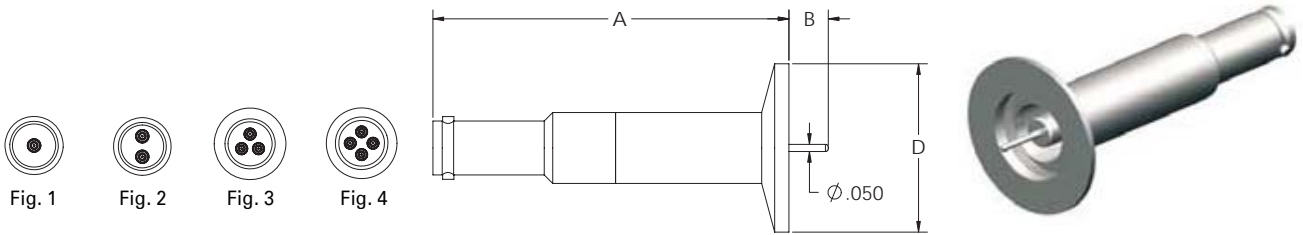
PINS	FIG	D	CC	PART #	PRICE
1	1	1.33 / CF16	---	A1601-1-CF	195.00
1	1	2.75 / CF40	---	A1601-2-CF	205.00
2	2	2.75 / CF40	.75	A1601-3-CF	360.00
3	3	2.75 / CF40	.75	A1601-4-CF	520.00
4	4	2.75 / CF40	.95	A1601-5-CF	680.00

See Section 7 for connectors, wiring, and other accessories.



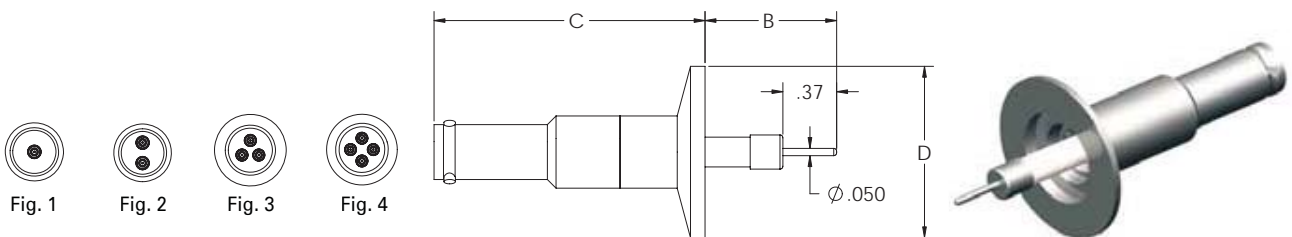
## SHV-10 10,000 Volts DC / 5 Amps *Air-side Connector Included*

### Grounded Shield – Recessed QUICK FLANGE



PINS	FIG	A	B	D	CC	PART #	PRICE
1	1	2.49	.28	1.18 / QF16	---	A1602-1-QF	180.00
1	1	2.39	.28	2.16 / QF40	---	A1602-2-QF	190.00
2	2	2.39	.28	2.16 / QF40	.75	A1602-3-QF	345.00
3	3	2.39	.28	2.95 / QF50	.75	A1602-4-QF	500.00
4	4	2.39	.28	2.95 / QF50	.95	A1602-5-QF	650.00

### Grounded Shield – Exposed QUICK FLANGE



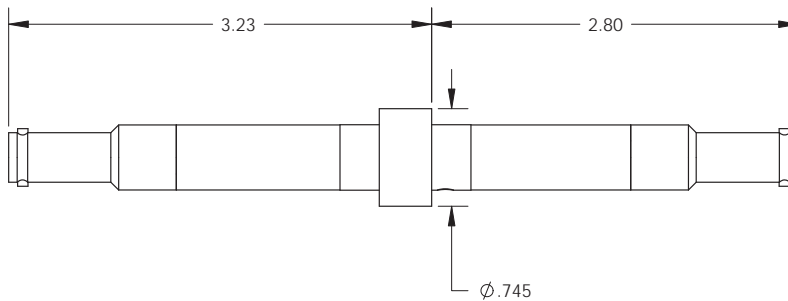
PINS	FIG	B	C	D	CC	PART #	PRICE
1	1	1.87	.90	1.18 / QF16	---	A1603-1-QF	195.00
1	1	1.77	1.00	2.16 / QF40	---	A1603-2-QF	205.00
2	2	1.77	1.00	2.16 / QF40	.75	A1603-3-QF	360.00
3	3	1.77	1.00	2.95 / QF50	.75	A1603-4-QF	520.00
4	4	1.77	1.00	2.95 / QF50	.95	A1603-5-QF	580.00

See Section 7 for connectors, wiring, and other accessories.



**SHV-10**  
**10,000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**WELDABLE**



PART #	PRICE
A2613-3-W	295.00



**SHV-10**  
**10,000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**CONFLAT FLANGE**

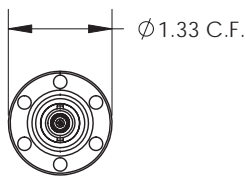
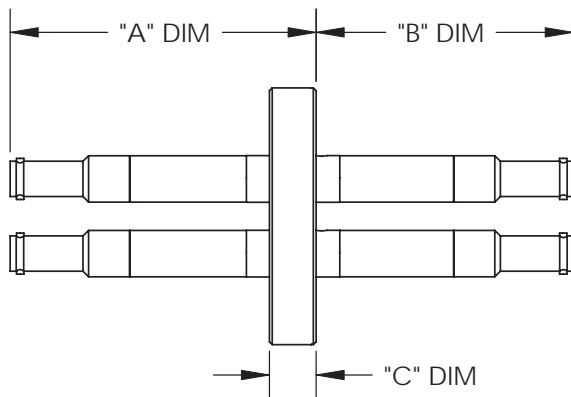


Fig. 1

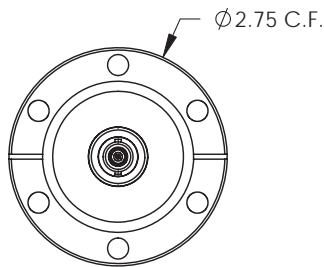


Fig. 2

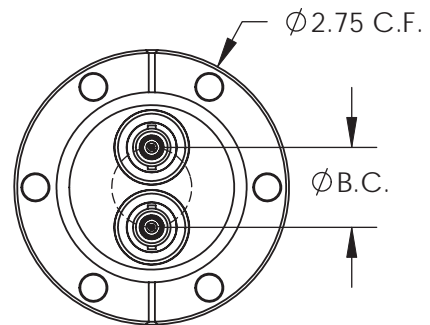


Fig. 3

FIG	PINS	$\varnothing$ B.C.	"A" DIM	"B" DIM	"C" DIM	PART #	PRICE
1	1	---	3.73	2.30	.285	A8272-1-CF	345.00
2	1	---	3.28	2.75	.500	A8272-2-CF	355.00
3	2	.80	3.28	2.75	.500	A8272-3-CF	600.00

See Section 7 for connectors, wiring, and other accessories.



**SHV-10**  
**10,000 Volts DC / 5 Amps**  
*Air-side Connector Included*

**Grounded Shield – Double-ended**  
**QUICK FLANGE**

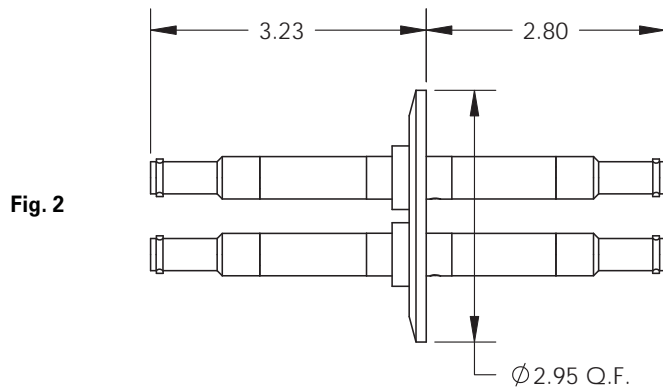
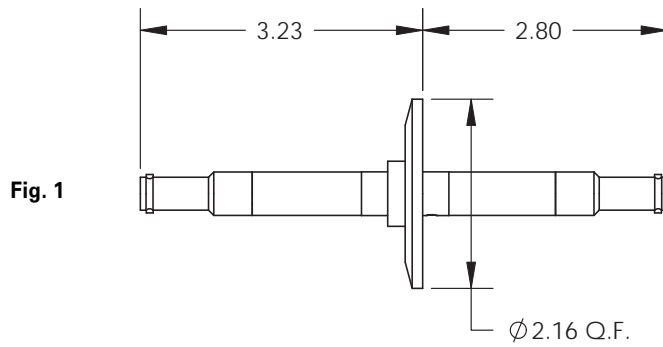


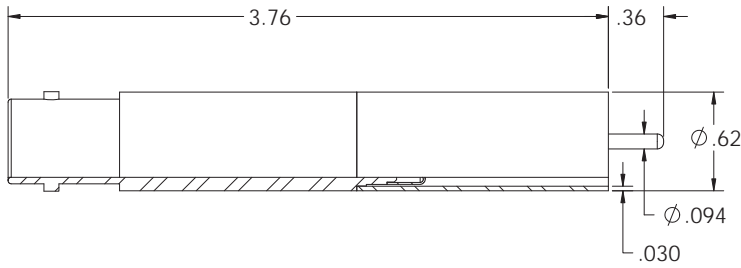
FIG	PINS	PART #	PRICE
1	1	A8273-1-QF	355.00
2	2	A8273-2-QF	600.00





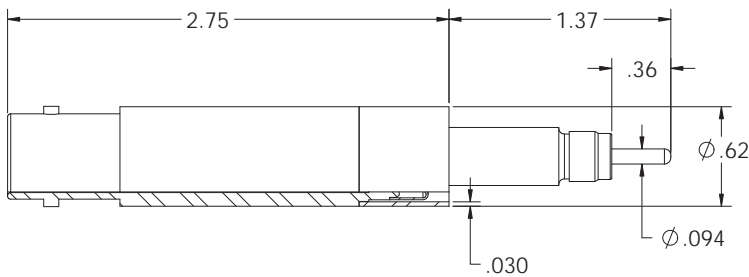
**SHV-20**  
**20,000 Volts DC / 15 Amps**  
*Air-side Connector Included*

**Grounded Shield — Recessed**  
**WELDABLE**



PART #	PRICE
A0701-1-W	195.00

**Grounded Shield — Exposed**  
**WELDABLE**



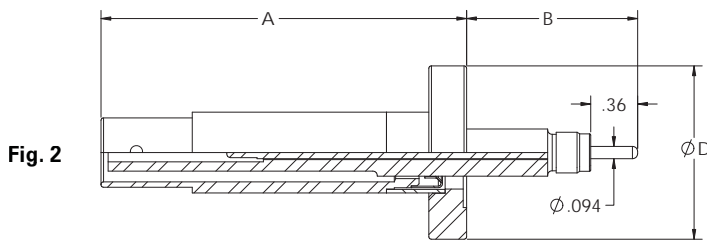
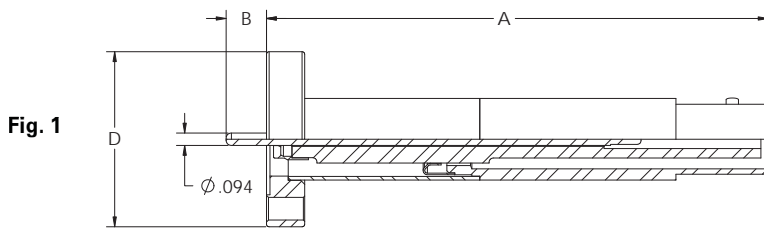
PART #	PRICE
A0702-1-W	195.00

See Section 7 for connectors, wiring, and other accessories.



**SHV-20**  
**20,000 Volts DC / 15 Amps**  
*Air-side Connector Included*

**Grounded Shield – Recessed and Exposed**  
**CONFLAT FLANGE**

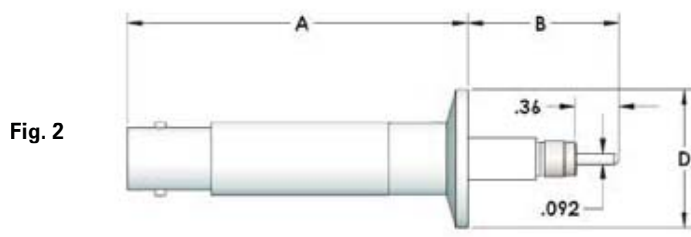
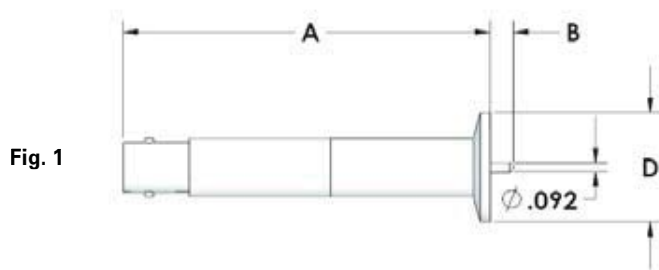


PINS	FIG	TYPE	A	B	D	CC	PART #	PRICE
1	1	RECESSED	3.80	.32	1.33 / CF16	---	A0703-1-CF	250.00
1	1	RECESSED	3.80	.32	2.75 / CF40	---	A2095-1-CF	260.00
2	1	RECESSED	3.80	.32	2.75 / CF40	.95	A2300-1-CF	505.00
1	2	EXPOSED	2.80	1.32	1.33 / CF16	---	A0704-1-CF	250.00
1	2	EXPOSED	2.80	1.32	2.75 / CF40	---	A1909-1-CF	260.00
2	2	EXPOSED	2.80	1.32	2.75 / CF40	.95	A2099-1-CF	505.00

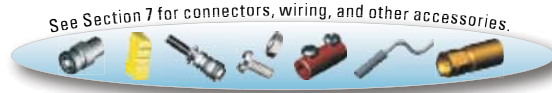


## SHV-20 20,000 Volts DC / 15 Amps *Air-side Connector Included*

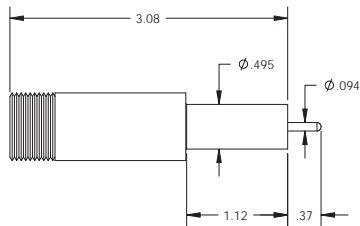
### Grounded Shield – Recessed and Exposed **QUICK FLANGE**



PINS	FIG	TYPE	A	B	D	CC	PART #	PRICE
1	1	RECESSED	3.85	.27	1.18 / QF16	---	A2096-1-QF	250.00
1	1	RECESSED	3.80	.37	2.16 / QF40	---	A2096-2-QF	255.00
2	2	RECESSED	3.80	.37	2.95 / QF50	.95	A2302-1-QF	505.00
1	1	EXPOSED	2.85	1.27	1.18 / QF16	---	A2094-1-QF	250.00
1	1	EXPOSED	2.75	1.37	2.16 / QF40	---	A2094-2-QF	255.00
2	2	EXPOSED	2.75	1.37	2.95 / QF50	.95	A2301-1-QF	505.00

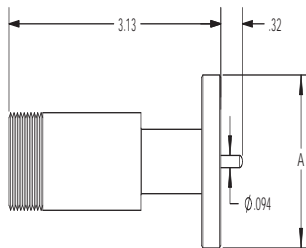


**SHV-B**  
**7500 Volts DC / 3 Amps**  
**Bakeable Connector**  
*Air-side Connector Included*  
**WELDABLE**



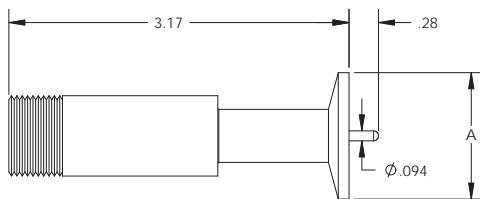
PART #	PRICE
A0836-1-W	185.00

**CONFLAT FLANGE**



A	PART #	PRICE
1.33	A1051-1-CF	225.00
2.75	A1051-2-CF	230.00

**QUICK FLANGE**



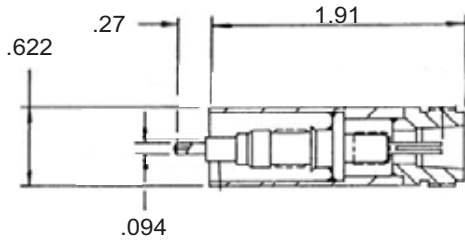
A	PART #	PRICE
1.18	A2610-1-QF	225.00
2.16	A2611-2-QF	230.00

See Section 7 for connectors, wiring, and other accessories.

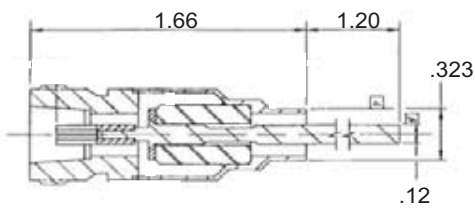


## TYPE-N

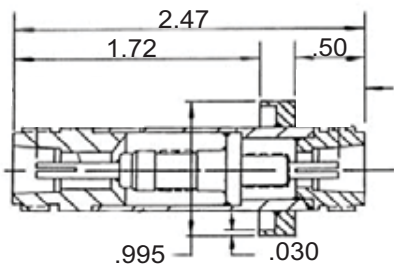
500 Volts DC / 3 Amps  
Air-side Connector Included  
**WELDABLE**



TYPE	PART #	PRICE
SINGLE-ENDED	A0654-1-W	120.00



TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A0655-1-W	350.00

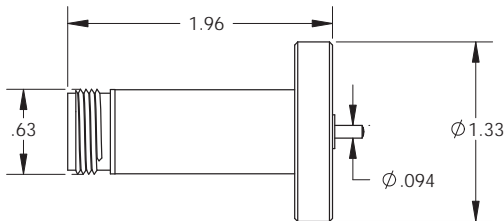


TYPE	PART #	PRICE
DOUBLE-ENDED	A0659-1-W	255.00

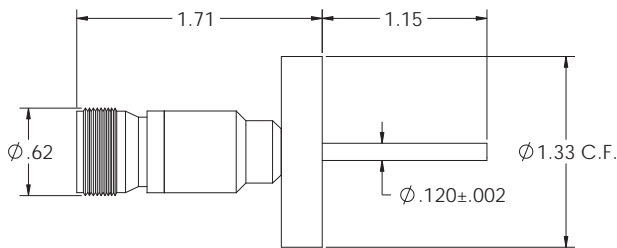
See Section 7 for connectors, wiring, and other accessories.



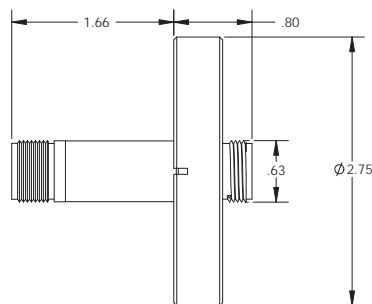
**TYPE-N**  
**500 Volts DC / 3 Amps**  
*Air-side Connector Included*  
**CONFLAT FLANGE**



TYPE	PART #	PRICE
SINGLE-ENDED	A1706-1-CF	180.00



TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A2714-1-CF	445.00



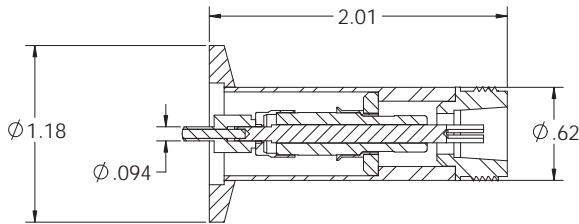
TYPE	PART #	PRICE
DOUBLE-ENDED	A2262-1-CF	315.00

See Section 7 for connectors, wiring, and other accessories.

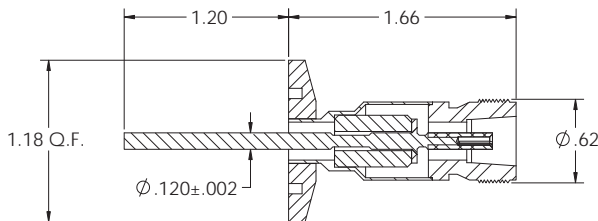


## TYPE-N

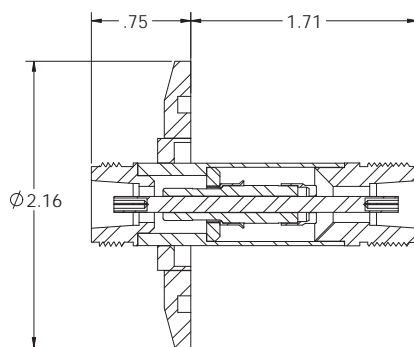
500 Volts DC / 3 Amps  
Air-side Connector Included  
**QUICK FLANGE**



TYPE	PART #	PRICE
SINGLE-ENDED	A2247-1-QF	180.00



TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A3062-1-QF	445.00

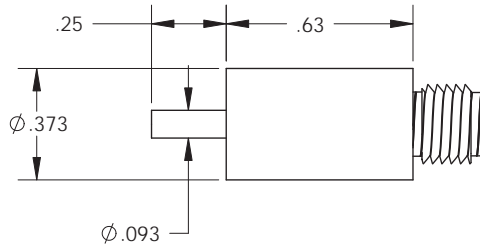


TYPE	PART #	PRICE
DOUBLE-ENDED	A2604-1-QF	315.00

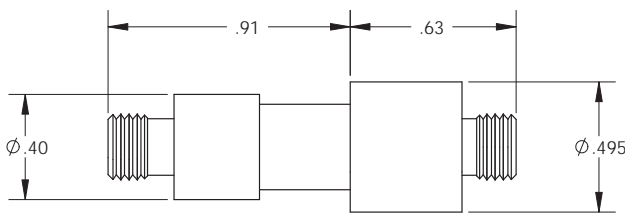
See Section 7 for connectors, wiring, and other accessories.



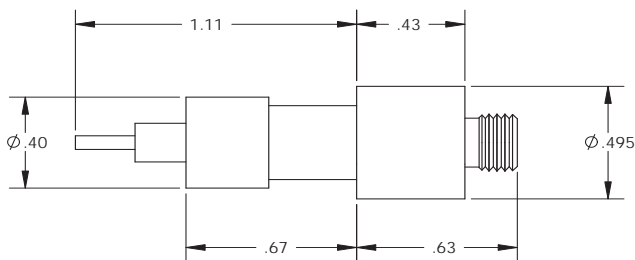
**SMA**  
**700 Volts DC / 1 Amp**  
*Air-side Connector Included*  
**WELDABLE**



TYPE	PART #	PRICE
SINGLE-ENDED	A0660-1-W	80.00



TYPE	PART #	PRICE
DOUBLE-ENDED / 50 Ohms	A0645-1-W	345.00



TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A1908-1-W	345.00

See Section 7 for connectors, wiring, and other accessories.



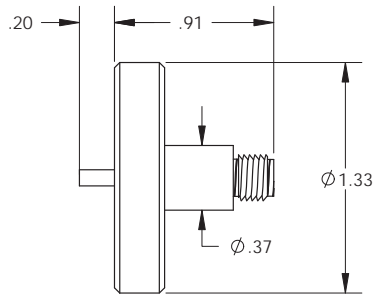


## SMA

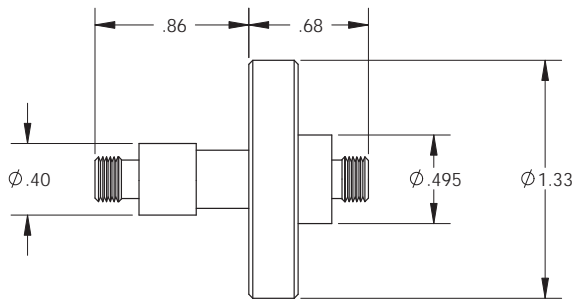
### 700 Volts DC / 1 Amp

*Air-side Connector Included*

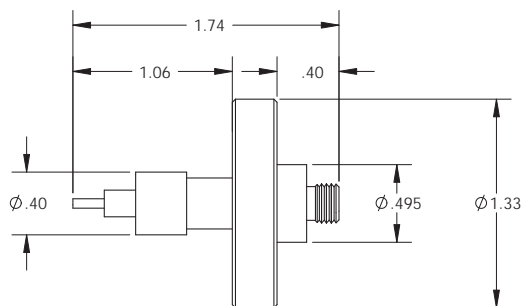
### CONFLAT FLANGE



TYPE	PART #	PRICE
SINGLE-ENDED	A1911-2-CF	180.00



TYPE	PART #	PRICE
DOUBLE-ENDED / 50 Ohms	A1835-1-CF	445.00

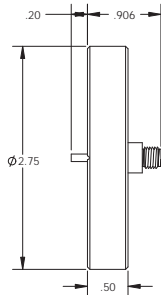


TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A1921-1-CF	445.00

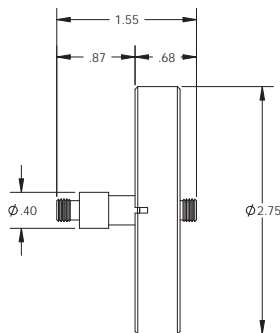
See Section 7 for connectors, wiring, and other accessories.



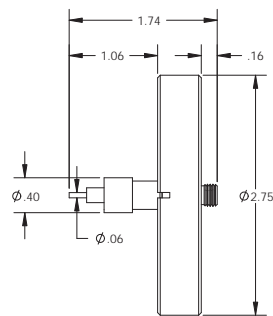
**SMA**  
**700 Volts DC / 1 Amp**  
*Air-side Connector Included*  
**CONFLAT FLANGE**



TYPE	PART #	PRICE
SINGLE-ENDED	A1911-1-CF	190.00



TYPE	PART #	PRICE
DOUBLE-ENDED / 50 Ohms	A2286-1-CF	455.00



TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A1910-1-CF	455.00

See Section 7 for connectors, wiring, and other accessories.

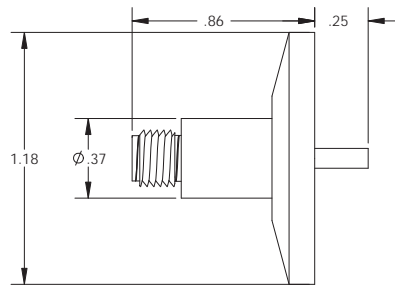


## SMA

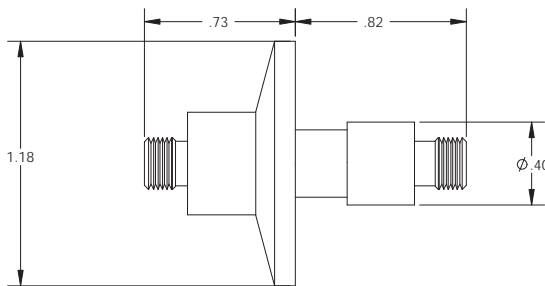
### 700 Volts DC / 1 Amp

*Air-side Connector Included*

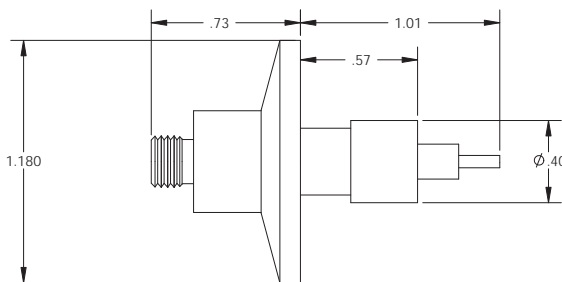
### QUICK FLANGE



TYPE	PART #	PRICE
SINGLE-ENDED	A1920-1-QF	180.00



TYPE	PART #	PRICE
DOUBLE-ENDED / 50 Ohms	A2127-1-QF	445.00

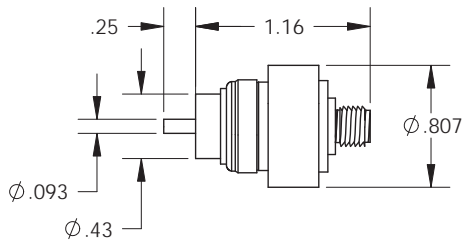


TYPE	PART #	PRICE
SINGLE-ENDED / 50 Ohms	A1922-1-QF	445.00

See Section 7 for connectors, wiring, and other accessories.

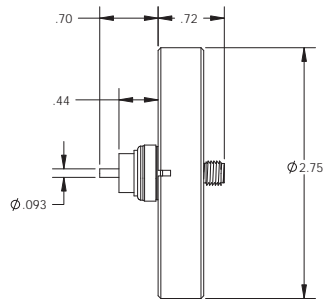


**SMA**  
**700 Volts DC / 1 Amp**  
*Air-side Connector Included*  
**WELDABLE**



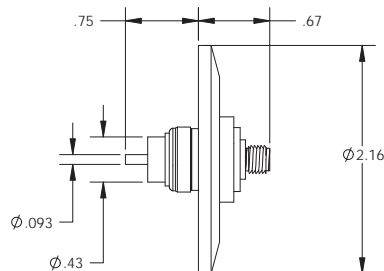
TYPE	PART #	PRICE
SINGLE-ENDED	A1980-1-W	250.00

**CONFLAT FLANGE**



TYPE	PART #	PRICE
SINGLE-ENDED	A1983-1-CF	350.00

**QUICK FLANGE**



TYPE	PART #	PRICE
SINGLE-ENDED	A1984-1-QF	350.00

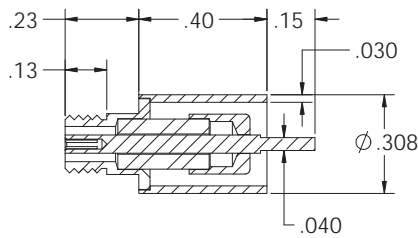
See Section 7 for connectors, wiring, and other accessories.



## MICRODOT

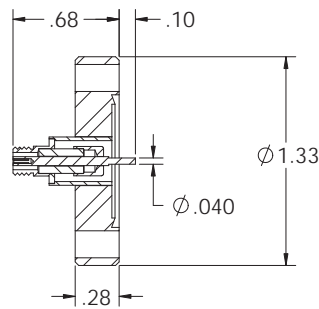
500 Volts DC / 2 Amps  
Air-side Connector Included

**WELDABLE**



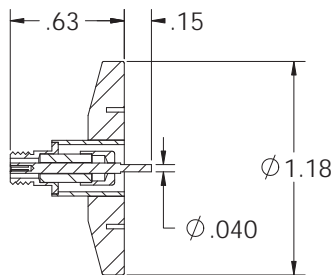
TYPE	PART #	PRICE
SINGLE-ENDED	A1634-1-W	90.00

## CONFLAT FLANGE



TYPE	PART #	PRICE
SINGLE-ENDED	A1648-1-CF	140.00

## QUICK FLANGE



TYPE	PART #	PRICE
SINGLE-ENDED	A1649-1-QF	140.00

See Section 7 for connectors, wiring, and other accessories.

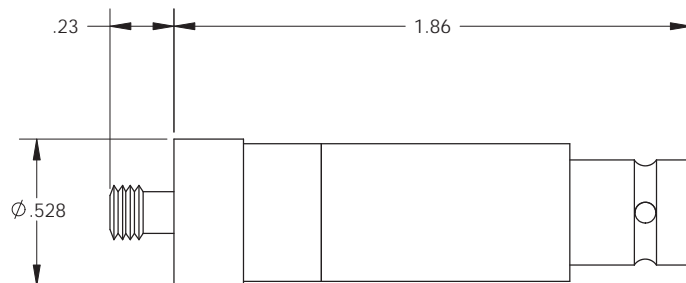


**BETWEEN SERIES COAXIAL**

**500 Volts DC / 2 Amps**

*Air-side Connector Included*

**BNC to Microdot / Crystal Sensor Feedthrough**  
**WELDABLE**



TYPE	PART #	PRICE
SINGLE-ENDED	A0975-1-W	215.00

See Section 7 for connectors, wiring, and other accessories.



## BETWEEN SERIES COAXIAL

500 Volts DC / 2 Amps

*Air-side Connector Included*

### BNC to Microdot / Crystal Sensor Feedthrough CONFLAT FLANGE

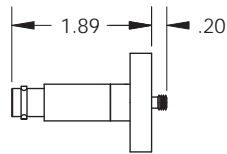


Fig. 1

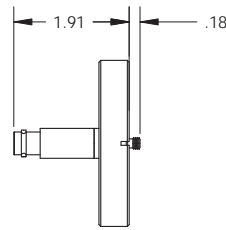
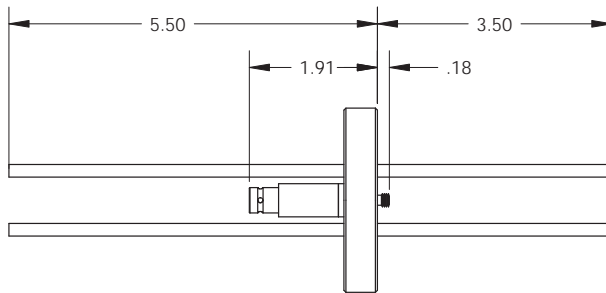


Fig. 2

PART #	FIG	COAX	COOLING LINES	FLANGE	PRICE
A2554-1-CF	1	1	---	1.33 CF	285.00
A2750-1-CF	2	1	---	2.75 CF	295.00



PART #	COAX	COOLING LINES	FLANGE	PRICE
A2728-1-CF	1	2	2.75 CF	355.00

See Section 7 for connectors, wiring, and other accessories.

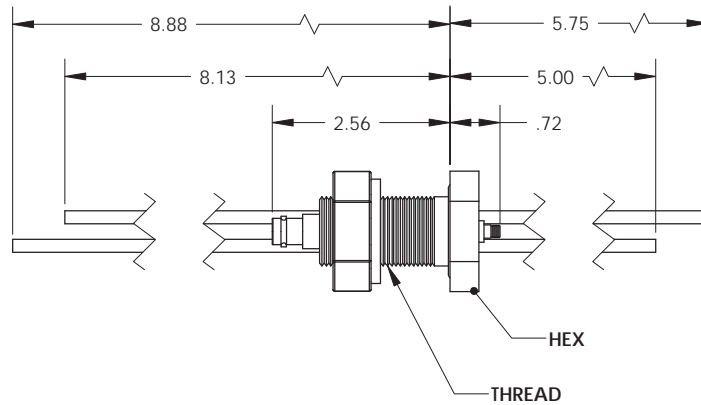


**BETWEEN SERIES COAXIAL**

**500 Volts DC / 2 Amps**

*Air-side Connector Included*

**BNC to Microdot / Crystal Sensor Feedthrough  
BASEPLATE**



PART #	COAX	COOLING LINES	MOUNT	PRICE
A7164-1-BP	1	2	1" BP	325.00

See Section 7 for connectors, wiring, and other accessories.

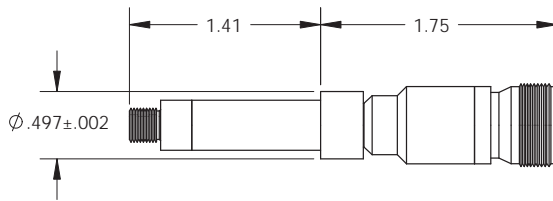




## BETWEEN SERIES COAXIAL

500 Volts DC / 1 Amp  
Air-side Connector Included

Type N to SMA  
**WELDABLE**



PART #	PRICE
A3888-1-W	355.00

## CONFLAT FLANGE

Fig. 1

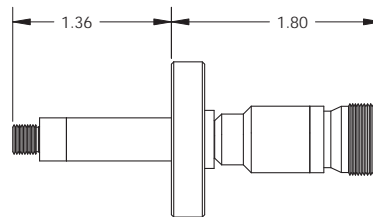
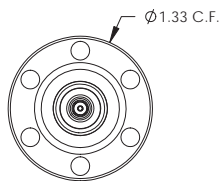


Fig. 2

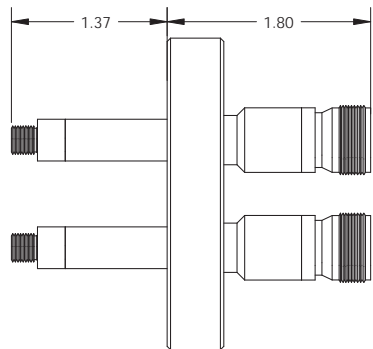
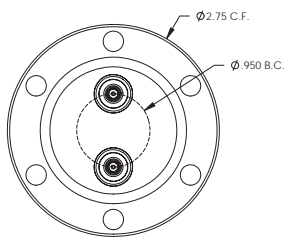


FIG	FLANGE	PART #	PRICE
1	1.33 CF	A8223-1-CF	455.00
2	2.75 CF	A3892-1-CF	850.00

See Section 7 for connectors, wiring, and other accessories.

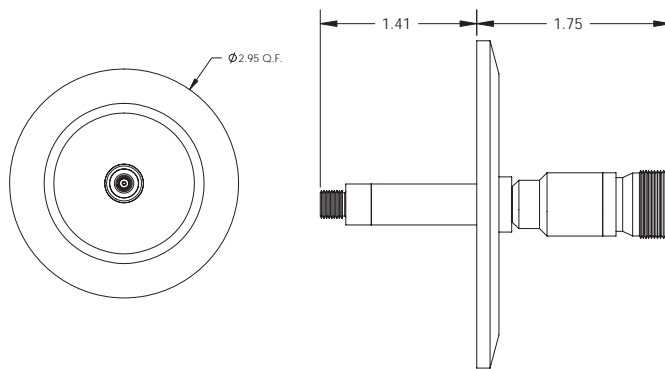


**BETWEEN SERIES COAXIAL**

**500 Volts DC / 1 Amp**  
*Air-side Connector Included*

**Type N to SMA**  
**QUICK FLANGE**

**Fig. 1**



**Fig. 2**

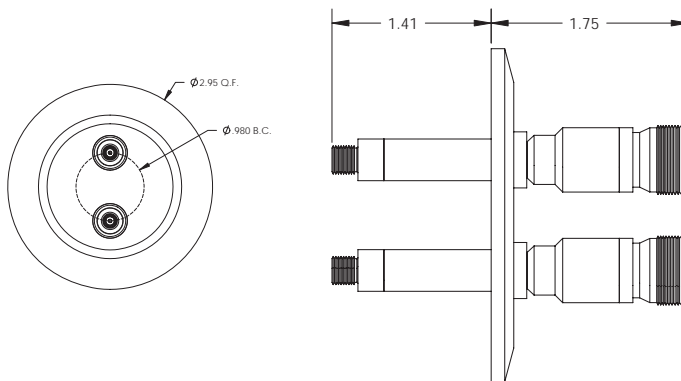


FIG	FLANGE	PART #	PRICE
1	QF 50	A8224-1-QF	455.00
2	QF 50	A8224-2-QF	850.00

See Section 7 for connectors, wiring, and other accessories.

