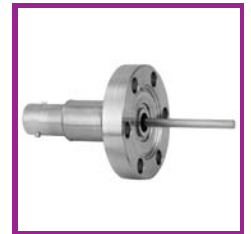


Electrical Feedthroughs

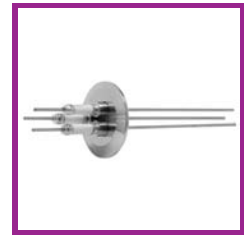
Multipin Feedthroughs
with Plug Connectors



Coaxial Feedthroughs



Power and High Voltage
Feedthroughs



Thermocouple Feedthroughs



Insulators



Accessories



Multipin Feedthroughs with Plug Connectors

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Coaxial Feedthroughs

SMA Feedthroughs, Grounded Shield	page 6-19 to 6-21
Type N Feedthroughs, Grounded Shield	page 6-22 to 6-24
Type HN Feedthroughs, Grounded Shield	page 6-25
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BNC Feedthroughs, Floating Shield	page 6-28
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Power and High Voltage Feedthroughs

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Bulkhead Fitting	page 6-60 to 6-61

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Eyelets	page 6-63 to 6-64
Thermocouple Feedthroughs with Plugs	page 6-64 to 6-68
Thermocouple Feedthroughs with Plugs in Combination With Power Feedthroughs	page 6-69
Circular Connectors MIL-C-5015, Single Ended	page 6-70 to 6-71

Insulators

Cryogenic	page 6-72
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Vacuum	page 6-73 to 6-77

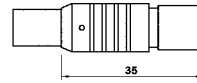
Accessories

Vacuum Accessories	page 6-77 to 6-78
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Ceramic Spacers	page 6-82

Multipin Feedthroughs with Plug Connectors

Compact Feedthroughs with Standard-Mini-Snap Connector

Mini-snap connector, vacuum and atmosphere side

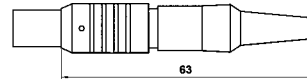


Technical Data

■ Material	stainless steel
■ Contact material	CuBe
■ Insulator	PEEK
■ Bakeable	240 °C
■ Strain-relieved	no

Order code	Number of pins
PLUG-MINI-05-V	5
PLUG-MINI-10-V	10

Mini-snap connector, atmosphere side



Technical Data

■ Material	brass (plated)
■ Contact material	brass alloy
■ Insulator	PEEK
■ Temperature range	-40 °C to 120 °C
■ Strain-relieved	yes

Order code	Number of pins
PLUG-MINI-05-A	5
PLUG-MINI-10-A	10

Soldering pins



Technical Data

■ Contact material	brass alloy
■ Insulator	PEEK
■ Bakeable	120 °C

Order code	Number of pins
PLUG-MINI-05-P-MEL	5
PLUG-MINI-10-P-MEL	10

Multipin Feedthroughs with Plug Connectors

Compact Feedthroughs with Standard-Mini-Snap Connector

Crimp pins



Technical Data

■ Contact material	CuBe
■ Insulator	PEEK
■ Bakeable	240 °C
■ Accessories	contacts (PLUG-MINI-05-EK, PLUG-MINI-10-EK)

Order code	Number of pins
PLUG-MINI-05-P	5
PLUG-MINI-10-P	10

6

Voltage: 700 V and 1000 V



Technical Data

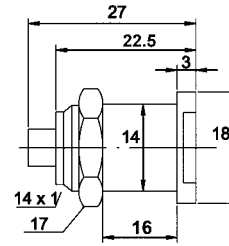
■ Housing material	stainless steel
■ Contact material	Kovar (gold plated)
■ Insulator	aluminium ceramics
■ Current load with 5 pins	10 A (max. 7.5 A at strain of all conductors)
■ Current load with 10 pins	5 A (max. 2.75 A at strain of all conductors)
■ Temperature range without flange and on CF flange	-200 °C to 350 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Leakage rate	< 1.0E-9 mbar l/s
■ Pressure resistance	14 bar
■ Accessories	contacts (PLUG-MINI-EK)

Order code	Flange	Number of pins	D	L	Voltage (V)
VB-1B-05	-	5	12	26.2	1000
VB-1B-10	-	10	12	26.2	700
KF16-VB-1B-05	DN16KF	5	30	29.4	1000
KF16-VB-1B-10	DN16KF	10	30	29.4	700
KF25-VB-1B-05	DN25KF	5	40	29.4	1000
KF25-VB-1B-10	DN25KF	10	40	29.4	700
KF40-VB-1B-05	DN40KF	5	55	29.4	1000
KF40-VB-1B-10	DN40KF	10	55	29.4	700
CF16-VB-1B-05	DN16CF	5	34	26.2	1000
CF16-VB-1B-10	DN16CF	10	34	26.2	700
CF35-VB-1B-05	DN35CF	5	70	26.2	1000
CF35-VB-1B-10	DN35CF	10	70	26.2	700

Multipin Feedthroughs with Plug Connectors

Compact Feedthroughs with Standard-Mini-Snap Connector

For wall fastening with FPM seal



Technical Data

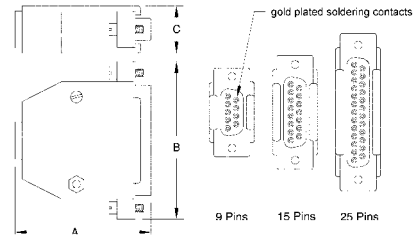
■ Housing material	copper alloy with matt chrome coating
■ Contact material	gold plated copper alloy soldering cups
■ Insulator	PBT for socket
■ Current load with 5 pins	10 A (max. 7.5 A at strain of all conductors)
■ Current load with 10 pins	5 A (max. 2.75 A at strain of all conductors)
■ Complete cross section of soldering cups with 5 pins	0.38 mm ²
■ Complete cross section of soldering cups with 10 pins	0.08 mm ²
■ Temperature range	-10 °C to 80 °C
■ Magnetic	yes
■ Assembly bore	Ø 14.1
■ Leakage rate	< 1.0E-9 mbar l/s
■ Accessories	plug (see page 6-3)

Order code	Flange	Number of pins	Voltage (V)
VBBP-1B-05	-	5	1000
VBBP-1B-10	-	10	700
KF25-VBBP-1B-05	DN25KF	5	1000
KF25-VBBP-1B-10	DN25KF	10	700
KF40-VBBP-1B-05	DN40KF	5	1000
KF40-VBBP-1B-10	DN40KF	10	700

Multipin Feedthroughs with Plug Connectors

Sub D Feedthroughs with Plugs Bothsided

Voltage: 500 V, 9 - 50 pins, plug, atmosphere side



Technical Data

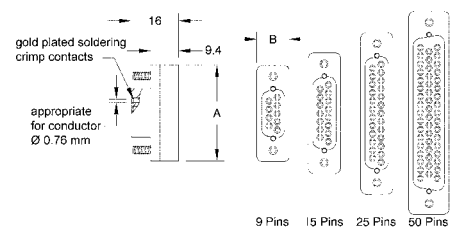
■ Contact material	copper alloy
■ Insulator	fibre glass reinforced plastics
■ Temperature range	-55 °C to 105 °C
■ Magnetic	yes
■ Current	5 A

6

Order code	Number of pins	A	B	C
PLUG-SUB-D-9	9	43	31	15
PLUG-SUB-D-9-1000*	9	43	31	15
PLUG-SUB-D-15	15	41	41	15
PLUG-SUB-D-15-1000*	15	41	41	15
PLUG-SUB-D-25	25	48	56	15
PLUG-SUB-D-25-1000*	25	48	56	15
PLUG-SUB-D-50	50	51	66	18
PLUG-SUB-D-50-1000*	50	51	66	18

* Plug for 1000 pluggings

Voltage: 500 V, 9 - 50 pins, plug, vacuum and atmosphere side



Technical Data

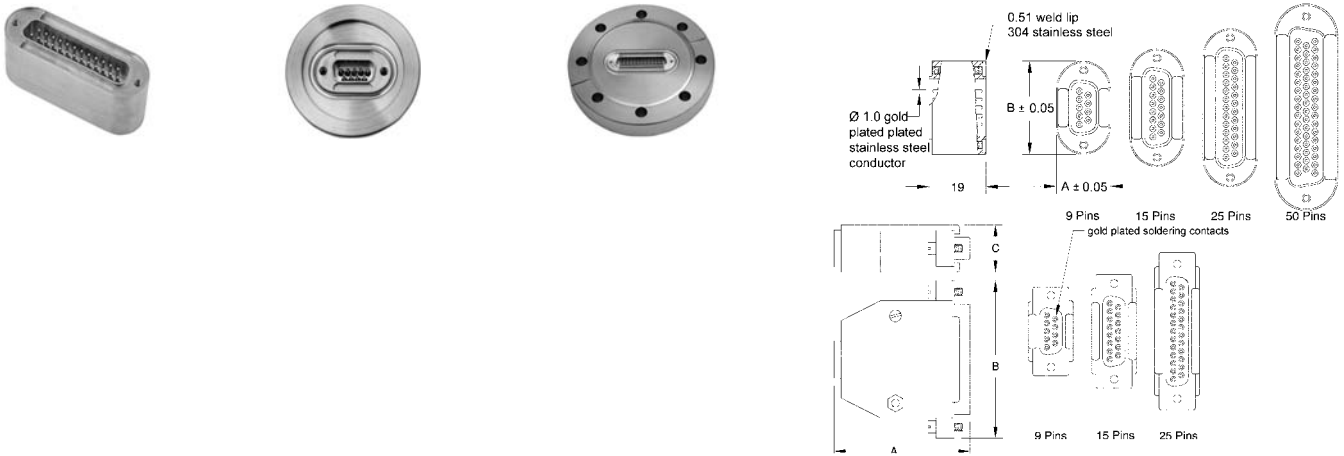
■ Contact material	copper alloy, pins in plug
■ Insulator	PEEK
■ Temperature range	-200 °C to 200 °C
■ Magnetic	no
■ Current	5 A

Order code	Number of pins	A	B
PLUG-SUBD-9-P-CL	9	33	11
PLUG-SUBD-15-P-CL	15	40	11
PLUG-SUBD-25-P-CL	25	55	11
PLUG-SUBD-50-P-CL	50	69	14

Multipin Feedthroughs with Plug Connectors

Sub D Feedthroughs with Plugs Bothsided

Voltage: 500 V, 9 - 50 pins



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	5 A
■ Accessories	clamps (EK-SUBD-CLG10), plugs (see page 6-6)

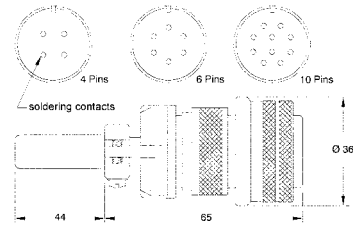
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B
W-SUBD-9-DE-CE-SSG	-	9	93.1	18.29	31.34
W-SUBD-15-DE-CE-SSG	-	15	86.1	18.29	39.67
W-SUBD-25-DE-CE-SSG	-	25	82.7	18.29	53.39
W-SUBD-50-DE-CE-SSG	-	50	62.1	21.13	69.54
KF40-SUBD-9-DE-CE-SSG	DN40KF	9	6*	-	-
KF50-SUBD-15-DE-CE-SSG	DN50KF	15	6*	-	-
CF35-SUBD-9-DE-CE-SSG	DN35CF	9	93.1	-	-
CF63-SUBD-15-DE-CE-SSG	DN63CF	15	86.2	-	-
CF63-SUBD-25-DE-CE-SSG	DN63CF	25	82.7	-	-
CF100-SUBD-50-DE-CE-SSG	DN100CF	50	62.1	-	-

* With trapped centering ring and clamp chain.

Multipin Feedthroughs with Plug Connectors

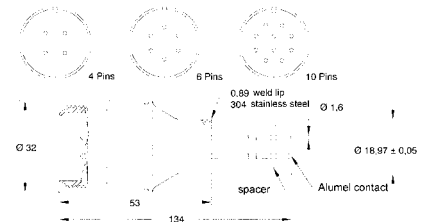
Circular Connectors MIL-C-5015, Single Ended

Atmosphere side plug, 4 - 10 pins, voltage: 700 V



Order code	Number of pins	Temperature range (°C)	Insulator	Contact material	Current (A)
PLUG-MPC5-4-DI-AM	4	-55 to 125	diallyl phthalate	copper alloy	13
PLUG-MPC5-6-DI-AM	6	-55 to 125	diallyl phthalate	copper alloy	13
PLUG-MPC5-10-DI-AM	10	-55 to 125	diallyl phthalate	copper alloy	13
PLUG-MPC5-4-P-AM	4	-55 to 260	PEEK	Alumel	4.8
PLUG-MPC5-6-P-AM	6	-55 to 260	PEEK	Alumel	4.8
PLUG-MPC5-10-P-AM	10	-55 to 260	PEEK	Alumel	4.8

Voltage: 700 V, 4 - 10 pins, plug, atmosphere side



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	7 A
■ Accessories	contacts (EK-C-CB16, EK-C-NIL16, EK-LK-CB16)

Order code	Flange	Number of pins	Pressure, 20 °C (bar)
W-MPC5-4-SE-CE-AM	-	4	41
W-MPC5-6-SE-CE-AM	-	6	38
W-MPC5-10-SE-CE-AM	-	10	34
KF16-MPC5-4-SE-CE-AM	DN16KF	4	7*
KF16-MPC5-6-SE-CE-AM	DN16KF	6	7*
KF16-MPC5-10-SE-CE-AM	DN16KF	10	7*
CF16-MPC5-4-SE-CE-AM	DN16CF	4	41
CF16-MPC5-6-SE-CE-AM	DN16CF	6	38
CF16-MPC5-10-SE-CE-AM	DN16CF	10	34
CF35-MPC5-4-SE-CE-AM	DN35CF	4	41
CF35-MPC5-6-SE-CE-AM	DN35CF	6	38
CF35-MPC5-10-SE-CE-AM	DN35CF	10	34

* With trapped centering ring and clamp chain.

● Temperature specifications are only valid with demounted plug (see above).

Multipin Feedthroughs with Plug Connectors

Circular Connectors MIL-C-26482

Voltage: 1000 V, 3 - 41 pins, plug, atmosphere side



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	5 A
■ Accessories	clamps (EK-C-CLG10), plugs (see page 6-9)

6

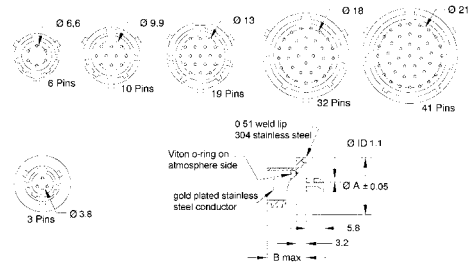
Order code	Flange	Number of pins	Pressure, 20 °C (bar)
KF25-MPC2-3-SE-CE-SSG	DN25KF	3	7*
KF40-MPC2-6-SE-CE-SSG	DN40KF	6	6*
KF40-MPC2-10-SE-CE-SSG	DN40KF	10	6*
KF40-MPC2-19-SE-CE-SSG	DN40KF	19	6*
KF40-MPC2-32-SE-CE-SSG	DN40KF	32	6*
KF50-MPC2-41-SE-CE-SSG	DN50KF	41	6*
CF35-MPC2-3-SE-CE-SSG	DN35CF	3	38
CF35-MPC2-6-SE-CE-SSG	DN35CF	6	34
CF35-MPC2-10-SE-CE-SSG	DN35CF	10	31
CF35-MPC2-19-SE-CE-SSG	DN35CF	19	28
CF35-MPC2-32-SE-CE-SSG	DN35CF	32	26
CF35-MPC2-41-SE-CE-SSG	DN35CF	41	24

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Multipin Feedthroughs with Plug Connectors

Circular Connectors MIL-C-26482

Voltage: 1000 V, 3 - 41 pins, plug atmosphere side, soldering tags vacuum side



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic no
- Current 5 A
- Accessories clamps (EK-C-CLG10), plugs (see page 6-9)

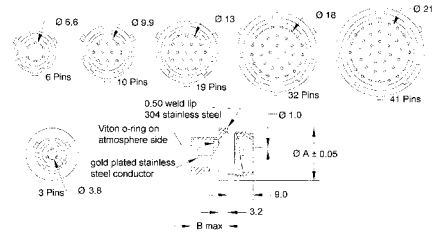
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B
W-MPC2-3-SES-CE-SSG	-	3	38	18.92	13
W-MPC2-6-SES-CE-SSG	-	6	34	22.10	13
W-MPC2-10-SES-CE-SSG	-	10	31	25.27	13
W-MPC2-19-SES-CE-SSG	-	19	28	28.45	13
W-MPC2-32-SES-CE-SSG	-	32	26	34.80	13
W-MPC2-41-SES-CE-SSG	-	41	24	37.97	14.5
KF25-MPC2-3-SES-CE-SSG	DN25KF	3	7*	-	-
KF40-MPC2-6-SES-CE-SSG	DN40KF	6	6*	-	-
KF40-MPC2-10-SES-CE-SSG	DN40KF	10	6*	-	-
KF40-MPC2-19-SES-CE-SSG	DN40KF	19	6*	-	-
KF40-MPC2-32-SES-CE-SSG	DN40KF	32	6*	-	-
KF50-MPC2-41-SES-CE-SSG	DN50KF	41	6*	-	-
CF35-MPC2-3-SES-CE-SSG	DN35CF	3	38	-	-
CF35-MPC2-6-SES-CE-SSG	DN35CF	6	34	-	-
CF35-MPC2-10-SES-CE-SSG	DN35CF	10	31	-	-
CF35-MPC2-19-SES-CE-SSG	DN35CF	19	28	-	-
CF35-MPC2-32-SES-CE-SSG	DN35CF	32	26	-	-
CF35-MPC2-41-SES-CE-SSG	DN35CF	41	24	-	-

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Multipin Feedthroughs with Plug Connectors

Circular Connectors MIL-C-26482

Voltage: 1000 V, 3 - 41 pins, plugs bothsided



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	5 A
■ Accessories	clamps (EK-C-CLG10), plugs (see page 6-9)

6

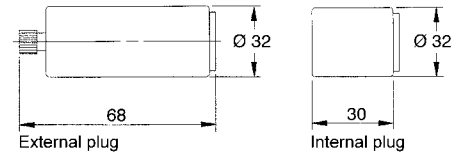
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B
W-MPC2-3-DE-CE-SSG	-	3	38	18.92	13
W-MPC2-6-DE-CE-SSG	-	6	34	22.10	13
W-MPC2-10-DE-CE-SSG	-	10	31	25.57	13
W-MPC2-19-DE-CE-SSG	-	19	28	28.45	13
W-MPC2-32-DE-CE-SSG	-	32	26	34.80	13
W-MPC2-41-DE-CE-SSG	-	41	24	37.97	14.5
KF25-MPC2-3-DE-CE-SSG	DN25KF	3	7*	-	-
KF40-MPC2-6-DE-CE-SSG	DN40KF	6	6*	-	-
KF40-MPC2-10-DE-CE-SSG	DN40KF	10	6*	-	-
KF40-MPC2-19-DE-CE-SSG	DN40KF	19	6*	-	-
KF40-MPC2-32-DE-CE-SSG	DN40KF	32	6*	-	-
KF50-MPC2-41-DE-CE-SSG	DN50KF	41	6*	-	-
CF35-MPC2-3-DE-CE-SSG	DN35CF	3	38	-	-
CF35-MPC2-6-DE-CE-SSG	DN35CF	6	34	-	-
CF35-MPC2-10-DE-CE-SSG	DN35CF	10	31	-	-
CF35-MPC2-19-DE-CE-SSG	DN35CF	19	28	-	-
CF35-MPC2-32-DE-CE-SSG	DN35CF	32	26	-	-
CF35-MPC2-41-DE-CE-SSG	DN35CF	41	24	-	-

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Multipin Feedthroughs with Plug Connectors

Other Circular Connectors with Plugs Bothsided

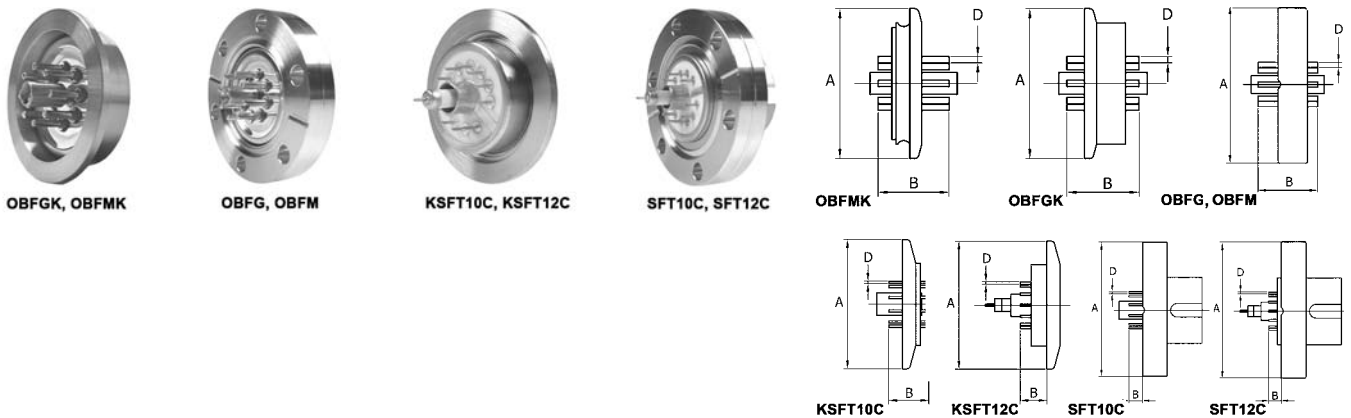
Plug for 8 - 11 pins



Order code	Number of pins	Contacts ID	Current (A)	Voltage (kV)	Bakeable to (°C)	Contact side	To fit ring
VC8E	8	2.3	3	1	250	atm	OBFK(K), OBFM(K)
VC8I	8	2.3	3	1	150	vak	OBFK(K), OBFM(K)
VC10E	9	1.0	5	3	250	atm	(K)SFT10C
VC10I	9	1.0	5	3	150	vak	(K)SFT10C
VC12E	11	1.0	5	3	250	atm	(K)SFT12C
VC12I	11	1.0	5	3	150	vak	(K)SFT12C

- crimp contact (CC10F, CC23F)

Multipin feedthroughs for 8 - 11 pins



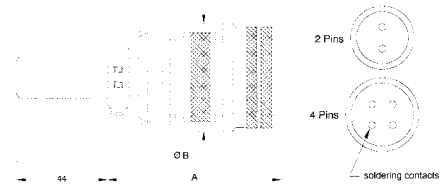
Order code	Flange	Number of pins	Contact material	Current (A)	Voltage (kV)	Insulator	A	B	D
OBFK*	DN40KF	8	kovar	10	5	vitriified block	55	26	2.3
OBFM*	DN40KF	8	kovar	10	1	metal plate with glass	55	26	2.3
OBFK*	DN35CF	8	kovar	10	5	vitriified block	70	26	2.3
OBFM*	DN35CF	8	kovar	10	1	metal plate with glass	70	26	2.3
KSFT10C	DN40KF	9	nickel	5	5	aluminium ceramics	55	17	1
KSFT12C	DN40KF	11	nickel	5	3	aluminium ceramics	55	17	1
SFT10C	DN35CF	9	nickel	5	5	aluminium ceramics	70	8	1
SFT12C	DN35CF	11	nickel	5	3	aluminium ceramics	70	8	1

* Bakeout temperatur till 150°C, assembly only with chain clamp f.e. W40, XA40

Multipin Feedthroughs with Plug Connectors

High Voltage Circular Connectors, Single Ended

Atmosphere side plug, 2 - 4 pins, voltage: 700 V

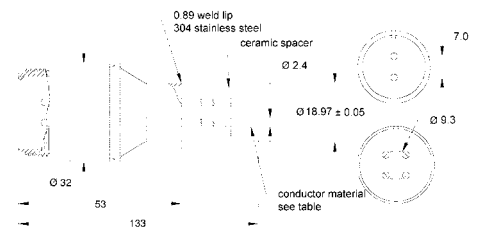


Technical Data

- Contact material copper alloy
- Insulator diallyl phthalate

Order code	Number of pins	Temperature range (°C)	Magnetic	Current (A)
PLUG-MPC5C-2-DI-CUL	2	-55 to 125	no	23
PLUG-MPC5C-4-DI-CUL	4	-55 to 125	no	23

Voltage: 700 V, plug, atmosphere side



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Accessories contacts (EK-S-CB24, EK-LK-CB24), plugs (see above)

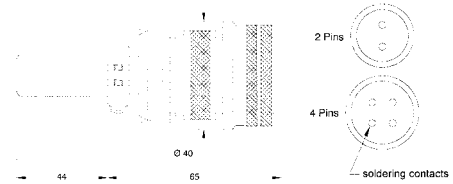
Order code	Flange	Number of pins	Contact material	Pressure, 20 °C (bar)	Current (A)
W-MPC5C-2-SE-CE-NI	-	2	nickel	33	16
W-MPC5C-2-SE-CE-MO	-	2	molybdenium	33	28
W-MPC5C-4-SE-CE-NI	-	4	nickel	33	16
W-MPC5C-4-SE-CE-MO	-	4	molybdenium	33	28
KF16-MPC5C-2-SE-CE-NI	DN16KF	2	nickel	7*	16
KF16-MPC5C-2-SE-CE-MO	DN16KF	2	molybdenium	7*	28
KF16-MPC5C-4-SE-CE-NI	DN16KF	4	nickel	7*	16
KF16-MPC5C-4-SE-CE-MO	DN16KF	4	molybdenium	7*	28
CF16-MPC5C-2-SE-CE-NI	DN16CF	2	nickel	33	16
CF16-MPC5C-2-SE-CE-MO	DN16CF	2	molybdenium	33	28
CF16-MPC5C-4-SE-CE-NI	DN16CF	4	nickel	33	16
CF16-MPC5C-4-SE-CE-MO	DN16CF	4	molybdenium	33	28
CF35-MPC5C-2-SE-CE-NI	DN35CF	2	nickel	33	16
CF35-MPC5C-2-SE-CE-MO	DN35CF	2	molybdenium	33	28
CF35-MPC5C-4-SE-CE-NI	DN35CF	4	nickel	33	16
CF35-MPC5C-4-SE-CE-MO	DN35CF	4	molybdenium	33	28

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Multipin Feedthroughs with Plug Connectors

High Voltage Circular Connectors, Single Ended

Atmosphere side plug, 2 - 4 pins, voltage: 700 V

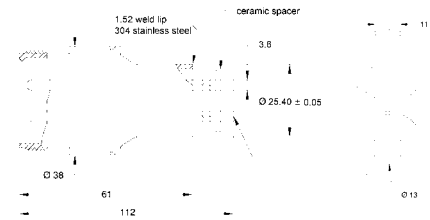


Technical Data

■ Contact material	copper alloy
■ Insulator	diallyl phthalate
■ Temperature range	-55 °C to 125 °C
■ Magnetic	no
■ Current	46 A

Order code	Number of pins
PLUG-MPC5HC-2-DI-CUL	2
PLUG-MPC5HC-4-DI-CUL	4

Voltage: 700 V, plug, atmosphere side



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Accessories	clamps (EK-LK-CB39), plugs (see above)

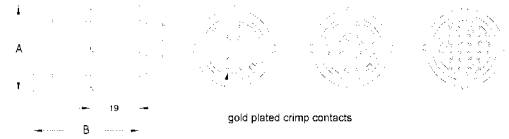
Order code	Flange	Number of pins	Contact material	Pressure, 20 °C (bar)	Current (A)
W-MPC5HC-2-SE-CE-NI	-	2	nickel	41	25
W-MPC5HC-2-SE-CE-MO	-	2	molybdenium	41	46
W-MPC5HC-4-SE-CE-NI	-	4	nickel	34	25
W-MPC5HC-4-SE-CE-MO	-	4	molybdenium	34	46
KF40-MPC5HC-2-SE-CE-NI	DN40KF	2	nickel	6*	25
KF40-MPC5HC-2-SE-CE-MO	DN40KF	2	molybdenium	6*	46
KF40-MPC5HC-4-SE-CE-NI	DN40KF	4	nickel	6*	25
KF40-MPC5HC-4-SE-CE-MO	DN40KF	4	molybdenium	6*	46
CF35-MPC5HC-2-SE-CE-NI	DN35CF	2	nickel	41	25
CF35-MPC5HC-2-SE-CE-MO	DN35CF	2	molybdenium	41	46
CF35-MPC5HC-4-SE-CE-NI	DN35CF	4	nickel	34	25
CF35-MPC5HC-4-SE-CE-MO	DN35CF	4	molybdenium	34	46

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Multipin Feedthroughs with Plug Connectors

High Voltage Circular Connectors, Single Ended

Atmosphere side plug, 2 - 7 pins, voltage: 12 kV



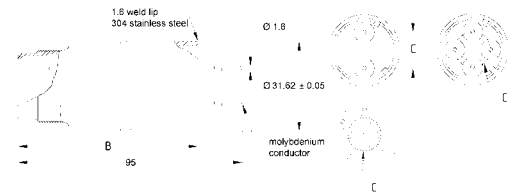
Technical Data

■ Contact material	copper alloy
■ Insulator	reinforced polyester and silicon rubber
■ Temperature range	-15 °C to 85 °C
■ Magnetic	no
■ Current	13 A

Order code	Number of pins	A	B
PLUG-MPCHV12-2-KU-CUL	2	33	41
PLUG-MPCHV12-4-KU-CUL	4	33	41
PLUG-MPCHV12-7-KU-CUL	7	37	84

6

Voltage: 12 kV, 2 - 7 pins, plug, atmosphere side



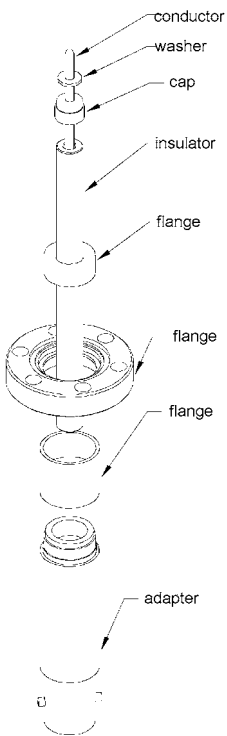
Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	13 A
■ Accessories	clamps (EK-C-CB16, EK-LK-CB16), plugs (see above)

Order code	Flange	Number of pins	Pressure, 20 °C (bar)	B	C
W-MPCHV12-2-SE-CE-MO	-	2	28	64	13
W-MPCHV12-4-SE-CE-MO	-	4	20	64	13
W-MPCHV12-7-SE-CE-MO	-	7	14	50	18
KF40-MPCHV12-2-SE-CE-MO	DN40KF	2	6*	66	13
KF40-MPCHV12-4-SE-CE-MO	DN40KF	4	6*	66	13
KF40-MPCHV12-7-SE-CE-MO	DN40KF	7	6*	53	18
CF35-MPCHV12-2-SE-CE-MO	DN35CF	2	28	65	13
CF35-MPCHV12-4-SE-CE-MO	DN35CF	4	20	65	13
CF35-MPCHV12-7-SE-CE-MO	DN35CF	7	14	56	18

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Introduction



Construction overview

Voltage (kV DC)	Current (A)	Impedance	Sub Chapters
0.5	to 1.8	50 ohm & inconstant	SMA
0.5	to 3.6	50 ohm & inconstant	BNC
1.5	to 5	50 ohm & inconstant	Type N
1.5	1.0	50 ohm	Type N to SMA
7	7	50 ohm	NH
5	3.6	inconstant	MHV
5	16.5	inconstant	SHV 5 kV
10	10	inconstant	SHV 10 kV
20	16.5	inconstant	SHV 20 kV

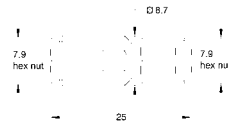
Standard specifications

Category	Classification	Highest Voltage (kV DC)	Coupler	Current (A)	Cable
Sub-miniature	SMA (subminiature A)	0.5	screwed	0.8 - 1.8	RG-58/U
Miniature	BNC (bajonett naval connection)	0.5	bajonett	3.6 - 4.4	RG-58/U
	MHV (min. high-voltage)	5	bajonett	3.6	RG-59/U
	SHV-5kV (safe high-voltage)	5	bajonett	10	RG-59/U
	SHV-10kV (safe high-voltage)	10	bajonett	2.2 - 10	RG-58/U
	SHV-20kV (safe high-voltage)	20	bajonett	16.5	RG-213/U
Medium-sized	N	1.5	screwed	0.8 - 5	RG-8/U RG-9/U RG-10/U
	NH	7	screwed	7	RG-8/U RG-9/U RG-87/U RG-213/U RG-214/U RG-225/U

Coaxial Feedthroughs

SMA Feedthroughs, Grounded Shield

Voltage: 500 V, atmosphere side plug



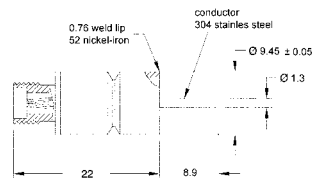
Technical Data

■ Temperature range	-65 °C to 125 °C
■ Magnetic	no
■ Current	5 A

Order code	Description
PLUG-SMA	voltage: 500 V, atmosphere side plug

6

Voltage: 500 V, plug, atmosphere side



Technical Data

■ Magnetic	no
■ Current	1.8 A
■ Accessories	clamps (EK-C-CB13, EK-S-CB13, EK-LK-CB13), plugs (see above)

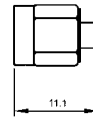
Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-SMA-GS-SE-CE-SS	-	276	-269 to 450
KF16-SMA-GS-SE-GS-SS	DN16KF	7*	-25 to 205
CF16-SMA-GS-SE-GS-SS	DN16CF	207	-269 to 450

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

SMA Feedthroughs, Grounded Shield

Plug for micro SMA feedthrough, strain-relieved, solder connection, 50 ohm



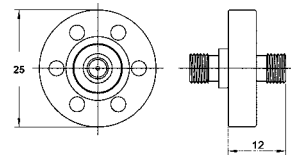
Technical Data

■ Vacuum	yes
■ Material	stainless steel
■ Contact material	CuBe (gold plated)
■ Insulator	Teflon
■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	10 A

Order code	Description
PLUG-SMA-50	plug for micro SMA feedthrough, strain-relieved, solder connection, 50 ohm

6

Micro SMA feedthrough, plug bothsided, 50 ohm



Technical Data

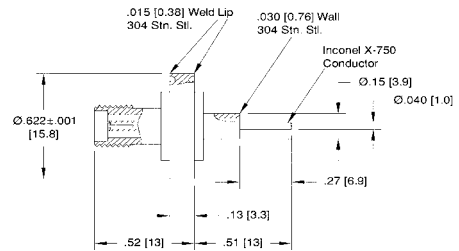
■ Material	stainless steel
■ Contact material	Kovar (gold plated)
■ Insulator	ceramics
■ Flange	NW10CF
■ Temperature range	-200 °C to 350 °C
■ Impedance	50 ohm
■ Leakage rate	< 10E-9 mbar l/s
■ Magnetic	yes
■ Current	10 A
■ Accessories	plug (see above)

Order code	Description
CF10-VB-SMA2	micro SMA feedthrough, plug bothsided, 50 ohm

Coaxial Feedthroughs

SMA Feedthroughs, Grounded Shield

Voltage: 500 V, plug, atmosphere side, 50 ohm



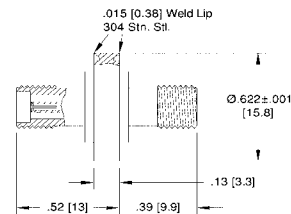
Technical Data

■ Contact material	Inconel X-750
■ Magnetic	no
■ Current	1 A
■ Accessories	clamps (EK-C-CLG10, EK-S-CB10, EK-LK-CB10), plugs (see page 6-18)

Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-SMA50-SH-SE-CE-INC	-	34	-269 to 350
KF25-SMA50-SH-SE-CE-INC	DN25KF	7*	-25 to 205
CF16-SMA50-SH-SE-CE-INC	DN16CF	34	-269 to 350

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Feedthrough is also with ungrounded shield available.

Voltage: 500 V, plug bothsided, 50 ohm



Technical Data

■ Contact material	Inconel X-750
■ Magnetic	no
■ Current	1 A
■ Accessories	clamps (EK-C-CLG10, EK-S-CB10, EK-LK-CB10), plugs (see page 6-18)

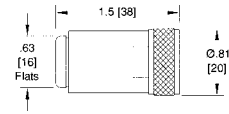
Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-SMA50-SH-DE-CE-INC	-	97	-269 to 350
KF25-SMA50-SH-DE-CE-INC	DN25KF	7*	-25 to 205
CF16-SMA50-SH-DE-CE-INC	DN16CF	97	-269 to 350

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Feedthrough is also with ungrounded shield available.

Coaxial Feedthroughs

Type N Feedthroughs, Grounded Shield

Voltage: 1.5 kV, atmosphere side plug

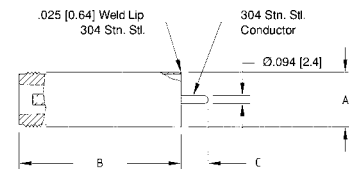


Technical Data

■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	5 A

Order code	Description
PLUG-N	voltage: 1.5 kV, atmosphere side plug

Voltage: 1.5 kV, current: 3.6 A, plug, atmosphere side



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see above)

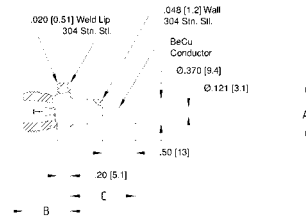
Order code	Flange	Pressure, 20 °C (bar)	A	B	C
W-N-GS-SE-CE-SS	-	124	15.8	47	7.9
KF25-N-GS-SE-CE-SS	DN25KF	7*	40	47	7.2
CF16-N-GS-SE-CE-SS	DN16CF	124	34	50	4.3
CF35-N-GS-SE-CE-SS	DN35CF	103	69	48	6.7

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

Type N Feedthroughs, Grounded Shield

Voltage: 1.5 kV, current: 1 A, plug, atmosphere side, 50 ohm



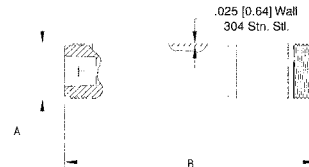
Technical Data

■ Temperature range without flange and on CF flange	-200 °C to 225 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Accessories	clamps (EK-LK-CB32), plugs (see page 6-21)

Order code	Flange	Pressure, 20 °C (bar)	A	B	C
W-N50-SH-SE-CE-CB	-	34	22.1	18	25
KF40-N50-SH-SE-CE-CB	DN40KF	6*	55	18	25
CF35-N50-SH-SE-CE-CB	DN35CF	34	69	18	24

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Voltage: 1.5 kV, current: 3.6 A, plug bothsided



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Accessories	plug (see page 6-21)

Order code	Flange	Pressure, 20 °C (bar)	A	B	C
W-N-GS-DE-CE-SS	-	124	15.8	72	0
KF25-N-GS-DE-CE-SS	DN25KF	7*	40	42	30
CF35-N-GS-DE-CE-SS	DN35CF	103	69	42	30

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

Type N Feedthroughs, Grounded Shield

Voltage: 1.5 kV, current: 1 A, plug bothsided, 50 ohm



Technical Data

■ Temperature range without flange and on CF flange	-200 °C to 225 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Accessories	plug (see page 6-21)

Order code	Flange	Pressure, 20 °C (bar)	A	B	C
W-N50-SH-DE-CE-CB	-	34	22.1	18	25
KF40-N50-SH-DE-CE-CB	DN40KF	6*	55	18	25
CF35-N50-SH-DE-CE-CB	DN35CF	34	69	19	24

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Voltage: 1.5 kV, type N to SMA feedthrough, 50 ohm



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 350 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	1 A
■ Accessories	plug (see page 6-18 and 6-21)

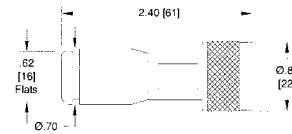
Order code	Flange	Pressure, 20 °C (bar)
W-NSMA-GS-DE-CE-CB	-	97
KF40-NSMA-GS-DE-CE-CB	DN40KF	6*
CF35-NSMA-GS-DE-CE-CB	DN35CF	97

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

Type HN Feedthrough, Grounded Shield

Voltage: 7 kV, atmosphere side plug, 50 ohm



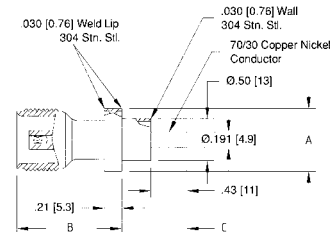
Technical Data

■ Temperature range	-55 °C to 165 °C
■ Magnetic	no
■ Current	10 A

Order code	Description
PLUG-HN50	voltage: 7 kV, atmosphere side plug, 50 ohm

Voltage: 7 kV, plug, atmosphere side, 50 ohm

6



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	7 A
■ Accessories	clamps (EK-LK-CB64), plugs (see above)

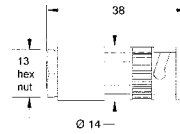
Order code	Flange	Pressure, 20 °C (bar)	A	B	C
W-HN50-SE-GS-GE-NI	-	22	19	32	20
KF40-HN50-SE-GS-CE-NI	DN40KF	6*	55	32	20
CF35-HN50-SE-GS-CE-NI	DN35CF	22	69	21	13

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Impedance 50 ±5 ohm at a pulse rise time of 45 picoseconds.

Coaxial Feedthroughs

BNC Feedthroughs, Grounded Shield

Voltage: 500 V, atmosphere side plug

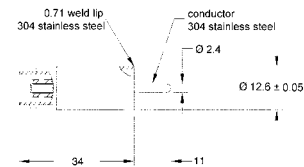


Technical Data

■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	5 A

Order code	Description
PLUG-BNC	voltage: 500 V, atmosphere side plug

Voltage: 500 V, 1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	3.6 A
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see above)

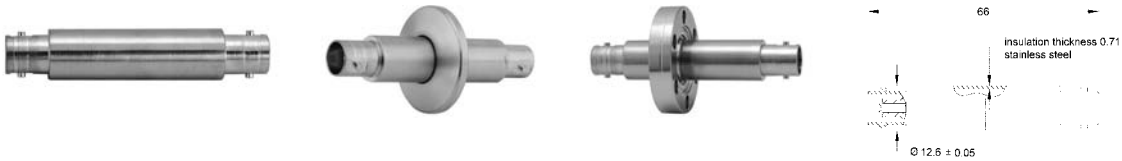
Order code	Flange	Number of pins	Pressure, 20 °C (bar)
W-BNC-GS-SE-CE-SS	-	1	97
KF16-BNC-GS-SE-CE-SS	DN16KF	1	7*
KF40-BNC-1-GS-SE-CE-SS	DN40KF	1	6*
KF40-BNC-2-GS-SE-CE-SS	DN40KF	2	6*
KF40-BNC-3-GS-SE-CE-SS	DN40KF	3	6*
KF40-BNC-4-GS-SE-CE-SS	DN40KF	4	6*
CF16-BNC-GS-SE-CE-SS	DN16CF	1	97
CF35-BNC-1-GS-SE-CE-SS	DN35CF	1	97
CF35-BNC-2-GS-SE-CE-SS	DN35CF	2	97
CF35-BNC-3-GS-SE-CE-SS	DN35CF	3	97
CF35-BNC-4-GS-SE-CE-SS	DN35CF	4	97

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Other flange sizes on request

Coaxial Feedthroughs

BNC Feedthroughs, Grounded Shield

Voltage: 500 V, 1 - 4 pins, plug bothsided



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	3.6 A
■ Accessories	plug (see page 6-25)

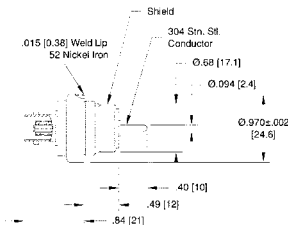
Order code	Flange	Number of pins	Pressure, 20 °C (bar)
W-BNC-GS-DE-CE-SS	-	1	97
KF16-BNC-GS-DE-CE-SS	DN16KF	1	7*
KF40-BNC-1-GS-DE-CE-SS	DN40KF	1	6*
KF40-BNC-2-GS-DE-CE-SS	DN40KF	2	6*
KF50-BNC-3-GS-DE-CE-SS	DN50KF	3	6*
KF50-BNC-4-GS-DE-CE-SS	DN50KF	4	6*
CF16-BNC-GS-DE-CE-SS	DN16CF	1	97
CF35-BNC-1-GS-DE-CE-SS	DN35CF	1	97
CF35-BNC-2-GS-DE-CE-SS	DN35CF	2	97
CF35-BNC-3-GS-DE-CE-SS	DN35CF	3	97
CF63-BNC-4-GS-DE-CE-SS	DN63CF	4	97

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Other flange sizes on request

Coaxial Feedthroughs

BNC Feedthroughs, Floating Shield

Voltage: 500 V, plug, atmosphere side



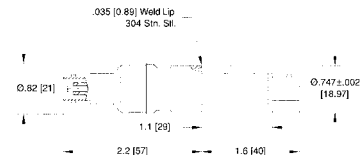
Technical Data

■ Housing material	stainless steel
■ Contact material	nickel-iron alloy
■ Magnetic	yes
■ Current	3.6 A
■ Voltage shield/ earth	2.5 kV
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see page 6-25)

Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-BNC-SFK-SE-CE-SS	-	20	-269 to 450
KF40-BNC-SFK-SE-CE-SS	DN40KF	6*	-25 to 205
CF35-BNC-SFK-SE-CE-SS	DN35CF	20	-269 to 450

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Voltage: 500 V, plug bothsided



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	3.6 A
■ Voltage shield/ earth	2.5 kV
■ Accessories	plug (see page 6-25)

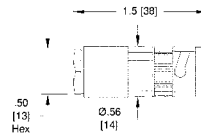
Order code	Flange	Pressure, 20 °C (bar)
W-BNC-SFL-DE-CE-SS	-	28
KF16-BNC-SFL-DE-CE-SS	DN16KF	7*
KF40-BNC-SFL-DE-CE-SS	DN40KF	6*
CF16-BNC-SFL-DE-CE-SS	DN16CF	28
CF35-BNC-SFL-DE-CE-SS	DN35CF	28

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

MHV Feedthrough, Grounded Shield

Voltage: 5 kV, plug, atmosphere side plug



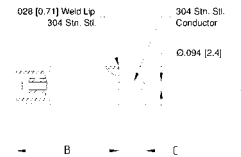
Technical Data

■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	10 A
■ pressure (20 °C)	97 bar

Order code	Description
PLUG-MHV	voltage: 5 kV, atmosphere side plug

6

Voltage: 5 kV, 1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	3.6 A
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see above)

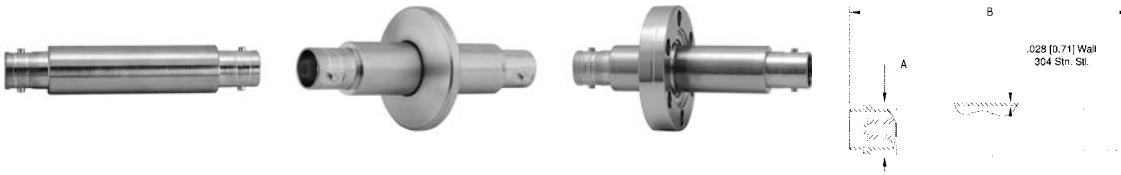
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-MHV-GS-SE-CE-SS	-	1	97	12.6	34	11
KF16-MHV-GS-SE-CE-SS	DN16KF	1	7*	34	37	5.4
KF40-MHV-1-GS-SE-CE-SS	DN40KF	1	6*	55	36	6.3
KF40-MHV-2-GS-SE-CE-SS	DN40KF	2	6*	55	36	6.3
KF40-MHV-3-GS-SE-CE-SS	DN40KF	3	6*	55	36	6.3
KF40-MHV-4-GS-SE-CE-SS	DN40KF	4	6*	55	36	6.3
CF16-MHV-GS-SE-CE-SS	DN16CF	1	97	34	37	5.4
CF35-MHV-1-GS-SE-CE-SS	DN35CF	1	97	69	35	7.7
CF35-MHV-2-GS-SE-CE-SS	DN35CF	2	97	69	35	7.7
CF35-MHV-3-GS-SE-CE-SS	DN35CF	3	97	69	35	7.7
CF35-MHV-4-GS-SE-CE-SS	DN35CF	4	97	69	35	7.7

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring. Plug see above.
- Feedthrough with ungrounded shield on request

Coaxial Feedthroughs

MHV Feedthrough, Grounded Shield

Voltage: 5 kV, 1 - 4 pins, plug bothsided



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no
■ Current	3.6 A
■ Accessories	plug (see page 6-28)

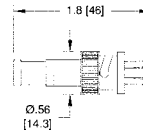
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-MHV-GS-DE-CE-SS	-	1	97	12.57	66	0
KF16-MHV-GS-DE-CE-SS	DN16KF	1	7*	30	34	33
KF40-MHV-1-GS-DE-CE-SS	DN40KF	1	6*	55	31	35
KF40-MHV-2-GS-DE-CE-SS	DN40KF	2	6*	55	31	35
KF40-MHV-3-GS-DE-CE-SS	DN40KF	3	6*	55	31	35
KF40-MHV-4-GS-DE-CE-SS	DN40KF	4	6*	55	31	35
CF16-MHV-GS-DE-CE-SS	DN16CF	1	97	34	31	35
CF35-MHV-1-GS-DE-CE-SS	DN35CF	1	97	69	32	34
CF35-MHV-2-GS-DE-CE-SS	DN35CF	2	97	69	32	34
CF35-MHV-3-GS-DE-CE-SS	DN35CF	3	97	69	32	34
CF35-MHV-4-GS-DE-CE-SS	DN35CF	4	97	69	32	34

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug und o-ring. Plug see page 6-28.
- Feedthrough with ungrounded shield on request

Coaxial Feedthroughs

SHV 5 kV Feedthrough

Atmosphere side plug

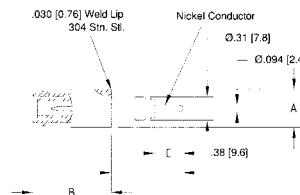


Technical Data

■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	10 A

Order code	Description
PLUG-SHV5	atmosphere side plug

1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	nickel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	16.5 A
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see above)

Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-SHV5-SH-SE-CE-NI	-	1	110	12.6	26	24
KF16-SHV5-SH-SE-CE-NI	DN16KF	1	7*	30	29	22
KF40-SHV5-1-SH-SE-CE-NI	DN40KF	1	6*	55	31	19
KF40-SHV5-2-SH-SE-CE-NI	DN40KF	2	6*	55	31	19
KF40-SHV5-3-SH-SE-CE-NI	DN40KF	3	6*	55	31	19
KF40-SHV5-4-SH-SE-CE-NI	DN40KF	4	6*	55	31	19
CF16-SHV5-SH-SE-CE-NI	DN16CF	1	110	34	30	21
CF35-SHV5-1-SH-SE-CE-NI	DN35CF	1	103	69	27	23
CF35-SHV5-2-SH-SE-CE-NI	DN35CF	2	103	69	27	23
CF35-SHV5-3-SH-SE-CE-NI	DN35CF	3	103	69	27	23
CF35-SHV5-4-SH-SE-CE-NI	DN35CF	4	103	69	27	23

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

SHV 5 kV Feedthrough

1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	nickel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	16.5 A
■ Voltage shield/ earth	2.5 kV
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see page 6-30)

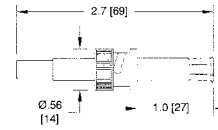
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-SHV5-LG-SE-CE-NI	-	1	110	12.6	41	9.6
KF16-SHV5-LG-SE-CE-NI	DN16KF	1	7*	30	43	7.1
KF40-SHV5-1-LG-SE-CE-NI	DN40KF	1	6*	55	41	7.1
KF40-SHV5-2-LG-SE-CE-NI	DN40KF	2	6*	55	41	7.1
KF40-SHV5-3-LG-SE-CE-NI	DN40KF	3	6*	55	41	7.1
KF40-SHV5-4-LG-SE-CE-NI	DN40KF	4	6*	55	41	7.1
CF16-SHV5-LG-CE-NI	DN16CF	1	110	34	44	6.2
CF35-SHV5-1-LG-SE-CE-NI	DN35CF	1	103	69	42	8.8
CF35-SHV5-2-LG-SE-CE-NI	DN35CF	2	103	69	42	8.8
CF35-SHV5-3-LG-SE-CE-NI	DN35CF	3	103	69	42	8.8
CF35-SHV5-4-LG-SE-CE-NI	DN35CF	4	103	69	42	8.8

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Feedthrough with stainless steel conductor on request
- Feedthrough with ungrounded shield on request

Coaxial Feedthroughs

SHV 10 kV Feedthrough

Atmosphere side plug



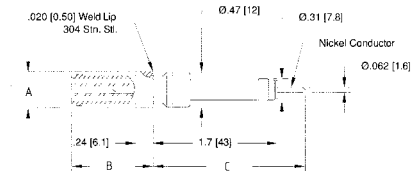
Technical Data

■ Temperature range	-65 °C to 165 °C
■ Magnetic	no
■ Current	10 A

Order code	Description
PLUG-SHV10	atmosphere side plug

6

1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	nickel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	10 A
■ Accessories	clamps (EK-C-NIL16, EK-LK-CB16), plugs (see above)

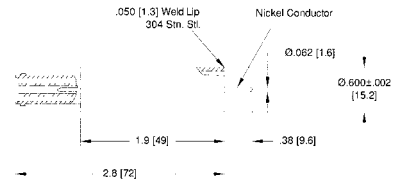
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-SHV10-SH-SE-CE-NI	-	1	8.3	12.6	28	53
KF16-SHV10-SH-SE-CE-NI	DN16KF	1	7*	30	31	50
KF40-SHV10-1-SH-SE-CE-NI	DN40KF	1	6*	55	31	50
KF40-SHV10-2-SH-SE-CE-NI	DN40KF	2	6*	55	31	50
KF50-SHV10-3-SH-SE-CE-NI	DN50KF	3	6*	55	31	50
KF50-SHV10-4-SH-SE-CE-NI	DN50KF	4	6*	55	31	50
CF16-SHV10-SH-SE-CE-NI	DN16CF	1	8.3	34	30	52
CF35-SHV10-1-SH-SE-CE-NI	DN35CF	1	8.3	69	30	52
CF35-SHV10-2-SH-SE-CE-NI	DN35CF	2	8.3	69	30	52
CF35-SHV10-3-SH-SE-CE-NI	DN35CF	3	8.3	69	30	52
CF63-SHV10-4-SH-SE-CE-NI	DN63CF	4	8.3	69	30	52

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.
- Feedthrough with stainless steel conductor on request

Coaxial Feedthroughs

SHV 10 kV Feedthrough

1 - 4 pins, plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	nickel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	10 A
■ Accessories	clamps (EK-C-NIL16, EK-LK-CB16), plugs (see page 6-32)

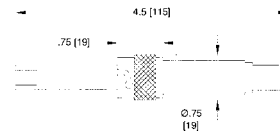
Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A	B	C
W-SHV10-LG-SE-CE-N	-	1	8.3	15.2	72	0
KF16-SHV10-LG-SE-CE-N	DN25KF	1	7*	40	72	9.6
KF40-SHV10-1-LG-SE-CE-N	DN40KF	1	6*	55	74	7.1
KF40-SHV10-2-LG-SE-CE-N	DN40KF	2	6*	55	74	7.1
KF50-SHV10-3-LG-SE-CE-N	DN50KF	3	6*	55	74	7.1
KF50-SHV10-4-LG-SE-CE-N	DN50KF	4	6*	55	74	7.1
CF16-SHV10-LG-SE-CE-N	DN16CF	1	8.3	34	74	7.7
CF35-SHV10-1-LG-SE-CE-N	DN35CF	1	8.3	69	73	8.5
CF35-SHV10-2-LG-SE-CE-N	DN35CF	2	8.3	69	73	8.5
CF35-SHV10-3-LG-SE-CE-N	DN35CF	3	8.3	69	73	8.5
CF63-SHV10-4-LG-SE-CE-N	DN63CF	4	8.3	69	73	8.5

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Coaxial Feedthroughs

SHV 20 kV Feedthrough

Atmosphere side plug

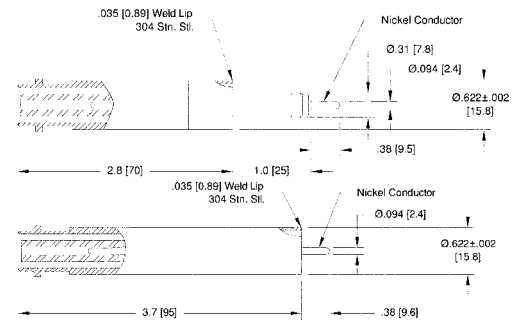


Technical Data

■ Temperature range	-20 °C to 125 °C
■ Magnetic	yes
■ Current	20 A

Order code	Description
PLUG-SHV20	atmosphere side plug

Plug, atmosphere side



Technical Data

■ Housing material	stainless steel
■ Contact material	nickel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	16.5 A
■ Accessories	clamps (EK-S-CB24, EK-LK-CB24), plugs (see above)

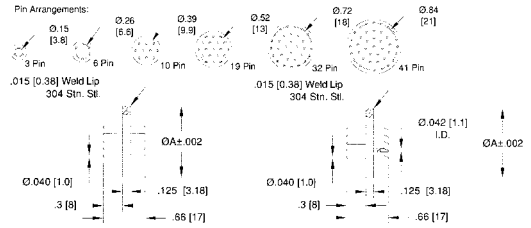
Order code	Flange	Pressure, 20 °C (bar)	Type of housing
W-SHV20-SH-SE-CE-NI	-	17	exposed
W-SHV20-LG-SE-CE-NI	-	17	recessed
KF25-SHV20-SH-SE-CE-NI	DN25KF	7*	exposed
KF25-SHV20-LG-SE-CE-NI	DN25KF	7*	recessed
CF16-SHV20-SH-SE-CE-NI	DN16CF	17	exposed
CF16-SHV20-LG-SE-CE-NI	DN16CF	17	recessed

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug and o-ring.

Power and High Voltage Feedthroughs

Voltage: 1 - 2 kV

Voltage: 1 kV, 3 - 41 pins, pin diameter: 1.0 mm



Technical Data

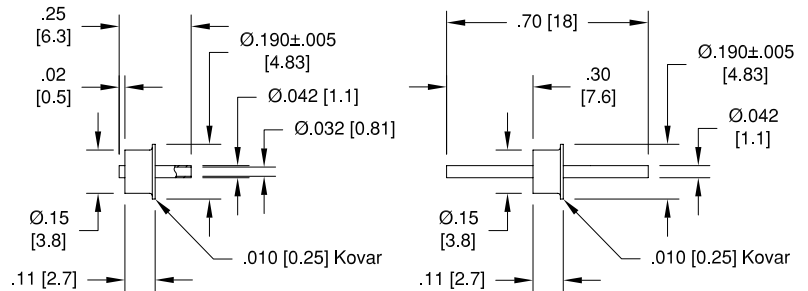
■ Insulator	glass ceramics
■ Contact material	nickel-plated stainless steel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Current	5 A per conductor
■ Form	crimp connectors double-sided
■ Accessories	contacts (CC10F)

Order code	Flange	Number of pins	Pressure, 20 °C (bar)	A
W-MP-3-NC-CE-SSN	-	3	38	18.92
W-MP-6-NC-CE-SSN	-	6	34	22.10
W-MP-10-NC-CE-SSN	-	10	31	25.27
W-MP-19-NC-CE-SSN	-	19	28	28.45
W-MP-32-NC-CE-SSN	-	32	26	34.80
W-MP-41-NC-CE-SSN	-	41	24	37.97
KF25-MP-3-NC-CE-SSN	DN25KF	3	7*	-
KF40-MP-6-NC-CE-SSN	DN40KF	6	6*	-
KF40-MP-10-NC-CE-SSN	DN40KF	10	6*	-
KF40-MP-19-NC-CE-SSN	DN40KF	19	6*	-
KF40-MP-32-NC-CE-SSN	DN40KF	32	6*	-
KF50-MP-41-NC-CE-SSN	DN50KF	41	6*	-
CF35-MP-3-NC-CE-SSN	DN35CF	3	38	-
CF35-MP-6-NC-CE-SSN	DN35CF	6	34	-
CF35-MP-10-NC-CE-SSN	DN35CF	10	31	-
CF35-MP-19-NC-CE-SSN	DN35CF	19	28	-
CF35-MP-32-NC-CE-SSN	DN35CF	32	26	-
CF35-MP-41-NC-CE-SSN	DN35CF	41	24	-

Power and High Voltage Feedthroughs

Voltage: 1 - 2 kV

Voltage: 500 V DC, 1 pin, without flange, pin diameter: 0.81 mm



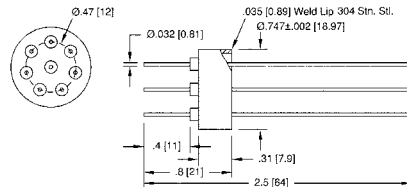
Technical Data

- Temperature range -80°C to 450°C
- Magnetic yes
- pressure (20 °C) 172 bar
- Accessories contacts (EK-C-CLG11)

6

Order code	Contact material	Current (A)
W-V500-NC-CE-KOVT11	Kovar tube	-
W-V500-NC-CE-MO11	molybdenium	11.5

Voltage: 1.5 kV, 8 pins, pin diameter: 1.3 mm



Technical Data

- Insulator aluminium ceramics
- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Accessories contacts (EK-C-CB081)

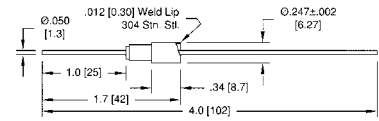
Order code	Flange	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
W-HV1-8-CE-SS081	-	stainless steel 304	1.1	no	34
W-HV1-8-CE-NI081	-	nickel	5	yes	34
W-HV1-8-CE-MO081	-	molybdenium	8.5	no	34
W-HV1-8-CE-CU081	-	copper	16	no	34
KF16-HV1-8-CE-SS081	DN16KF	stainless steel 304	1.1	no	7*
KF16-HV1-8-CE-NI081	DN16KF	nickel	5	yes	7*
KF16-HV1-8-CE-MO081	DN16KF	molybdenium	8.5	no	7*
KF16-HV1-8-CE-CU081	DN16KF	copper	16	no	7*
CF16-HV1-8-CE-CU081	DN16CF	stainless steel 304	1.1	no	34
CF16-HV1-8-CE-NI081	DN16CF	nickel	5	yes	34
CF16-HV1-8-CE-SS081	DN16CF	molybdenium	8.5	no	34
CF16-HV1-8-CE-MO081	DN16CF	copper	16	no	34

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

Voltage: 5 - 6 kV

Voltage: 5 kV, 1 pin, without flange, pin diameter: 1.3 mm

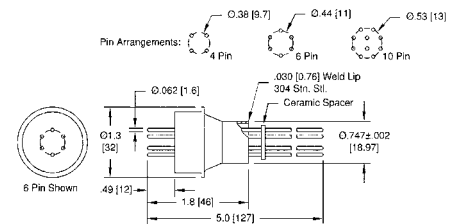


Technical Data

■ Insulator	aluminium ceramics
■ Temperature range	-269 °C to 450 °C
■ pressure (20 °C)	241 bar
■ Accessories	contacts (EK-C-CB13, EK-LK-CB13)

Order code	Contact material	Current (A)	Magnetic
W-HV5-CE-SS13	stainless steel 304	1.8	no
W-HV5-CE-NI13	nickel	8.2	yes
W-HV5-CE-NIT13	nickel tube	-	yes
W-HV5-CE-CU13	copper	27	no

Voltage: 2 - 5 kV, 4 - 10 pins, pin diameter: 1.6 mm



Technical Data

■ Contact material	Alumel
■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	5 A
■ Accessories	contacts (EK-C-AM16, EK-LK-CB16)

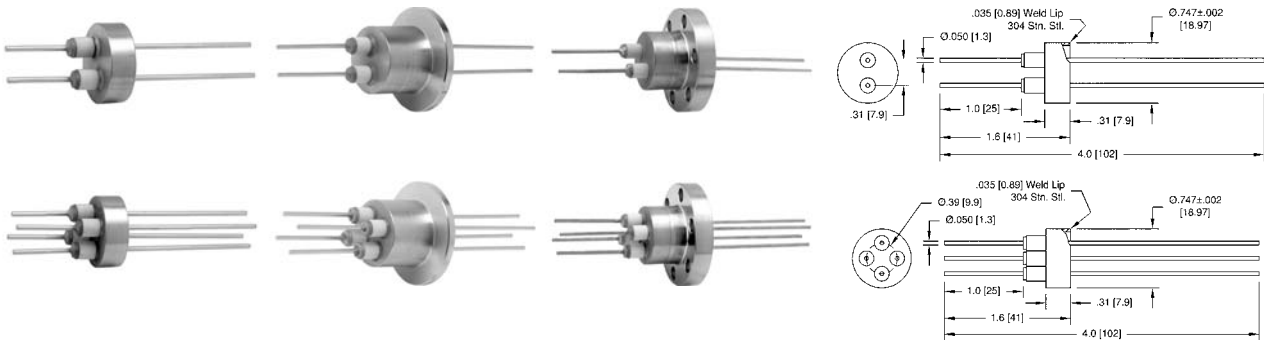
Order code	Number of pins	Flange	Voltage (kV)	Pressure, 20 °C (bar)
W-HV5-4-CE-AM16	4	-	5	41
W-HV5-6-CE-AM16	6	-	5	38
W-HV2-10-CE-AM16	10	-	2	34
KF16-HV5-4-CE-AM16	4	DN16KF	5	7*
KF16-HV5-6-CE-AM16	6	DN16KF	5	7*
KF16-HV2-10-CE-AM16	10	DN16KF	2	7*
CF16-HV5-4-CE-AM16	4	DN16CF	5	41
CF16-HV5-6-CE-AM16	6	DN16CF	5	38
CF16-HV2-10-CE-AM16	10	DN16CF	2	34
CF35-HV5-4-CE-AM16	4	DN35CF	5	41
CF35-HV5-6-CE-AM16	6	DN35CF	5	38
CF35-HV2-10-CE-AM16	10	DN35CF	2	34

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

Voltage: 5 - 6 kV

Voltage: 6 kV, 2 - 4 pins, pin diameter: 1.3 mm



Technical Data

- Insulator
- Temperature range without flange and on CF flange
- Temperature range on KF flange
- Accessories

aluminium ceramics
 -269 °C to 450 °C
 -25 °C to 205 °C
 contacts (EK-C-CB13, EK-LK-CB13)

6

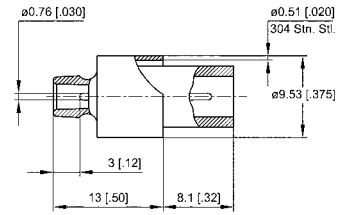
Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
W-HV6-2-CE-SS13	-	2	stainless steel 304	1.8	no	86
W-HV6-2-CE-NI13	-	2	nickel	8.2	yes	86
W-HV6-2-CE-CU13	-	2	copper	27	no	86
W-HV6-4-CE-SS13	-	4	stainless steel 304	1.8	no	86
W-HV6-4-CE-NI13	-	4	nickel	8.2	yes	86
W-HV6-4-CE-CU13	-	4	copper	27	no	86
KF16-HV6-2-CE-SS13	DN16KF	2	stainless steel 304	1.8	no	7*
KF16-HV6-2-CE-NI13	DN16KF	2	nickel	8.2	yes	7*
KF16-HV6-2-CE-CU13	DN16KF	2	copper	27	no	7*
KF16-HV6-4-CE-SS13	DN16KF	4	stainless steel 304	1.8	no	7*
KF16-HV6-4-CE-NI13	DN16KF	4	nickel	8.2	yes	7*
KF16-HV6-4-CE-CU13	DN16KF	4	copper	27	no	7*
CF16-HV6-2-CE-SS13	DN16CF	2	stainless steel 304	1.8	no	86
CF16-HV6-2-CE-NI13	DN16CF	2	nickel	8.2	yes	86
CF16-HV6-2-CE-CU13	DN16CF	2	copper	27	no	86
CF16-HV6-4-CE-SS13	DN16CF	4	stainless steel 304	1.8	no	86
CF16-HV6-4-CE-NI13	DN16CF	4	nickel	8.2	yes	86
CF16-HV6-4-CE-CU13	DN16CF	4	copper	27	no	86

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

Voltage: 10 kV

Micro HV plug with cable

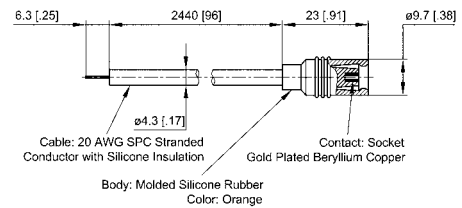


Technical Data

- Temperature range -55 °C to 125 °C
- Current 26 A

Order code	Description
PLUG-HV10S-MOP07	micro HV plug with cable

Micro HV feedthrough, 1 - 4 pins, pin diameter: 0.76 mm



Technical Data

- Housing material stainless steel
- Contact material gold plated molybdenum
- Insulator aluminium ceramics
- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes
- Current 3 A
- Accessories contacts (EK-C-CB081)

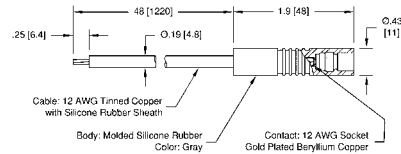
Order code	Flange	Number of pins	Pressure, 20 °C (bar)
W-HV10S-CE-MOP07	-	1	96
KF16-HV10S-1-CE-MOP07	DN16KF	1	7*
KF40-HV10S-2-CE-MOP07	DN40KF	2	6*
KF40-HV10S-3-CE-MOP07	DN40KF	3	6*
KF40-HV10S-4-CE-MOP07	DN40KF	4	6*
CF16-HV10S-1-CE-MOP07	DN16CF	1	96
CF35-HV10S-2-CE-MOP07	DN35CF	2	96
CF35-HV10S-3-CE-MOP07	DN35CF	3	96
CF35-HV10S-4-CE-MOP07	DN35CF	4	96

* With trapped centering ring and clamp chain.
 • These specifications are only valid for simultaneous use of high voltage plug PLUG-HV10S-MOP07.

Power and High Voltage Feedthroughs

Voltage: 10 kV

High voltage plug with silicone isolated cable, for pin diameter: 2.4 mm

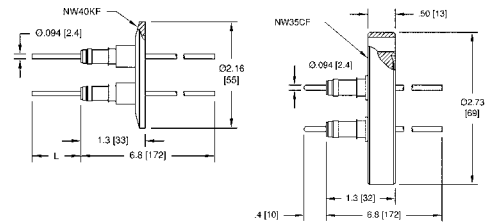


Technical Data

- Temperature range -55 °C to 125 °C
- Current 30 A

Order code	Description
PLUG-HV10-24	high voltage plug, for pin diameter: 2.4 mm

1 - 2 pins, pin diameter: 2.4 mm



Technical Data

- Insulator aluminium ceramics
- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Accessories clamps (BC23, EK-S-CB24, EK-LK-CB24), plugs (see above)

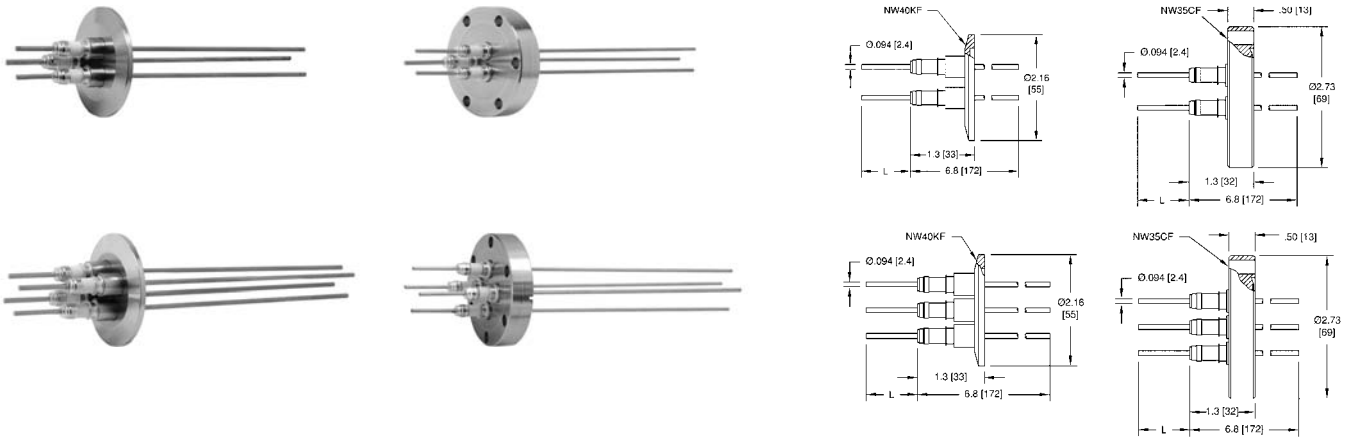
Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
W-HV10S-CE-SS24	-	1	stainless steel 304	3.6	no	103
W-HV10S-CE-NI24	-	1	nickel	16.5	yes	103
W-HV10S-CE-CU24	-	1	copper	55	no	103
KF16-HV10S-1-CE-SS24	DN16KF	1	stainless steel 304	3.6	no	7*
KF16-HV10S-1-CE-NI24	DN16KF	1	nickel	16.5	yes	7*
KF16-HV10S-1-CE-CU24	DN16KF	1	copper	55	no	7*
KF40-HV10S-2-CE-SS24	DN40KF	2	stainless steel 304	3.6	no	6*
KF40-HV10S-2-CE-NI24	DN40KF	2	nickel	16.5	yes	6*
KF40-HV10S-2-CE-CU24	DN40KF	2	copper	55	no	6*
CF16-HV10S-1-CE-SS24	DN16CF	1	stainless steel 304	3.6	no	103
CF16-HV10S-1-CE-NI24	DN16CF	1	nickel	16.5	yes	103
CF16-HV10S-1-CE-CU24	DN16CF	1	copper	55	no	103
CF35-HV10S-2-CE-SS24	DN35CF	2	stainless steel 304	3.6	no	103
CF35-HV10S-2-CE-NI24	DN35CF	2	nickel	16.5	yes	103
CF35-HV10S-2-CE-CU24	DN35CF	2	copper	55	no	103

- * With trapped centering ring and clamp chain.
- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV10-24.

Power and High Voltage Feedthroughs

Voltage: 10 kV

3 - 4 pins, pin diameter: 2.4 mm



Technical Data

- Insulator
- Temperature range on KF flange
- Temperature range on CF flange
- Accessories

aluminium ceramics

-25 °C to 205 °C

-269 °C to 450 °C

clamps (BC23, EK-S-CB24, EK-LK-CB24),
plugs (see page 6-40)

Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
KF40-HV10S-3-CE-SS24	DN40KF	3	stainless steel 304	3.6	no	6*
KF40-HV10S-3-CE-NI24	DN40KF	3	nickel	16.5	yes	6*
KF40-HV10S-3-CE-CU24	DN40KF	3	copper	55	no	6*
KF40-HV10S-4-CE-SS24	DN40KF	4	stainless steel 304	3.6	no	6*
KF40-HV10S-4-CE-NI24	DN40KF	4	nickel	16.5	yes	6*
KF40-HV10S-4-CE-CU24	DN40KF	4	copper	55	no	6*
CF35-HV10S-3-CE-SS24	DN35CF	3	stainless steel 304	3.6	no	103
CF35-HV10S-3-CE-NI24	DN35CF	3	nickel	16.5	yes	103
CF35-HV10S-3-CE-CU24	DN35CF	3	copper	55	no	103
CF35-HV10S-4-CE-SS24	DN35CF	4	stainless steel 304	3.6	no	103
CF35-HV10S-4-CE-NI24	DN35CF	4	nickel	16.5	yes	103
CF35-HV10S-4-CE-CU24	DN35CF	4	copper	55	no	103

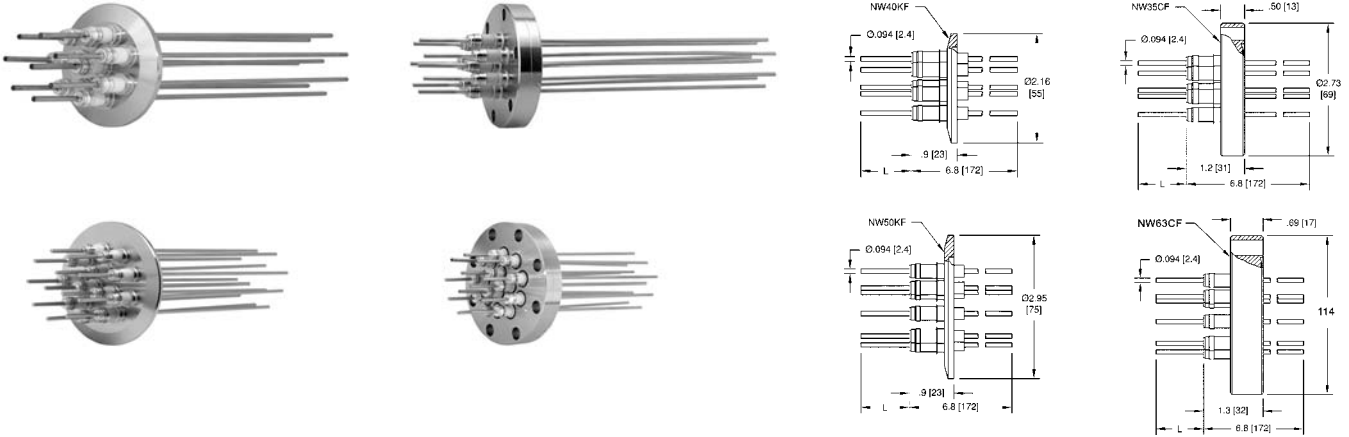
* With trapped centering ring and clamp chain.

- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV10-24.

Power and High Voltage Feedthroughs

Voltage: 10 kV

8 - 12 pins, pin diameter: 2.4 mm



Technical Data

- Insulator
- Temperature range on KF flange
- Temperature range on CF flange
- Accessories

aluminium ceramics
 -25 °C to 205 °C
 -269 °C to 450 °C
 clamps (BC23, EK-S-CB24, EK-LK-CB24),
 plugs (see page 6-40)

6

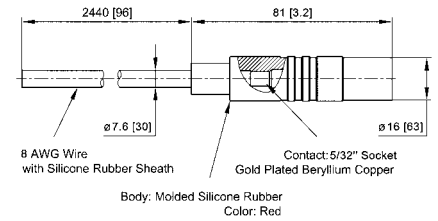
Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
KF40-HV10S-8-CE-SS24	DN40KF	8	stainless steel 304	3.6	no	6*
KF40-HV10S-8-CE-NI24	DN40KF	8	nickel	16.5	yes	6*
KF40-HV10S-8-CE-CU24	DN40KF	8	copper	55	no	6*
KF50-HV10S-12-CE-SS24	DN50KF	12	stainless steel 304	3.6	no	6*
KF50-HV10S-12-CE-NI24	DN50KF	12	nickel	16.5	yes	6*
KF50-HV10S-12-CE-CU24	DN50KF	12	copper	55	no	6*
CF35-HV10S-8-CE-SS24	DN35CF	8	stainless steel 304	3.6	no	103
CF35-HV10S-8-CE-NI24	DN35CF	8	nickel	16.5	yes	103
CF35-HV10S-8-CE-CU24	DN35CF	8	copper	55	no	103
CF63-HV10S-12-CE-SS24	DN63CF	12	stainless steel 304	3.6	no	103
CF63-HV10S-12-CE-NI24	DN63CF	12	nickel	16.5	yes	103
CF63-HV10S-12-CE-CU24	DN63CF	12	copper	55	no	103

- * With trapped centering ring and clamp chain.
- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV10-24.

Power and High Voltage Feedthroughs

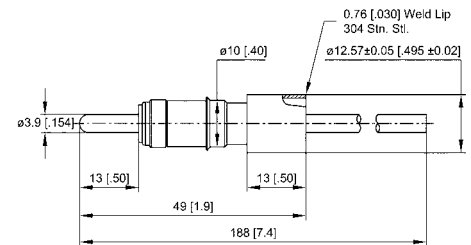
Voltage: 10 kV

Micro HV plug, voltage: 10 kV



Order code	Description
PLUG-HV10-39	micro HV plug, voltage: 10 kV

1 - 4 pins, pin diameter: 3.9 mm



Technical Data

■ Housing material	stainless steel
■ Insulator	aluminium ceramics
■ Magnetic	yes
■ Accessories	contacts (EK-LK-CB39), plugs (see above)

Order code	Flange	Number of pins	Contact material	Current (A)	Pressure, 20 °C (bar)	Temperature range (°C)
W-HV10S-CE-NI39	-	1	nickel	30	69	-269 to 450
W-HV10S-CE-CU39	-	1	copper	100	69	-269 to 450
KF16-HV10S-1-CE-NI39	DN16KF	1	nickel	30	7*	-25 to 205
KF16-HV10S-1-CE-CU39	DN16KF	1	copper	100	7*	-25 to 205
KF40-HV10S-2-CE-NI39	DN40KF	2	nickel	30	6*	-25 to 205
KF40-HV10S-2-CE-CU39	DN40KF	2	copper	100	6*	-25 to 205
KF40-HV10S-3-CE-NI39	DN40KF	3	nickel	30	6*	-25 to 205
KF40-HV10S-3-CE-CU39	DN40KF	3	copper	100	6*	-25 to 205
KF40-HV10S-4-CE-NI39	DN40KF	4	nickel	30	6*	-25 to 205
KF40-HV10S-4-CE-CU39	DN40KF	4	copper	100	6*	-25 to 205
CF16-HV10S-1-CE-NI39	DN16CF	1	nickel	30	69	-269 to 450
CF16-HV10S-1-CE-CU39	DN16CF	1	copper	100	69	-269 to 450
CF35-HV10S-2-CE-NI39	DN35CF	2	nickel	30	69	-269 to 450
CF35-HV10S-2-CE-CU39	DN35CF	2	copper	100	69	-269 to 450
CF35-HV10S-3-CE-NI39	DN35CF	3	nickel	30	69	-269 to 450
CF35-HV10S-3-CE-CU39	DN35CF	3	copper	100	69	-269 to 450
CF35-HV10S-4-CE-NI39	DN35CF	4	nickel	30	69	-269 to 450
CF35-HV10S-4-CE-CU39	DN35CF	4	copper	100	69	-269 to 450

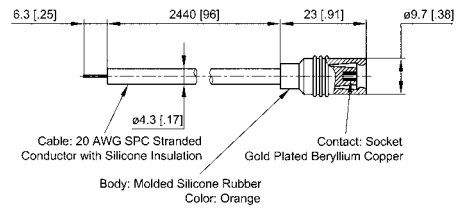
* With trapped centering ring and clamp chain.

● These specifications are only valid for simultaneous use of high voltage plug PLUG-HV10-39.

Power and High Voltage Feedthroughs

Voltage: 15 kV

Mini high voltage plug, voltage: 15 kV



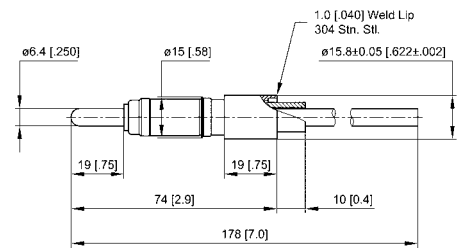
Technical Data

■ Temperature range	-55 °C to 125 °C
■ Current	7.5 A
■ pressure (20 °C)	76 bar

Order code	Description
PLUG-HV15-MOP1	mini high voltage plug, voltage: 15 kV

6

1 - 4 pins, pin diameter: 0.97 mm



Technical Data

■ Housing material	stainless steel
■ Contact material	gold plated molybdenum
■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	7.5 A
■ Accessories	clamps (EK-C-CLG10), plugs (see above)

Order code	Flange	Number of pins	Pressure, 20 °C (bar)
W-HV15S-CE-MOP1	-	1	76
KF16-HV15S-1-CE-MOP1	DN16KF	1	6*
KF40-HV15S-2-CE-MOP1	DN40KF	2	7*
KF40-HV15S-3-CE-MOP1	DN40KF	3	7*
KF40-HV15S-4-CE-MOP1	DN40KF	4	7*
CF16-HV15S-1-CE-MOP1	DN16CF	1	76
CF35-HV15S-2-CE-MOP1	DN35CF	2	76
CF35-HV15S-3-CE-MOP1	DN35CF	3	76
CF35-HV15S-4-CE-MOP1	DN35CF	4	76

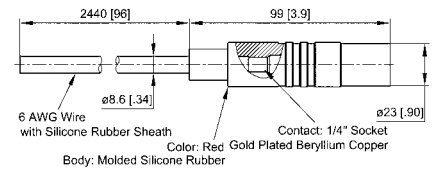
* With trapped centering ring and clamp chain.

● These specifications are only valid for simultaneous use of high voltage plug PLUG-HV15-MOP1.

Power and High Voltage Feedthroughs

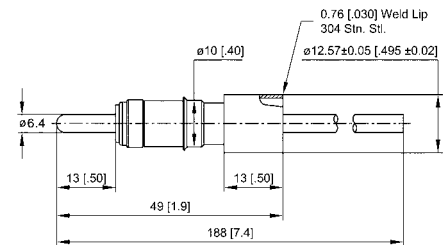
Voltage: 15 kV

Power plug, voltage: 15 kV



Order code	Temperature range (°C)	Current (A)	Pressure, 20 °C (bar)
PLUG-HV15S-64	-55 to 125	100	52

1 - 4 pins, pin diameter: 6.4 mm



Technical Data

■ Housing material	stainless steel
■ Insulator	aluminium ceramics
■ Magnetic	yes
■ Accessories	clamps (EK-LK-CB64), plugs (see above)

Order code	Flange	Number of pins	Contact material	Current (A)	Pressure, 20 °C (bar)	Temperature range (°C)
W-HV15S-CE-NI64	-	1	nickel	56	52	-269 to 450
W-HV15S-CE-CU64	-	1	copper	185	52	-269 to 450
KF16-HV15S-1-CE-NI64	DN16KF	1	nickel	56	7*	-269 to 450
KF16-HV15S-1-CE-CU64	DN16KF	1	copper	185	7*	-25 to 250
KF40-HV15S-2-CE-NI64	DN40KF	2	nickel	56	6*	-25 to 250
KF40-HV15S-2-CE-CU64	DN40KF	2	copper	185	6*	-25 to 250
KF40-HV15S-3-CE-NI64	DN40KF	3	nickel	56	6*	-25 to 250
KF40-HV15S-3-CE-CU64	DN40KF	3	copper	185	6*	-25 to 250
KF40-HV15S-4-CE-NI64	DN40KF	4	nickel	56	6*	-25 to 250
KF40-HV15S-4-CE-CU64	DN40KF	4	copper	185	6*	-25 to 250
CF16-HV15S-1-CE-NI64	DN16CF	1	nickel	56	52	-269 to 450
CF16-HV15S-1-CE-CU64	DN16CF	1	copper	185	52	-269 to 450
CF35-HV15S-2-CE-NI64	DN35CF	2	nickel	56	52	-269 to 450
CF35-HV15S-2-CE-CU64	DN16CF	2	copper	185	52	-269 to 450
CF35-HV15S-3-CE-NI64	DN35CF	3	nickel	56	52	-269 to 450
CF35-HV15S-3-CE-CU64	DN35CF	3	copper	185	52	-269 to 450
CF35-HV15S-4-CE-NI64	DN35CF	4	nickel	56	52	-269 to 450
CF35-HV15S-4-CE-CU64	DN35CF	4	copper	185	52	-269 to 450

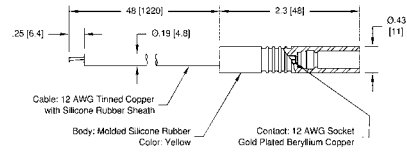
* With trapped centering ring and clamp chain.

- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV15S-64.

Power and High Voltage Feedthroughs

Voltage: 20 kV

High voltage plug with silicone isolated cable, for pin diameter: 2.4 mm



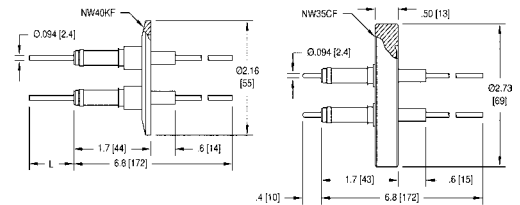
Technical Data

- Temperature range: -55 °C to 125 °C
- Current: 55 A

Order code	Description
PLUG-HV20-24	high voltage plug, for pin diameter: 2.4 mm

- Increases withstand voltage of feedthroughs as described on the following pages.

1 - 2 pins, pin diameter: 2.4 mm



Technical Data

- Insulator: aluminium ceramics
- Temperature range without flange and on CF flange: -269 °C to 450 °C
- Temperature range on KF flange: -25 °C to 205 °C
- Accessories: contacts (EK-S-CB24, EK-LK-CB24), plugs (see above)

Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
W-HV20S-CE-SS24	-	1	stainless steel 304	3.6	no	103
W-HV20S-CE-NI24	-	1	nickel	16.5	yes	103
W-HV20S-CE-CU24	-	1	copper	55	no	103
KF16-HV20S-1-CE-SS24	DN16KF	1	stainless steel 304	3.6	no	7*
KF16-HV20S-1-CE-NI24	DN16KF	1	nickel	16.5	yes	7*
KF16-HV20S-1-CE-CU24	DN16KF	1	copper	55	no	7*
KF40-HV20S-2-CE-SS24	DN40KF	2	stainless steel 304	3.6	no	6*
KF40-HV20S-2-CE-NI24	DN40KF	2	nickel	16.5	yes	6*
KF40-HV20S-2-CE-CU24	DN40KF	2	copper	55	no	6*
CF16-HV20S-1-CE-SS24	DN16CF	1	stainless steel 304	3.6	no	103
CF16-HV20S-1-CE-NI24	DN16CF	1	nickel	16.5	yes	103
CF16-HV20S-1-CE-CU24	DN16CF	1	copper	55	no	103
CF35-HV20S-2-CE-SS24	DN35CF	2	stainless steel 304	3.6	no	103
CF35-HV20S-2-CE-NI24	DN35CF	2	nickel	16.5	yes	103
CF35-HV20S-2-CE-CU24	DN35CF	2	copper	55	no	103

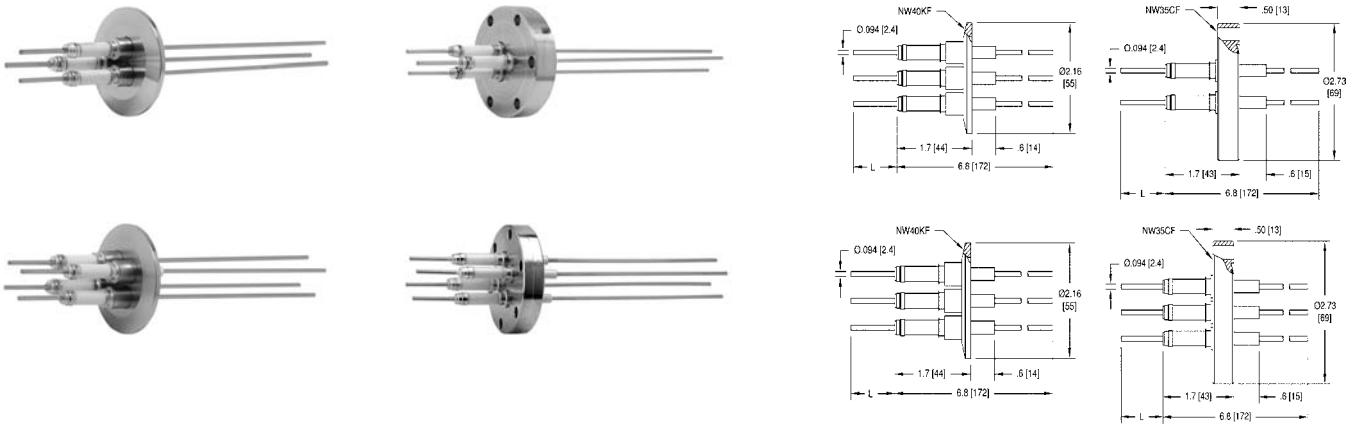
* With trapped centering ring and clamp chain.

- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV20-24.

Power and High Voltage Feedthroughs

Voltage: 20 kV

3 - 4 pins, pin diameter: 2.4 mm



Technical Data

- Insulator
- Temperature range on KF flange
- Temperature range on CF flange
- Accessories

aluminium ceramics
 -25 °C to 205 °C
 -269 °C to 450 °C
 clamps (EK-S-CB24, EK-LK-CB24),
 plugs (see page 6-46)

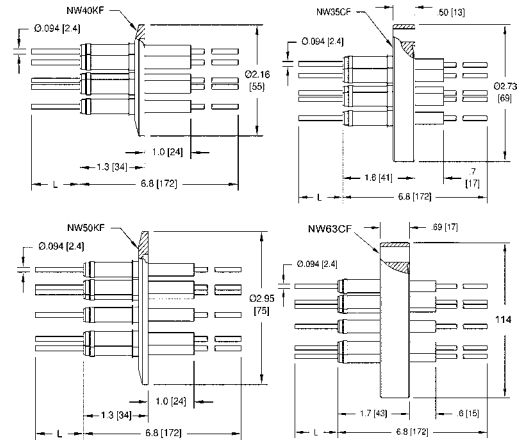
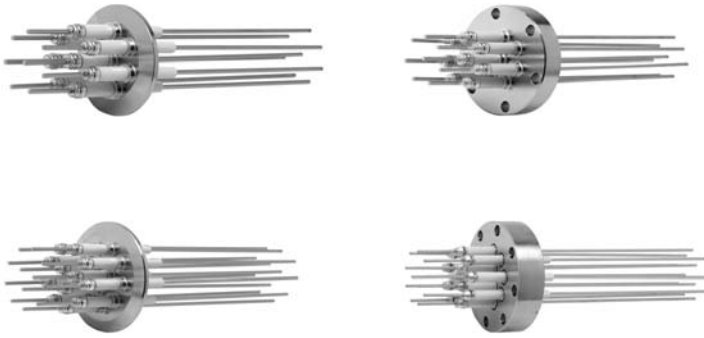
Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
KF40-HV20S-3-CE-SS24	DN40KF	3	stainless steel 304	3.6	no	6*
KF40-HV20S-3-CE-NI24	DN40KF	3	nickel	16.5	yes	6*
KF40-HV20S-3-CE-CU24	DN40KF	3	copper	55	no	6*
KF40-HV20S-4-CE-SS24	DN40KF	4	stainless steel 304	3.6	no	6*
KF40-HV20S-4-CE-NI24	DN40KF	4	nickel	16.5	yes	6*
KF40-HV20S-4-CE-CU24	DN40KF	4	copper	55	no	6*
CF35-HV20S-3-CE-SS24	DN35CF	3	stainless steel 304	3.6	no	103
CF35-HV20S-3-CE-NI24	DN35CF	3	nickel	16.5	yes	103
CF35-HV20S-3-CE-CU24	DN35CF	3	copper	55	no	103
CF35-HV20S-4-CE-SS24	DN35CF	4	stainless steel 304	3.6	no	103
CF35-HV20S-4-CE-NI24	DN35CF	4	nickel	16.5	yes	103
CF35-HV20S-4-CE-CU24	DN35CF	4	copper	55	no	103

- * With trapped centering ring and clamp chain.
- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV20-24.

Power and High Voltage Feedthroughs

Voltage: 20 kV

8 - 12 pins, pin diameter: 2.4 mm



Technical Data

- Insulator
- Temperature range on KF flange
- Temperature range on CF flange
- Accessories

aluminium ceramics
 -25 °C to 205 °C
 -269 °C to 450 °C
 clamps (EK-S-CB24, EK-LK-CB24),
 plugs (see page 6-46)

6

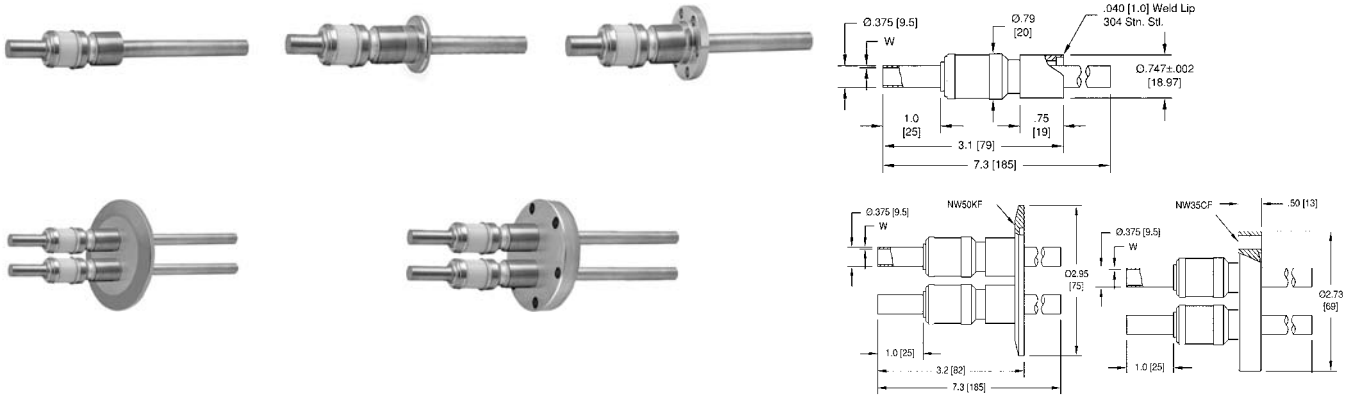
Order code	Flange	Number of pins	Contact material	Current (A)	Magnetic	Pressure, 20 °C (bar)
KF40-HV20S-8-CE-SS24	DN40KF	8	stainless steel 304	3.6	no	6*
KF40-HV20S-8-CE-NI24	DN40KF	8	nickel	16.5	yes	6*
KF40-HV20S-8-CE-CU24	DN40KF	8	copper	55	no	6*
KF40-HV20S-12-CE-SS24	DN50KF	12	stainless steel 304	3.6	no	6*
KF40-HV20S-12-CE-NI24	DN50KF	12	nickel	16.5	yes	6*
KF40-HV20S-12-CE-CU24	DN50KF	12	copper	55	no	6*
CF35-HV20S-8-CE-SS24	DN35CF	8	stainless steel 304	3.6	no	103
CF35-HV20S-8-CE-NI24	DN35CF	8	nickel	16.5	yes	103
CF35-HV20S-8-CE-CU24	DN35CF	8	copper	55	no	103
CF63-HV20S-12-CE-SS24	DN63CF	12	stainless steel 304	3.6	no	103
CF63-HV20S-12-CE-NI24	DN63CF	12	nickel	16.5	yes	103
CF63-HV20S-12-CE-CU24	DN63CF	12	copper	55	no	103

- * With trapped centering ring and clamp chain.
- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV20-24.

Power and High Voltage Feedthroughs

High Power Feedthroughs

Voltage: 8 kV, 1 - 2 pins, pin diameter: 9.5 mm



Technical Data

- Insulator aluminium ceramics
- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes

Order code	Flange	Number of pins	Contact material	Current (A)	Insulation thickness	Pressure, 20 °C (bar)
W-HC8-CE-SST95	-	1	stainless steel 304 tube	-	0.89	34
W-HC8-CE-CUT95	-	1	copper tube	-	0.81	34
W-HC8-CE-SS95	-	1	stainless steel 304	21	-	34
W-HC8-CE-CU95	-	1	copper	330	-	34
KF16-HC8-1-CE-SST95	DN16KF	1	stainless steel 304 tube	-	0.89	7*
KF16-HC8-1-CE-CUT95	DN16KF	1	copper tube	-	0.81	7*
KF16-HC8-1-CE-SS95	DN16KF	1	stainless steel 304	21	-	7*
KF16-HC8-1-CE-CU95	DN16KF	1	copper	330	-	7*
KF50-HC8-2-CE-SST95	DN50KF	2	stainless steel 304 tube	-	0.89	6*
KF50-HC8-2-CE-CUT95	DN50KF	2	copper tube	-	0.81	6*
KF50-HC8-2-CE-SS95	DN50KF	2	stainless steel 304	21	-	6*
KF50-HC8-2-CE-CU95	DN50KF	2	copper	330	-	6*
CF16-HC8-1-CE-SST95	DN16CF	1	stainless steel 304 tube	-	0.89	34
CF16-HC8-1-CE-CUT95	DN16CF	1	copper tube	-	0.81	34
CF16-HC8-1-CE-SS95	DN16CF	1	stainless steel 304	21	-	34
CF16-HC8-1-CE-CU95	DN16CF	1	copper	330	-	34
CF35-HC8-2-CE-SST95	DN35CF	2	stainless steel 304 tube	-	0.89	34
CF35-HC8-2-CE-CUT95	DN35CF	2	copper tube	-	0.81	34
CF35-HC8-2-CE-SS95	DN35CF	2	stainless steel 304	21	-	34
CF35-HC8-2-CE-CU95	DN35CF	2	copper	330	-	34

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

High Power Feedthroughs

Voltage: 8 kV, 1 pin, pin diameter: 12.7 - 19.05 mm



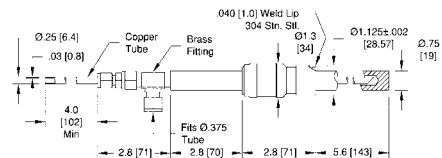
Technical Data

- Insulator aluminium ceramics
- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes

Order code	Flange	Contact material	Contact diameter	Current (A)	Insulation thickness	Pressure, 20 °C (bar)
W-HC8-1-CE-CUT127	-	copper tube	12.7	-	0.81	24
W-HC8-1-CE-CU127	-	copper	12.7	470	-	24
W-HC8-CE-CUT190	-	copper tube	19.05	-	1.65	17
W-HC8-CE-CU190	-	copper	19.05	800	-	17
KF25-HC8-1-CE-CUT127	DN25KF	copper tube	12.7	-	0.81	7*
KF25-HC8-1-CE-CU127	DN25KF	copper	12.7	470	-	7*
KF40-HC8-1-CE-CUT190	DN40KF	copper tube	19.05	-	1.65	6*
KF40-HC8-1-CE-CU190	DN40KF	copper	19.05	800	-	6*
CF35-HC8-1-CE-CUT127	DN35CF	copper tube	12.7	-	0.81	24
CF35-HC8-1-CE-CU127	DN35CF	copper	12.7	470	-	24
CF35-HC8-1-CE-CUT190	DN35CF	copper tube	19.05	-	1.65	17
CF35-HC8-1-CE-CU190	DN35CF	copper	19.05	800	-	17

* With trapped centering ring and clamp chain.

Voltage: 8 kV, 1 pin, liquid cooled, pin diameter: 19.05 mm



Technical Data

- Contact material tellurium-copper
- Insulator aluminium ceramics
- Magnetic yes
- Current 1000 A

Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-HC8K-CE-TECU190	-	17	-269 to 450
KF40-HC8K-CE-TECU190	DN40KF	6*	-25 to 205
CF35-HC8K-CE-TECU190	DN35CF	17	-269 to 450

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

High Power Feedthroughs

Voltage: 8 kV, 1 pin, pin diameter: 6.4 mm



Technical Data

■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Accessories	contacts (EK-LK-CB64)

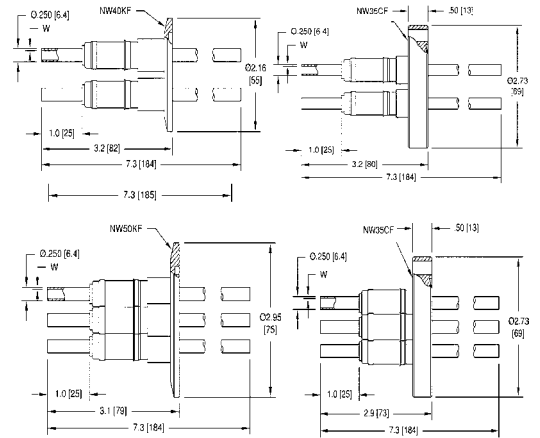
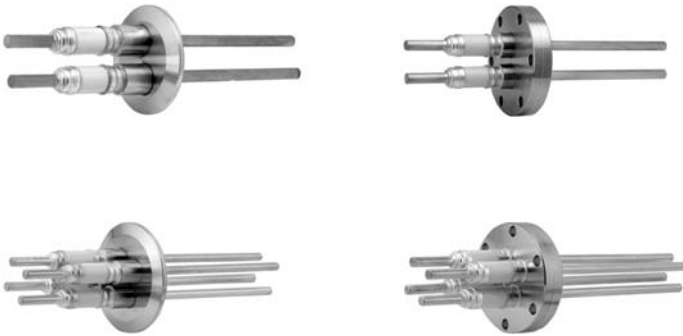
Order code	Flange	Contact material	Current (A)	Insulation thickness	Pressure, 20 °C (bar)
W-HC8-CE-SST64	-	stainless steel 304 tube	-	0.89	52
W-HC8-CE-CUT64	-	copper tube	-	0.81	52
W-HC8-CE-SS64	-	stainless steel 304	12	-	52
W-HC8-CE-CU64	-	copper	185	-	52
KF16-HC8-1-CE-SST64	DN16KF	stainless steel 304 tube	-	0.89	7*
KF16-HC8-1-CE-CUT64	DN16KF	copper tube	-	0.81	7*
KF16-HC8-1-CE-SS64	DN16KF	stainless steel 304	12	-	7*
KF16-HC8-1-CE-CU64	DN16KF	copper	185	-	7*
CF16-HC8-1-CE-SST64	DN16CF	stainless steel 304 tube	-	0.89	52
CF16-HC8-1-CE-CUT64	DN16CF	copper tube	-	0.81	52
CF16-HC8-1-CE-SS64	DN16CF	stainless steel 304	12	-	52
CF16-HC8-1-CE-CU64	DN16CF	copper	185	-	52
CF35-HC8-1-CE-SST64	DN35CF	stainless steel 304 tube	-	0.89	52
CF35-HC8-1-CE-CUT64	DN35CF	copper tube	-	0.81	52
CF35-HC8-1-CE-SS64	DN35CF	stainless steel 304	12	-	52
CF35-HC8-1-CE-CU64	DN35CF	copper	185	-	52

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

High Power Feedthroughs

Voltage: 8 kV, 2 - 4 pins, pin diameter: 6.4 mm



Technical Data

- Insulator
 - Temperature range on KF flange
 - Temperature range on CF flange
 - Magnetic
 - Accessories
- aluminium ceramics
 -25 °C to 205 °C
 -269 °C to 450 °C
 yes
 contacts (EK-LK-CB64)

6

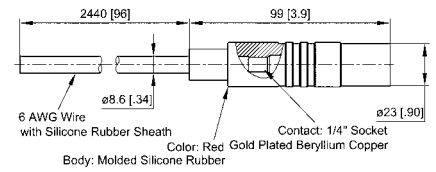
Order code	Flange	Number of pins	Contact material	Current (A)	Insulation thickness	Pressure, 20 °C (bar)
KF40-HC8-2-CE-SST64	DN40KF	2	stainless steel 304 tube	-	0.76	6*
KF40-HC8-2-CE-CUT64	DN40KF	2	copper tube	-	0.76	6*
KF40-HC8-2-CE-SS64	DN40KF	2	stainless steel 304	12	-	6*
KF40-HC8-2-CE-CU64	DN40KF	2	copper	185	-	6*
KF50-HC8-4-CE-SST64	DN50KF	4	stainless steel 304 tube	-	0.76	6*
KF50-HC8-4-CE-CUT64	DN50KF	4	copper tube	-	0.76	6*
KF50-HC8-4-CE-SS64	DN50KF	4	stainless steel 304	12	-	6*
KF50-HC8-4-CE-CU64	DN50KF	4	copper	185	-	6*
CF35-HC8-2-CE-SST64	DN35CF	2	stainless steel 304 tube	-	0.76	52
CF35-HC8-2-CE-CUT64	DN35CF	2	copper tube	-	0.76	52
CF35-HC8-2-CE-SS64	DN35CF	2	stainless steel 304	12	-	52
CF35-HC8-2-CE-CU64	DN35CF	2	copper	185	-	52
CF35-HC8-4-CE-SST64	DN35CF	4	stainless steel 304 tube	-	0.76	52
CF35-HC8-4-CE-CUT64	DN35CF	4	copper tube	-	0.76	52
CF35-HC8-4-CE-SS64	DN35CF	4	stainless steel 304	12	-	52
CF35-HC8-4-CE-CU64	DN35CF	4	copper	185	-	52

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

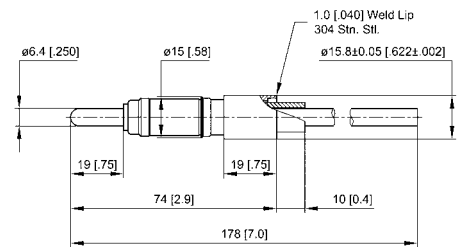
High Voltage Feedthroughs

Power plug, voltage: 25 kV



Order code	Temperature range (°C)	Magnetic	Current (A)
PLUG-HV25S-64	-55 to 125	yes	100

Voltage: 25 kV, 1 - 4 pins, pin diameter: 6.4 mm



Technical Data

■ Housing material	stainless steel
■ Insulator	aluminium ceramics
■ Magnetic	yes
■ Accessories	contacts (EK-LK-CB64), plugs (see above)

Order code	Flange	Contact material	Number of pins	Current (A)	Pressure, 20 °C (bar)	Temperature range (°C)
W-HV25S-CE-CU64	-	copper	1	185	52	-269 to 450
W-HV25S-CE-NI64	-	nickel	1	56	52	-269 to 450
KF16-HV25S-1-CE-CU64	DN16KF	copper	1	185	7*	-25 to 205
KF16-HV25S-1-CE-NI64	DN16KF	nickel	1	56	7*	-25 to 205
KF40-HV25S-2-CE-CU64	DN40KF	copper	2	185	6*	-25 to 205
KF40-HV25S-2-CE-NI64	DN40KF	nickel	2	56	6*	-25 to 205
KF50-HV25S-3-CE-CU64	DN50KF	copper	3	185	6*	-25 to 205
KF50-HV25S-3-CE-NI64	DN50KF	nickel	3	56	6*	-25 to 205
KF50-HV25S-4-CE-CU64	DN50KF	copper	4	185	6*	-25 to 205
KF50-HV25S-4-CE-NI64	DN50KF	nickel	4	56	6*	-25 to 205
CF16-HV25S-1-CE-CU64	DN16CF	copper	1	185	52	-269 to 450
CF16-HV25S-1-CE-NI64	DN16CF	nickel	1	56	52	-269 to 450
CF35-HV25S-1-CE-CU64	DN35CF	copper	1	185	52	-269 to 450
CF35-HV25S-1-CE-NI64	DN35CF	nickel	1	56	52	-269 to 450
CF35-HV25S-2-CE-CU64	DN35CF	copper	2	185	52	-269 to 450
CF35-HV25S-2-CE-NI64	DN35CF	nickel	2	56	52	-269 to 450
CF63-HV25S-3-CE-CU64	DN63CF	copper	3	185	52	-269 to 450
CF63-HV25S-3-CE-NI64	DN63CF	nickel	3	56	52	-269 to 450
CF63-HV25S-4-CE-CU64	DN63CF	copper	4	185	52	-269 to 450
CF63-HV25S-4-CE-NI64	DN63CF	nickel	4	56	52	-269 to 450

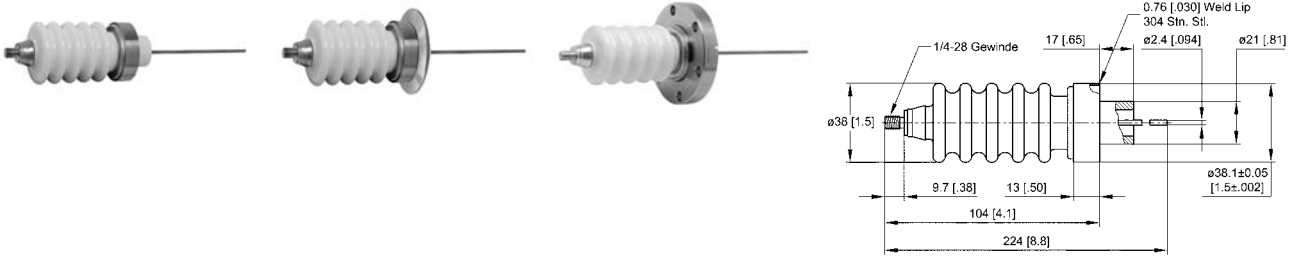
* With trapped centering ring and clamp chain.

● These specifications are only valid for simultaneous use of high voltage plug PLUG-HV25S-64.

Power and High Voltage Feedthroughs

High Voltage Feedthroughs

Voltage: 30 - 100 kV, 1 pin, pin diameter: 2.4 mm



Technical Data

■ Housing material	stainless steel
■ Contact material	stainless steel
■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Accessories	contacts (BC23, EK-S-CB24, EK-LK-CB24))

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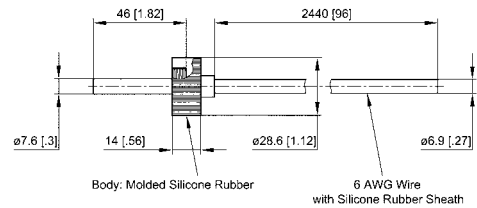
Order code	Flange	Voltage (kV)	Current (A)	Pressure, 20 °C (bar)
W-HV30R-CE-SS24	-	30	3.6	17
W-HV70R-CE-SS24	-	70	6.5	17
W-HV100R-CE-SS24	-	100	6.5	17
KF40-HV30R-1-CE-SS24	DN40KF	30	3.6	6*
ISO100-HV70R-1-CE-SS24	DN100ISO-K	70	6.5	6*
ISO100-HV100R-1-CE-SS24	DN100ISO-K	100	6.5	6*
CF35-HV30R-1-CE-SS24	DN35CF	30	3.6	17
CF100-HV70R-1-CE-SS24	DN100CF	70	6.5	17
CF100-HV100R-1-CE-SS24	DN100CF	100	6.5	17

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

High Voltage Feedthroughs

High voltage plug, voltage: 40 - 50 kV

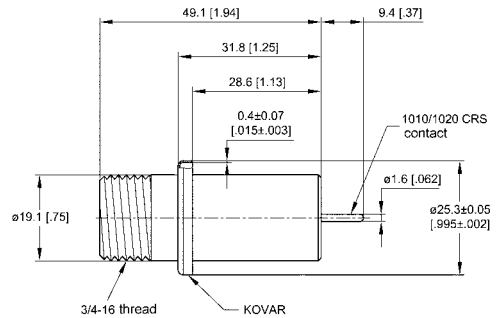


Technical Data

■ Temperature range	-55 °C to 125 °C
■ Magnetic	yes
■ pressure (20 °C)	8.6 bar

Order code	Voltage (kV)
PLUG-HV40S-16	40
PLUG-HV50S-16	50

Voltage: 40 - 50 kV, 1 pin, pin diameter: 1.6 mm



Technical Data

■ Housing material	Kovar
■ Contact material	nickel-plated stainless steel
■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Current	10 A
■ Accessories	clamps (BC18, EK-C-CB16, EK-LK-CB16), plugs (see above)

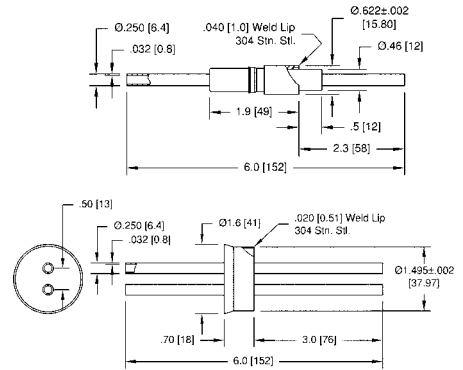
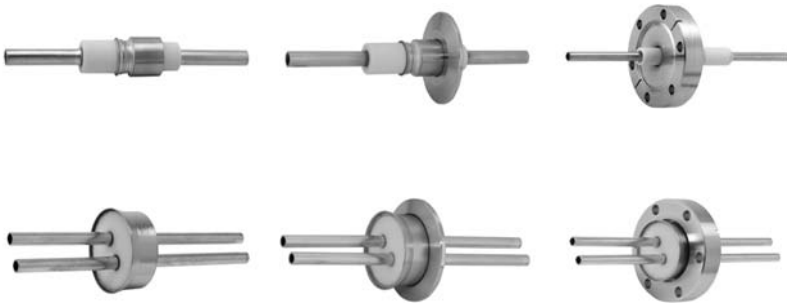
Order code	Flange	Voltage (kV)	Pressure, 20 °C (bar)
W-HV40S-CE-CRS16	-	40	28
W-HV50S-CE-CRS16	-	50	28
KF40-HV40S-CE-CRS16	DN40KF	40	6*
KF40-HV50S-CE-CRS16	DN50KF	50	6*
CF35-HV40S-CE-CRS16	DN35CF	40	28
CF35-HV50S-CE-CRS16	DN35CF	50	28

- * With trapped centering ring and clamp chain.
- These specifications are only valid for simultaneous use of high voltage plug PLUG-HV40S-16 or PLUG-HV50S-16.

Power and High Voltage Feedthroughs

RF Power Feedthroughs

Conductor diameter: 6.4 mm



Technical Data

■ Housing material	stainless steel
■ Contact material	copper tube
■ Insulator	aluminium ceramics
■ Temperature range without flange and on CF flange	-55 °C to 350 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Frequency	13560 kHz
■ Magnetic	no

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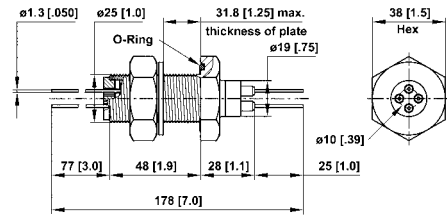
Order code	Flange	Number of pins	Voltage (kV)	Pressure, 20 °C (bar)
W-HF-CE-CUT64	-	1	14	35
W-HF8-CE-CUT64	-	2	8	8.6
KF25-HF-CE-CUT64	DN25KF	1	14	6*
KF40-HF8-CE-CUT64	DN40KF	2	8	7*
CF35-HF-CE-CUT64	DN35CF	1	14	35
CF35-HF8-CE-CUT64	DN35CF	2	8	8.6

* With trapped centering ring and clamp chain.

Power and High Voltage Feedthroughs

Bulkhead Fitting

For power and high voltage feedthroughs



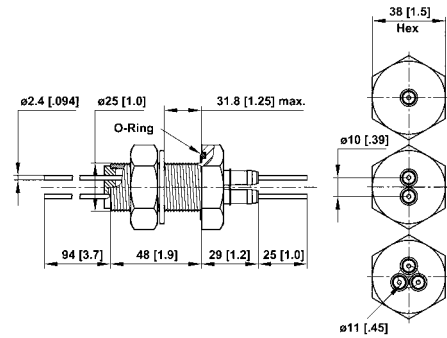
Technical Data

■ Screw	stainless steel
■ Seal	FPM
■ Insulator	aluminium ceramics
■ Temperature range	-25 °C to 205 °C
■ pressure (20 °C)	14 bar
■ Accessories	contacts (BC15, EK-C-CB13, EK-S-CB13, EK-LK-CB13)

Order code	Contact material	Current (A)	Magnetic
BP-HV2-4-CE-NI13	nickel	8.2	yes
BP-HV2-4-CE-CU13	copper	27	no

6

For power feedthroughs, voltage: 2 - 5 kV, 1 - 3 pins



Technical Data

■ Screw	stainless steel
■ Contact material	copper
■ Insulator	aluminium ceramics
■ Seal	FPM
■ Temperature range	-25 °C to 205 °C
■ Magnetic	no
■ pressure (20 °C)	14 bar
■ Accessories	contacts (BC23, EK-S-CB24, EK-LK-CB24)

Order code	Number of pins	Voltage (kV)	Current (A)
BP-HV5-1-CE-CU24	1	5	55
BP-HV2-2-CE-CU24	2	2	27
BP-HV2-3-CE-CU24	3	2	27

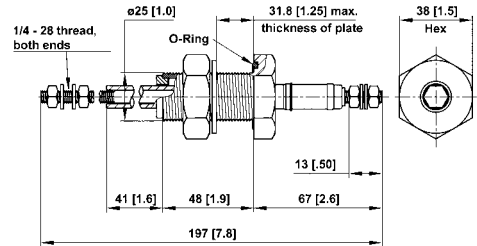
Power and High Voltage Feedthroughs

Bulkhead Fitting

For high power feedthroughs, voltage: 12 kV, 1 pin



with Teflon shield **BP-HV12-SH-PTFE**



Technical Data

■ Screw	stainless steel
■ Contact material	copper
■ Insulator	aluminium ceramics
■ Seal	FPM
■ Temperature range	-25 °C to 205 °C
■ Current	185 A
■ pressure (20 °C)	14 bar

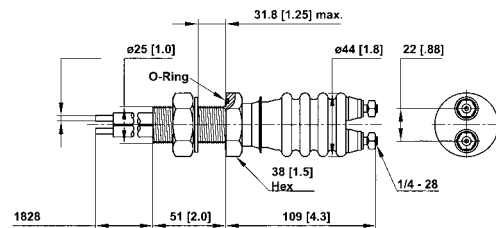
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Order code	Description
BP-HV12-CE-CU14TH	for high voltage feedthroughs, 12 kV, 1 pin

Accessories: Teflon shield

Order code	Description
BP-HV12-SH-PTFE	PTFE Teflon shield for high voltage feedthrough BP-HV12-CE-CU14TH

For HV feedthroughs, voltage: 15 kV, 2 pins



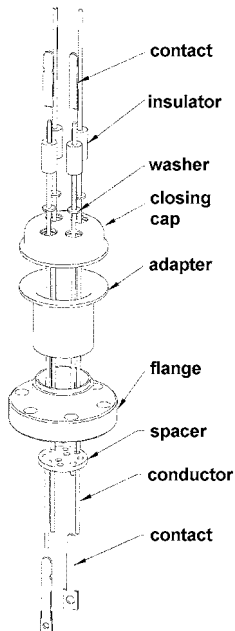
Technical Data

■ Screw	stainless steel
■ Contact material	copper
■ Insulator	aluminium ceramics
■ Seal	FPM
■ Temperature range	-25 °C to 205 °C
■ Magnetic	yes
■ Current	185 A
■ pressure (20 °C)	8.6 bar

Order code	Description
BP-HV15-2-CE-CU14TH	for high voltage plug, voltage: 15 kV, 2 pins

Thermocouple Feedthroughs

Introduction



Construction and technical data

Connection type	Thermocouple type (see table below)	Contact or number of pairs	Temperature at the feedthrough and at plug
with eyelet	R, S, T	single, 1, 2	feedthrough: -269 °C to 450 °C
with thermocouple plug	C, E, J, K	single, 1, 2, 3, 5	feedthrough: -269 °C to 450 °C; air plug: -73 °C to 650 °C
with thermocouple plug and power feedthrough	C, J, K	1, 2	feedthrough: -269 °C to 450 °C; air plug: -73 °C to 650 °C
with single contacts	K	1, 3, 5, 9, 16, 20	feedthrough: -269 °C to 450 °C
with round plug type MIL-C-5015	K	3, 5, 10	feedthrough: -269 °C to 450 °C; air plug: -55 °C to 125 °C

6

Thermocouple materials

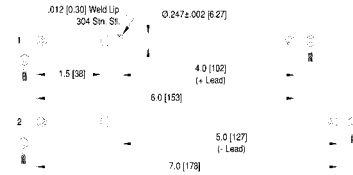
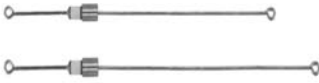
ANSI type	Thermocouple	Polarity	Temperature range	Voltage (mV)
T	copper	+	-200 °C to 350 °C	-5.60 to 17.82
	constantan	-		
K	Chromel	+	-200 °C to 1250 °C	-5.9 to 50.63
	Alumel	-		
S	platinum with 10% rhodium	+	0 °C to 1450 °C	0 to 14.97
	platinum	-		
C*	wolfram with 5% rhenium	+	0 °C to 2315 °C	0 to 37.06
	wolfram with 5% rhenium	-		

* no ANSI symbol

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Eyelets

Pin without flange



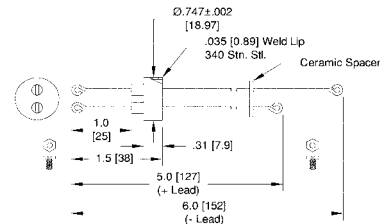
Technical Data

■ Temperature range	-269 °C to 450 °C
■ Magnetic	no
■ pressure (20 °C)	241 bar

Order code	Contact material	Figure
W-TSL-CE-CU	copper	1
W-TSL-CE-KO	constantan	2
W-TSL-CE-PR	platinum rhodium*	2

* Compensation wire, max. transmission temperature 250 °C.

1 Pair



Technical Data

■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	no

Order code	Flange	Contact material	ANSI Type	Pressure, 20 °C (bar)
W-TCL1-CE-T	-	copper/constantan	T	86
W-TCL1-CE-RS	-	platinum rhodium*	R/S	86
KF16-TCL1-CE-T	DN16KF	copper/constantan	T	7**
KF16-TCL1-CE-RS	DN16KF	platinum rhodium*	R/S	7**
CF16-TCL1-CE-T	DN16CF	copper/constantan	T	86
CF16-TCL1-CE-RS	DN16CF	platinum rhodium*	R/S	86
CF35-TCL1-CE-T	DN35CF	copper/constantan	T	86
CF35-TCL1-CE-RS	DN35CF	platinum rhodium*	R/S	86

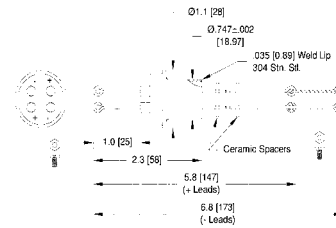
* Compensation wire, max. transmission temperature 250 °C.

** With trapped centering ring and clamp chain.

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Eyelets

2 Pairs



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic no

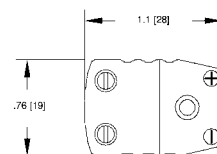
Order code	Flange	Contact material	ANSI Type	Pressure, 20 °C (bar)
W-TCL2-CE-T	-	copper/constantan	T	55
W-TCL2-CE-PR	-	platinum rhodium*	R/S	55
KF16-TCL2-CE-T	DN16KF	copper/constantan	T	7**
KF16-TCL2-CE-PR	DN16KF	platinum rhodium*	R/S	7**
CF16-TCL2-CE-T	DN16CF	copper/constantan	T	55
CF16-TCL2-CE-PR	DN16CF	platinum rhodium*	R/S	55
CF35-TCL2-CE-T	DN35CF	copper/constantan	T	55
CF35-TCL2-CE-PR	DN35CF	platinum rhodium*	R/S	55

* Compensation wire, max. transmission temperature 250 °C.

** With trapped centering ring and clamp chain.

Thermocouple Feedthroughs with Plugs

Atmosphere side plug



Order code	ANSI Type	Material	Plug type	Plug material	Temperature range (°C)	Colour
PLUG-TC-N-K	K	Cromel/Alumel	standard	glass filled nylon	-73 to 650	yellow
PLUG-TC-CE-K	K	Cromel/Alumel	hegh temp.	ceramics	-29 to 218	yellow*
PLUG-TC-N-C	C**	wolfram-rhenium	standard	glass filled nylon	-73 to 650	red
PLUG-TC-CE-C	C**	wolfram-rhenium	high temp.	ceramics	-29 to 218	red*

* Ceramic plugs are marked coloured.

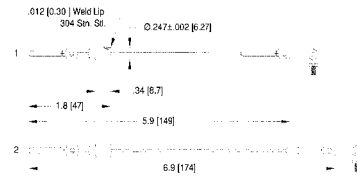
** no ANSI symbol

- Optional plug type J and type E available on request.

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Plugs

Single conductor, without flange, for atmosphere side plug



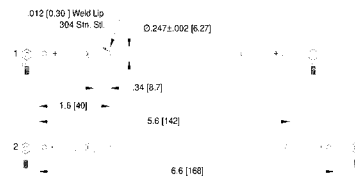
Technical Data

- Temperature range -269 °C to 450 °C
- pressure (20 °C) 241 bar

Order code	Material	Magnetic	Figure
W-TS-CE-CR	Cromel	no	1
W-TS-CE-AM	Alumel	yes	2

6

Single conductor, without flange, with screw contact on both sides



Technical Data

- Temperature range -269 °C to 450 °C
- pressure (20 °C) 241 bar

Order code	Material	Magnetic	Figure
W-TS2L-CE-CR	Chromel	no	1
W-TS2L-CE-AM	Alumel	yes	2

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Plugs

1 Pair



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes
- Options thermocouple feedthrough type J and type E

Order code	Flange	ANSI Type	Material	Pressure, 20 °C (bar)
W-TC1-CE-K	-	K	Chromel/Alumel	86
W-TC1-CE-C	-	C***	wolfram rhenium**	86
KF16-TC1-CE-K	DN16KF	K	Chromel/Alumel	7*
KF16-TC1-CE-C	DN16KF	C***	wolfram rhenium**	7*
CF16-TC1-CE-K	DN16CF	K	Chromel/Alumel	86
CF16-TC1-CE-C	DN16CF	C***	wolfram rhenium**	86
CF35-TC1-CE-K	DN35CF	K	Chromel/Alumel	86
CF35-TC1-CE-C	DN35CF	C***	wolfram rhenium**	86

- * With trapped centering ring and clamp chain.
- ** Compensation wire, max. transmission temperature 250 °C.
- *** no ANSI symbol
- Temperature specifications are only valid with demounted plug.

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Plugs

2 Pairs



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes
- Options thermocouple feedthrough type J and type E

Order code	Flange	ANSI Type	Material	Pressure, 20 °C (bar)
W-TC2-CE-K	-	K	Chromel/Alumel	55
W-TC2-CE-C	-	C***	wolfram rhenium**	55
KF16-TC2-CE-K	DN16KF	K	Chromel/Alumel	7*
KF16-TC2-CE-C	DN16KF	C***	wolfram rhenium**	7*
CF16-TC2-CE-K	DN16CF	K	Chromel/Alumel	55
CF16-TC2-CE-C	DN16CF	C***	wolfram rhenium**	55
CF35-TC2-CE-K	DN35CF	K	Chromel/Alumel	55
CF35-TC2-CE-C	DN35CF	C***	wolfram rhenium**	55

- * With trapped centering ring and clamp chain.
- ** Compensation wire, max. transmission temperature 250 °C.
- *** no ANSI symbol
- Temperature specifications are only valid with demounted plug.

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Plugs

3 or 5 Pairs



Technical Data

■ Material	Chromel/Alumel
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ ANSI Typ	K
■ Magnetic	yes

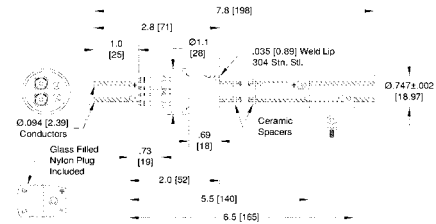
Order code	Flange	Pairs	Pressure, 20 °C (bar)
W-TC3-CE-K	-	3	28
W-TC5-CE-K	-	5	24
KF16-TC3-CE-K	DN16KF	3	7*
KF16-TC5-CE-K	DN16KF	5	7*
CF16-TC3-CE-K	DN16CF	3	28
CF16-TC5-CE-K	DN16CF	5	24
CF35-TC3-CE-K	DN35CF	3	28
CF35-TC5-CE-K	DN35CF	5	24

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug.

Thermocouple Feedthroughs

Thermocouple Feedthroughs with Plugs in Combination with Power Feedthroughs

Voltage: 5 kV



Technical Data

- Temperature range without flange and on CF flange -269 °C to 450 °C
- Temperature range on KF flange -25 °C to 205 °C
- Magnetic yes
- Options thermocouple feedthrough type J and type E

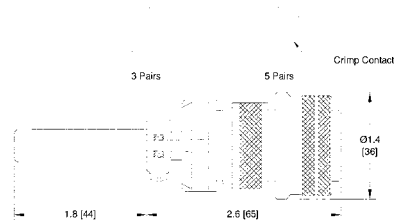
Order code	Flange	ANSI Type	Thermocouple material	Current (A)	Contact material	Pressure, 20 °C (bar)
W-TC1HV5-CE-K-2NI24	-	K	Chromel/Alumel	16.5	nickel	34
W-TC1HV5-CE-K-2CU24	-	K	Chromel/Alumel	55	copper	34
W-TC1HV5-CE-C-2NI24	-	C***	wolfram rhenium**	16.5	nickel	34
W-TC1HV5-CE-C-2CU24	-	C***	wolfram rhenium**	55	copper	34
KF16-TC1HV5-CE-K-2NI24	DN16KF	K	Chromel/Alumel	16.5	nickel	7*
KF16-TC1HV5-CE-K-2CU24	DN16KF	K	Chromel/Alumel	55	copper	7*
KF16-TC1HV5-CE-C-2NI24	DN16KF	C***	wolfram rhenium**	16.5	nickel	7*
KF16-TC1HV5-CE-C-2CU24	DN16KF	C***	wolfram rhenium**	55	copper	7*
CF16-TC1HV5-CE-K-2NI24	DN16CF	K	Chromel/Alumel	16.5	nickel	34
CF16-TC1HV5-CE-K-2CU24	DN16CF	K	Chromel/Alumel	55	copper	34
CF16-TC1HV5-CE-C-2NI24	DN16CF	C***	wolfram rhenium**	16.5	nickel	34
CF16-TC1HV5-CE-C-2CU24	DN16CF	C***	wolfram rhenium**	55	copper	34
CF35-TC1HV5-CE-K-2NI24	DN35CF	K	Chromel/Alumel	16.5	nickel	34
CF35-TC1HV5-CE-K-2CU24	DN35CF	K	Chromel/Alumel	55	copper	34
CF35-TC1HV5-CE-C-2NI24	DN35CF	C***	wolfram rhenium**	16.5	nickel	34
CF35-TC1HV5-CE-C-2CU24	DN35CF	C***	wolfram rhenium**	55	copper	34

- * With trapped centering ring and clamp chain.
- ** Compensation wire, max. transmission temperature 250 °C.
- *** no ANSI symbol
- Temperature specifications are only valid with demounted plug.

Thermocouple Feedthroughs

Circular Connectors MIL-C-5015, Single Ended

Atmosphere side plug for 3 - 10 pairs



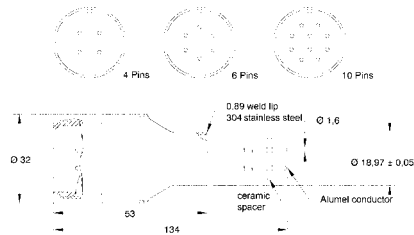
Technical Data

■ Material	Chromel/Alumel
■ Insulator	diallyl phthalate
■ Temperature range	-55 °C to 125 °C
■ Magnetic	yes

Order code	Pairs	ANSI Type
PLUG-MPCTC5-3-DI-K	3	K
PLUG-MPCTC5-5-DI-K	5	K
PLUG-MPCTC5-10-DI-K	10	K

6

3 - 10 Pairs, plug, atmosphere side



Technical Data

■ Material	Chromel/Alumel
■ ANSI Typ	K
■ Temperature range without flange and on CF flange	-269 °C to 450 °C
■ Temperature range on KF flange	-25 °C to 205 °C
■ Magnetic	yes
■ Accessories	contacts (EK-C-CR16, EK-C-AM16), plugs (see above)

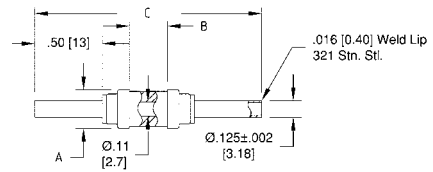
Order code	Flange	Pairs	Pressure, 20 °C (bar)
W-MPCTC5-3-SE-CE-K	-	3	28
W-MPCTC5-5-SE-CE-K	-	5	24
W-MPCTC5-10-SE-CE-K	-	10	8.6
KF16-MPCTC5-3-SE-CE-K	DN16KF	3	7*
KF16-MPCTC5-5-SE-CE-AM	DN16KF	5	7*
KF40-MPCTC5-10-SE-CE-K	DN40KF	10	6
CF16-MPCTC5-3-SE-CE-K	DN16CF	3	28
CF16-MPCTC5-5-SE-CE-K	DN16CF	5	24
CF35-MPCTC5-3-SE-CE-K	DN35CF	3	28
CF35-MPCTC5-5-SE-CE-K	DN35CF	5	24
CF35-MPCTC5-10-SE-CE-K	DN35CF	10	8.6

- * With trapped centering ring and clamp chain.
- Temperature specifications are only valid with demounted plug.

Insulators

Cryogenic

Voltage: 6 kV, without flange



Technical Data

- Temperature range
- Magnetic

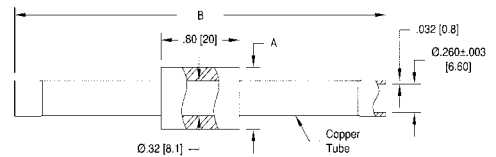
-269 °C to 450 °C
yes

Order code	Voltage (kV)	Inner diameter	Welding connection diameter	A	B	C	Pressure, 20 °C (bar)
W-KR6-SST32	6	2.7	3.2	7.3	5	43	68
W-KR13-SST64	13	6.4	6.4	15	13	78	61
W-KR13-SST64I	13	6.4	6.4	13	13	76	61
W-KR13-SST96	13	10	9.6	16	13	76	27

6

Water

Voltage: 5 kV, without flange



Technical Data

- Temperature range

0 °C to 100 °C

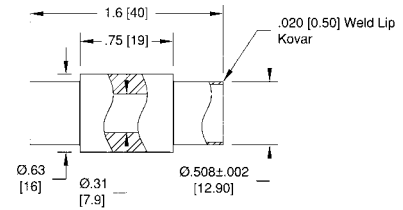
Order code	Inner diameter	Inner diameter solder connection	A	B	Pressure, 20 °C (bar)
W-W5-CE-66	8.1	6.6	14	97	30
W-W5-CE-98	11	9.8	17	97	20
W-W5-SE-129	14	12.95	21	97	13

- By using other liquids an other temperature range can be reached.
- Application only with distilled, deionised and demineralised water.

Insulators

Vacuum

Voltage: 15 kV



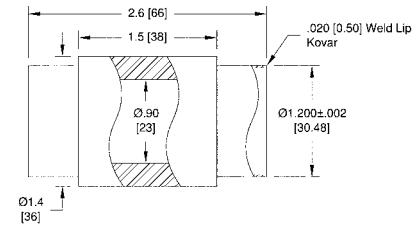
Technical Data

■ Inner diameter	7.9 mm
■ Welding connection diameter	12.9 mm
■ Magnetic	yes

Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-ISO15-CE-KOV129	-	61	-55 to 450
KF16-ISO15-CE-KOV129	DN16KF	7*	-25 to 205
CF16-ISO15-CE-KOV129	DN16CF	61	-55 to 450

* With trapped centering ring and clamp chain.

Voltage: 30 kV



Technical Data

■ Inner diameter	23 mm
■ Welding connection diameter	30.5 mm
■ Magnetic	yes

Order code	Flange	Pressure, 20 °C (bar)	Temperature range (°C)
W-ISO30M-CE-KOV305	-	24	-55 to 450
KF40-ISO30M-CE-KOV305	DN40KF	6*	-25 to 205
CF35-ISO30M-CE-KOV305	DN35CF	24	-55 to 450

* With trapped centering ring and clamp chain.

Insulators

Vacuum

Voltage: 6 - 35 kV



Technical Data

- Inner diameter 19 mm
- Welding connection diameter 17.2 mm

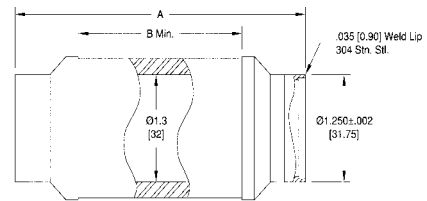
Order code	Flange	Voltage (kV)	A	B	Pressure, 20 °C (bar)	Magnetic	Temperature range (°C)
W-ISO6M-CE-KOV172	-	6	48	6.3	34	yes	-55 to 450
W-ISO25M-CE-KOV172	-	20	67	25	34	yes	-55 to 450
W-ISO35M-CE-KOV172	-	35	92	51	34	yes	-55 to 450
W-ISO6-CE-SS172	-	6	48	6.3	24	no	-269 to 450
W-ISO25-CE-SS172	-	20	67	25	24	no	-269 to 450
W-ISO35-CE-SS172	-	35	92	51	24	no	-269 to 450
KF16-ISO6M-CE-KOV172	DN16KF	6	73	6.3	7*	yes	-25 to 205
KF16-ISO25M-CE-KOV172	DN16KF	20	92	25	7*	yes	-25 to 205
KF16-ISO35M-CE-KOV172	DN16KF	35	118	51	7*	yes	-25 to 205
KF16-ISO6-CE-SS172	DN16KF	6	73	6.3	7*	no	-25 to 205
KF16-ISO25-CE-SS172	DN16KF	20	92	25	7*	no	-25 to 205
KF16-ISO35-CE-SS172	DN16KF	35	118	51	7*	no	-25 to 205
CF16-ISO6M-CE-KOV172	DN16CF	6	73	6.3	34	yes	-55 to 450
CF16-ISO25M-CE-KOV172	DN16CF	20	92	25	34	yes	-55 to 450
CF16-ISO35M-CE-KOV172	DN16CF	35	118	51	34	yes	-55 to 450
CF16-ISO6-CE-SS172	DN16CF	6	73	6.3	24	no	-269 to 450
CF16-ISO25-CE-SS172	DN16CF	20	92	25	24	no	-269 to 450
CF16-ISO35-CE-SS172	DN16CF	35	118	51	24	no	-269 to 450

* With trapped centering ring and clamp chain.

Insulators

Vacuum

Voltage: 5 - 65 kV



Technical Data

- Inner diameter 32 mm
- Welding connection diameter 31.8 mm

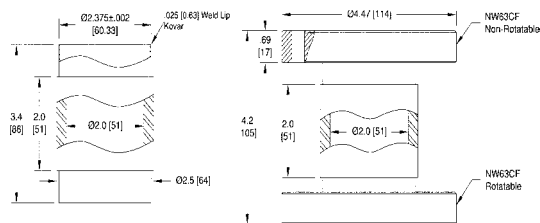
Order code	Flange	Voltage (kV)	A	B	Pressure, 20 °C (bar)	Temperature range (°C)	Magnetic	Weld lip material
W-ISO5M-CE-KOV318	-	5	49	6	24	-55 to 450	yes	Kovar
W-ISO35M-CE-KOV318	-	35	96	50	24	-55 to 450	yes	Kovar
W-ISO65M-CE-KOV318	-	65	144	99	24	-55 to 450	yes	Kovar
W-ISO5-CE-SS318	-	5	49	4.0	17	-269 to 450	no	stainless steel
W-ISO35-CE-SS318	-	35	96	50	17	-269 to 450	no	stainless steel
W-ISO65-CE-SS318	-	65	144	99	17	-269 to 450	no	stainless steel
KF40-ISO5M-CE-KOV318	DN40KF	5	54	4.0	6*	-25 to 205	yes	Kovar
KF40-ISO35M-CE-KOV318	DN40KF	35	101	50	6*	-25 to 205	yes	Kovar
KF40-ISO65M-CE-KOV318	DN40KF	65	149	99	6*	-25 to 205	yes	Kovar
KF40-ISO5-CE-SS318	DN40KF	5	54	4.0	6*	-25 to 205	no	stainless steel
KF40-ISO35-CE-SSV318	DN40KF	35	101	50	6*	-25 to 205	no	stainless steel
KF40-ISO65-CE-SS318	DN40KF	65	149	99	6*	-25 to 205	no	stainless steel
CF35-ISO5M-CE-KOV318	DN35CF	5	59	4.0	24	-55 to 450	yes	Kovar
CF35-ISO35M-CE-KOV318	DN35CF	35	107	50	24	-55 to 450	yes	Kovar
CF35-ISO65M-CE-KOV318	DN35CF	65	155	99	24	-55 to 450	yes	Kovar
CF35-ISO5-CE-SS318	DN35CF	5	59	4.0	17	-269 to 450	no	stainless steel
CF35-ISO35-CE-SS318	DN35CF	35	107	50	17	-269 to 450	no	stainless steel
CF35-ISO65-CE-SS318	DN35CF	65	155	99	17	-269 to 450	no	stainless steel

* With trapped centering ring and clamp chain.

Insulators

Vacuum

Voltage: 40 - 60 kV, Kovar weld lip



Technical Data

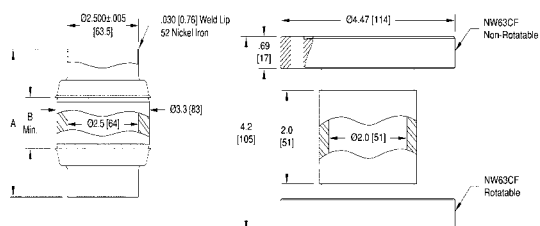
- Temperature range
- Magnetic

-55 °C to 450 °C
yes

Order code	Flange	Voltage (kV)	Pressure, 20 °C (bar)	Inner diameter	Welding connection diameter
W-ISO40M-CE-KOV603	-	40	12	51	60.3
W-ISO60M-CE-KOV711	-	60	10	64	71.1
CF63-ISO40M-CE-KOV603	DN63CF	40	12	51	-
CF100-ISO60M-CE-KOV711	DN100CF	60	10	64	-

6

Voltage: 20 - 60 kV, NiFe weld lip



Technical Data

- Temperature range
- Magnetic

-269 °C to 450 °C
yes

Order code	Flange	Voltage (kV)	A	B	Pressure, 20 °C (bar)	Inner diameter	Welding connection diameter
W-ISO20M-CE-NIFE635	-	20	95	23	5	64	63.5
W-ISO60M-CE-NIFE635	-	60	165	93	5	64	63.5
W-ISO20M-CE-NIFE1016	-	20	95	23	4	102	101.6
W-ISO60M-CE-NIFE1016	-	60	165	93	4	165	92.7
CF63-ISO20M-CE-NIFE635	DN63CF	20	114	23	5	64	-
CF63-ISO60M-CE-NIFE635	DN63CF	60	184	93	5	64	-
CF100-ISO20M-CE-NIFE1016	DN100CF	20	117	23	4	102	-
CF100-ISO60M-CE-NIFE1016	DN100CF	60	187	93	4	102	-

Accessories

Vacuum Accessories

Conductance wire



Order code	Material	Current (A)	Diameter (AD)
COND-CU081-16	copper	16	0.81
COND-ZCU081-17	zirkonium copper	17	0.91
COND-NI13-8	nickel	8.2	1.3
COND-ZCU13-30	zirkonium copper	30	1.3
COND-CU13-27	copper	27	1.3

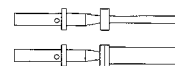
Braid



Order code	Inner diameter
BRAID-SS-3	3.18
BRAID-SS-6	6.35

Contacts

Contacts for multipin feedthroughs

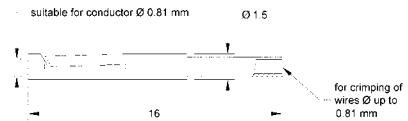


Order code	Drilling	Type	Vacuum-suited
CC10F	1.0	female	yes
CC10M	1.0	male	yes
CC23F2	2.3	female	no
CC23M2	2,3	male	no
CC23F	2.3	female	yes

- 20 pieces per package
- Not vacuum capable plugs can be used at the atmospheric side of the flange only!

Contacts

Crimp pins, for conductor diameter: 0.81 mm



Technical Data

■ Material	beryllium-copper
■ Temperature range	-200 °C to 200 °C
■ Current	10 A

Order code	Description
EK-C-CB081	crimp pins, for conductor diameter: 0.81 mm

Crimp pins, for conductor diameter: 1.0 mm



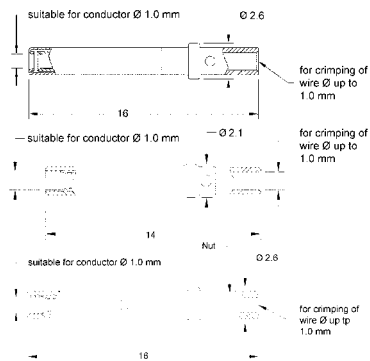
EK-C-CLG10



EK-SUBD-CLG10



EK-MPCTC2-AM10, EK-MPCTC2-CR10,
EK-MPCTC2-AMG10, EK-MPCTC2-CRG10

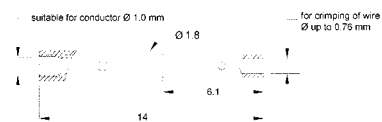


Technical Data

■ Temperature range	-200 °C to 200 °C
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Order code	Material	Current (A)	Flute
EK-C-CLG10	gold plated copper alloy	15	-
EK-SUBD-CLG10	gold plated copper alloy	15	-
EK-MPCTC2-AM10	Alumel	-	no
EK-MPCTC2-CR10	Chromel	-	yes
EK-MPCTC2-AMG10	gold plated Alumel	-	no
EK-MPCTC2-CRG10	Chromel	-	yes

Crimp pins, for conductor diameter: 1.1 mm



Technical Data

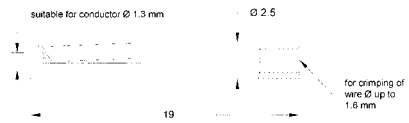
■ Temperature range	-269 °C to 450 °C
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Order code	Description
EK-C-CLG11	crimp pins, for conductor diameter: 1.1 mm

Accessories

Contacts

Crimp pins, for conductor diameter: 1.3 mm



Order code	Description
EK-C-CB13	crimp pins, for conductor diameter: 1.3 mm

Crimp pins, for conductor diameter: 1.6 mm



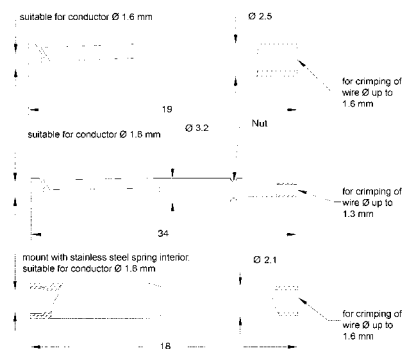
EK-C-CB16



EK-C-CR16, EK-C-AM16

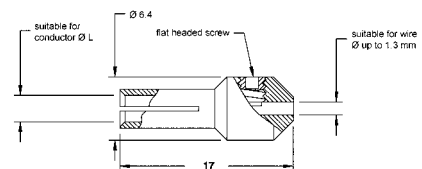


EK-C-NIL16



Order code	Material	Temperature range (°C)	Current (A)	Flute
EK-C-CB16	beryllium copper	-200 to 200	20	-
EK-C-CR16	Chromel	-269 to 350	-	yes
EK-C-AM16	Alumel	-269 to 350	-	no
EK-C-NIL16	nickel alloy	-269 to 400	10	-

Plug with flat headed screw



Technical Data

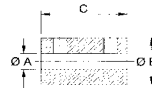
- Contact material: beryllium-copper
- Temperature range: -200 °C to 200 °C

Order code	Current (A)	L
EK-S-CB10	20	1.0
EK-S-CB13	25	1.3
EK-S-CB24	25	2.4

- 10 pieces per package

Contacts

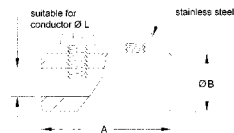
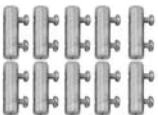
Clamps



Order code	A	B	C	Screw (number x type)
BC10	1.1	4.7	10	2 x flat headed screw
BC23	2.4	4.7	10	2 x flat headed screw
BC15	1.5	4.7	13	2 x slotted screw
BC18	1.8	4.7	13	2 x slotted screw
BC30	3.0	6.4	14	2 x slotted screw

- stainless steel screws are included
- 10 pieces per package

Clamps with slotted screw



Technical Data

- Contact material
- Temperature range

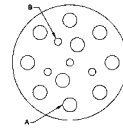
beryllium-copper
-200 °C to 200 °C

Order code	A	B	L	Current (A)
EK-LK-CB10	12.7	3.2	1.0	13
EK-LK-CB13	12.7	4.8	1.3	20
EK-LK-CB16	12.7	4.8	1.6	20
EK-LK-CB24	14.2	6.4	2.4	25
EK-LK-CB32	16.0	6.4	3.2	25
EK-LK-CB39	19.1	8.3	3.9	35
EK-LK-CB64	25.4	12.7	6.4	30

- 10 pieces per package

Ceramic spacers

Ceramic spacers



Technical Data

- Material 85% aluminium ceramics
- Temperature range -269 °C to 800°C

Order code	Diameter	Thickness	Conductor holes	A	B
SP-CE-10	15	1.5	10	1.9	1.0
SP-CE-11	28	2.0	11	2.3	-
SP-CE-17	15	2.3	17	1.5	-
SP-CE-20	32	2.3	20	2.5	-
SP-CE-35	32	2.3	35	2.3	-

- A - conductor holes, B - ventilation hole