

Coaxial

SEMICONDUCTOR | ANALYTICAL EQUIPMENT | AEROSPACE | TELECOMMUNICATIONS



OIL EXPLORATION | R&D | HIGH ENERGY PHYSICS | MILITARY/DEFENSE | BIOTECHNOLOGY



*Advanced Ceramic-to-Metal &
Glass-Ceramic Sealing Technology*

Description

CeramTec coaxial connectors consist of two concentric conductors: a central conductor surrounded by and insulated from a second tubular conductor. The outside conductor is usually at ground potential but in some product variations may be floated off ground by employing an additional insulating ring. The outer conducting surface can prevent radio frequency noise from passing to or from the central conductor. CeramTec's Ceramaseal® product line includes a complete line of industry-standard coaxial connectors ranging from Microdot through SHV. These coaxial connectors are manufactured for high and ultra-high vacuum service.

Microdot connectors are the smallest standard threaded interface connectors we offer for use in Ultra-High Vacuum (UHV). CeramTec's standard Microdot connectors are available as single ended or double ended units.

SMA (Subminiature Type-A) connectors offer a threaded interface in a subminiature size. Matched impedance designs are also available and are ideally suited for high frequency signal transmission above 10 GHz. CeramTec's standard SMA connectors are available as single ended or double ended units.

SMB (Subminiature Type-B) connectors are designed for quick connecting and disconnecting. This is made possible by the SMB's spring retention connector. CeramTec's standard SMB connectors are single ended and available with a grounded shield or a floating shield configuration.

BNC connectors are the most popular miniature-sized connector and can accommodate up to 500 V DC. The BNC is characterized by its quick connect/disconnect bayonet coupling. Matched impedance designs are also available and are ideally suited for high frequency



signal transmission. CeramTec's standard BNC connectors are available as single or double ended units with a grounded shield or a floating shield.

MHV (Miniature High Voltage) connectors are designed for high-voltage applications of BNC connectors (DC voltage between 500 V and 5 kV). MHV connectors are sometimes referred to as "high-voltage BNCs." CeramTec's standard MHV connectors are available as single ended or double ended units with a floating shield or a grounded shield.

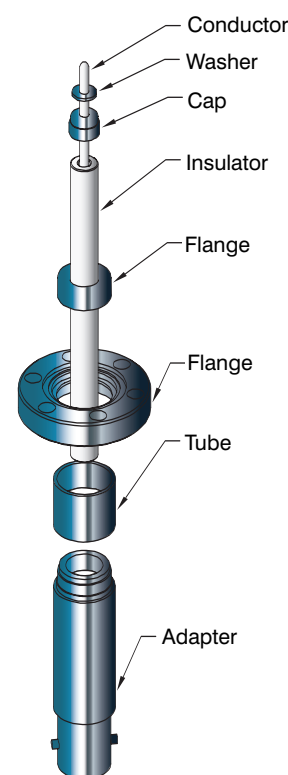
Type N series connectors are the most popular medium-sized connectors, accommodating voltages up to 1.5 kV. The threaded coupling provides low noise and increases resistance to shock and vibration. Matched impedance designs are also available and are ideally suited for high frequency signal transmission above 6 GHz. CeramTec's standard Type N connectors are available as single or double ended units.

HN series connectors are Type N series connectors that have been designed to take higher voltages (up to 7 kV). These matched impedance designs are ideally suited for high frequency signal transmission or fast rise time pulses for data transmission.

Standard Specifications

- Grounded and floating shield versions
- High frequency 50 ohm impedance matched connectors
- Connectors sold with or without air side plugs

Typical Coaxial Construction



SHV (Safe High Voltage)

connectors feature an improved interface over the MHV. The SHV outer contact ground connection is maintained through the center contact mating cycle. The center contact is recessed to prevent shock hazard when disengaged. Four designs are included in this Product Guide covering DC voltages from 5 kV to as high as 20 kV. The BSHV version is a bakeable SHV connector that exhibits the safety level of the SHV. CeramTec's standard SHV connectors are single ended and available with a grounded shield or a floating shield (SHV 5 kV) configuration.

Extreme / Custom Design

- Multiple coaxial and multipin connectors in a flange
- Double ended 50 ohm coaxial connector with floating shield for a cryogenic application
- Coaxial connectors using a glass-ceramic seal for cryogenic and corrosive environments
- LC connector, TNC connector and other military style coaxial connectors

Installation

Standard installation mountings include:

- Weld (Pulse-TIG, TIG, Laser, E-Beam)
- ISO KF flange
- ConFlat flange
- NPT fitting (see Pressure section)

Applications

A few of the many applications in which these coaxial connectors are commonly used are:

- Telecommunications
- Semiconductor processing equipment
- Aerospace equipment
- Medical equipment

STANDARD SPECIFICATIONS					
Category	Classification	DC Voltage	Coupling	Current (amps)	Cable
Subminiature	Microdot®	1000V	Threaded	2	.08 dia. 50-ohm
	SMB (Subminiature-B)	375V	Push-on	1.4	RG-174/U
	SMA (Subminiature-A)	500V	Threaded	0.8 - 1.8	RG-58/U
Miniature	BNC	500V	Bayonet	3.6 - 4.4	RG-58/U
	MHV (Min. High-Voltage)	5000V	Bayonet	3.6	RG-59/U
	SHV-5KV (Safe High-Voltage)	5000V	Bayonet	10	RG-59/U
	SHV-10KV (Safe High-Voltage)	10,000V	Bayonet	2.2 - 10	RG-58/U
	SHV-20KV (Safe High-Voltage)	20,000V	Bayonet	16.5	RG-213/U
	BSHV (Bakeable Safe High-Voltage)	7500V	Threaded	8	RG-59/U
Medium-Sized	N	1500V	Threaded	0.8 - 5	RG-8/U RG-9/U RG-10/U
	HN	7000V	Threaded	7	RG-8/U RG-9/U RG-87/U RG-213/U RG-214/U RG-225/U

- Microwave
- In-vacuum coating
- Particle accelerators

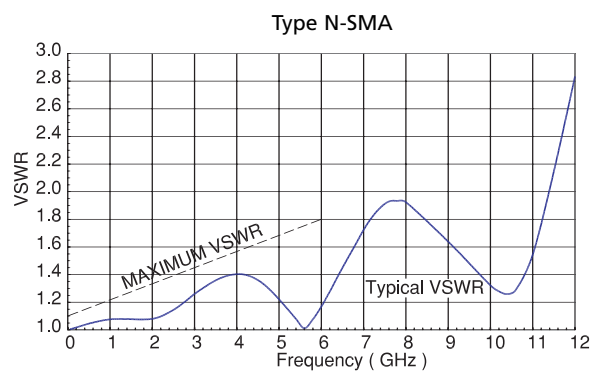
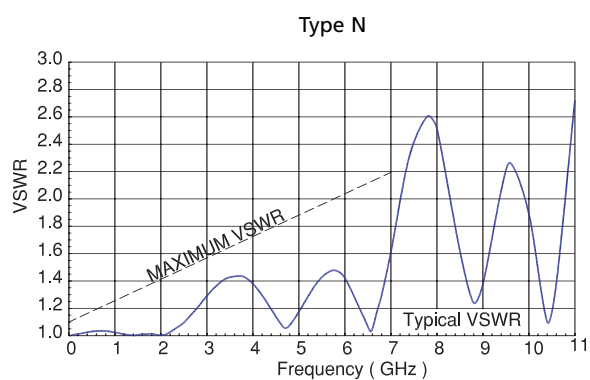
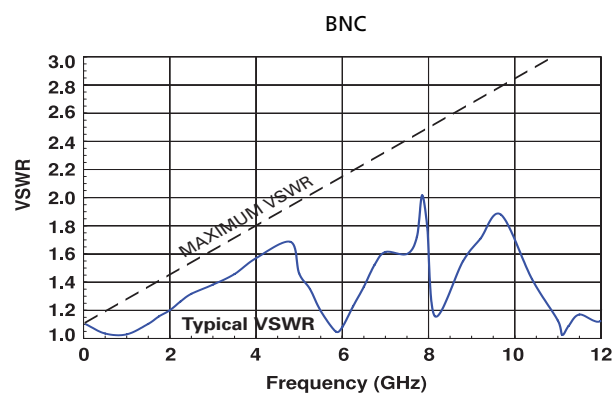
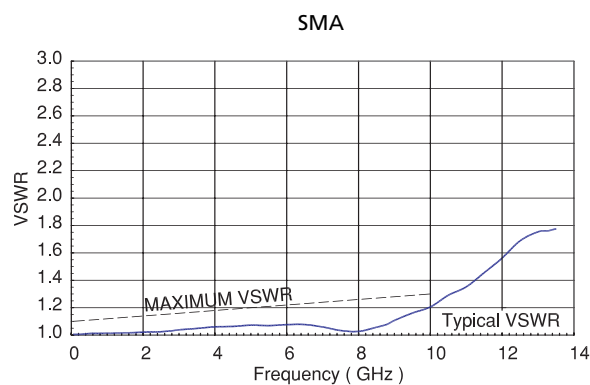
New Products

- Floating SMA connector
- BNC to Microdot connector
- New 50 Ohm BNC connector design

High Frequency 50 Ohm Designs

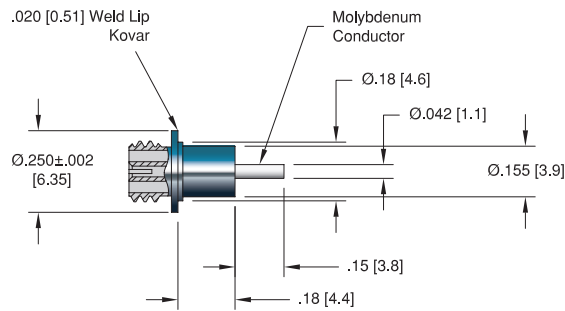
- SMA
- BNC
- Type N
- HN

VSWR vs. Frequency Charts

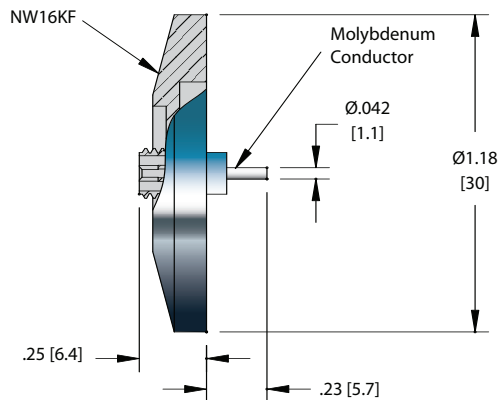


Type	Voltage DC	Current	Impedance Rating	Sub-section	Section Pages
	1 kV	2 Amps	Non-Constant	Microdot	C.1 80-83
	375 V	1.4 Amps	Non-Constant	SMB	C.2 84-87
	500 V	to 1.8 Amps	50 Ohm & Non-Constant	SMA	C.3 88-95
	500 V	to 3.6 Amps	50 Ohm & Non-Constant	BNC	C.4 96-105
	5 kV	3.6 Amps	Non-Constant	MHV	C.5 106-113
	1.5 kV	to 5 Amps	50 Ohm & Non-Constant	Type N	C.6 114-117
	7 kV	7 Amps	50 Ohm	HN	C.7 118-119
	5 kV	10 Amps	Non-Constant	SHV 5 KV	C.8 120-125
	7.5 kV	8 Amps	Non-Constant	BSHV 7.5 KV	C.9 126-127
	10 kV	to 10 Amps	Non-Constant	SHV 10 KV	C.10 128-131
	20 kV	16.5 Amps	Non-Constant	SHV 20 KV	C.11 132-133
	1.5 kV	0.8 Amps	50 Ohm & Non-Constant	Between Series	C.12 134-137

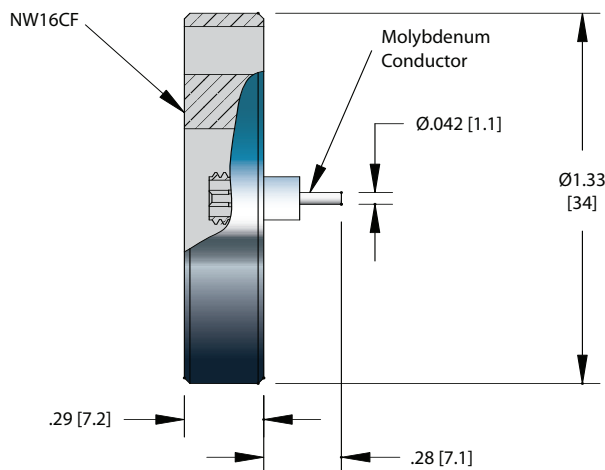
Weldable



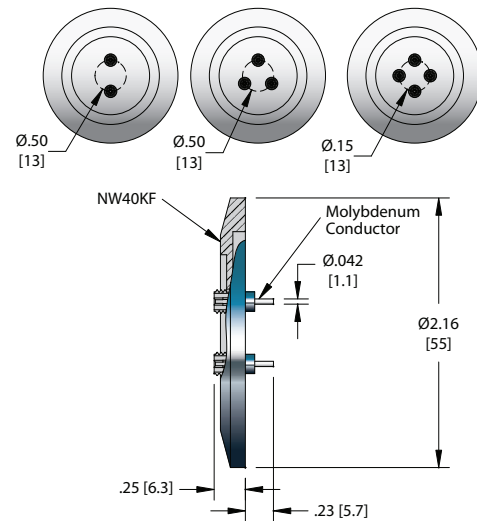
ISO KF - NW16KF



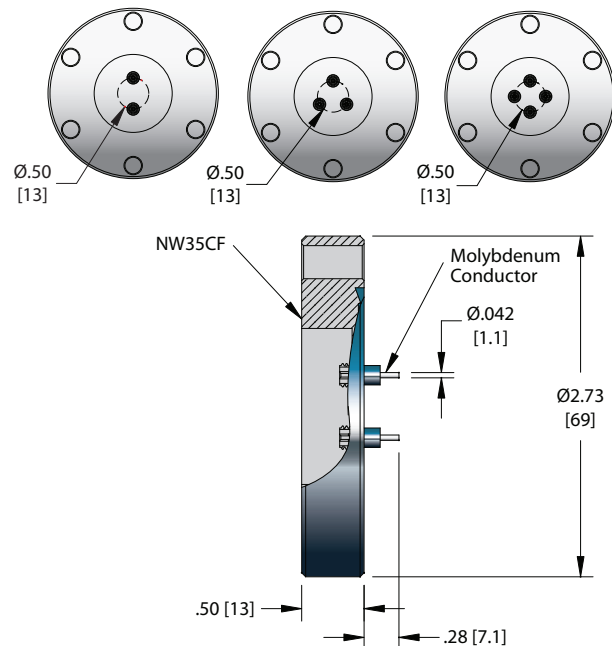
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: Kovar
Pin: Molybdenum
Insulation: Alumina ceramic
Magnetic Materials: Yes

Voltage Rating 1 kV DC

Current Rating 2 Amps

Temperature Range -55°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C See table

**Weldable**

NO. PINS	INSTALLATION	PRESSURE @ 20°C PSIG BAR		PART NUMBER
1	Weld	1600	110	17614-01-W

ISO FLANGE

1	NW16KF	-	-	21507-01-KF
2	NW40KF	-	-	21525-01-KF
3	NW40KF	-	-	21526-01-KF
4	NW40KF	-	-	21527-01-KF

CONFLAT FLANGE

1	1 1/3" (NW16CF)	1600	110	21505-01-CF
2	2 3/4" (NW35CF)	1500	103	21522-01-CF
3	2 3/4" (NW35CF)	1500	103	21523-01-CF
4	2 3/4" (NW35CF)	1500	103	21524-01-CF

ConFlat**Air Side Cable Assembly**

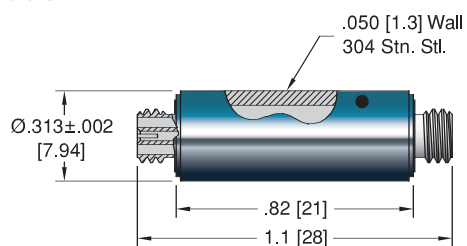
TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX	PART NUMBER
Microdot – Single Ended	10'	1 kV	2	-65°C 125°C	14544-01-A

Contacts

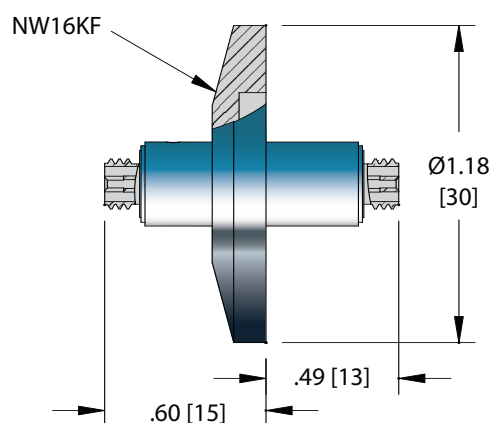
TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.042 Crimp Contacts Crimp Tool	Gold Plated 300 Series Stn. Stl.	Accepts wire up to 0.030 [0.76] For 0.025" – 0.075" Diameters	14461-04-A 2840-05

*Contacts priced and sold in packages of 5. See the Accessories section for more information on all accessories.

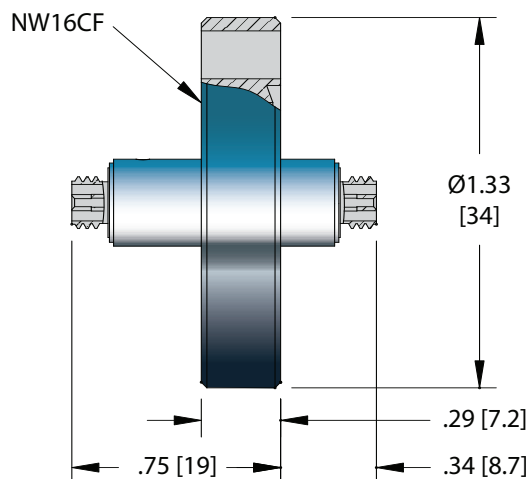
Weldable



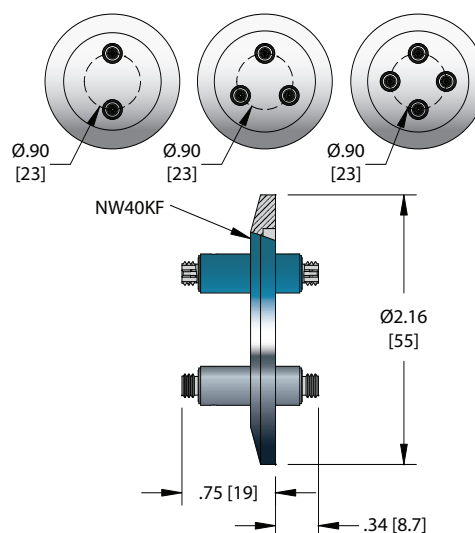
ISO KF - NW16KF



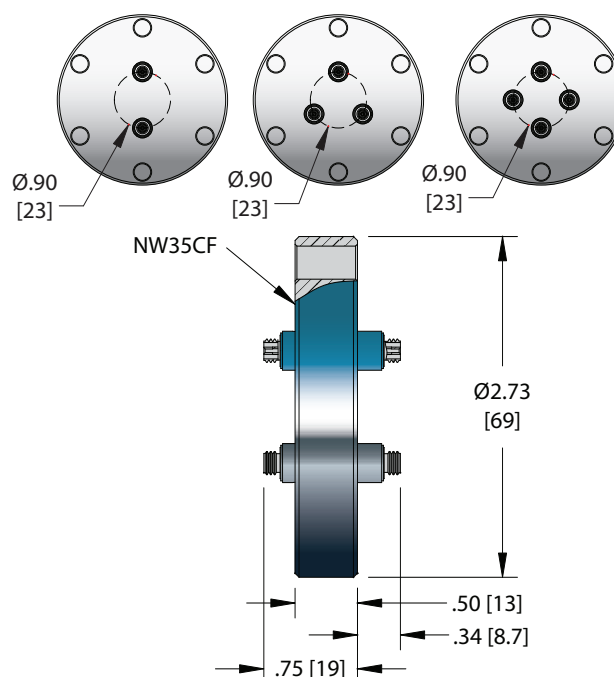
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
Contact: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: Yes

Voltage Rating 1 kV DC

Current Rating 2 Amps

Temperature Range -55°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C See table

Weldable



NO. PINS	INSTALLATION	PRESSURE @ 20°C PSIG BAR		PART NUMBER
1	Weld	1600	110	18044-02-W

ISO FLANGE

1	NW16KF	-	-	21511-01-KF
2	NW40KF	-	-	21517-01-KF
3	NW40KF	-	-	21518-01-KF
4	NW40KF	-	-	21519-01-KF

ISO KF



CONFLAT FLANGE

1	1 1/3" (NW16CF)	1600	110	21509-01-CF
2	2 3/4" (NW35CF)	1500	103	21514-01-CF
3	2 3/4" (NW35CF)	1500	103	21515-01-CF
4	2 3/4" (NW35CF)	1500	103	21516-01-CF

ConFlat



Air Side Cable Assembly



TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN	TEMPERATURE MAX	PART NUMBER
Microdot Air Side – Single Ended	10'	1 kV	2	-65°C	125°C	14544-01-A

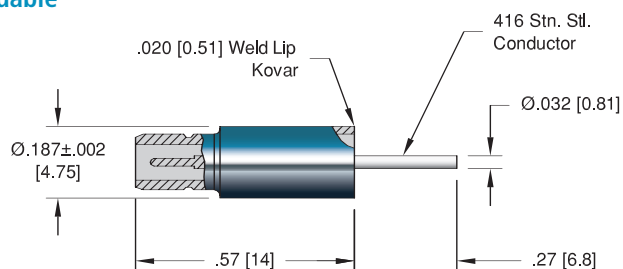
Vacuum Side Cable Assembly



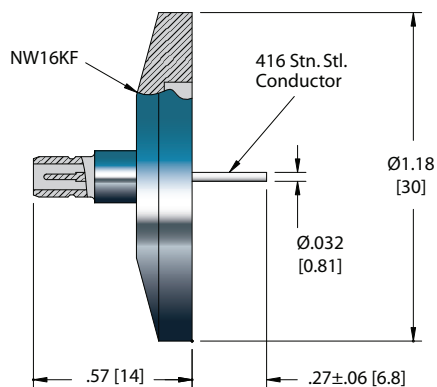
TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN	TEMPERATURE MAX	PART NUMBER
Microdot Vacuum Side – Double Ended	12"	500 V	2	-65°C	125°C	15767-12-A
Microdot Vacuum Side – Double Ended	24"	500 V	2	-65°C	125°C	15767-24-A
Microdot Vacuum Side – Double Ended	36"	500 V	2	-65°C	125°C	15767-36-A [†]

[†]Shown in photo. See the Accessories section for more information on all accessories.

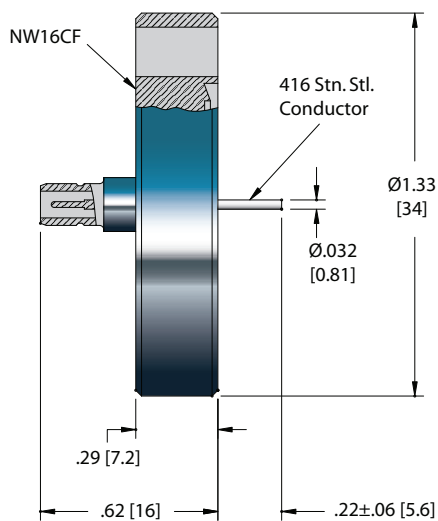
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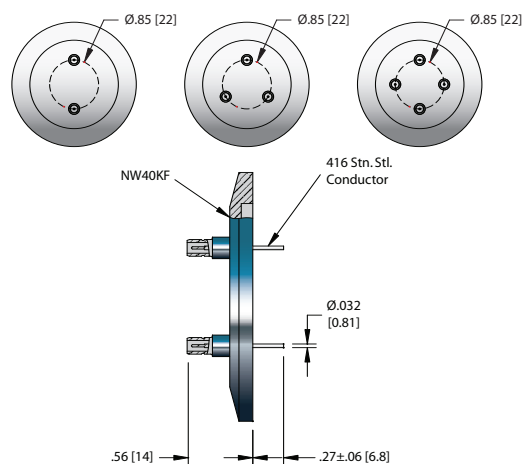
ISO KF - NW16KF



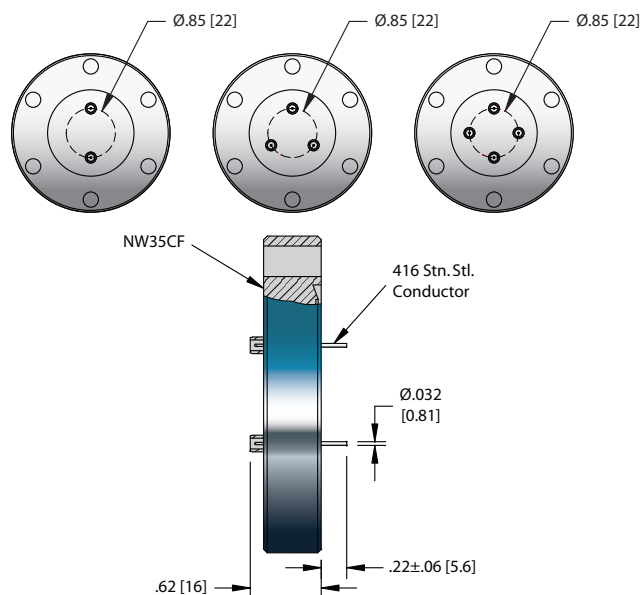
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: Kovar
Pin: 416 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: Yes

Voltage Rating 500 V DC

Current Rating 1.4 Amps

Temperature Range -55°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C See table

Weldable



NO. PINS	INSTALLATION	PRESSURE @ 20°C PSIG BAR		PART NUMBER
1	Weld	3500	241	0713-02-W

ISO FLANGE

1	NW16KF	-	-	21371-01-KF
2	NW40KF	-	-	21379-01-KF
3	NW40KF	-	-	21381-01-KF
4	NW40KF	-	-	21383-01-KF

ISO KF



CONFLAT FLANGE

1	1 1/3" (NW16CF)	3000	207	21369-01-CF
2	2 3/4" (NW35CF)	1500	103	21373-01-CF
3	2 3/4" (NW35CF)	1500	103	21375-01-CF
4	2 3/4" (NW35CF)	1500	103	21377-01-CF

ConFlat



Air Side Plug



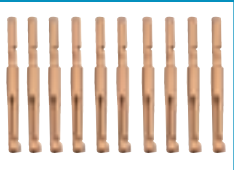
TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L		DESCRIPTION	PART NUMBER
Air Side	375 V	5	0.25 [6.4]	0.71 [18]	SMB Plug	3095-12

Air Side Cable Assembly



TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX		PART NUMBER
50 Ohm SMB – Double Ended	10'	500 V	2	-70	200	21618-01-A

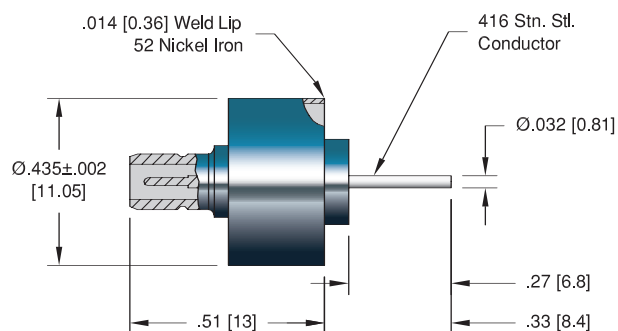
Contacts



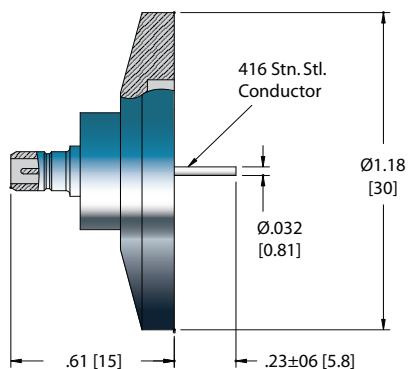
TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.032 Crimp Contacts Crimp Tool	Beryllium Copper	Accepts wire up to 0.032 [0.81] For 0.025" – 0.075" Diameters	11288-02-X 2840-05

*Contacts priced and sold in packages of 10. See the Accessories section for more information on all accessories.

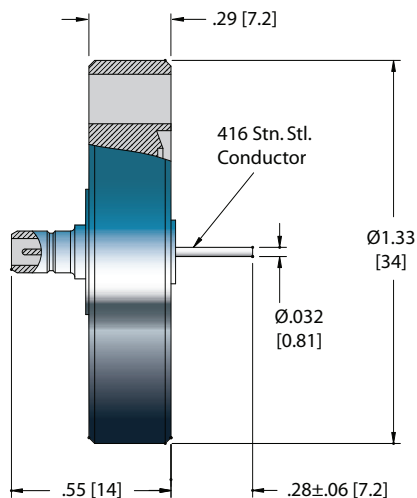
Weldable



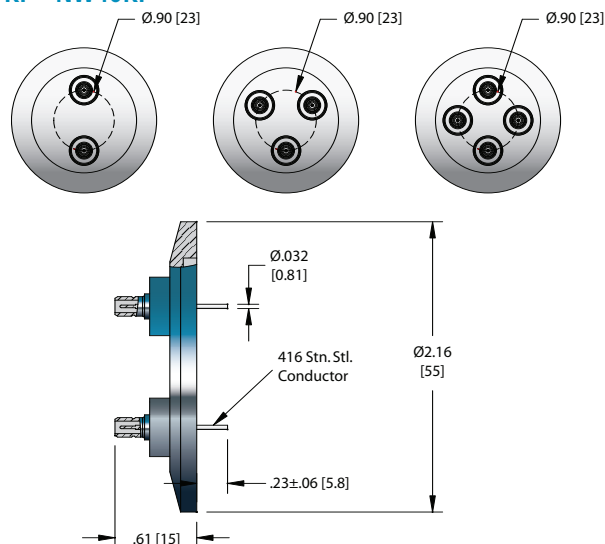
ISO KF - NW16KF



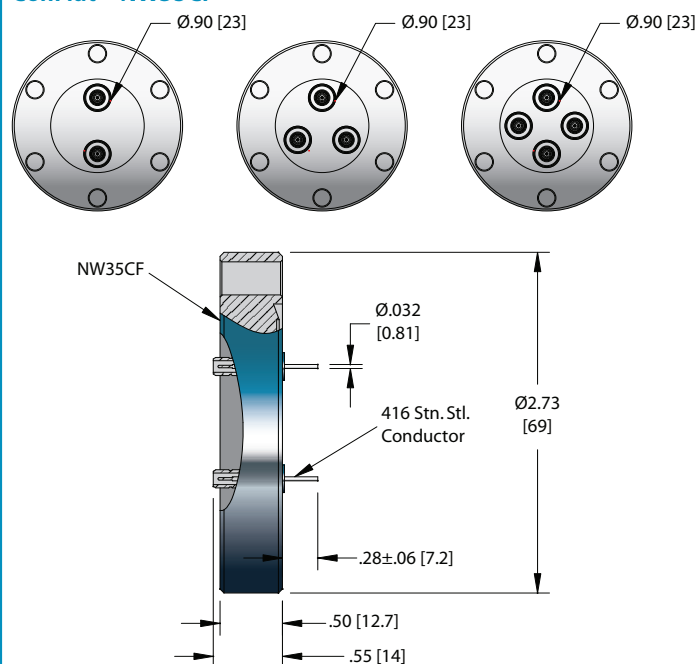
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

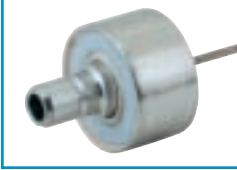
Housing: 52 Nickel Iron
Pin: 416 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: Yes

Voltage Rating Pin/Shield: 500 V DC, Shield/Grd: 1 kV DC

Current Rating 1.4 Amps

Temperature Range -55°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 500 PSIG (35 Bar), ISO KF 0 PSIG

**Weldable**NO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

0714-02-W

ISO FLANGE

1

NW16KF

21396-01-KF

2

NW40KF

21403-01-KF

3

NW40KF

21405-01-KF

4

NW40KF

21407-01-KF

CONFLAT FLANGE

1

1 1/3" (NW16CF)

21394-01-CF

2

2 3/4" (NW35CF)

21397-01-CF

3

2 3/4" (NW35CF)

21399-01-CF

4

2 3/4" (NW35CF)

21401-01-CF

Air Side Plug

TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

375 V

5

0.25 [6.4] 0.71 [18]

SMB Plug

3095-12

**Air Side Cable
Assembly**

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm SMB – Double Ended

10'

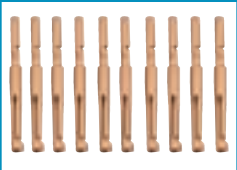
500 V

2

-70

200

21618-01-A

Contacts

TYPE

MATERIAL

DESCRIPTION

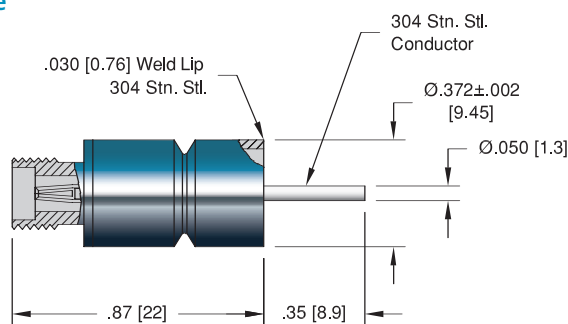
PART
NUMBER0.032 Crimp Contacts
Crimp Tool

Beryllium Copper

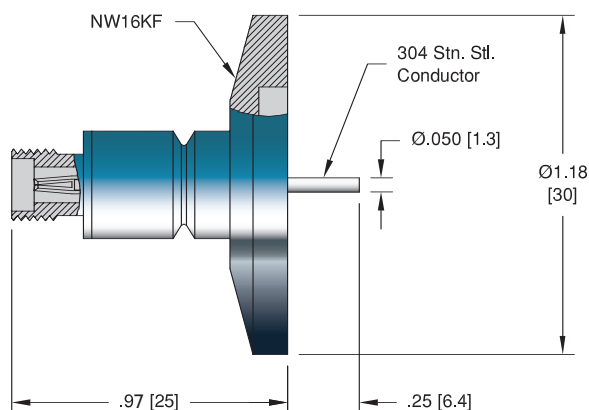
Accepts wire up to 0.032 [0.81]
For 0.025" – 0.075" Diameters11288-02-X
2840-05

*Contacts priced and sold in packages of 10. See the Accessories section for more information on all accessories.

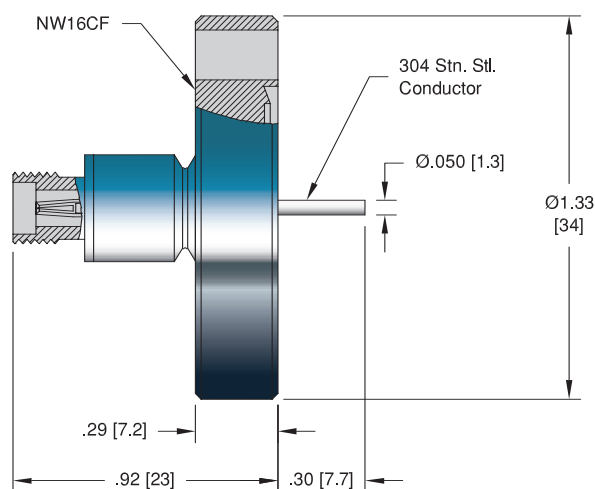
Weldable



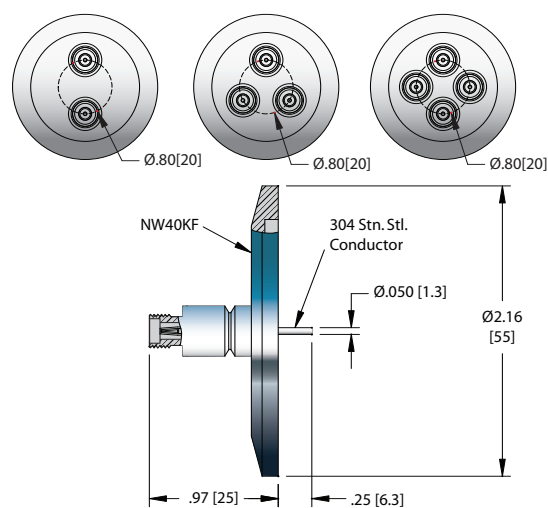
ISO KF - NW16KF



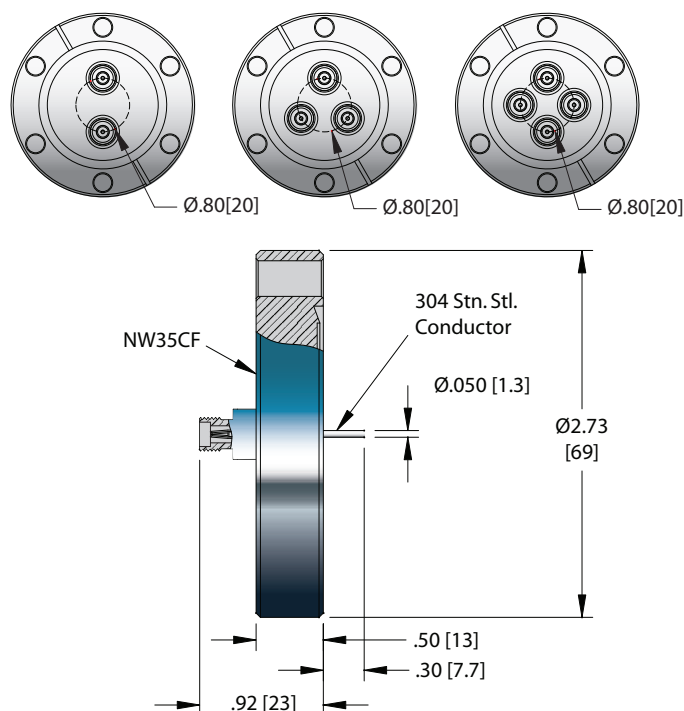
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: No

Voltage Rating 500 V DC

Current Rating 1.8 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C See table

Weldable



NO. PINS	INSTALLATION	PRESSURE @ 20°C PSIG BAR		PART NUMBER
1	Weld	4000	276	8071-02-W

ISO FLANGE

1	NW16KF	-	-	18045-02-KF
2	NW40KF	-	-	21498-01-KF
3	NW40KF	-	-	21499-01-KF
4	NW40KF	-	-	21500-01-KF

CONFLAT FLANGE

1	1 1/3" (NW16CF)	3000	207	18046-02-CF
2	2 3/4" (NW35CF)	1500	103	21495-01-CF
3	2 3/4" (NW35CF)	1500	103	21496-01-CF
4	2 3/4" (NW35CF)	1500	103	21497-01-CF

ConFlat



Air Side Plug



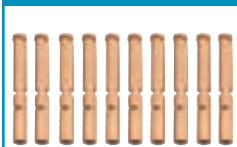
TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L		DESCRIPTION	PART NUMBER
Air Side	500 V	5	0.31 [7.9]	0.98 [25]	SMA Plug	6524-02

Air Side Cable Assembly



TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX		PART NUMBER
50 Ohm SMA – Double Ended	10'	500 V	5	-70	200	21617-01-A

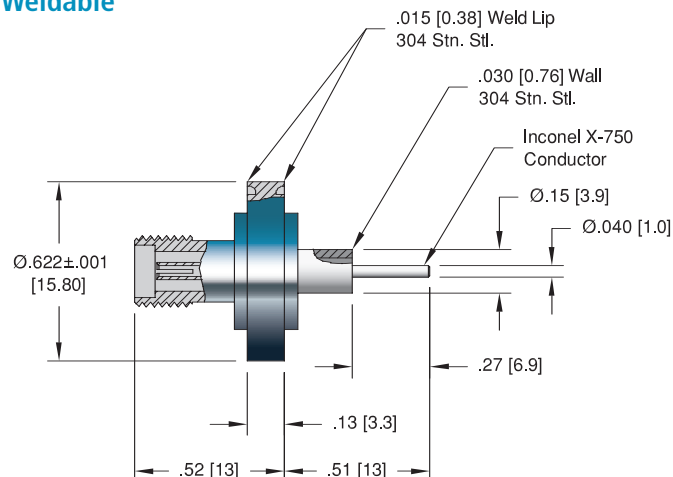
Contacts



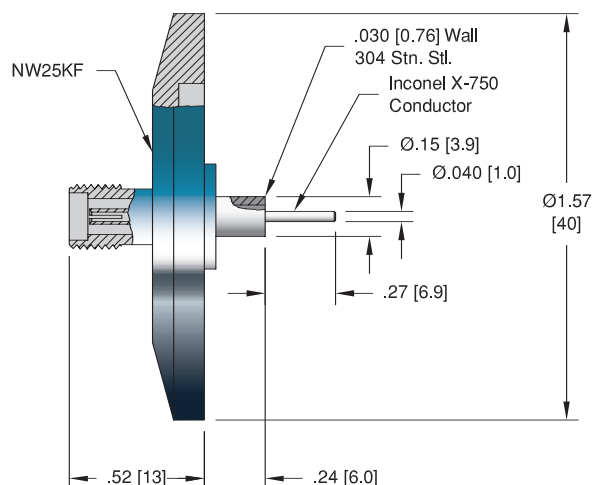
TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.050 Crimp Contacts	Beryllium Copper	Accepts wire up to 0.062 [1.6]	11911-02-X†
0.050 Set Screw Type Contacts	Beryllium Copper	Accepts wire up to 0.050 [1.3]	7429-02-A
0.050 Barrel Type Contacts	Beryllium Copper	Accepts wire up to 0.050 [1.3]	7332-02-A
Crimp Tool		For 0.025" – 0.075" Diameters	2840-05

*Contacts priced and sold in packages of 10. †Shown in photo. See the Accessories section for more information on all accessories.

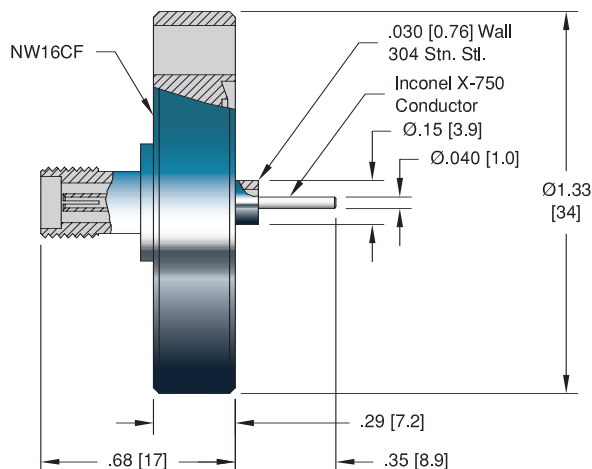
Weldable



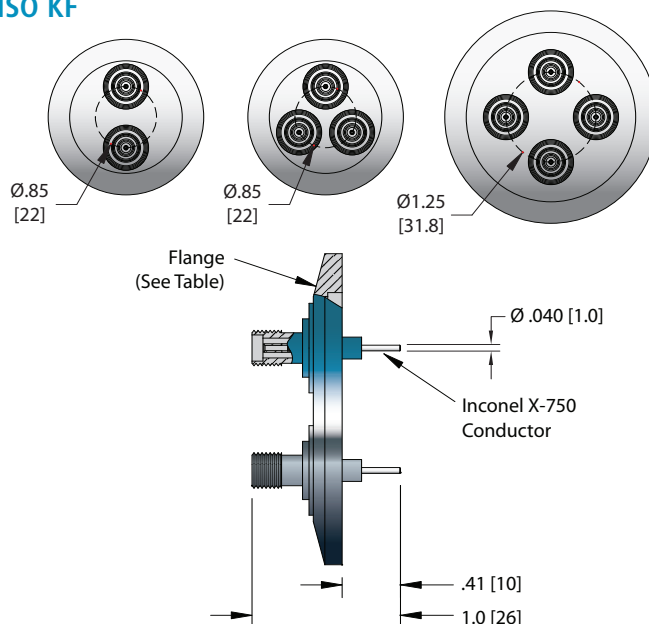
ISO KF – NW25KF



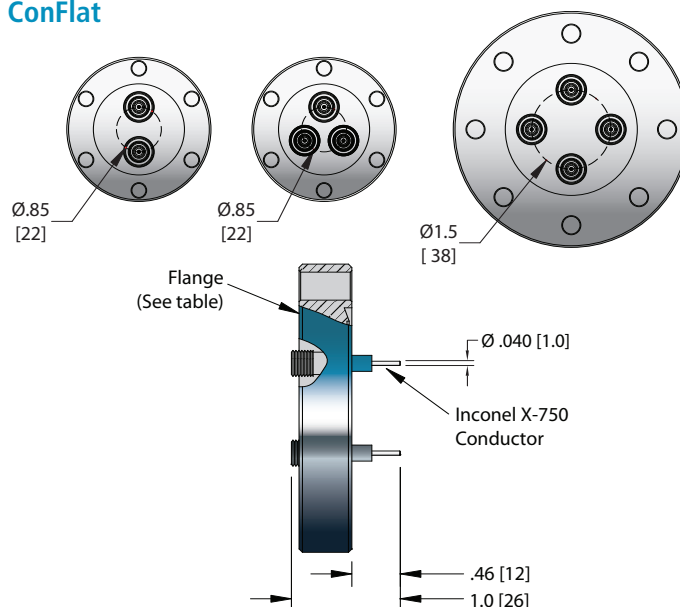
ConFlat – NW16CF



ISO KF



ConFlat



Specifications

Materials

Housing: 304 Stainless steel Insulation: Glass-ceramic
Pin: Inconel X-750 Magnetic Materials: No
Contacts: 300 Series Stn. Stl.

Voltage Rating 500 V DC

Current Rating 1 Amp

Temperature Range -269°C to 350°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Single Ended
WeldableNO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

15310-03-W

ISO FLANGE

1

NW25KF

18053-02-KF

2

NW40KF

21356-01-KF

3

NW40KF

21357-01-KF

4

NW50KF

21361-01-KF

CONFLAT FLANGE

1

1 1/3" (NW16CF)

18054-02-CF

2

2 3/4" (NW35CF)

21353-01-CF

3

2 3/4" (NW35CF)

21358-01-CF

4

4 1/2" (NW63CF)

21360-01-CF

Single Ended
ConFlat

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

500 V

5

0.31 [7.9] 0.98 [25]

SMA Plug

6524-02

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm SMA – Double Ended

10'

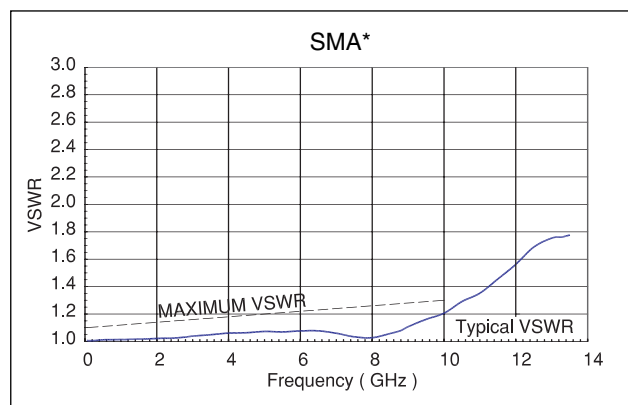
500 V

5

-70 200

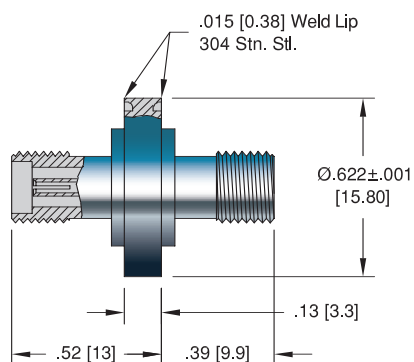
21617-01-A

See the Accessories section for more information on all accessories.

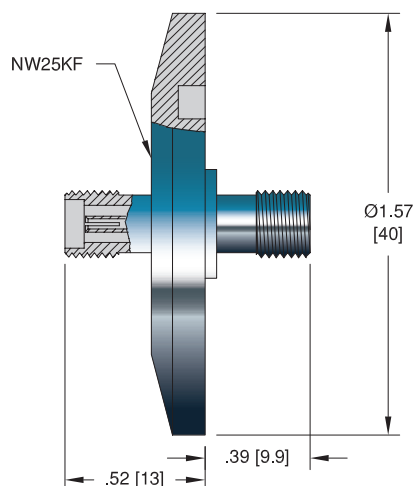


*Applies when properly mated to a 50 Ohm load.

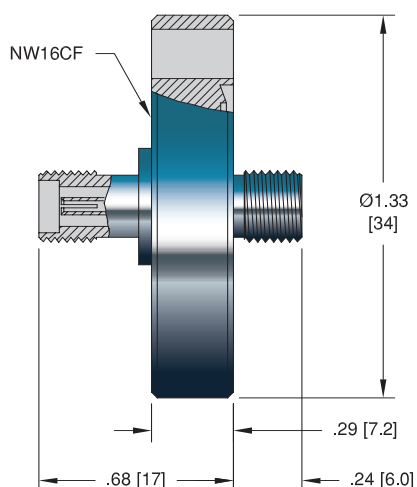
Weldable



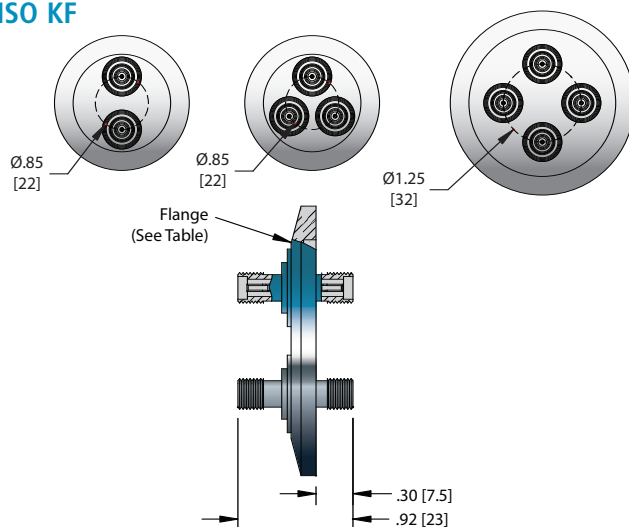
ISO KF – NW25KF



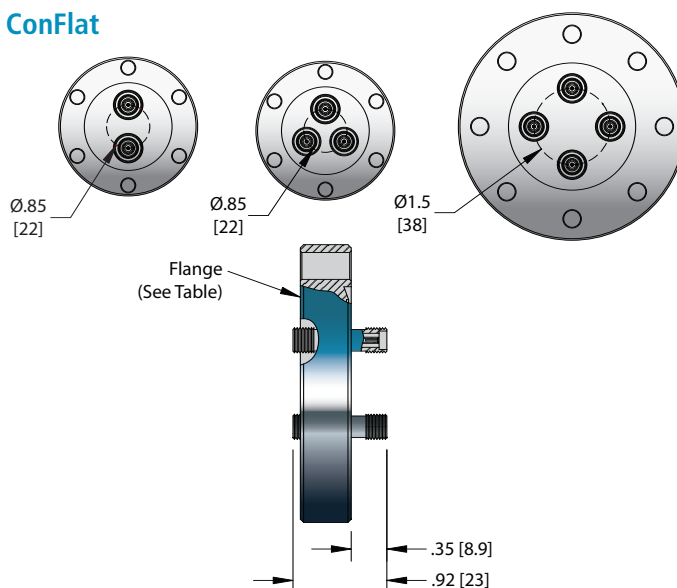
ConFlat – NW16CF



ISO KF



ConFlat



Specifications

Materials

Housing: 304 Stainless steel Insulation: Glass-ceramic
Pin: Inconel X-750 Magnetic Materials: No
Contacts: 300 Series Stn. Stl.

Voltage Rating 500 V DC

Current Rating 1 Amp

Temperature Range -269°C to 350°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Double Ended
WeldableNO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

15263-03-W

ISO FLANGE

1

NW25KF

18055-02-KF

2

NW40KF

21365-01-KF

3

NW40KF

21366-01-KF

4

NW50KF

21367-01-KF

CONFLAT FLANGE

1

1 1/3" (NW16CF)

16545-01-CF

2

2 3/4" (NW35CF)

21362-01-CF

3

2 3/4" (NW35CF)

21363-01-CF

4

4 1/2" (NW63CF)

21364-01-CF

Double Ended
ConFlat

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

500 V

5

0.31 [7.9] 0.98 [25]

SMA Plug

6524-02

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm SMA – Double Ended

10'

500 V

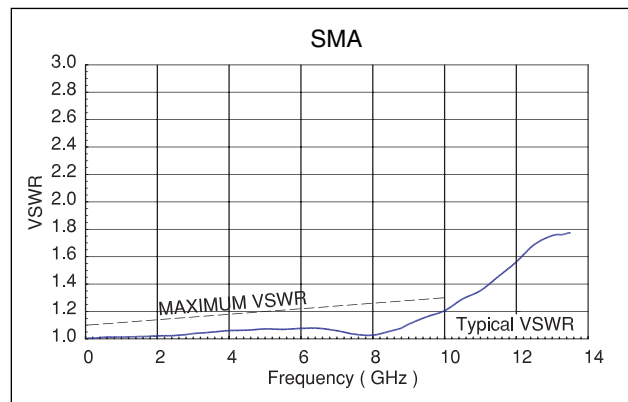
5

-70

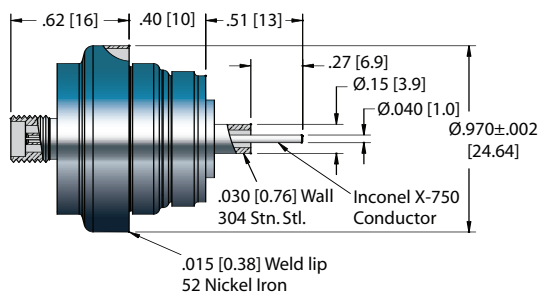
200

21617-01-A

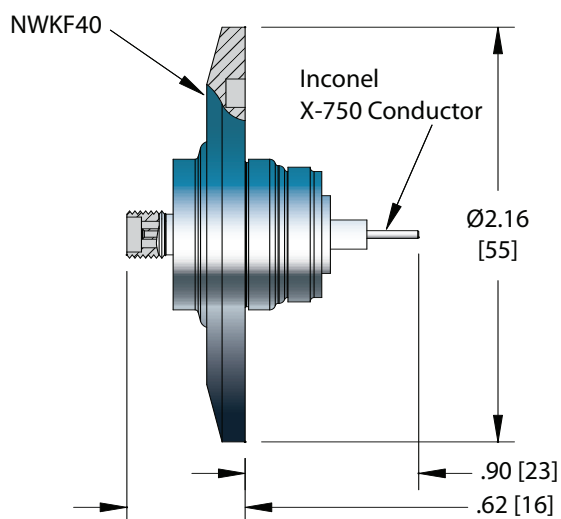
See the Accessories section for more information on all accessories.



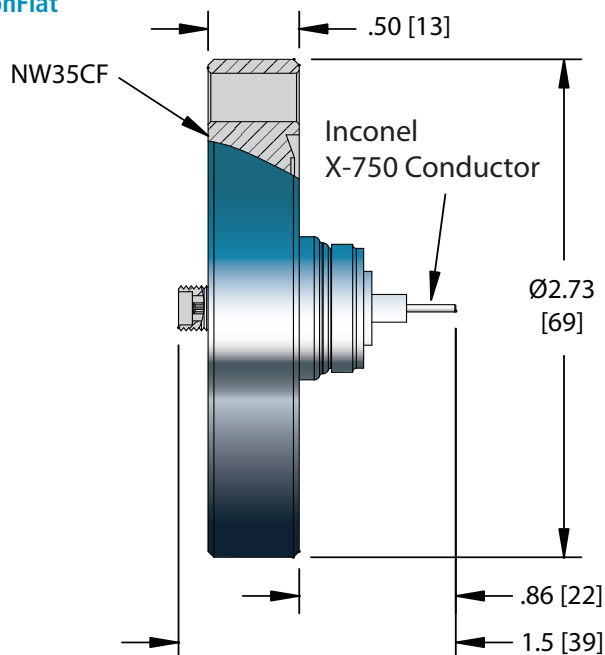
Single Ended – Floating Shield Weldable



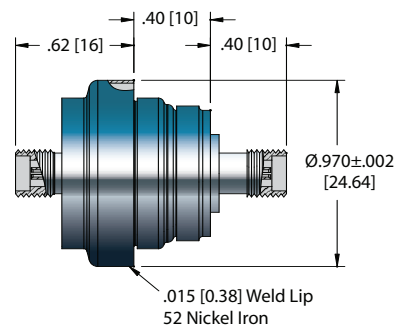
ISO KF



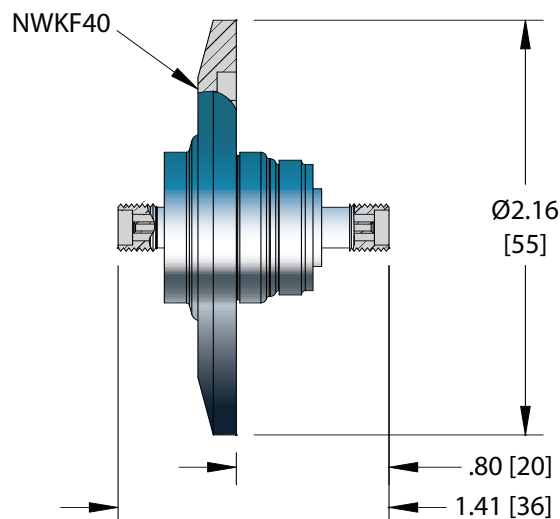
ConFlat



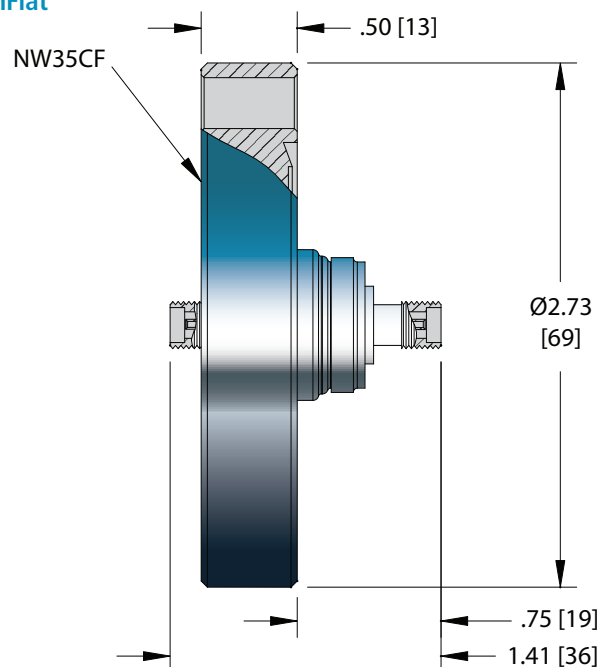
Double Ended – Floating Shield Weldable



ISO KF



ConFlat



Single & Double Ended
Weldable

STYLE	INSTALLATION	PART NUMBER
Single Ended	Weld	21283-01-W
Double Ended	Weld	19604-01-W†

Single & Double Ended
ISO KF

ISO FLANGE		
Single Ended	NW40KF	21285-01-KF
Double Ended	NW40KF	21287-01-KF†

Single & Double Ended
ConFlat

CONFLAT FLANGE		
Single Ended	2 3/4" (NW35CF)	21284-01-CF
Double Ended	2 3/4" (NW35CF)	21286-01-CF†

Air Side Plug



TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L	DESCRIPTION	PART NUMBER
Air Side	500 V	5	0.31 [7.9] 0.98 [25]	SMA Plug	6524-02

Air Side Cable
Assembly

TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX	PART NUMBER
50 Ohm SMA – Double Ended	10'	500 V	5	-70 200	21617-01-A

Contacts



TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.040 Crimp Contacts	Copper Alloy - Gold Flash	Accepts wire up to 0.040 [1.0]	16167-03-A†
0.040 Set Screw Type Contacts	Beryllium Copper	Accepts wire up to 0.050 [1.3]	7429-03-A
0.040 Barrel Type Contacts	Beryllium Copper	Accepts wire up to 0.040 [1.0]	7332-01-A
Crimp Tool		For 0.025" – 0.075" Diameters	2840-05

*Contacts priced and sold in packages of 5. **Contacts priced and sold in packages of 10. †Shown in photo. See the Accessories section for more information on all accessories.

Specifications

Materials

Housing: 52 Nickel Iron Insulation: Glass-ceramic & Alumina ceramic

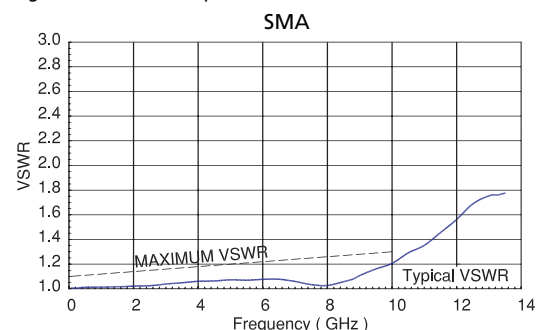
Pin: Inconel X-750 Magnetic Materials: Yes

Voltage Rating Pin/Shield: 500 V DC, Shield/Gnd: 2.5 kV DC

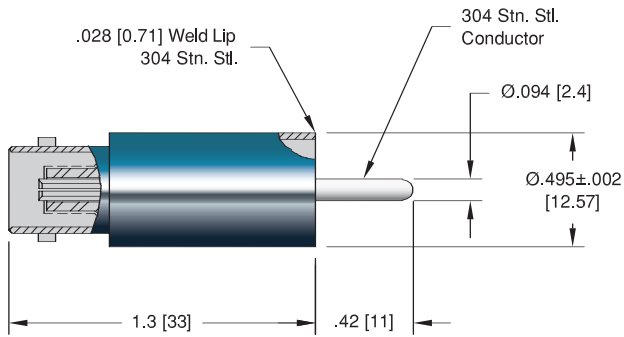
Current Rating 1 Amp

Temperature Range -269°C to 350°C, ISO KF -25°C to 205°C

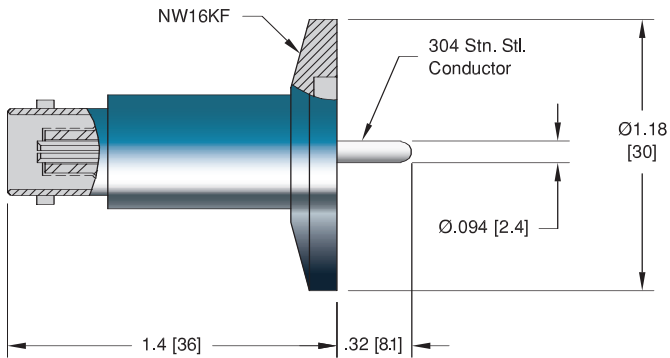
Pressure @ 20°C 300 PSIG (20 Bar), ISO KF 0 PSIG



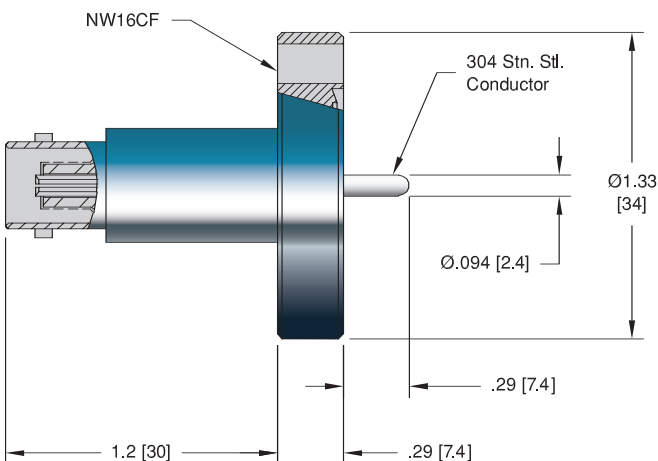
Weldable



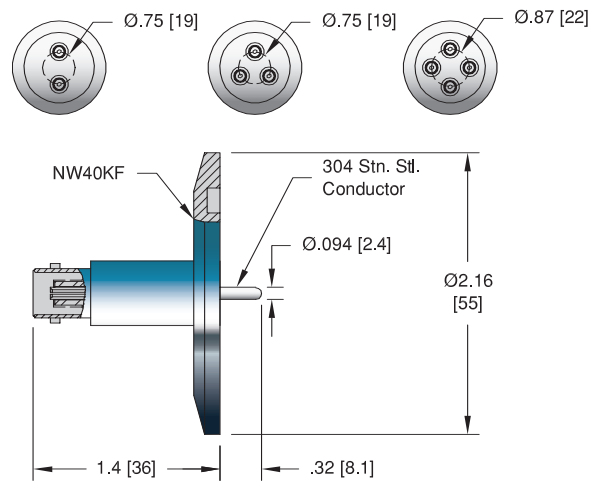
ISO KF - NW16KF



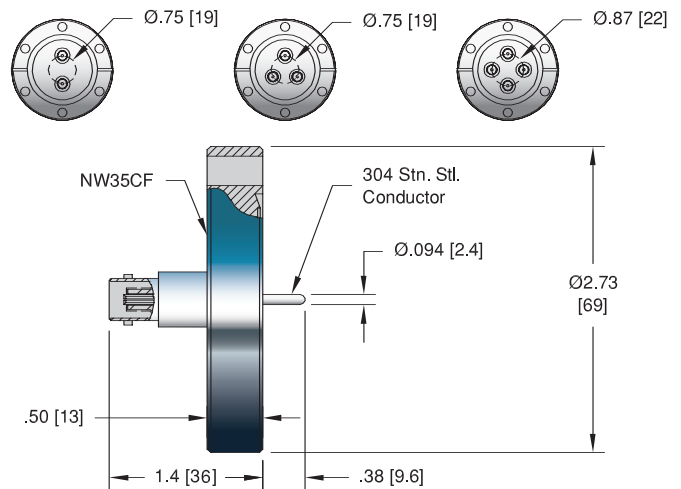
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
 Pin: 304 Stainless steel
 Insulation: Alumina ceramic
 Magnetic Materials: No

Voltage Rating 500 V DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Single Ended
WeldableNO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

7007-02-W

Single Ended
ISO KF

ISO FLANGE

1

NW16KF

17114-01-KF

1

NW40KF

17114-05-KF

2

NW40KF

17136-01-KF

3

NW40KF

17137-01-KF

4

NW40KF

17138-01-KF

Single Ended
ConFlat

CONFLAT FLANGE

1

1 1/3" ConFlat (NW16CF)

7593-02-CF

1

2 3/4" ConFlat (NW35CF)

7592-02-CF

2

2 3/4" ConFlat (NW35CF)

5822-04-CF

3

2 3/4" ConFlat (NW35CF)

6647-04-CF

4

2 3/4" ConFlat (NW35CF)

7184-05-CF

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

500 V

5

0.56 [14] 1.1 [27]

BNC Plug

7116-02

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm BNC – Double Ended

10'

500 V

5

-40 85

18921-01-A

Contacts



TYPE

MATERIAL

DESCRIPTION

PART
NUMBER

0.094 Set Screw Type Contacts

Beryllium Copper

Accepts wire up to 0.050 [1.3]

7429-01-A†

0.094 Barrel Type Contacts

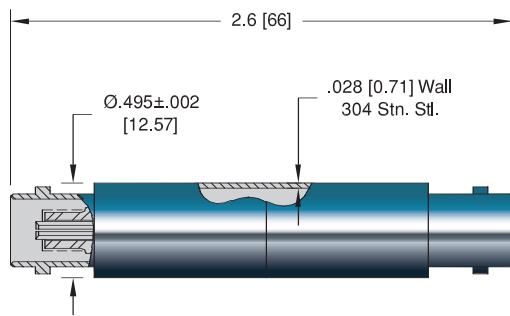
Beryllium Copper

Accepts wire up to 0.094 [2.4]

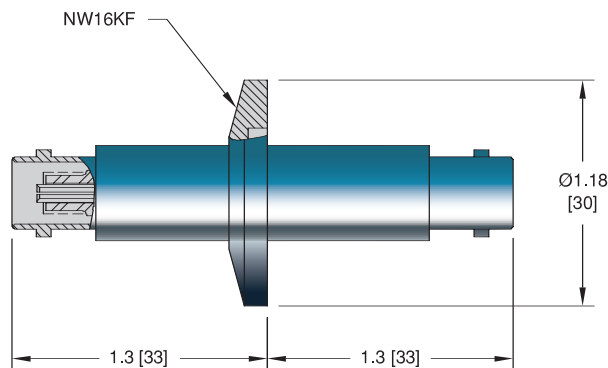
7332-04-A

*Contacts priced and sold in packages of 10. †Shown in photo. See the Accessories section for more information on all accessories.

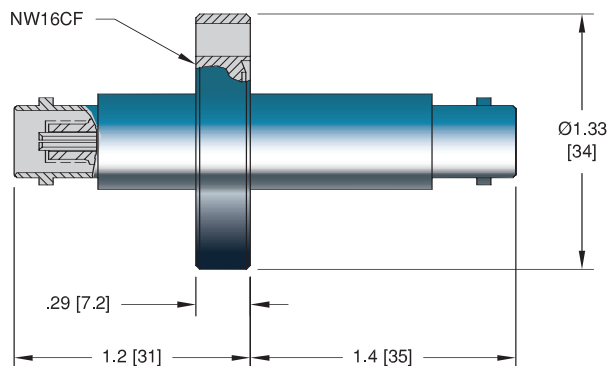
Weldable



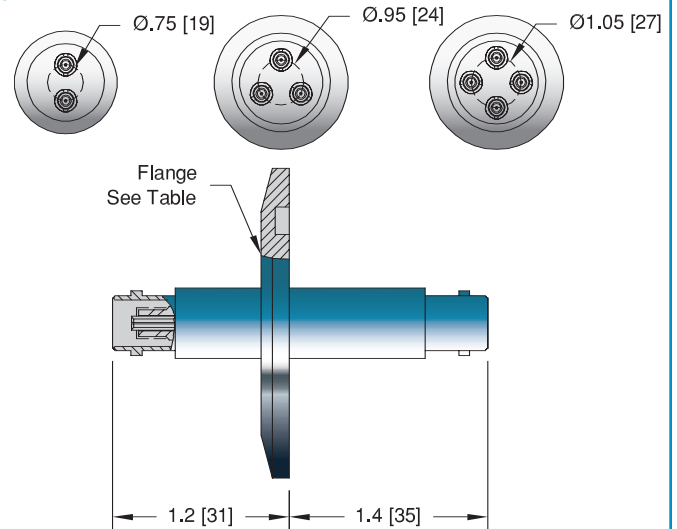
ISO KF - NW16KF



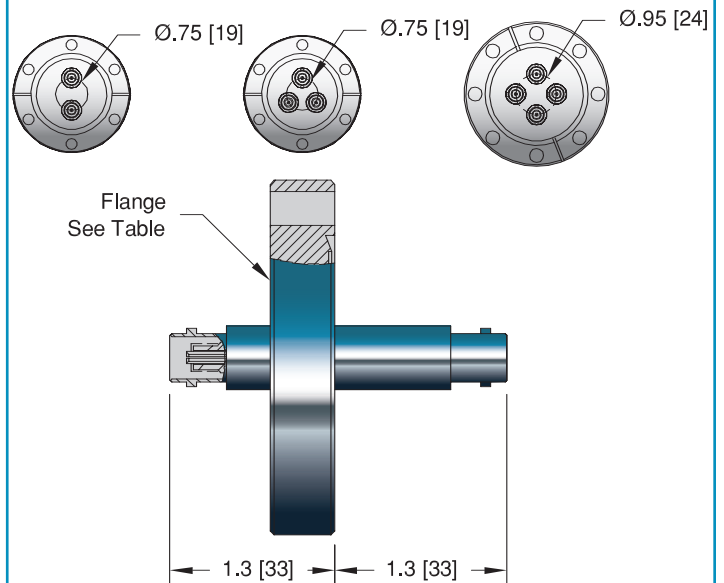
ConFlat - NW16CF



ISO KF



ConFlat



Specifications

Materials

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: No

Voltage Rating 500 V DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Double Ended
WeldableNO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

17115-01-W

ISO FLANGE

1

NW16KF

17116-01-KF

1

NW40KF

17118-01-KF

2

NW40KF

17118-05-KF

3

NW50KF

17122-01-KF

4

NW50KF

17139-01-KF

CONFLAT FLANGE

1

1 1/3" ConFlat (NW16CF)

17117-01-CF

1

2 3/4" ConFlat (NW35CF)

18604-01-CF

2

2 3/4" ConFlat (NW35CF)

17187-01-CF

3

2 3/4" ConFlat (NW35CF)

17188-01-CF

4

3 3/8" ConFlat (NW50CF)

17189-01-CF

Double Ended
ConFlat

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

500 V

5

0.56 [14] 1.1 [28]

BNC Plug

7116-02

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm BNC – Double Ended

10'

500 V

5

-40 85

18921-01-A

See the Accessories section for more information on all accessories.



Specifications

Materials

Housing: 52 Nickel Iron

Pin: 304 Stainless steel

Insulation: Alumina ceramic

Magnetic Materials: Yes

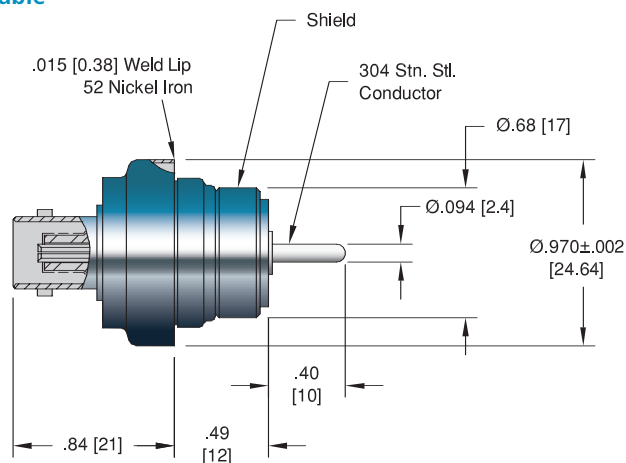
Voltage Rating Pin/Shield: 500 V DC, Shield/Gnd: 2.5 kV DC

Current Rating 3.6 Amps

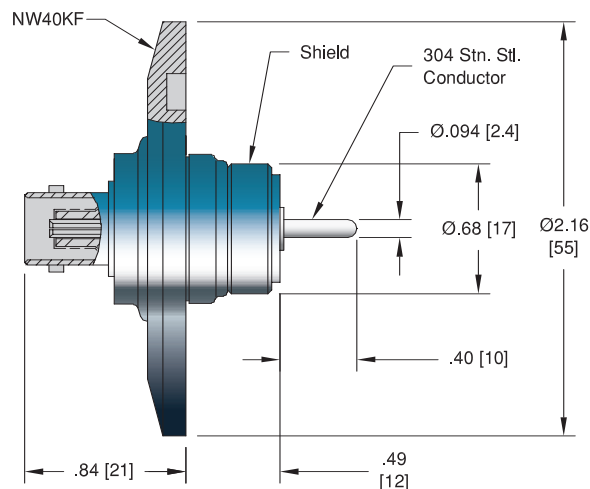
Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 300 PSIG (20 Bar), ISO KF 0 PSIG

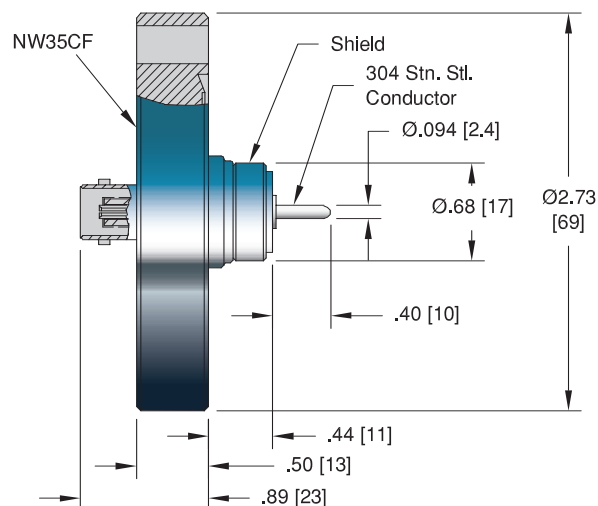
Weldable



ISO KF



ConFlat



Single Ended
Weldable

INSTALLATION

Weld

PART
NUMBER

6511-03-W

Single Ended
ISO KF

ISO FLANGE

NW40KF

17177-01-KF

Single Ended
ConFlat

CONFLAT FLANGE

2 3/4" (NW35CF)

17178-01-CF

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

500 V

5

0.56 [14] 1.1 [28]

BNC Plug

7116-02

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

50 Ohm BNC – Double Ended

10'

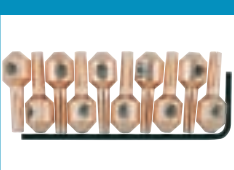
500 V

5

-40 85

18921-01-A

Contacts



TYPE

MATERIAL

DESCRIPTION

PART
NUMBER

0.094 Set Screw Type Contacts

Beryllium Copper

Accepts wire up to 0.050 [1.3]

7429-01-A[†]

0.094 Barrel Type Contacts

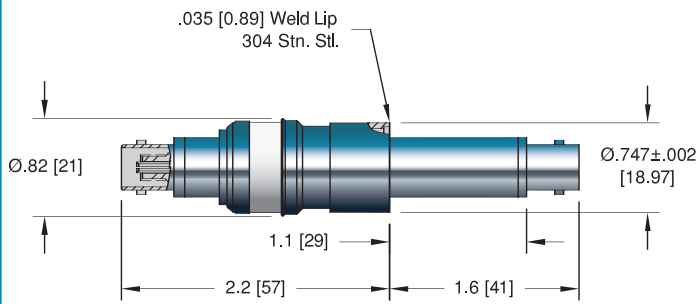
Beryllium Copper

Accepts wire up to 0.094 [2.4]

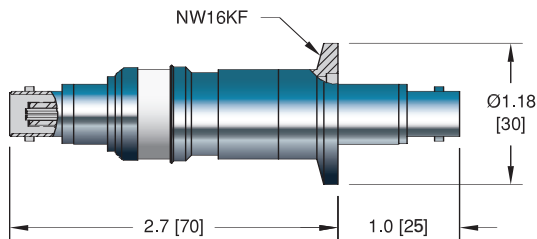
7332-04-A

*Contacts priced and sold in packages of 10. [†]Shown in photo. See the Accessories section for more information on all accessories.

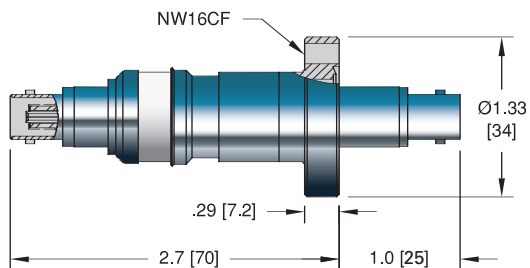
Weldable



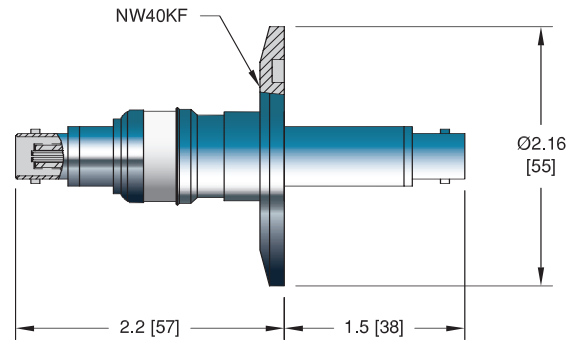
ISO KF - NW16KF



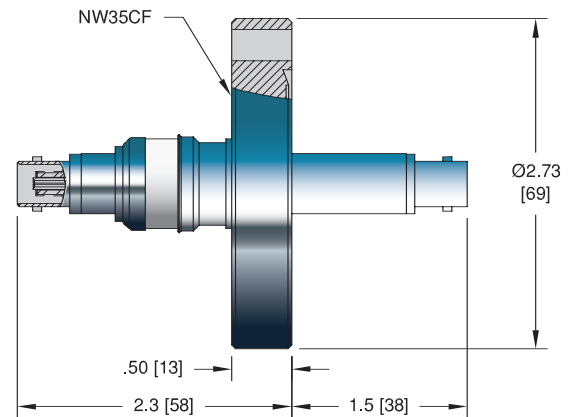
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
 Pin: 304 Stainless steel
 Insulation: Alumina ceramic
 Magnetic Materials: Yes

Voltage Rating Pin/Shield: 500 V DC, Shield/Gnd: 2.5 kV DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 400 PSIG (28 Bar), ISO KF 0 PSIG

**Double Ended
Weldable****INSTALLATION**

Weld

**PART
NUMBER**

17190-01-W

**Double Ended
ISO KF****ISO FLANGE**

NW16KF

NW40KF

17191-01-KF

17191-05-KF

**Double Ended
ConFlat****CONFLAT FLANGE**

1 1/3" (NW16CF)

2 3/4" (NW35CF)

17192-01-CF

17193-01-CF

**Air Side Cable
Assembly****TYPE****LENGTH****VOLTAGE
DC****CONDUCTOR
AMPS****TEMPERATURE
MIN MAX****PART
NUMBER**

50 Ohm BNC – Double Ended

10'

500 V

5

-40

85

18921-01-A

Air Side Plug**TYPE****VOLTAGE
DC****CONDUCTOR
AMPS****DIMENSIONS
H L****DESCRIPTION****PART
NUMBER**

Air Side

500 V

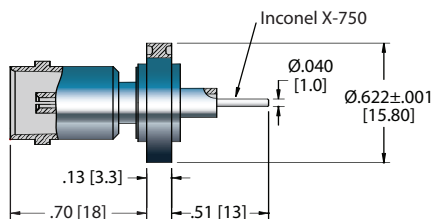
5

0.56 [14] 1.1 [28]

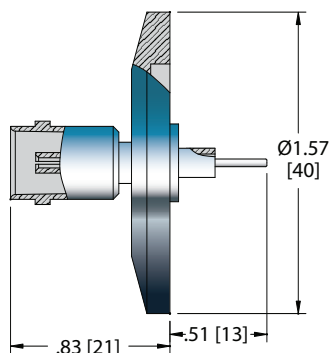
BNC Plug

7116-02

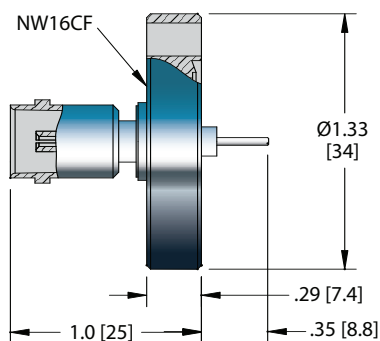
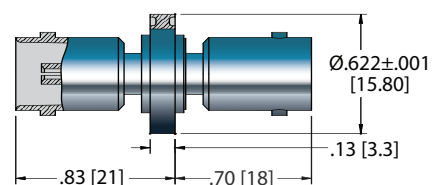
See the Accessories section for more information on all accessories.

Single Ended - Grounded Shield
Weldable

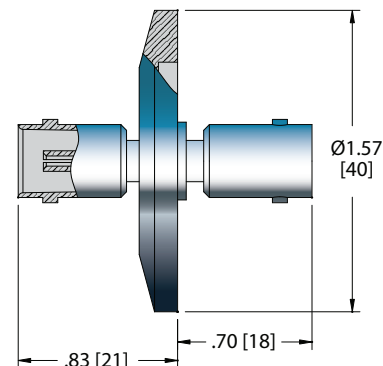
ISO KF



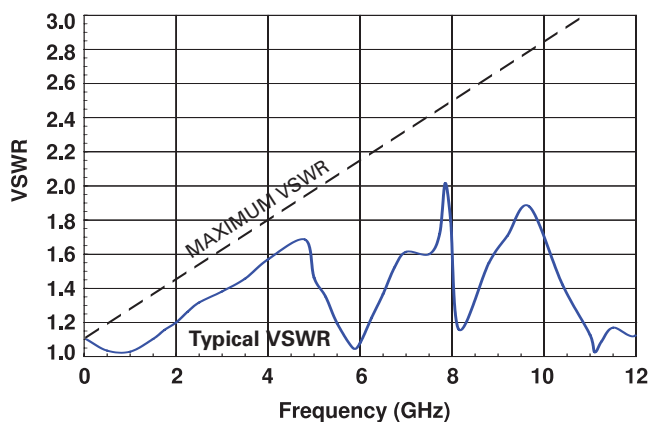
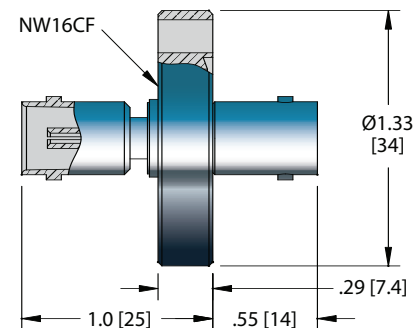
ConFlat

Double Ended - Grounded Shield
Weldable

ISO KF



ConFlat



Specifications

Materials

Housing: 304 Stainless steel
Pin: Inconel X-750
Insulation: Glass-ceramic
Magnetic Materials: No

Voltage Rating 500 V DC

Current Rating 1 Amp

Temperature Range -269°C to 350°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Single & Double Ended
Weldable

STYLE	INSTALLATION	PART NUMBER
Single Ended	Weld	21200-01-W
Double Ended	Weld	21201-01-W

Single & Double Ended
ISO KF

ISO FLANGE		
Single Ended	NW25KF	21205-01-KF
Double Ended	NW25KF	21207-01-KF

Single & Double Ended
ConFlat

CONFLAT FLANGE		
Single Ended	1 1/3" ConFlat (NW16CF)	21204-01-CF
Double Ended	1 1/3" ConFlat (NW16CF)	21206-01-CF

Air Side Plug



TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L	DESCRIPTION	PART NUMBER
Air Side	500 V	5	0.56 [14] 1.1 [28]	BNC Plug	7116-02

Air Side Cable
Assembly

TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX	PART NUMBER
50 Ohm BNC – Double Ended	10'	500 V	5	-40 85	18921-01-A

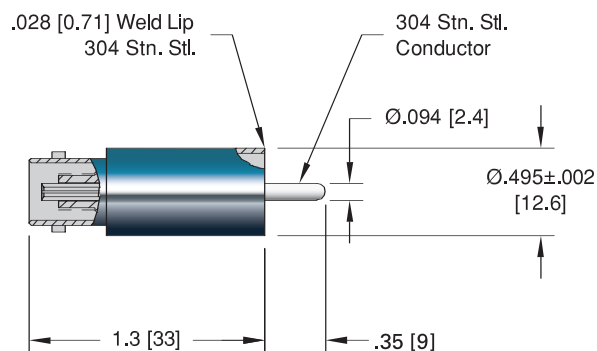
Contacts



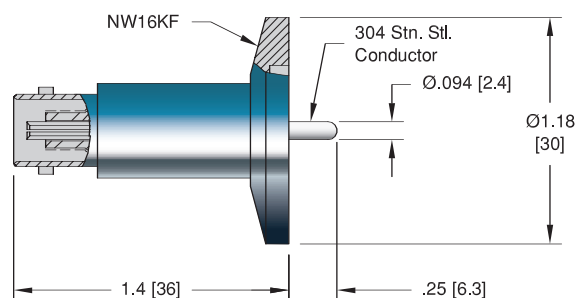
TYPE	MATERIAL	DESCRIPTION	PART NUMBER
Crimp Type Contacts	Copper Alloy - Gold Flash	Accepts wire up to 0.040 [1.0]	16167-03-A
Crimp Tool		For 0.025" – 0.075" Diameters	2840-05

*Contacts priced and sold in packages of 5. See the Accessories section for more information on all accessories.

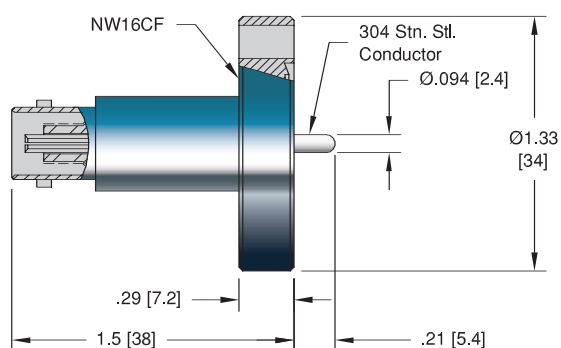
Weldable



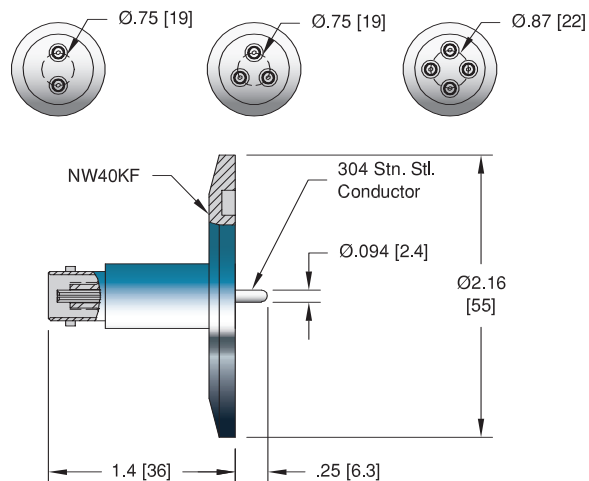
ISO KF - NW16KF



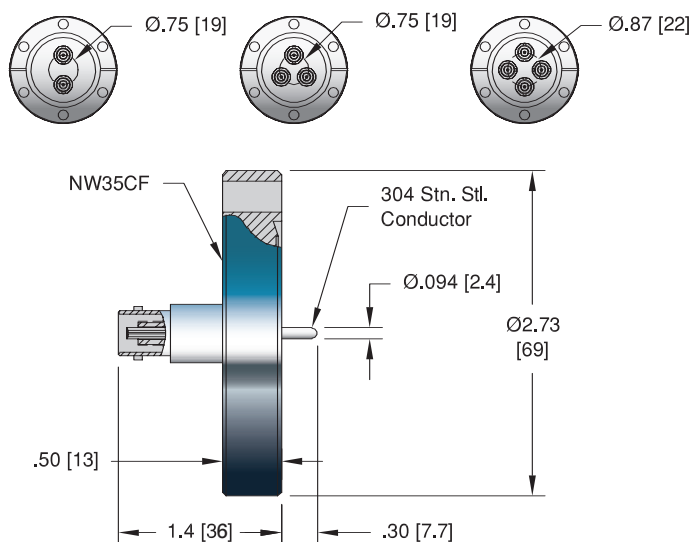
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: No

Voltage Rating 5 kV DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

Single Ended
WeldableNO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

5230-07-W

ISO FLANGE

1

NW16KF

17114-03-KF

1

NW40KF

17114-07-KF

2

NW40KF

17136-03-KF

3

NW40KF

17137-03-KF

4

NW40KF

17138-03-KF

CONFLAT FLANGE

1

1 1/3" ConFlat (NW16CF)

6924-03-CF

1

2 3/4" ConFlat (NW35CF)

7590-02-CF

2

2 3/4" ConFlat (NW35CF)

5822-05-CF

3

2 3/4" ConFlat (NW35CF)

6647-01-CF

4

2 3/4" ConFlat (NW35CF)

7184-06-CF

Single Ended
ConFlat

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

5 kV

10

0.56 [14] 1.5 [38]

MHV Plug

7116-01

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

52 Ohm MHV – Double Ended

10'

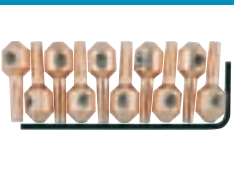
5 kV

10

-55 85

18921-02-A

Contacts



TYPE

MATERIAL

DESCRIPTION

PART
NUMBER

0.094 Set Screw Type Contacts

Beryllium Copper

Accepts wire up to 0.050 [1.3]

7429-01-A[†]

0.094 Barrel Type Contacts

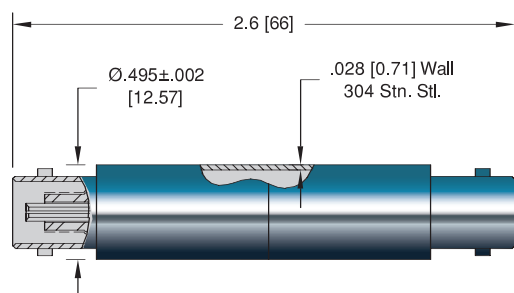
Beryllium Copper

Accepts wire up to 0.094 [2.4]

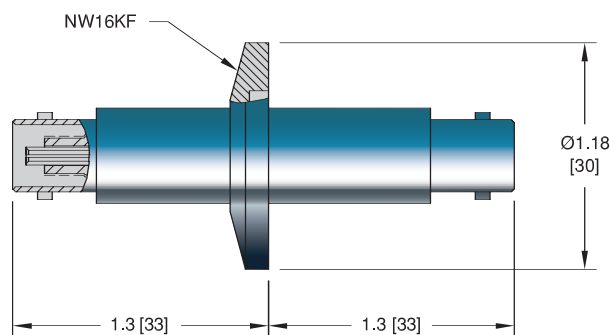
7332-04-A

*Contacts priced and sold in packages of 10. [†]Shown in photo. See the Accessories section for more information on all accessories.

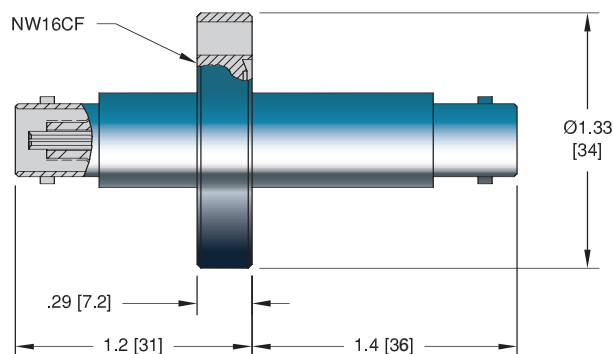
Weldable



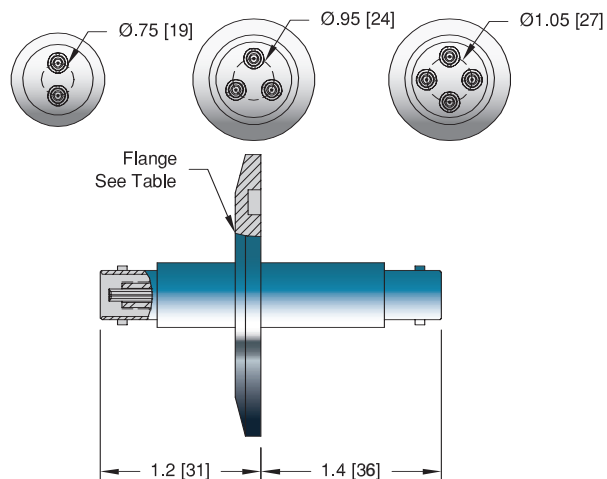
ISO KF - NW16KF



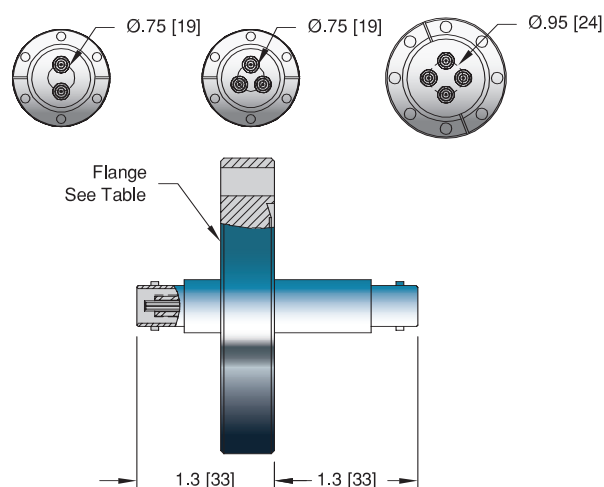
ConFlat - NW16CF



ISO KF



ConFlat



Specifications

Materials

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: No

Voltage Rating 5 kV DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 1400 PSIG (97 Bar), ISO KF 0 PSIG

**Double Ended
Weldable**NO.
PINS

INSTALLATION

PART
NUMBER

1

Weld

17115-03-W

ISO FLANGE

1

NW16KF

17116-03-KF

1

NW40KF

17118-03-KF

2

NW40KF

17118-07-KF

3

NW50KF

17122-03-KF

4

NW50KF

17139-03-KF

CONFLAT FLANGE

1

1 1/3" ConFlat (NW16CF)

17117-03-CF

1

2 3/4" ConFlat (NW35CF)

18604-03-CF

2

2 3/4" ConFlat (NW35CF)

17187-03-CF

3

2 3/4" ConFlat (NW35CF)

17188-03-CF

4

3 3/8" ConFlat (NW50CF)

17189-03-CF

**Double Ended
ConFlat****Air Side Plug**

TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

5 kV

10

0.56 [14] 1.5 [38]

MHV Plug

7116-01

**Air Side Cable
Assembly**

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

52 Ohm MHV – Double Ended

10'

5 kV

10

-55

85

18921-02-A

See the Accessories section for more information on all accessories.



Specifications

Materials

Housing: 52 Nickel Iron
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: Yes

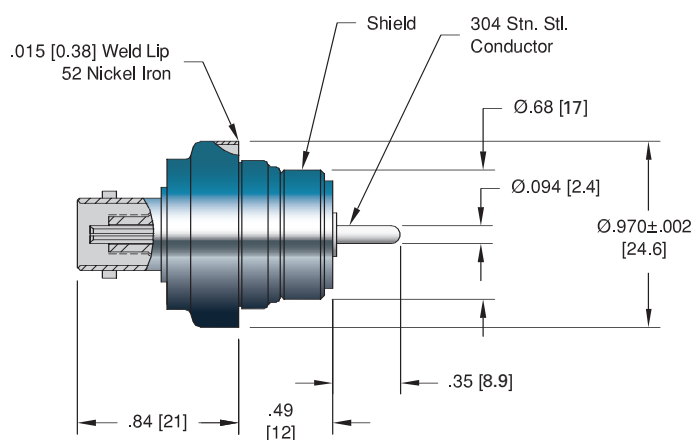
Voltage Rating Pin/Shield: 5 kV DC, Shield/Gnd: 2.5 kV DC

Current Rating 3.6 Amps

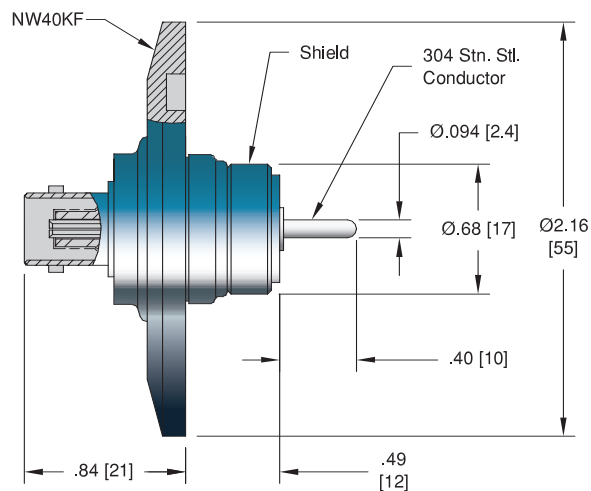
Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 300 PSIG (20 Bar), ISO KF 0 PSIG

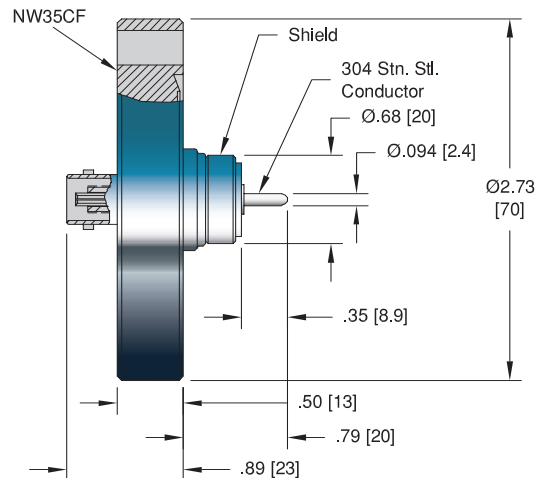
Weldable



ISO KF



ConFlat



Single Ended
Weldable

INSTALLATION

Weld

PART
NUMBER

6511-04-W

Single Ended
ISO KF

ISO FLANGE

NW40KF

17177-03-KF

Single Ended
ConFlat

CONFLAT FLANGE

2 3/4" (NW35CF)

17178-03-CF

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

5 kV

10

0.56 [14] 1.5 [38]

MHV Plug

7116-01

Air Side Cable
Assembly

TYPE

LENGTH

VOLTAGE
DCCONDUCTOR
AMPSTEMPERATURE
MIN MAXPART
NUMBER

52 Ohm MHV – Double Ended

10'

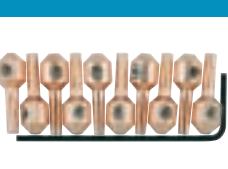
5 kV

10

-55 85

18921-02-A

Contacts



TYPE

MATERIAL

DESCRIPTION

PART
NUMBER

0.094 Set Screw Type Contacts

Beryllium Copper

Accepts wire up to 0.050 [1.3]

7429-01-A†

0.094 Barrel Type Contacts

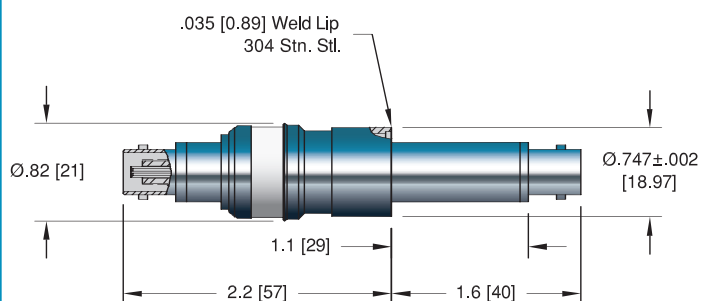
Beryllium Copper

Accepts wire up to 0.094 [2.4]

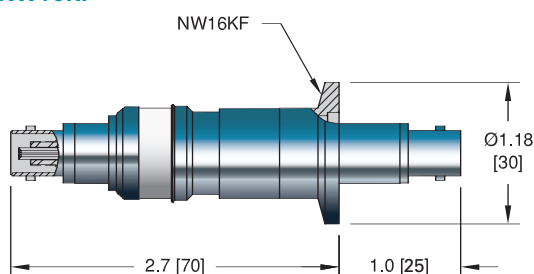
7332-04-A

*Contacts priced and sold in packages of 10. †Shown in photo. See the Accessories section for more information on all accessories.

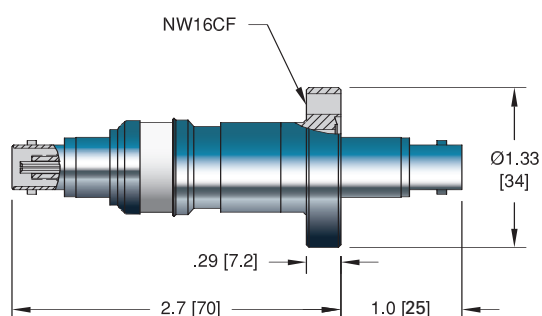
Weldable



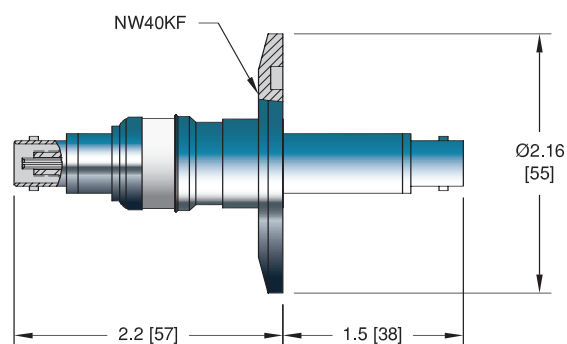
ISO KF - NW16KF



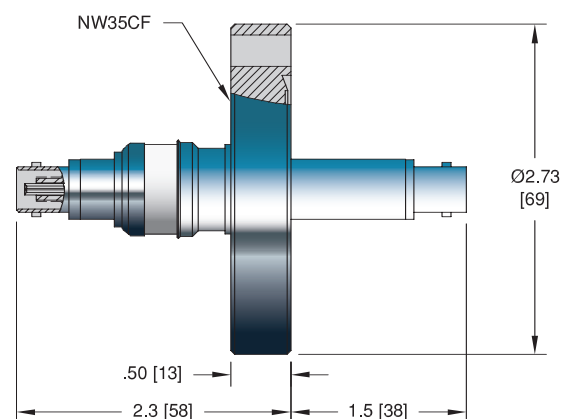
ConFlat - NW16CF



ISO KF - NW40KF



ConFlat - NW35CF



Specifications

Materials

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: Yes

Voltage Rating Pin/Shield: 5 kV DC, Shield/Gnd: 2.5 kV DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 400 PSIG (28 Bar), ISO KF 0 PSIG



INSTALLATION	PART NUMBER
Weld	17190-03-W



ISO FLANGE	PART NUMBER
NW16KF	17191-03-KF
NW40KF	17191-07-KF



CONFLAT FLANGE	PART NUMBER
1 1/3" (NW16CF)	17192-03-CF
2 3/4" (NW35CF)	17193-03-CF

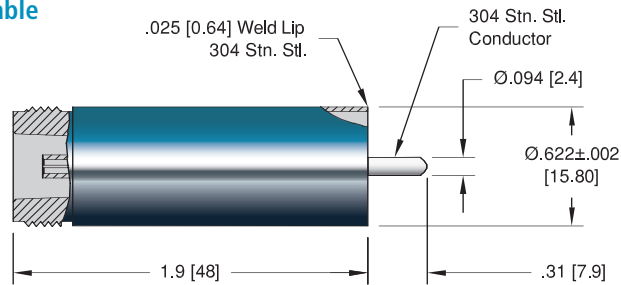
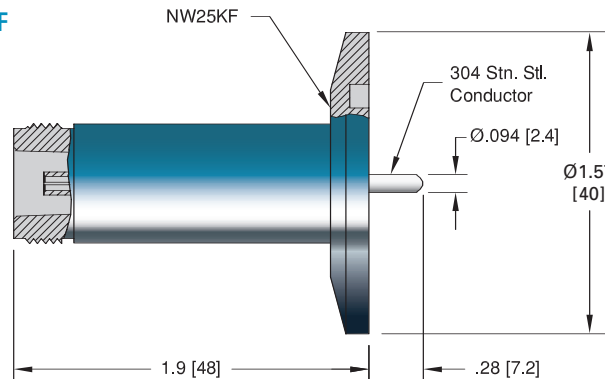
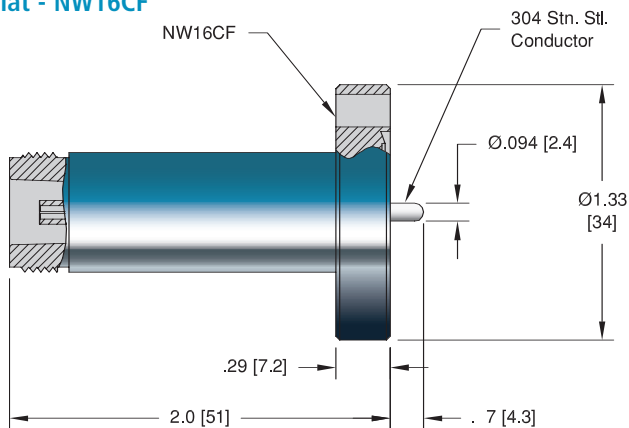
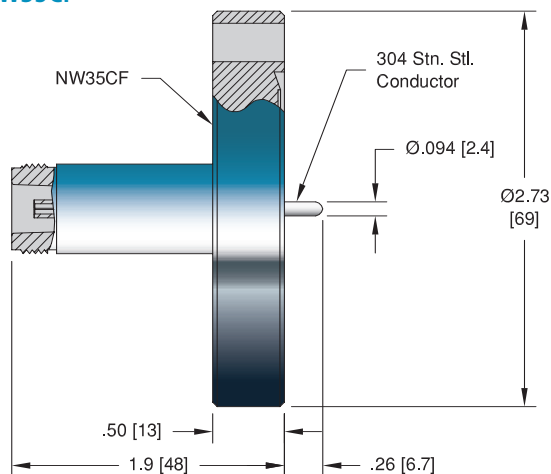
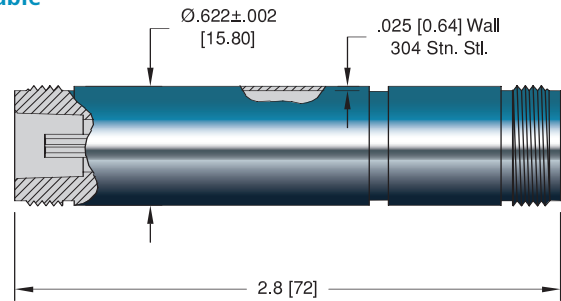
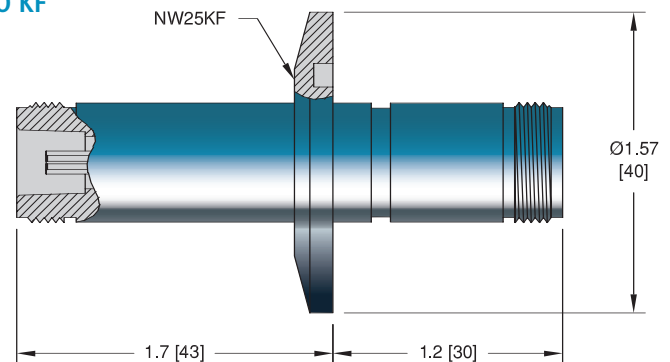
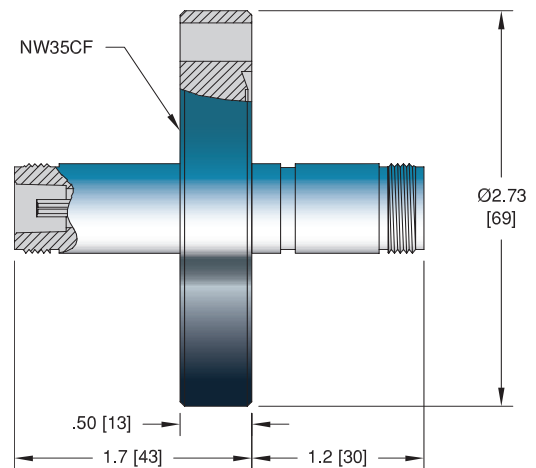


TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H	L	DESCRIPTION	PART NUMBER
Air Side	5 kV	10	0.56 [14]	1.5 [38]	MHV Plug	7116-01



TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN	MAX	PART NUMBER
52 Ohm MHV – Double Ended	10'	5 kV	10	-55	85	18921-02-A

See the Accessories section for more information on all accessories.

**Single Ended – Grounded Shield
Weldable****ISO KF****ConFlat - NW16CF****ConFlat - NW35CF****Double Ended – Grounded Shield
Weldable****ISO KF****ConFlat****Specifications****Materials**

Housing: 304 Stainless steel
Pin: 304 Stainless steel
Insulation: Alumina ceramic
Magnetic Materials: No

Voltage Rating 1.5 kV DC

Current Rating 3.6 Amps

Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C See table

Single & Double Ended
Weldable

STYLE	INSTALLATION	PRESSURE @ 20°C PSIG BAR		PART NUMBER
Single Ended	Weld	1800	124	7589-02-W [†]
Double Ended	Weld	1800	124	18077-02-W

ISO FLANGE

Single & Double Ended
ISO KF

Single Ended	NW25KF	-	-	18057-01-KF
Double Ended	NW40KF	-	-	18078-02-KF [†]

CONFLAT FLANGE

Single & Double Ended
ConFlat

Single Ended	1 1/3" (NW16CF)	1800	124	7588-02-CF [†]
Single Ended	2 3/4" (NW35CF)	1500	103	7587-02-CF
Double Ended	2 3/4" (NW35CF)	1500	103	18080-02-CF

Air Side Plug

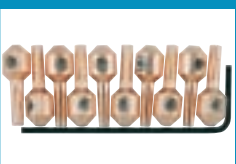


TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L		DESCRIPTION	PART NUMBER
Air Side	1.5 kV	5	0.81 [20]	1.5 [38]	Type N Plug	7707-01

Air Side Cable
Assembly

TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX		PART NUMBER
50 Ohm Type N – Double Ended	10'	1.5 kV	5	-55	85	21619-01-A

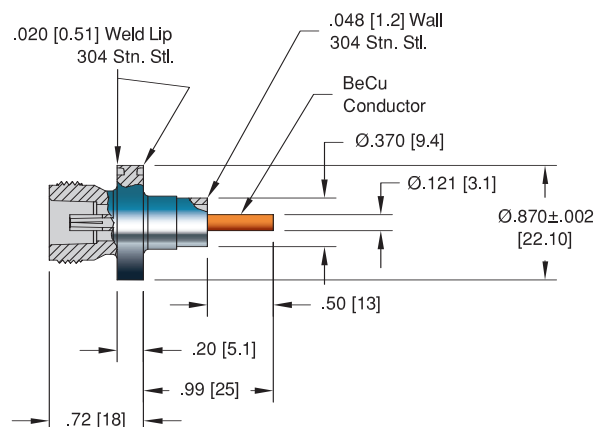
Contacts



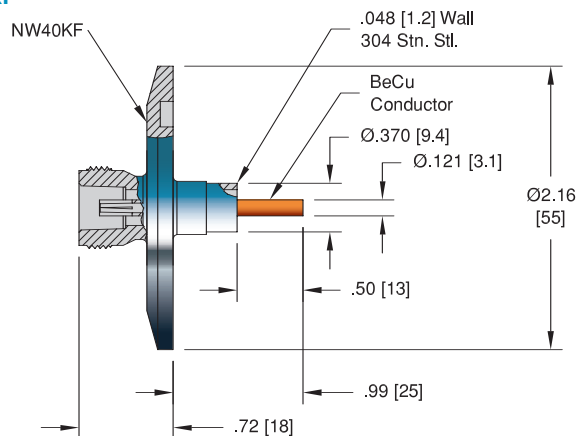
TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.094 Set Screw Type Contacts	Beryllium Copper	Accepts wire up to 0.050 [1.3]	7429-01-A [†]
0.094 Barrel Type Contacts	Beryllium Copper	Accepts wire up to 0.094 [2.4]	7332-04-A

*Contacts priced and sold in packages of 10. [†]Shown in photo. See the Accessories section for more information on all accessories.

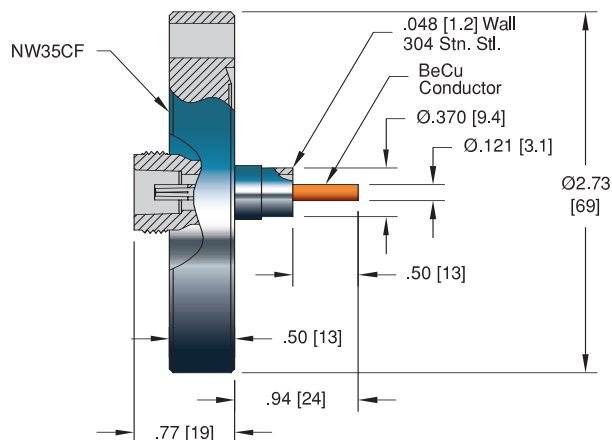
Single Ended – Grounded Shield Weldable



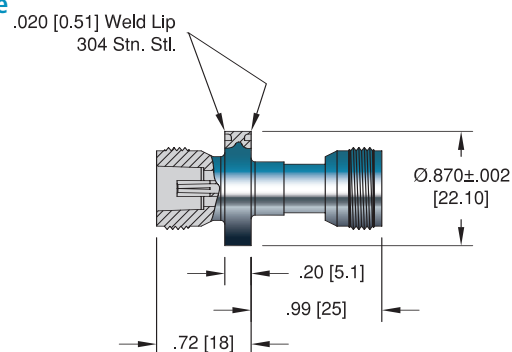
ISO KF



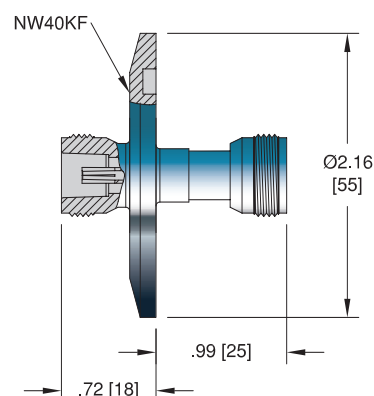
ConFlat



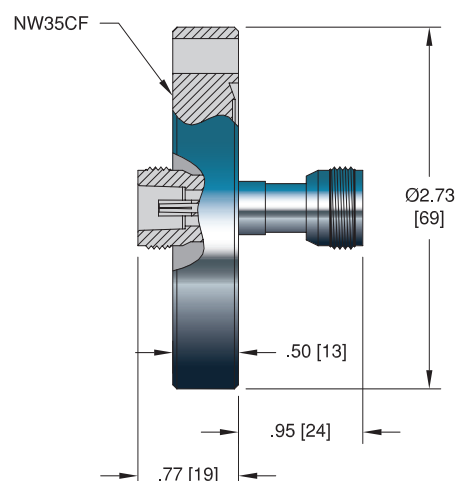
Double Ended – Grounded Shield Weldable



ISO KF



ConFlat



Specifications Materials

Housing: 304 Stainless steel
Pin/Contact: Beryllium Copper
Insulation: Glass-ceramic
Magnetic Materials: No

Voltage Rating 1.5 kV DC

Current Rating 1 Amp

Temperature Range -200°C to 225°C, ISO KF -25°C to 205°C

Pressure @ 20°C 500 PSIG (34 Bar), ISO KF 0 PSIG

Single & Double Ended
Weldable

STYLE	INSTALLATION	PART NUMBER
Single Ended	Weld	18066-01-W†
Double Ended	Weld	18069-01-W

ISO FLANGE

Single & Double Ended
ISO KF

Single Ended	NW40KF	18067-01-KF
Double Ended	NW40KF	18070-01-KF†

CONFLAT FLANGE

Single & Double Ended
ConFlat

Single Ended	2 3/4" (NW35CF)	18068-01-CF†
Double Ended	2 3/4" (NW35CF)	18071-01-CF

Air Side Plug

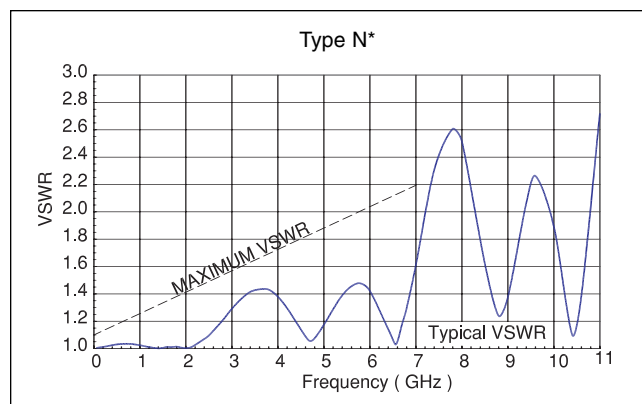


TYPE	VOLTAGE DC	CONDUCTOR AMPS	DIMENSIONS H L	DESCRIPTION	PART NUMBER
Air Side	1.5 kV	5	0.81 [20] 1.5 [38]	Type N Plug	7707-01

Air Side Cable
Assembly

TYPE	LENGTH	VOLTAGE DC	CONDUCTOR AMPS	TEMPERATURE MIN MAX	PART NUMBER
50 Ohm Type N – Double Ended	10'	1.5 kV	5	-55 85	21619-01-A

†Shown in photo. See the Accessories section for more information on all accessories.



*Applies when properly mated to a 50 Ohm load.



Specifications

Materials

Housing: 304 Stainless steel
Pin: 70/30 Copper Nickel
Insulation: Alumina ceramic
Magnetic Materials: No

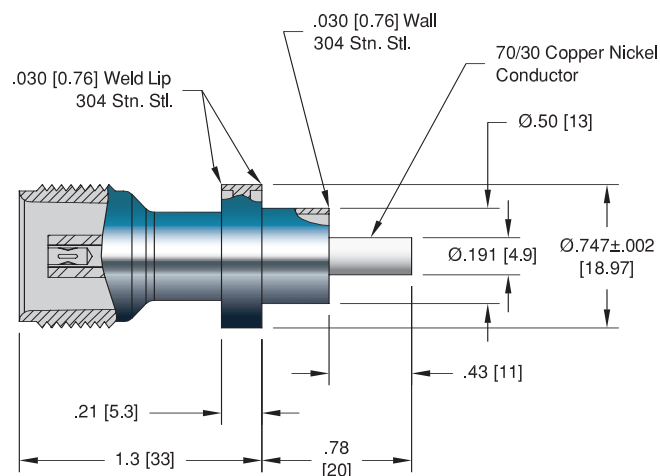
Voltage Rating 7 kV DC

Current Rating 7 Amps

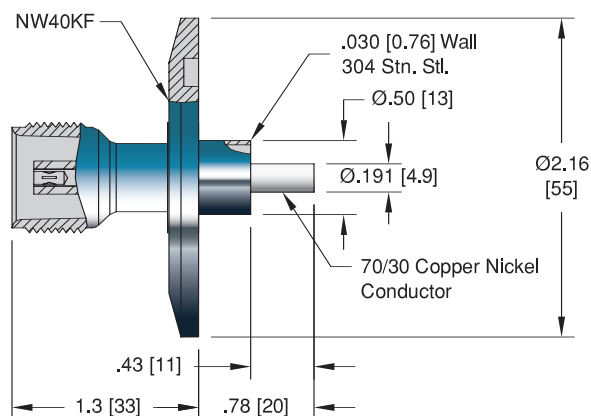
Temperature Range -269°C to 450°C, ISO KF -25°C to 205°C

Pressure @ 20°C 320 PSIG (22 Bar), ISO KF 0 PSIG

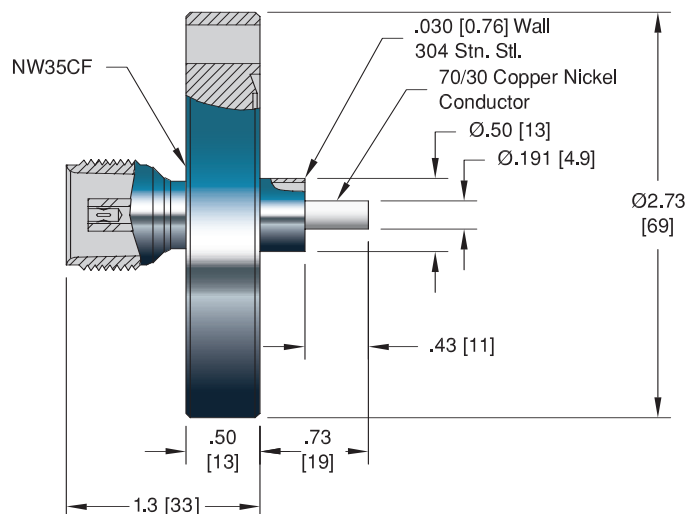
Single Ended – Grounded Shield Weldable



ISO KF



ConFlat



Weldable



INSTALLATION

Weld

PART
NUMBER

1084-01-W

ISO KF



ISO FLANGE

NW40KF

18072-01-KF

ConFlat



CONFLAT FLANGE

2 3/4" (NW35CF)

10339-02-CF

Air Side Plug



TYPE

VOLTAGE
DCCONDUCTOR
AMPSDIMENSIONS
H L

DESCRIPTION

PART
NUMBER

Air Side

7 kV

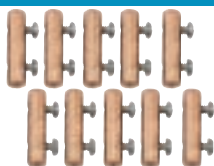
10

0.88 [22] 2.4 [61]

HN Plug

6524-05

Contacts



TYPE

MATERIAL

DESCRIPTION

PART
NUMBER

0.250 Barrel Type Contacts

Beryllium Copper

Accepts wire up to 0.250 [6.4]

7332-06-A

*Contacts priced and sold in packages of 10. See the Accessories section for more information on all accessories.