

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



2.1 CM FEEDTHROUGHS

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



2.1 CM SETS

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



2.3 CM: CONNECTORS

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Industry standard air side sockets
 PEEK vacuum side sockets



2.4 CM: IN-VACUUM CABLES

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



2.5 DUAL IN-LINE (DIL)

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Dual In-line Feedthroughs
 for direct connection to PCBs



TOOLS FOR CABLE STRIPPING AND CRIMPING

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- 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

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CM FEEDTHROUGHS

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- 1 Sub-D
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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	<5x10 ⁻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



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

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



220-CM12-C16 air side view

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

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

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
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CM: CONNECTORS

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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

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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
- Alllectra recommends the use of the housing for handling

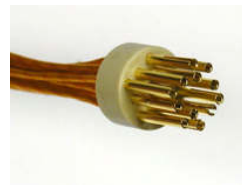


Specifications

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 REDUCED

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 \varnothing
Small	0.25 ... 0.6mm \varnothing
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



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



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 Cables



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 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

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
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DUAL IN-LINE (DIL)

DE: Info@allectra.com
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 F: fr@allectra.com



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

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16 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.

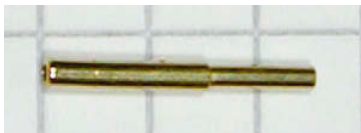


Specifications

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



230-DIL40M-C63



Crimp pin
360-CRF-05



Vacuum side connector



Vacuum side connector with optional housing

Dual In-line Feedthroughs 2mm x 2mm pitch

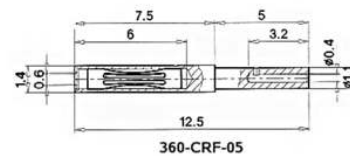
FLANGE	No. OF PINS	PART NUMBER	EURO
WELD	40	230-DIL40M	358,00
63CF	40	230-DIL40M-C63	590,00
63CF	80	230-DIL80M-C63-2	980,00
63CF	120	230-DIL120M-C63-3	1.450,00
100CF	40	230-DIL40M-C100	625,00
100CF	80	230-DIL80M-C100-2	1.030,00
100CF	120	230-DIL120M-C100-3	1.510,00
100CF	160	230-DIL160M-C100-4	1.850,00

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.