

Sub-D Feedthroughs, Connectors, Pins & Cables



1.1 SUB-D: CF FLANGES

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Sub-miniature D Type Feedthroughs on CF Flanges
 9 to 300 pins, 40CF to 160CF



1.2 SUB-D: KF & ISO FLANGES

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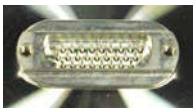
Sub-miniature D type Feedthroughs on KF and ISO-K flanges
 Sub-D weldables



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Multiple Feedthrough Flanges
 CF, ISO-K and custom



NEW

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High Pin Density Sub-D Feedthroughs
 26 Pins and 78 Pins in standard shell



NEW

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Combination Sub-D Feedthroughs
 Power and Co-axial types



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Sub-miniature D Feedthroughs for use with K type thermocouples



1.11 SUB-D: READY MADE CABLES

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Sub-D compatible ready made In-vacuum cables

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Sub-miniature D Type Feedthroughs on CF Flanges

9 to 300 Pins, 40CF to 160CF

- Electronics industry standard Sub-miniature D system
- 9, 15 and 25 way Feedthroughs on 40CF flange
- Multiple and custom Feedthrough flanges
- UHV PEEK, Ceramic and Air Side sockets



General Specifications Sub-Miniature D

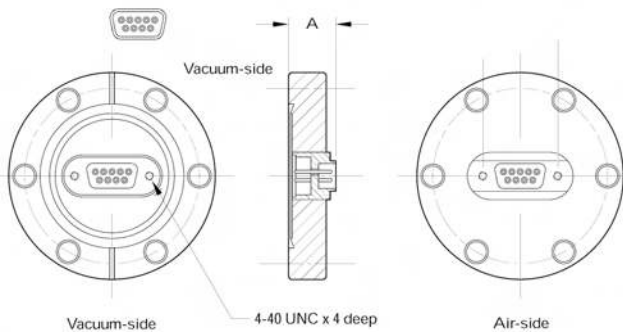
Compliance	DIN 41652, MIL-C-24308
Pin-ø	1.0mm
Pin material	Gold plated NiFe
Seal	Glass Ceramic
Flange	Stainless Steel 316L
Test Voltage	500V DC
Max. Current	5A per pin
Cont. Current	3A per pin, all pins loaded
Temp.	-200°C to 230°C
Leak rate	5×10^{-10} mar-l/s He

Sub-D Feedthroughs on CF Flanges 500V, up to 5 Amps per Pin

REDUCED

SIZE	NO. OF PINS	PART NUMBER	EURO
40CF	9	210-D09-C40	250,00
40CF	15	210-D15-C40	292,00
40CF	25*	210-D25-C40	345,00
63CF	15	210-D15-C63	323,00
63CF	25	210-D25-C63	345-,00
63CF	50	210-D50-C63	448,00
100CF	37	210-D37-C100	461,00
100CF	50	210-D50-C100	465,00

* uses special socket connector on vacuum side- page 1.7



Multiple Sub-D Feedthroughs on CF Flanges 500V, up to 5 Amps per Pin

REDUCED

SIZE	NO. OF PINS	PART NUMBER	EURO
63CF	2x D15	210-D15-C63-2	635,00
63CF	2x D25	210-D25-C63-2	687,00
63CF	3x D15	210-D15-C63-3	932,00
100CF	4x D25	210-D25-C100-4	POR
100CF	2x D50	210-D50-C100-2	POR
160CF	8x D25	210-D25-C160-8	POR
160CF	6x D50	210-D50-C160-6	POR

other combinations on request, see page 1.4

We offer a comprehensive range including unique products:

- 9, 15 and 25 Pins on 40CF
- 50 Pins on 63CF
- 9 Pins on 25KF / 25 Pins on 50KF
- High Density versions with 26 and 78 pins



210-D50-CF100-2



210-D15-CF100-6

210-D15-CF63-2

Sub-miniature D type Feedthroughs on KF and ISO-K Flanges

Sub-D weldable versions

- Flanged versions with KF and ISO-K
- Weldable versions suitable for TIG welding
- Special types e.g. 9 pins on a 25KF flange and 25 pins on 50KF. (For these versions vacuum side connectors without the mounting screws are required (see page 14), standard air side connectors will fit.)



General Specifications Sub-Miniature D

Compliance	DIN 41652, MIL-C-24308
Pin-ø	1.0 mm
Pin material	Gold plated NiFe
Seal	Glass Ceramic
Flange	Stainless Steel
Test Voltage	500V DC
Max. Current	5A per pin
Cont. Current	3A per pin, all pins loaded
Temp.	-40°C to 200°C (limited by flange)
Leak rate	<1x10 ⁻⁹ mbar-l/s He

Components of a complete system:

- feedthrough
- connector
- pins
- housing with strain relief
- cable



Sub-D Weldables in all sizes from 9 to 50 pins

General Specifications Weldable Sub-D

Height	17 mm
Standard welding	TIG without filler
Material	Stainless Steel
Leak rate	<1x10 ⁻⁹ mbar-l/s He

Please note: Welding Sub-D Feedthroughs requires care and experience! Damage to the Feedthroughs during welding is not covered by the warranty. We are happy to offer complete assemblies at competitive prices.

Sub-D Feedthroughs on KF Flanges

500V, up to 5 Amps per Pin

REDUCED

SIZE	NO. OF PINS	PART NUMBER	EURO
25KF	9*	210-D09-K25	250,00
40KF	9	210-D09-K40	250,00
40KF	15**	210-D15-K40	292,00
50KF	15	210-D15-K50	297,00
50KF	25**	210-D25-K50	345,00
63ISO-K	25	210-D25-ISO63	332,00
63ISO-K	50**	210-D50-ISO63	442,00
100ISO-K	37	210-D37-ISO100	461,00
100ISO-K	50	210-D50-ISO100	448,00

* uses small "SX"-type socket connector - page 1.8

** uses small "S"-type socket connector - page 1.8

Multiple Sub-D F/T's on ISO-K Flanges

500V, up to 5 Amps per Pin

REDUCED

SIZE	NO. OF PINS	PART NUMBER	EURO
63ISO-K	2x15	210-D15-ISO63-2	621,00
63ISO-K	2x25	210-D25-ISO63-2	674,00
63ISO-K	3x15	210-D15-ISO63-3	919,00
100ISO-K	4x25	210-D25-ISO100-4	POR
100ISO-K	2x50	210-D50-ISO100-2	POR
160ISO-K	8x25	210-D25-ISO160-8	POR
160ISO-K	6x50	210-D50-ISO160-6	POR

Sub-D Feedthroughs WELDABLES

500V, up to 5 Amps per Pin

NO. OF PINS	SIZE (mm)	PART NUMBER	EURO
9	14.5x33	218-D09-SS	280,00
15	16.5x38	218-D15-SS	318,00
25	19x55	218-D25-SS	338,00
37	19x70	218-D37-SS	419,00
50	19x68	218-D50-SS	439,00

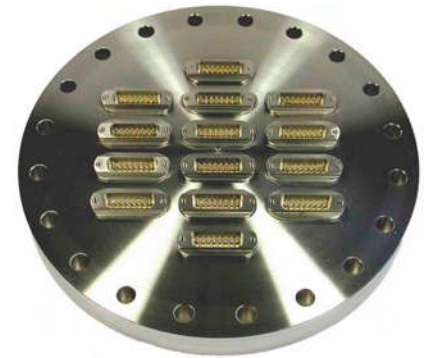
non-magnetic versions on request

1 Sub-D
 2 CM + DIL F/T
 3 Coax F/T
 4 Power High Voltage
 5 Thermo-couple
 6 Cables Accessories
 7 Viewports Fiberoptic
 8 Valves
 9 Motion Manipulation
 10 Process Control
 11 CF Hardware
 12 KF Hardware
 13 ISO-K Hardware
 14 Adaptors Specials
 15 HV / UHV Chambers
 16 Atlas Bi-Metal

Multiple Feedthrough Flanges

CF, ISO-K and Custom

- Standard or custom flanges
- In-house manufacturing for fast delivery and competitive prices
- Allectra can produce drawings for approval or we can work with customer drawings.
- Titanium body Feedthroughs on Titanium flanges to special order



Specifications for Specials

Possible Feedthroughs	Sub-D, Coaxial and all other Feedthroughs Combinations with Fibreoptic or viewports
Possible Flanges	CF, KF, ISO-K, ISO-F, JIS, ASA and custom flanges Adapter flanges
Flange materials	SS, 316L, 316LN, 304, Titanium
Standard Leak Check	$<1 \times 10^{-9}$ or 5×10^{-10} mbar-l/s He depending on flange

Multiple Sub-D Feedthroughs on Standard Flanges Examples of combinations of Sub-Ds

SIZE	NO. OF PINS	PART NUMBER	EURO
100ISO-K	72(8x 9)	219-D09-ISO100-8	POR
160CF	153(7x9+6x15)	219-D09-7-D15-6-C160	POR
160CF	120(8x15)	219-D15-C160-8	POR

Multiple Sub-D Feedthroughs on various Flanges Sub-D combined with other feedthroughs

SIZE	NO. OF PINS	PART NUMBER	EURO
40CF	9 + BNC	219-D09-BNC-C40	POR
40CF	9 + 2xBNC	219-D09-BNC-2-C40	POR
Plate	12x 9 + 12x 15	SPECIAL	POR



Three examples of special arrangements
 Left: 9-pin Sub-D and floating Shield SMA on 40CF
 Top: Various Sub-D Feedthroughs and tapped holes on an 250 ISO-K
 Right: Custom Rectangular Flange with 24 Sub-D type Feedthroughs

General Specifications Titanium Sub-D

Flange and Housing	Titanium
Pins	WCu (non-magnetic)

Sub-D Feedthrough on CF40 flange Titanium Flange

SIZE	NO. OF PINS	PART NUMBER	EURO
40CF-TI	9	210-D09-C40-TI	POR

Titanium Feedthroughs with Titanium flanges are available on request. If zero magnetism is an issue, they might be the solution. Please enquire.

High Density Sub-D

26 and 78 Pins in a Standard Shell

High density Sub-D Connectors offer more pins on the same shell size: Instead of 15 pins, 26 pins fit in the same space. And instead of 50 pins, 78 pins are possible. A 3-row / 4-row pin arrangement with reduced pin diameter makes this possible.

For the Vacuum side PEEK connectors are available.



General Specifications HIGH DENSITY SUB-D

Compliance	DIN 41652 part 2 , MIL-C-24308
Pin-ø	0.7 mm
Pin material	Gold plated NiFe
Seal	Glass Ceramic
Flange	Stainless Steel 316L
Test Voltage	500V DC
Max. Current	3A per pin
Cont. Current	1.5A, all pins loaded
Temp.	-200°C to 230°C
Leak rate	5×10^{-10} mbar-l/s He

For HD Connectors, only one type of Pin is available. Therefore these connectors INCLUDE the required amount of Pins.

Spare Pins and Male Pins are available.

General Specifications HIGH DENSITY PINS

Pin-ø	0.7 mm
Cable diameter	0.25 - 0.8 mm max (AWG22)
Material	phosphor bronze (female) Cu-Alloy (male)
Contact finish	hard-gold-plated over Nickel



High Density Pins, Male and Female.
 As a comparison, a Standard Pin is shown on the left.

Sub-D Feedthroughs on CF Flanges, HIGH DENSITY

NEW

SIZE	NO. OF PINS	PART NUMBER	EURO
WELD	26	218-HD26-SS	395,00
40CF	26	210-HD26-C40	419,00
40KF	26	210-HD26-K40	422,00
50KF	26	210-HD26-K50	442,00
63CF	2x26 (52)	210-HD26-C63-2	864,00
63CF	3x26 (78)	210-HD26-C63-3	1.266,00
WELD	78	218-HD78-SS	651,00
63CF	78	210-HD78-C63	707,00
100CF	78	210-HD78-C100	739,00
100CF	2x78 (156)	210-HD78-C100-2	1386,00

Sub-D High Density CONNECTORS AIR/ VACUUM

NEW

TYPE	NO. OF PINS	PART NUMBER	EURO
AIR	26	211-FS26H-AIR	12,00
HV/ UHV*	26	211-FS26H-PK	179,00
AIR	78	211-FS78H-AIR	24,00
HV/UHV*	78	211-FS78H-PK	285,00

*) : 26 / 78 off Crimp pins are included!

Sub-D High Density CRIMP PINS

TYPE	NO. OF PINS	PART NUMBER	EURO
FEMALE	10	212-PINFHD-10	15,00
FEMALE	26	212-PINFHD-26	32,00
MALE	10	212-PINMHD-10	15,00
MALE	26	212-PINMHD-26	32,00



Air Side Connector. The connector is solder type

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Combination Sub-Ds:

Power, Coaxial and Standard Pin Feedthroughs

Combination Feedthroughs offer a mixture of Power Pins, Coaxial Pins and Standard Pins in one shell. The Power Pins are ideal for heater applications.

NEW: Versions with 3, 5 and 8 Pins are now available! Please ask for further details.

General Specifications COMBINATION POWER SUB-D

Compliance	DIN 41652, MIL-C-24308
Standard Pin-ø	1.0 mm
Power Pin-ø	3.6 mm
Pin material	Gold plated NiFe
Seal	Glass Ceramic
Flange	Stainless Steel 316L
Test Voltage	500V DC
Max. Current	Power Pin: 20A
Max Current	Standard Pin: 5A
Temp.	-200°C to 230°C
Leak rate	<5x10 ⁻¹⁰ mbar-l/s He



Power Pins
 Left: Male, Right: Female
 The female versions fit to the F/T.
 The Power connectors use the same pins on air and vacuum side.

The Connectors accept Power contacts as well as Co-axial ones. Please order the desired Pins separately and insert them into the Connector.
 The Standard 1mm Pins are included with the Connectors.

General Specifications COMBINATION COAXIAL SUB-D

Compliance	DIN 41652, MIL-C-24308
Standard Pin-ø	1.0 mm
Coaxial Pin	Floating shield
Pin material	Gold plated NiFe
Seal	Glass Ceramic
Flange	Stainless Steel 316L
Test Voltage	500V DC
Impedance Coax	not constant
Temp.	-200°C to 220°C
Leak rate	<5x10 ⁻¹⁰ mbar-l/s He



Sub-D Feedthroughs on CF Flanges, MIXED POWER (P) + Standard (S) 1mm Pins

REDUCED

SIZE	NO. OF PINS	PART NUMBER	EURO
WELD	2P+5S	218-X15-2P5	380,00
40CF	2P+5S	210-X15-2P5-C40	428,00
63CF	2P+5S	210-X15-2P5-C63	471,00
63CF	4P+10S	210-X15-2P5-C63-2	881,00
40KF	2P+5S	210-X15-2P5-K40	423,00
63ISO-K	2P+5S	210-X15-2P5-ISO63	460,00
63ISO-K	4P+10S	210-X15-2P5-ISO63-2	861,00

HIGH POWER Connectors and Pins

TYPE	NO. OF PINS	PART NUMBER	EURO
AIR	2P +5	211-FX15-2x5-AIR	9,00
AIR Male	2P +5	211-MX15-2x5-AIR	9,00
HV*	2P +5	211-FX15-2x5-HV	62,00
HV Male*	2P +5	211-MX15-2x5-HV	62,00
UHV *	2P +5	211-FX15-2x5-PK	162,00
Power Female	1 off	212-POWER-F	3,50
Power Male	1 off	212-POWER-M	3,00
Coax Female	1 off	212-COAX-F	24,00
Coax Male	1 off	212-COAX-M	25,00

*) Vacuum connectors include 5 off crimp pins

Please note: Welding Sub-D Feedthroughs requires care and experience! Damage to the Feedthrough during welding is not covered by the warranty. We are happy to offer complete assemblies at competitive prices.

Sub-D Feedthroughs on CF/ KF Flanges, MIXED COAXIAL (CX) + Standard (S) 1mm Pins

NEW

SIZE	NO. OF PINS	PART NUMBER	EURO
WELD	2CX+3S	218-X15-2C3	355,00
40CF	2CX+3S	210-X15-2C3-C40	402,00
40KF	2CX+3S	210-X15-2C3-K40	402,00
63CF	4CX+6S	210-X15-2C3-C63-2	796,00
63CF	6CX+9S	210-X15-2C3-C63-3	1197,00

UHV Plugs and Sockets in PEEK and Ceramic

Allectra offers Female Connectors (Sockets) which fit to Feedthroughs as well as Male Connectors (Plugs) for in-vacuum coupling.

- Ceramic connectors: max. 300°C
- PEEK connectors: max. 230°C

Please order Pins separately, see page 1.9 for range.
 HV versions and air side connectors are listed on page 1.8.

Specification PEEK Sub-D Connectors

Type	Sub-D Connectors for in-vacuum use
Vacuum	High Vacuum and UHV
Type	Female- fits Feedthroughs & Male Plugs
Body material	unfilled (pure) PEEK
Locking screws	included for Vac side (vented)
(\$ type:	no Vac side locking screws)
Temp. range	-50°C to 230°C
Use Pins	212-PINF, -PINF-B, -PINF-S, -PINF-TC
(Male types:	212-PINM-10, -PINM-S, -PINM-TC)

Specification Ceramic UHV Sub-D Connectors

Vacuum	UHV
Socket type	Female- fits Feedthroughs & Male Plugs
Body material	Ceramic / Glass-Ceramic
Locking screws	included for Vac side (vented)
(\$ type:	no Vac side locking screws)
Temp. range	4K to 300°C
Use Pins	212-PINF, -PINF-B, -PINF-S, -PINF-TC

Female Sockets include vented 4-40 UNC screws to fix to the F/T. The Male versions are supplied with long M2.5 screws to connect to a Female Socket.

The housings allow easy handling and provide shielding. They are made out of Aluminium and include a cable clamp for strain relief. Braid can be used to get a fully shielded cable connection (see Sec. 6). They fit to Male and Female Connectors.



UHV PEEK Sockets Female PEEK Sockets to fit Feedthroughs

REDUCED

VACUUM	No. OF POLES	PART NUMBER	EURO
HV/UHV	9	211-FS09-PK	120,00
HV/UHV	15	211-FS15-PK	141,00
HV/UHV	25	211-FS25-PK	149,00
HV/UHV	25	211-FS25-PK-S*	155,00
HV/UHV	37	211-FS37-PK	168,00
HV/UHV	50	211-FS50-PK	178,00

* for use with 210-D25-CF40 (no housing available)

UHV PEEK Plugs Male PEEK Plugs to fit Female Sockets

REDUCED

VACUUM	No. OF POLES	PART NUMBER	EURO
HV/UHV	9	211-MS09-PK	120,00
HV/UHV	15	211-MS15-PK	141,00
HV/UHV	25	211-MS25-PK	149,00
HV/UHV	37	211-MS37-PK	168,00
HV/UHV	50	211-MS50-PK	178,00

UHV Ceramic Sockets Female Ceramic Sockets to fit Feedthroughs

VACUUM	No. OF POLES	PART NUMBER	EURO
UHV	9	211-FS09-UHV	170,00
UHV	15	211-FS15-UHV	199,00
UHV	25	211-FS25-UHV	216,00
UHV	25	211-FS25-UHV-S*	250,00
UHV	37	211-FS37-UHV	242,00
UHV	50	211-FS50-UHV	251,00

* for use with 210-D25-CF40 (no housing available)

UHV Ceramic Plugs Male Ceramic Plugs to fit Sockets

VACUUM	No. OF POLES	PART NUMBER	EURO
UHV	9	211-MS09-UHV	170,00
UHV	15	211-MS15-UHV	199,00
UHV	25	211-MS25-UHV	210,00
UHV	37	211-MS37-UHV	POR
UHV	50	211-MS50-UHV	273,00

Housings with Strain Relief for PEEK and Ceramic Connectors, Male and Female

VACUUM	No. OF POLES	PART NUMBER	EURO
HV/UHV	9	211-HSG-D09-UHV	56,00
HV/UHV	15	211-HSG-D15-UHV	63,00
HV/UHV	25	211-HSG-D25-UHV	72,00
HV/UHV	37	211-HSG-D37-UHV	88,00
HV/UHV	50	211-HSG-D50-UHV	92,00

1 Sub-D
 2 CM + DIL F/T
 3 Coax F/T
 4 Power High Voltage
 5 Thermo-couple
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High Vacuum Plugs and Sockets

Air Side Sockets

High Vacuum Connectors (glass filled polymer with a stainless steel outer) are suitable for High Vacuum (10^{-8} mbar) and temperatures up to 110°C.

To be used with our crimp pins, see opposite page.
 The Air side connectors with housings are limited to 65°C
 Connectors for High Density and Mixed Sub-D are listed on page 1.10.



General Specification HV Sub-D Connectors

Vacuum	High Vacuum
Socket type	Female- fits Feedthroughs & Male Plugs (for internal connections)
Body material	DAP
S types	reduced outer SS part
SX types	no Vac. side locking screws
Temp. range	-55°C to 110°C
Use Pins	212-PINF, -PINF-B, -PINF-S, -PINF-TC
(Male types)	212-PINM-10, -PINM-S, -PINM-TC



211-FS15-HV-S



211-FS09-HV-SX

The Vacuum side HV housings include Strain Relief and fixing screws for the F/T. They are specially designed to fit the Allectra Sub-D Feedthroughs.

High vacuum Sockets for Sub-D Female type to fit Feedthroughs

VACUUM	NO. OF POLES	PART NUMBER	EURO
HV	9	211-FS09-HV	49,00
HV	9	211-FS09-HV-SX	49,00
HV	15	211-FS15-HV	52,00
HV	15	211-FS15-HV-S	57,00
HV	25	211-FS25-HV	60,00
HV	25	211-FS25-HV-SX	62,00
HV	37	211-FS37-HV	75,00
HV	37	211-FS37-HV-SX	77,00
HV	50	211-FS50-HV	87,00
HV	50	211-FS50-HV-S	92,00

SX versions without metal housing (see photo on the left)

High Vacuum Plugs for Sub-D Male Ceramic Plugs to fit female Sockets

VACUUM	NO. OF POLES	PART NUMBER	EURO
HV	9	211-MS09-HV	42,00
HV	15	211-MS15-HV	46,00
HV	25	211-MS25-HV	54,00
HV	37	211-MS37-HV	68,00
HV	50	211-MS50-HV	78,00

High vacuum Housings for Sub-D for Male and Female Connectors

VACUUM	NO. OF POLES	PART NUMBER	EURO
HV	9	211-HSG-D09-SR	32,00
HV	15	211-HSG-D15-SR	33,00
HV	25	211-HSG-D25-SR	37,00
HV	37	211-HSG-D37-SR	42,00
HV	50	211-HSG-D50-SR	46,00

Housings for small "S"- Types on request

Air side Sockets with housing for Sub-D Female type to fit Feedthroughs

VACUUM	NO. OF POLES	PART NUMBER	EURO
AIR	9	211-FS09-AIR	9,00
AIR	15	211-FS15-AIR	10,00
AIR	25	211-FS25-AIR	11,00
AIR	37	211-FS37-AIR	15,00
AIR	50	211-FS50-AIR	16,00

Male versions available on request



211-HSG-D50-SR



211-HSG-D15-SR



211-FS09-AIR with Solder pins

Sub-D
 1
 CM + DIL
 F/T
 2
 Coax
 F/T
 3
 Power
 High Voltage
 4
 Thermo-
 couple
 5
 Cables
 Accessories
 6
 Viewports
 Fiberoptic
 7
 Valves
 8
 Motion
 Manipulation
 9
 Process
 Control
 10
 Hardware
 CF
 11
 Hardware
 KF
 12
 Hardware
 ISO-K
 13
 Adaptors
 Specials
 14
 HV / UHV
 Chambers
 15
 Atlas
 Bi-Metal
 16

Crimp Pins for Sub-miniature D Plugs & Sockets

As well as the Standard Crimp Pins, Allectra offers other versions for special purposes:

- Small versions for wires down to 0.08mm
- Budget versions without additional Stainless Steel outer
- Zero-magnetic pins and Ni-plated pins are available on request.

General Specification CRIMP PINS

Vacuum	High Vacuum and UHV
Material	Gold plated copper alloy
SS shell	Standard and Small type only
Wire size	0.25 – 1.0 mm (Standard + Budget)
Small	0.08 to 0.5 mm (Small)
Crimp tool	214-CTOOL-SUB-D (wires >0.35mm) 214-CTOOL (no SMALL pins) 214-CTOOL-HQ (all types)



Female Budget pins



To connect a Crimp Pin directly to a Feedthrough without using a connector, the special "-NH" pins are recommended. These avoid the risk of the Pin tip touching ground.



3 different crimp tools:
214-CTOOL-SUB-D



214-CTOOL



214-CTOOL-HQ



214-CRIMPINS



Small pins (left) and Standard Pins (right)

Crimp Pins for Sub-D Fits HV and UHV Female Sockets

TYPE	No. PER PKT.	PART NUMBER	EURO
STANDARD	10	212-PINF-10	13,00
STANDARD	15	212-PINF-15	19,00
STANDARD	25	212-PINF-25	27,00
BUDGET	10	212-PINF-10-B	11,00
BUDGET	25	212-PINF-25-B	23,00
SMALL	10	212-PINF-10-S	14,00
SMALL	25	212-PINF-25-S	29,00

Crimp Pins for Sub-D Fits HV and UHV Male Plugs

TYPE	No. PER PKT.	PART NUMBER	EURO
STANDARD	10	212-PINM-10	8,00
STANDARD	25	212-PINM-25	17,00
SMALL	10	212-PINM-10-S	9,00
SMALL	25	212-PINM-25-S	19,00

Crimp Pins for Sub-D Special pins for use without Sockets

TYPE	No. PER PKT.	PART NUMBER	EURO
STANDARD	10	212-PINF-10-NH	12,00
STANDARD	25	212-PINF-25-NH	26,00

Crimp Tool for Sub-D For all HV and UHV types

TYPE	No. PER PKT.	PART NUMBER	EURO
BUDGET	1	214-CTOOL-SUB-D	98,00
HIGH QUALITY	1	214-CTOOL-HQ	511,00

Crimp Tool for Sub-D Not suitable for "S" types

TYPE	No. PER PKT.	PART NUMBER	EURO
STANDARD	1	214-CTOOL	211,00

Pin demounting Tool for Sub-D ONLY FOR HV TYPES

TYPE	No. PER PKT.	PART NUMBER	EURO
DEMOUNT	1	214-CRIMPINS	25,00

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Connectors for Sub-D

Here the following special purpose Connectors are listed:

- Air side Adapters female to female
- Air and Vacuum connectors for High Density Sub-D
- Air and Vacuum connectors for MIXED Sub-D

The connectors for the standard Sub-D Feedthroughs are listed on page 1.7 and 1.8



These adaptors are for use on the air side of Standard Sub-D Feedthroughs. With these adaptors the Air Side of the Feedthrough becomes Female allowing the use of conventional Male to Female cables on the Air Side.



High Density Vacuum Connectors include 26 Female Crimp Pins. Air Side Connectors are solder type.



The Combination Sub-D Feedthroughs (page 12) have 5 Standard Pins and 2 additional ones which are either Power(P) or Co-axial (CX). The Combination Connectors shown opposite fit both types.
 Combination Sockets for Vacuum use include 5 Standard Pins (212-PINF).
 2 additional Pins (either POWER or COAX type) should be ordered as required.



Polarity adaptors for Sub-D Air side Female to Female

VACUUM	No. OF PINS	PART NUMBER	EURO
AIR	9	211-D09-ADR	18,00
AIR	15	211-D15-ADR	21,00
AIR	25	211-D25-ADR	28,00
AIR	37*	211-D37-ADR	POR
AIR	50*	211-D50-ADR	POR

*) Short cable adaptor

Sub-D High Density Connectors and Pins

TYPE	NO. OF PINS	PART NUMBER	EURO
Air Socket*	26	211-FS26-AIR	12,00
HV/UHV Socket*	26	211-FS26-PK	179,00
* includes Solder tags or Pins			
Pin female	10	212-PINFHD-10	15,00
Pin female	26	212-PINFHD-26	32,00
Pin male	10	212-PINMHD-10	15,00
Pin male	26	212-PINMHD-26	32,00

Connectors for COMBINATION Sub-D, Female and Male, POWER PINS (P) & COAX PINS (CX)

TYPE	NO. OF PINS	PART NUMBER	EURO
Air Socket	2P/CX +5	211-FX15-2x5-AIR	9,00
Air Plug	2P/CX +5	211-MX15-2x5-AIR	9,00
HV Socket*	2P/CX +5	211-FX15-2x5-HV	62,00
HV Plug	2P/CX +5	211-MX15-2x5-HV	62,00
UHV Socket*	2P/CX +5	211-FX15-2x5-PK	162,00
* includes 5 standard Female Pins (212-PINF type)			
Female P Pin	1 off	212-POWER-F	3,50
Male P Pin	1 off	212-POWER-M	3,00
Female CX Pin	1 off	212-COAX-F	24,00
Male CX Pin	1 off	212-COAX-M	25,00

Male connectors can be used for in-vacuum connections

Pin Removal Tool for Power / Coax Pins

TYPE	PART NUMBER	EURO
Pin Removal tool	214-EXT-POWER	136,00

NEW!

Sub-miniature D Feedthroughs for use with K type Thermocouples

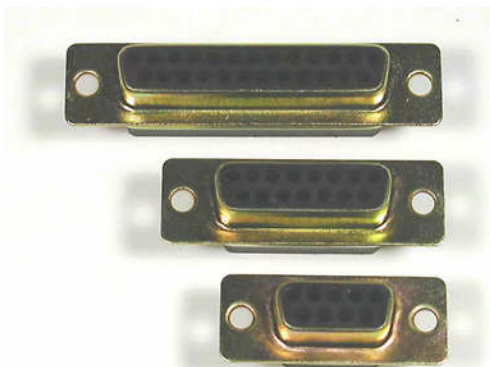
Sub-D F/Ts may be used for T/Cs. A Standard D-Type Feedthrough is used but the Air and Vacuum side Pins are changed to T/C types. Although the use of standard Pin material in contact with the T/C Pins results in the creation of two T/C junctions, the measurement error introduced is negligible provided the vacuum side of the Feedthrough contacts and the air side are at the same temperature. Tests showed a maximum error of less than 0.5K

General Specification K type T/C Crimp Pins

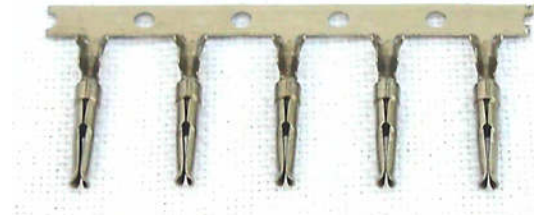
Vacuum/ Air Material	High Vacuum and UHV K Type Chromel and Alumel pairs Type N and T available on request
Fits wire	0.25 – 0.6 mm
Crimp tool	214-CTOOL-TC or 214-CTOOL-TC-HQ
Pack contents	5 Pairs (5 pieces Chromel and 5 pieces Alumel)

If a high accuracy temperature measurement is required, the use of a Platinum Resistance Thermometer is recommended. See Sec. 6

Other Crimp Pins - See Sec. 4 and Sec. 5



Air side housings for Thermocouple Pins. A housing is included in the pack.



K Type Thermocouple Crimp Pins for Sub-D Fits HV and UHV Female Sockets for Feedthroughs

TYPE	No. PER PKT.	PART NUMBER	EURO
K, Female	2x5	213-PINF-K	49,00



K Type Thermocouple Crimp Pins for Sub-D Fits HV and UHV Male Plugs

TYPE	No. PER PKT.	PART NUMBER	EURO
K, Male	2x5	213-PINM-K	49,00



Thermocouple Pin Crimp Tool for Sub-D For all HV and UHV types

TYPE	No. PER PKT.	PART NUMBER	EURO
Standard	1	214-CTOOL-TC	29,00
High Quality	1	214-CTOOL-TC-HQ	254,00



214-CTOOL-TC-HQ



214-CTOOL-TC

Air side Thermocouple Sockets for Sub-D Fit to K Type Thermocouple Pins

TYPE	SIZE	PART NUMBER	EURO
AIR	9	211-FS09-ATC	18,00
AIR	15	211-FS15-ATC	21,00
AIR	25	211-FS25-ATC	25,00
AIR	37	211-FS37-ATC	28,00
AIR	50	211-FS50-ATC	31,00

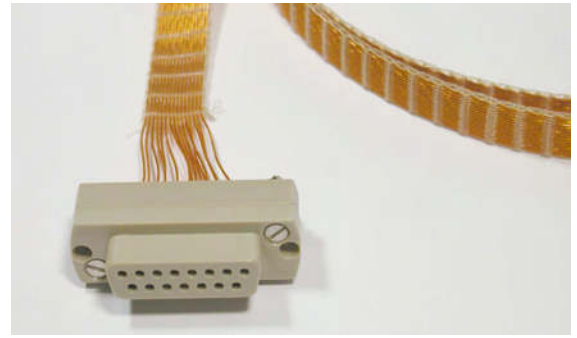
- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Sub-D ready made In-Vacuum Cables

Alllectra offers a full range of vacuum cables including both standard types and cables made to customers' specifications. The standard cable lengths is 0.5 m. Any desired length available.

Please note that only cables with one connector are listed here. The other end is left open. All other types are available on request.



Specifications Standard In-Vacuum Cables

Vacuum	HV or UHV
Socket type	PEEK, Ceramic or HV
Construction	Kapton Ribbon Cable/ PTFE
Current	3A max
Voltage	500V DC
Temp.	Defined by connectors

Please supply us with your requirements for custom cables:
 Type of connectors, cable, with or without housing, shielding, length

An example of a custom cable is shown below.



Custom made HV-Cable with one "Small" connector, housings and complete shielding. Please ask for a quote for your special application.

In-vacuum PTFE Ribbon Cable for Sub-D HV Socket to open end, 500mm long

VACUUM	No OF WIRES	PART NUMBER	EURO
HV (PTFE)	9	380-D09FXHPT-500	98,00
HV (PTFE)	15	380-D15FXHPT-500	140,00
HV (PTFE)	25	380-D25FXHPT-500	175,00
HV (PTFE)	37	380-D37FXHPT-500	POR
HV (PTFE)	50	380-D50FXHPT-500	POR

In-Vacuum KAPTON Ribbon Cable for Sub-D HV Socket to open end, 500mm long

VACUUM	No. OF PINS	PART NUMBER	EURO
HV	9	380-D09FXHR-500	143,00
HV	15	380-D15FXHR-500	178,00
HV	25	380-D25FXHR-500	229,00
HV	37	380-D37FXHR-500	344,00
HV	50	380-D50FXHR-500	418,00

In-Vacuum KAPTON Ribbon Cable for Sub-D PEEK Socket to open end, 500mm long

VACUUM	No. OF PINS	PART NUMBER	EURO
HV/UHV	9	380-D09FXPR-500	224,00
HV/UHV	15	380-D15FXPR-500	282,00
HV/UHV	25	380-D25FXPR-500	335,00
HV/UHV	37	380-D37FXPR-500	472,00
HV/UHV	50	380-D50FXPR-500	548,00

In-Vacuum KAPTON Ribbon Cable for Sub-D UHV Ceramic Socket to open end, 500mm long

VACUUM	No. OF PINS	PART NUMBER	EURO
UHV	9	380-D09FXUR-500	264,00
UHV	15	380-D15FXUR-500	328,00
UHV	25	380-D25FXUR-500	397,00
UHV	37	380-D37FXUR-500	528,00
UHV	50	380-D50FXUR-500	625,00

Sub-D KAPTON Ribbon Cable - Extension lengths for all Kapton Ribbon cables

No. OF WIRES	LENGTH	PART NUMBER	EURO
9	+500 mm	380-EXT-09	37,50
15	+500 mm	380-EXT-15	55,00
25	+500 mm	380-EXT-25	77,50
37	+500 mm	380-EXT-37	132,50
50	+500 mm	380-EXT-50	155,00

REDUCED

Circular Miniature (CM) and Dual In-line (DIL) Feedthroughs



2.1 CM FEEDTHROUGHS

-> Page 2.2

12 and 19 Pin Circular Miniature Feedthroughs
 6 Pin High Current Versions
 Flanged versions CF and weldables



2.1 CM SETS

-> Page 2.3

Circular Miniature Feedthrough Sets
 12 and 19 pin types
 6 Pin high current types
 include Air and Vacuum Sockets



2.3 CM: CONNECTORS

-> Page 2.4

Industry standard air side sockets
 PEEK vacuum side sockets



2.4 CM: IN-VACUUM CABLES

-> Page 2.5

Vacuum ready cables for the Circular Miniature Feedthroughs
 with housing and strain relief,
 optional with shielding



2.5 DUAL IN-LINE (DIL)

-> Page 2.6

Dual In-line Feedthroughs
 for direct connection to PCBs



TOOLS FOR CABLE STRIPPING AND CRIMPING

-> Sec. 6

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

12 & 19 Pin Circular Miniature Feedthroughs 6 Pin High Current versions

Based on the shell size of DIN connectors, Allectra offers compact feedthroughs with 12 and 19 Pins. Additionally a 6 way High Current version is available. The Industry Standard Air Side connectors are shielded and EMC compliant.

All Air Side Connectors are screw-on type. If used with the Vacuum Side Housing, a fully shielded connection from air to vacuum is possible.



220-CM12-C40-2
 air side view

Specifications

Compliance	IEC60130-9
Pin Diameter	1.6mm (6 pin) / 1.0mm (12+19 pin)
Test Voltage	500V DC (pin to pin / pin to GND)
Current	5A (6 pin) / 3A (12 and 19 pin)
Temp.	-200°C to 220°C
Leak rate	5×10^{-10} mbar l/s He

Circular Miniature Feedthroughs 6 Pin High Current Versions

FLANGE	No. OF PINS	PART NUMBER	EURO
WELD	6	220-CM6	170,00
16CF	6	220-CM6-C16	180,00
40CF	6	220-CM6-C40	225,00
40CF	12 (2x6)	220-CM6-C40-2	420,00
63CF	12 (2x6)	220-CM6-C63-2	425,00
63CF	18 (3x6)	220-CM6-C63-3	630,00

Circular Miniature Feedthroughs 12 Pin Versions

FLANGE	No. OF PINS	PART NUMBER	EURO
WELD	12	220-CM12	230,00
16CF	12	220-CM12-C16	245,00
40CF	12	220-CM12-C40	285,00
40CF	24 (2x12)	220-CM12-C40-2	545,00
63CF	24 (2x12)	220-CM12-C63-2	550,00
63CF	36 (3x12)	220-CM12-C63-3	825,00

Circular Miniature Feedthroughs 19 Pin Versions

FLANGE	No. OF PINS	PART NUMBER	EURO
WELD	19	220-CM19	295,00
16CF	19	220-CM19-C16	320,00
40CF	19	220-CM19-C40	340,00
40CF	38 (2x19)	220-CM19-C40-2	675,00
63CF	38 (2x19)	220-CM19-C63-2	680,00
63CF	57 (3x19)	220-CM19-C63-3	1,020,00



Weldable versions: 220-CM19 and 220-CM12
 Required welding diameter is 21.3mm



220-CM12-C16 air side view

The CM Feedthroughs are designed for 16CF flanges. On larger flanges they can be used in combination with other types like Coaxial Feedthroughs or Sub-Ds.

Versions on KF flanges are available on request, smallest flange size is 25KF

- 1 Sub-D
- 2 CM + DIL
- 3 Coax
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Circular Miniature (CM) Feedthrough Sets include Air and Vacuum Side Sockets

The sets contain:

- Air side connector
- Vacuum feedthrough
- Vacuum side connector including pins
- Vacuum side housing with strain relief

(If no housing should be used, the parts can be ordered separately)

General Specifications

Vacuum	UHV
Temp. Vacuum Socket	-200°C to 220°C
Temp. Air Socket	85°C
Current 6 Pin type	5A
Current 12 & 19 Pins	3A
Test Voltage	500V DC
Rated Voltage	60V AC / 250V (6 Pin Type)
Thread size connector	M16



220-CM19-C16 with air side connector



Custom flange with 4x12 way CM Feedthroughs on a 63CF flange

The Sets listed here contain the vacuums side housings with strain relief. On request also sets without the housings are available for the 6-pin versions.



6 Pin High Current Circular Miniature F/T Sets on CF Flanges with Air and Vacuum Connectors NEW

FLANGE	No. OF PINS	PART NUMBER	EURO
16CF	6	220-SET6-C16-SR	331,00
40CF	6	220-SET6-C40-SR	376,00
40CF	12 (2x6)	220-SET6-C40-2-SR	722,00
63CF	12 (2x6)	220-SET6-C63-2-SR	727,00

Note: KF Sets available on request. Smallest size is 25KF

12 Pin Circular Miniature Feedthrough Sets on CF flanges with Air and Vacuum Connectors NEW

FLANGE	No. OF PINS	PART NUMBER	EURO
16CF	12	220-SET12-C16-SR	379,00
40CF	12	220-SET12-C40-SR	419,00
40CF	24 (2x12)	220-SET12-C40-2-SR	814,00
63CF	24 (2x12)	220-SET12-C63-2-SR	819,00

Note: KF Sets available on request. Smallest size is 25KF

19 Pin Circular Miniature Feedthrough Sets on CF flanges with Air and Vacuum Connectors NEW

FLANGE	No. OF PINS	PART NUMBER	EURO
16CF	19	220-SET19-C16-SR	488,00
40CF	19	220-SET19-C40-SR	508,00
40CF	38 (2x19)	220-SET19-C40-2-SR	1015,00
63CF	38 (2x19)	220-SET19-C63-2-SR	1020,00

Note: KF Sets available on request. Smallest size is 25KF

Circular Miniature Feedthrough Housings - Spare parts - REDUCED

No. OF PINS	PART NUMBER	EURO
6	220-SR6	59,00
12/ 19	220-SR	59,00



220-SR Housing with Strain Relief clamp

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

CM Series Air and Vacuum Sockets

PEEK Vacuum Side Sockets

- PEEK UHV Vacuum Side Sockets, 6, 12 or 19 way
 - SS Housings with strain relief
 - Air Side Sockets 6, 12 or 19 way
 - Straight or 90° Air Side Connector
- Allectra recommends the use of the housing for handling

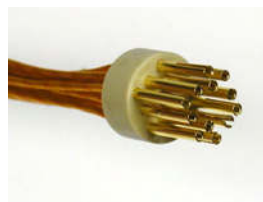


Specifications

Vacuum:	UHV
Materials	PEEK, Stainless steel
Current 6 Pin type	5A
Current 12/19 Pin type	3A
Temp. Vacuum Sockets	-200°C to 220°C
Temp. Air Sockets	-25°C to 85°C

Vacuum Sockets including Standard Pins STANDARD type (without housing)

No. OF PINS	TYPE	PART NUMBER	EURO
6	STANDARD	220-CON6	78,00
12	STANDARD	220-CON12	88,00
19	STANDARD	220-CON19	118,00



Back shell with pins during assembly

Vacuum Sockets including Standard Pins Type with Housing and Strain Relief



No. OF PINS	TYPE	PART NUMBER	EURO
6	HOUSING	220-CON6-SR	137,00
12	HOUSING	220-CON12-SR	147,00
19	HOUSING	220-CON19-SR	177,00



Specifications Pins

Vacuum:	UHV
Materials	Phospor Bronze / BeCu Gold plated
Wire Diameter Standard	0.6 ... 1.0mm Ø
Small	0.25 ... 0.6mm Ø
Connection	crimp or solder

Replacement Pins Standard and Small Types

TYPE	QTY	PART NUMBER	EURO
Standard	12	220-CM-PINF-12	19,00
Standard	20	220-CM-PINF-20	29,00
Small	12	220-CM-PINF-12-S	21,00
Small	20	220-CM-PINF-20-S	31,00

The 6-pin Versions use the pins 360-CRBC-1.6
 See page 52!

Air Side Sockets Straight and 90° types

No. OF PINS	TYPE	PART NUMBER	EURO
6	STRAIGHT	220-CON6-AIR	15,00
6	90°	220-CON6-AIR90	22,00
12	STRAIGHT	220-CON12-AIR	17,00
12	90°	220-CON12-AIR90	24,00
19	STRAIGHT	220-CON19-AIR	24,00
19	90°	220-CON19-AIR90	32,00



Sub-D
1
CM + DIL
F/T
2
Coax
F/T
3
Power
High Voltage
4
Thermo-
couple
5
Cables
Accessories
6
Viewports
Fiberoptic
7
Valves
8
Motion
Manipulation
9
Process
Control
10
CF
Hardware
11
KF
Hardware
12
ISO-K
Hardware
13
Adaptors
Specials
14
HV / UHV
Chambers
15
Atlas
Bi-Metal
16

Vacuum Ready Cables for Circular Miniature (CM) Series

- Kapton wire bundles, 6, 12 and 19 way
- UHV Cable lengths of 0.25m and 0.5m as standard
- Right Angle and Straight Air Side cables

The standard Kapton Wire is 311-KAPM-075 (see page 62) for 12- and 19-Pin, alternatively KAPM-060 and KAPM-100 types are available to order.
 6-Pin version uses 311-KAPM-100

Specifications

Vacuum Side Cables	UHV
Temp.	-200°C to 250°C
Materials	Kapton coated Copper (311-KAPM-075 for 12-/19-Pin) Peek, Stainless Steel
Air Side Cables	
Temp.	-40°C to 80°C
Materials	PVC isolated Copper



Top: Cable without fitted Housing

Top of page: Cable with Housing and Strain Relief Socket

Left: Cable with Housing and Strain Relief Socket + Braid

Air Side Cables



Air Side Cables per Metrer Shielded cables (without connectors)

NEW

NR. PINS	LENGTH	PART NUMBER	EURO
6 (3x2)	1 m	314-CAB6-AIR	5,00
6	1 m	314-CAB6-AIR-HC*	10,00
12 (6x2)	1 m	314-CAB12-AIR	9,00
20 (10x2)	1 m	314-CAB20-AIR	11,00

*) High Current cable with 6x 0.75mm², shielded
 Other cables: Shielded Twisted Pair 0.14mm²



Vacuum Ready Cable for CM Series with STRAIN RELIEF Socket

NEW

No. OF PINS	LENGTH	PART NUMBER	EURO
6	250	380-CM6-250-SR	224,00
6	500	380-CM6-500-SR	254,00
12	250	380-CM12-250-SR	304,00
12	500	380-CM12-500-SR	341,00
19	250	380-CM19-250-SR	404,00
19	500	380-CM19-500-SR	444,00

Vacuum Ready Cable for CM Series with STRAIN RELIEF and BRAIDED CABLE

REDUCED

No. OF PINS	LENGTH	PART NUMBER	EURO
6	250	380-CM6-250-SRB	242,00
6	500	380-CM6-500-SRB	272,00
12	250	380-CM12-250-SRB	322,00
12	500	380-CM12-500-SRB	359,00
19	250	380-CM19-250-SRB	422,00
19	500	380-CM19-500-SRB	462,00

Vacuum Ready Cable for CM Series Socket without housing

No. OF PINS	LENGTH	PART NUMBER	EURO
6	250	380-CM6-250	165,00
6	500	380-CM6-500	195,00

Air Side Cable for CM Series With mounted STRAIGHT plug

No. OF PINS	LENGTH	PART NUMBER	EURO
6	1 m	220-CAB6-AIR	38,00
6 (HC)	1 m	220-CAB6-AIR-HC	44,00
12	1 m	220-CAB12-AIR	47,00
19	1 m	220-CAB19-AIR	159,00

HC = High current

Air Side Cable for CM Series With mounted RIGHT ANGLE plug

No. OF PINS	LENGTH	PART NUMBER	EURO
6	1 m	220-CAB6-AIR90	40,00
12	1 m	220-CAB12-AIR90	46,00
19	1 m	220-CAB19-AIR90	POR

You can get cables in all desired lengths! Above are cables in 1m length. For each additional 1m add the cable costs from the list on the left

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal

Dual In-line Feedthroughs

for direct connection to Printed Circuit Boards

This special F/T allows direct connection to PCB on either Air or Vacuum side. Typically the electronic board is connected to the air side to give the shortest signal path. Up to 3 Feedthroughs will fit onto a 63CF flange.



Specifications

Vacuum	UHV
Materials	Stainless Steel/ Glass Ceramic
Temp.	-40°C to 230°C
Current per pin	1A
Pin spacing	2mm pitch

Dual In-line Feedthroughs 2mm x 2mm pitch

FLANGE	No. OF PINS	PART NUMBER	EURO
WELD	40	230-DIL40M	358,00
63CF	40	230-DIL40M-C63	590,00
63CF	80	230-DIL80M-C63-2	980,00
63CF	120	230-DIL120M-C63-3	1.450,00
100CF	40	230-DIL40M-C100	625,00
100CF	80	230-DIL80M-C100-2	1.030,00
100CF	120	230-DIL120M-C100-3	1.510,00
100CF	160	230-DIL160M-C100-4	1.850,00



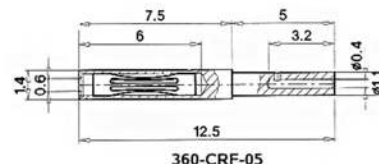
230-DIL40M-C63

Dual In-line Feedthroughs Connectors for Air and Vacuum

VACUUM	TYPE	PART NUMBER	EURO
AIR	IDC	230-CON40M-IDC-AIR	5,00
AIR	SOLDER	230-CON40M-W-AIR	5,00
VACUUM	PEEK	230-CON40M-PK	194,00

Dual In-line Feedthroughs Pins for vacuum side

VACUUM	No. PER PKT	PART NUMBER	EURO
VACUUM	10	360-CRF-05-10	45,00
VACUUM	40	360-CRF-05-40	130,00



Dual In-line Feedthroughs Air side ribbon cable 1m

VACUUM	LENGTH	PART NUMBER	EURO
AIR	1 m	314-RIB40-1-AIR	18,00

Housings for Dual In-line Feedthroughs for Vacuum are available on request.



Crimp pin
360-CRF-05



Vacuum side
connector



Vacuum side
connector with
optional housing

- 1 Sub-D
- 2 CM + DIL F/T
- 3 Coax F/T
- 4 Power High Voltage
- 5 Thermo-couple
- 6 Cables Accessories
- 7 Viewports Fiberoptic
- 8 Valves
- 9 Motion Manipulation
- 10 Process Control
- 11 CF Hardware
- 12 KF Hardware
- 13 ISO-K Hardware
- 14 Adaptors Specials
- 15 HV / UHV Chambers
- 16 Atlas Bi-Metal