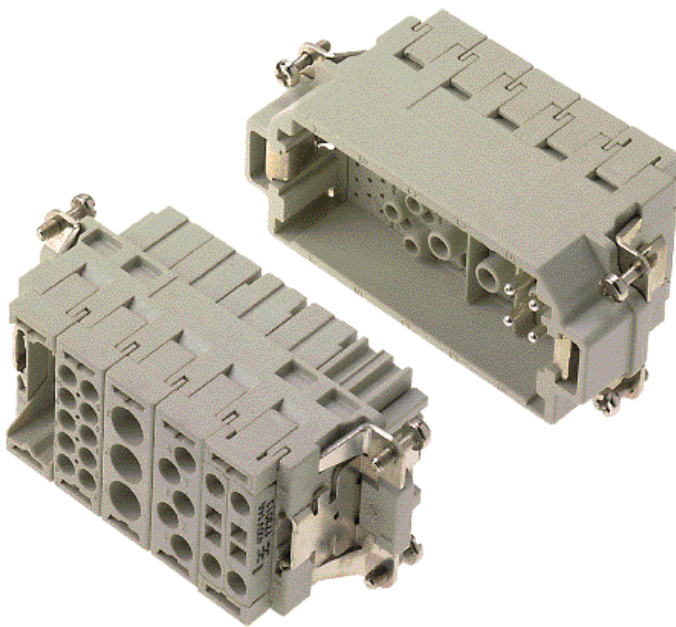


## Heavy Duty Connectors

### Series ConCept Modular Connector System

Number of poles:

2, 3, 4, 5, 10, 20



Universal and flexible – the solution for an almost infinite variety of combinations

- Signal and power transmission possible via the same connector
- Extremely flexible due to a large number of practical combinations of modules, frames, hoods and housings
- Free choice of the connecting technique in the modules
- Crimp modules for low-cost HE crimps
- Tension clamp modules for time-saving processing, maintenance-free and highly vibration-proof
- Screw connection for heavy currents and voltages.
- Modules and frames made from a PC material without halogen or phosphorus

#### United States

Weidmüller Inc.  
821 Southlake Blvd.  
Richmond, Virginia 23236  
Telephone: (800) 849-9343  
Facsimile: (804) 379-2593  
Email: [info@weidmuller.com](mailto:info@weidmuller.com)  
Website: [www.weidmuller.com](http://www.weidmuller.com)

#### Canada

Weidmüller Ltd.  
10 Spy Court  
Markham, Ontario L3R-5H6  
Telephone: (800) 268-4080  
Facsimile: (905) 475-2798  
Email: [info1@weidmuller.ca](mailto:info1@weidmuller.ca)  
Website: [www.weidmuller.ca](http://www.weidmuller.ca)

#### Mexico

Weidmüller, S.A. de C.V.  
5 Sur No. 4311  
Col. Huexotitla  
72534 Puebla, Pue. Mexico  
Telephone: (22) 37 2549  
Facsimile: (22) 43 1981  
Email: [weidmull@acnet.net](mailto:weidmull@acnet.net)

## Universal and flexible – the solution for a large number of applications

The modular ConCept connector system is a low-cost alternative to the standard HE inserts with fixed poles. It provides the user with flexibility in standard applications and for customized connectors.

Weidmüller has expanded the system with tension clamp and crimp modules that offer a free selection of the connecting technology: crimp or tension clamp.

The steadily increasing number of modules with varying numbers of poles and electrical specifications are the basis of an almost infinite combination of options.

Six different male and female modules with different power data and connecting technology, in conjunction with the mounting frames for 2, 3, 5, or 7 modules provide variable connector combinations options.

Single or double-row frames, in combination with standard housings create safe and reliable connections in machines, switchgear cabinets, motors and installations.



System specifications	630 V/40 A	400* V/20 A	250 V/10 A	100 V/4 A	630 V/25 A	400 V/14 A	1000 V/82 A	1000 V/82 A
Pole number	3	5	10	20	4	4	1/1 PE	2
Description	CM-3	CM-5	CM-10	CM-20	CM-HE	CM-4BZF/4SZF	CM 1 + PE	CM-2
Contact diameter	3.6	2.5	1.6	1	2.5	2.5	6	6
Connection method	crimp	crimp	crimp	crimp	crimp	tension clamp	screw	screw
Contact	turned	turned	turned	stamped	turned	turned	turned	turned
Conductor cross-section								
	mm <sup>2</sup>							
AWG conductor	1.5...10.0 <sup>2)</sup>	0.75...4.0 <sup>1)</sup>	0.14...2.5 <sup>1)</sup>	0.08...0.52 <sup>1)</sup>	0.5...4 <sup>1)</sup>	0.5...2.5 <sup>1)</sup>	4.0...16.0	4.0...16.0
	12...7	20...12	26...14	28...20	20...12	20...12	12...6	12...6
<b>Electrical specification plastic PC</b>								
Color: <b>grey</b>								
Rated voltage max.	V	630	250	250	100	630	400	1000
Rated current max.	A	40	20	10	4	25	14	82
Impulse voltage	KV	8	6	4	1.5	8	6	6
Pollution severity		3	3	3	3	3	3	3
Insulation resistance	>	10 <sup>12</sup>	10 <sup>12</sup>	10 <sup>11</sup>	10 <sup>12</sup>	10 <sup>12</sup>	10 <sup>12</sup>	10 <sup>12</sup>
Overvoltage category		III	III	III	III	III	III	III
Through resistance	m	< 5	< 5	< 5	< 5	< 5	< 5	< 5
<b>Electrical specification plastic PA</b>								
Color: <b>black</b>								
Rated voltage max.	V	630	400	250	100			
Rated current max.	A	40	20	10	4			
Impulse voltage	kV	8	6	4	1.5			
Pollution severity		3	3	3	3			
Insulation resistance	>	10 <sup>11</sup>	10 <sup>11</sup>	10 <sup>10</sup>	10 <sup>11</sup>			
Overvoltage category		III	III	III	III			
Through resistance	m	< 5	< 5	< 5	< 5			
		*400 Volt only if black modules						
<b>Materials data</b>								
• Modules								
Flammability class UL 94		V-0						
Plastic material		PA/PC (grey, RAL 7032) PA (black, RAL 9005) <sup>3)</sup>						
• Frames								
Flammability class UL 94		V-0						
Plastic material		PC (grey, RAL 7032) PA (black, RAL 9005) <sup>3)</sup>						
• Contacts								
Basic material		Cu-alloy						
Plating		Ag	Ag	Ag/Au	Ag	Ag/Au	Ag	

### Application note:

Weidmüller connectors are tested according to the DIN VDE 0627 standard, and are valid for its field of applications. Provided that the connectors are used for the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermal and corrosive stress will be satisfied. Connectors are not allowed to be operated under loading.

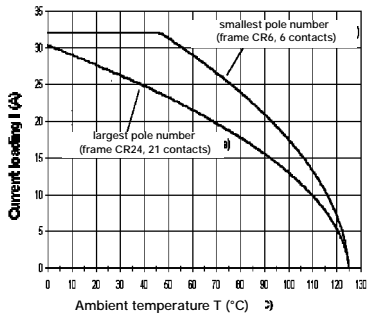
1) Ferrules are required for the connection of conductors with a cross-section 0.75 mm<sup>2</sup>.

2) Ring tongues are required for the connection of conductors with a cross-section 6 mm<sup>2</sup> to 10 mm<sup>2</sup>.

3) 4-pole crimp module CM-HE and tension clamp module CM-4BZF/4SZF are only available in PC (grey).

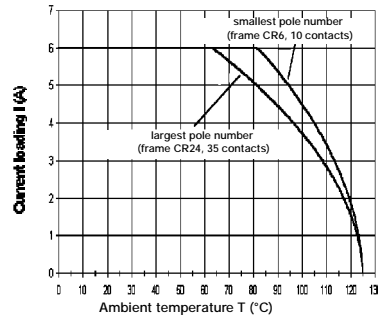
# ConCept / Derating Curves

## Module CM-3



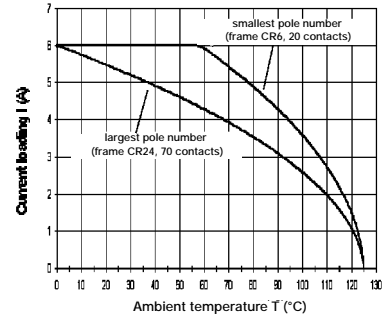
ConCept module CM-3  
Conductor H07V-K4.0 mm<sup>2</sup>

## Module CM-5

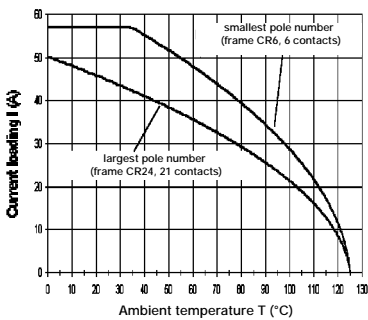


ConCept module CM-5  
Conductor H05V-K0.5 mm<sup>2</sup>

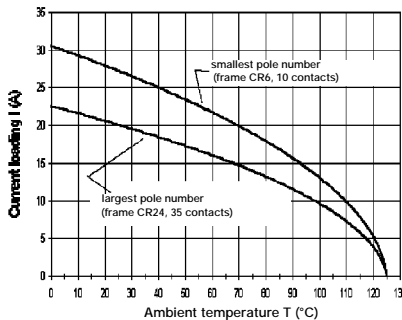
## Module CM-10



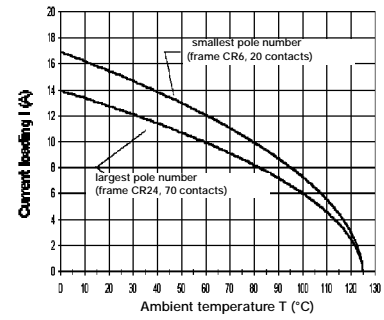
ConCept module CM-10  
Conductor H05V-K0.5 mm<sup>2</sup>



ConCept module CM-3  
Conductor H07V-K10.0 mm<sup>2</sup>

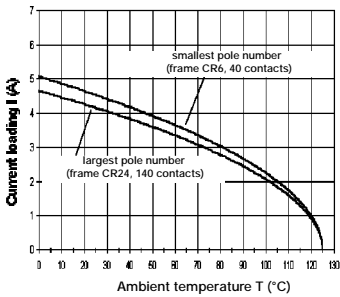


ConCept module CM-5  
Conductor H07V-K4.0 mm<sup>2</sup>



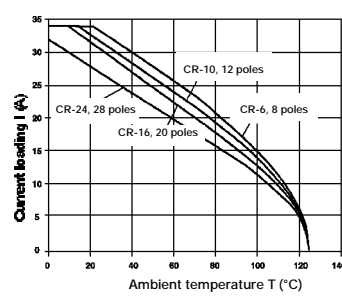
ConCept module CM-10  
Conductor H07V-K2.5 mm<sup>2</sup>

## Module CM-20



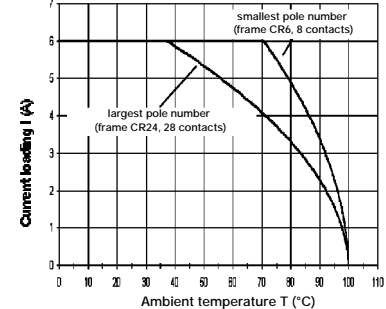
ConCept module CM-20  
AWG-Conductor 20/19

## Module CM-HE



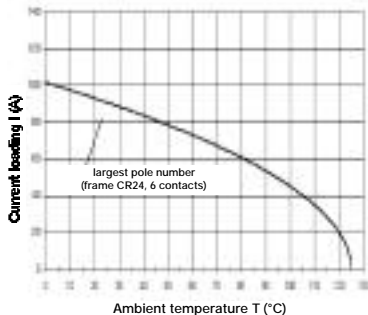
ConCept module CM-HE  
Conductor H07V-K4.0 mm<sup>2</sup>

## Module CM-4BZF/4SZF

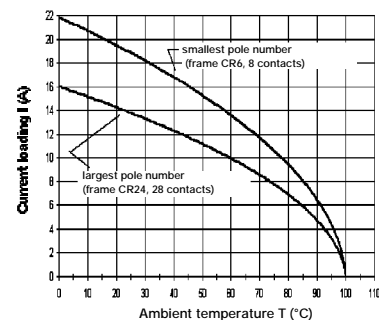


ConCept module CM-4BZF/4SZF  
Conductor H05V-K0.5 mm<sup>2</sup>

## Module CM-2



ConCept module CM-2  
Conductor 16 mm<sup>2</sup>

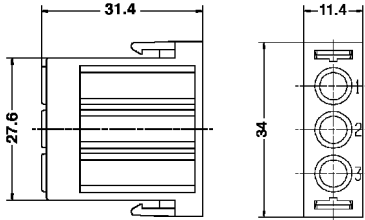


ConCept module CM-4BZF/4SZF  
Conductor H07V-K2.5 mm<sup>2</sup>

# ConCept Modules

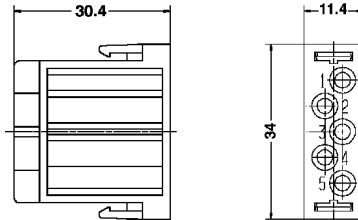
## Crimp connection CM-3SCM

3-pole 630 V/40 A



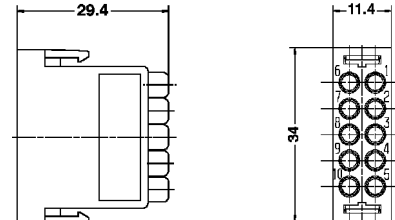
## Crimp connection CM-5SCM

5-pole 250\* V/20 A



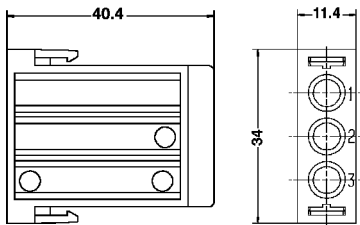
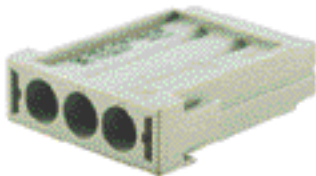
## Crimp connection CM-10SCM

10-pole 250 V/10 A



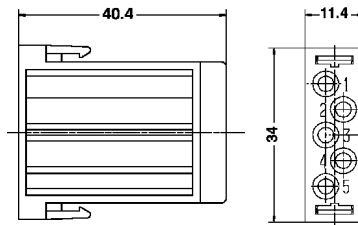
## Crimp connection CM-3BCM

3-pole 630 V/40 A



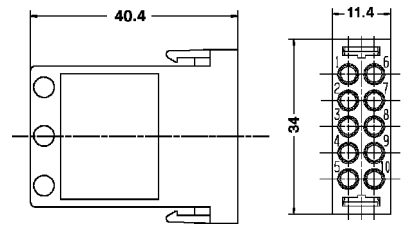
## Crimp connection CM-5BCM

5-pole 250\* V/20 A



## Crimp connection CM-10BCM

10-pole 250 V/10 A



For turned contacts

Color		Black	Grey	
Version	Type	Part No.	Part No.	Qty.
Male	HDC-CM-3SCM	1682080000	1758360000	10
Female	HDC-CM-3BCM	1682090000	1758370000	10

For turned contacts

Color		Black	Grey	
Version	Type	Part No.	Part No.	Qty.
Male	HDC-CM-5SCM	1682100000	1758380000	10
Female	HDC-CM-5BCM	1682110000	1758390000	10

For turned contacts

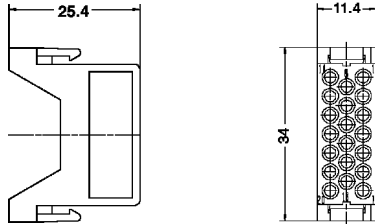
Color		Black	Grey	
Version	Type	Part No.	Part No.	Qty.
Male	HDC-CM-10SCM	1682120000	1758400000	10
Female	HDC-CM-10BCM	1682130000	1758410000	10

\* 400 V for black modules

# ConCept Modules

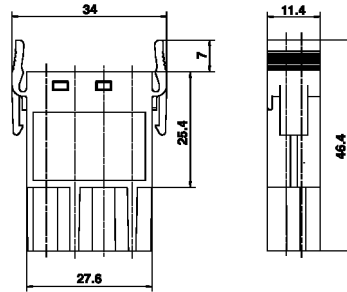
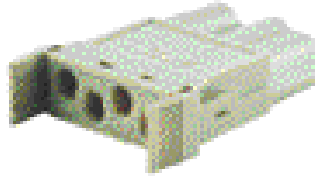
## Crimp connection CM-20SCM

20-pole 100 V/4 A



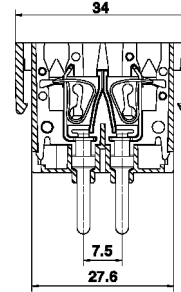
## Crimp connection CM-HE 4S GR

4-pole 630 V/25 A



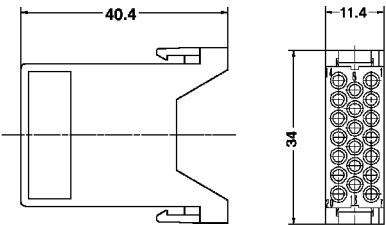
## Tension clamp CM-4SZF AG

4-pole 400 V/14 A



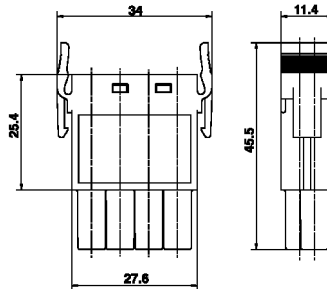
## Crimp connection CM-20BCM

20-pole 100 V/4 A



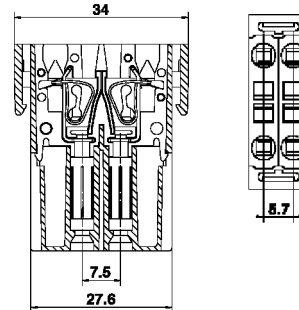
## Crimp connection CM-HE 4B GR

4-pole 630 V/25 A



## Tension clamp CM-4BZF AG

4-pole 400 V/14 A



### For stamped contacts

Color		Black	Grey	
Version	Type	Part No.	Part No.	Qty.
Male	HDC-CM-20SCM	1682160000	1758420000	10
Female	HDC-CM-20BCM	1682170000	1758430000	10

### For turned contacts

Color		Grey	
Version	Type	Part No.	Qty.
Male	HDC-CM-HE-4S GR	1758340000	10
Female	HDC-CM-HE-4B GR	1758350000	10

Color		Grey	
Version	Type	Part No.	Qty.
Male	HDC-CM-4SZF AG	1730120000	10
Female	HDC-CM-4BZF AG	1730130000	10

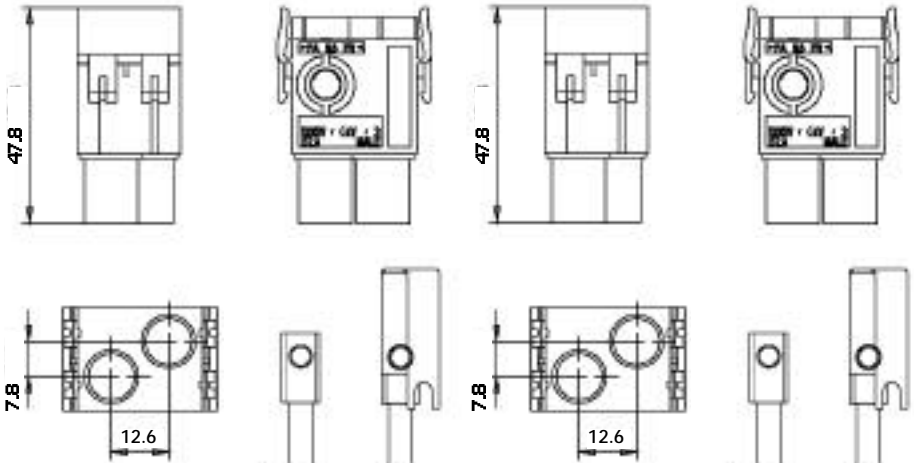
Screw connection CM-1 SS + PE

1-pole + PE 1000 V/82 A



Screw connection CM-2 SS

2-pole 1000 V/82 A



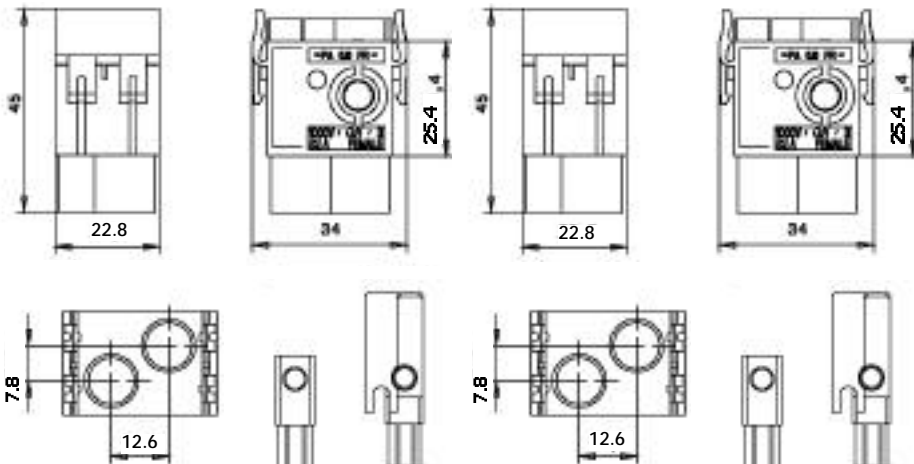
Screw connection CM-1 BS + PE

1-pole + PE 1000 V/82 A



Screw connection CM-2 BS

2-pole 1000 V/82 A

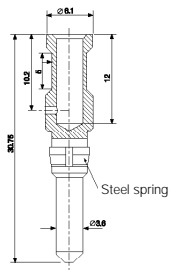


Version	Type	Part No.	Qty.
Male	HDC-CM 1SS+PE	1807980000	5
Female	HDC-CM 1BS+PE	1808000000	5

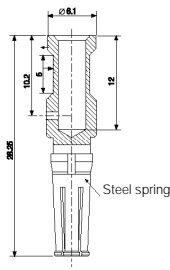
Version	Type	Part No.	Qty.
Male	HDC-CM 2SS	1807970000	5
Female	HDC-CM 2BS	1807990000	5

# ConCept / Crimp Contacts

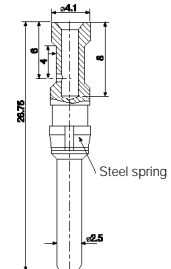
**Crimp contacts** must be ordered separately. The turned and stamped contacts are made of a brass-alloy. Contact platings are available either in gold or silver-plated versions. Stamped contacts are only available with gold coating. The male and female inserts are optionally available for stamped or turned contacts. Please select required crimp contacts.



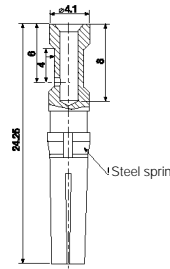
CM-3 Male



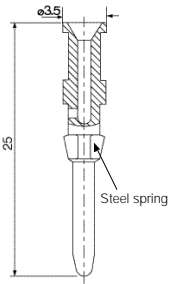
CM-3 Female



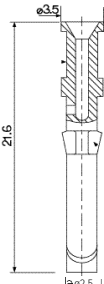
CM-5 Male



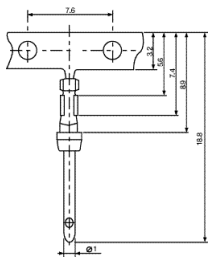
CM-5 Female



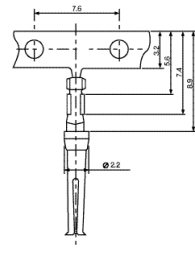
CM-10 Male



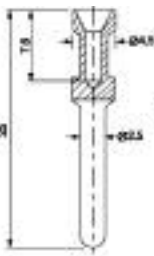
CM-10 Female



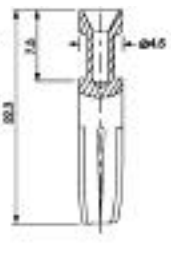
CM-20 Male



CM-20 Female



CM-HE Male



CM-HE Female

## Turned crimp contacts for module CM-3

Contact diameter of pin Ø 3.6 mm

Cross-section mm <sup>2</sup>	AWG	Plating	Version	Type	Part No.	Qty.
1.5	16	Ag	Male	HDC-C-M3-SM1.5Ag	1698120000	100
1.5	16	Ag	Female	HDC-C-M3-BM1.5Ag	1698130000	100
2.5	14	Ag	Male	HDC-C-M3-SM2.5Ag	1698140000	100
2.5	14	Ag	Female	HDC-C-M3-BM2.5Ag	1698150000	100
4.0	12	Ag	Male	HDC-C-M3-SM4.0Ag	1682260000	100
	12	Ag	Female	HDC-C-M3-BM4.0Ag	1682270000	100
6.0	10	Ag	Male	HDC-C-M3-SM6.0Ag	1682280000	100
	10	Ag	Female	HDC-C-M3-BM6.0Ag	1682290000	100
10.0	7	Ag	Male	HDC-C-M3-SM10.0Ag	1682300000	100
	7	Ag	Female	HDC-C-M3-BM10.0Ag	1682310000	100

## Turned crimp contacts for module CM-5

Contact diameter of pin Ø 2.5 mm

Cross-section mm <sup>2</sup>	AWG	Plating	Version	Type	Part No.	Qty.
0.75-1.0	18	Ag	Male	HDC-C-M5-SM0.75-1.0Ag	1682340000	100
	18	Ag	Female	HDC-C-M5-BM0.75-1.0Ag	1682350000	100
1.5	16	Ag	Male	HDC-C-M5-SM1.5Ag	1682360000	100
	16	Ag	Female	HDC-C-M5-BM1.5Ag	1682370000	100
2.5	14	Ag	Male	HDC-C-M5-SM2.5Ag	1682380000	100
	14	Ag	Female	HDC-C-M5-BM2.5Ag	1682390000	100
4.0	12	Ag	Male	HDC-C-M5-SM4.0Ag	1682400000	100
	12	Ag	Female	HDC-C-M5-BM4.0Ag	1682410000	100

## Turned crimp contacts for module CM-10

Contact diameter of pin Ø 1.6 mm

Cross-section mm <sup>2</sup>	AWG	Plating	Version	Type	Part No.	Qty.	
0.14 - 0.37	26...22	Au	Male	HDC-C-HD-SM0.14-0.37Au	1651620000	100	
			Female	HDC-C-HD-BM0.14-0.37Au	1651670000	100	
	26...22	Ag	Male	HDC-C-HD-SM0.14-0.37Ag	1651520000	100	
			Female	HDC-C-HD-BM0.14-0.37Ag	1651570000	100	
0.5	20	Au	Male	HDC-C-HD-SM0.5Au	1651630000	100	
			Female	HDC-C-HD-BM0.5Au	1651680000	100	
	20	Ag	Male	HDC-C-HD-SM0.5Ag	1651530000	100	
			Female	HDC-C-HD-BM0.5Ag	1651580000	100	
	0.75 - 1.00	18	Au	Male	HDC-C-HD-SM0.75-1.00Au	1651640000	100
				Female	HDC-C-HD-BM0.75-1.00Au	1651690000	100
18	Ag	Male	HDC-C-HD-SM0.75-1.00Ag	1601750000	100		
		Female	HDC-C-HD-BM0.75-1.00Ag	1601760000	100		
1.5	16	Au	Male	HDC-C-HD-SM1.5Au	1651650000	100	
			Female	HDC-C-HD-BM1.5Au	1651700000	100	
	16	Ag	Male	HDC-C-HD-SM1.5Ag	1651550000	100	
			Female	HDC-C-HD-BM1.5Ag	1651600000	100	
	2.5	14	Au	Male	HDC-C-HD-SM2.5Au	1651660000	100
				Female	HDC-C-HD-BM2.5Au	1651710000	100
14	Ag	Male	HDC-C-HD-SM2.5Ag	1651560000	100		
		Female	HDC-C-HD-BM2.5Ag	1651610000	100		

\* We recommend the mounting tool HDC-DW-M10, order no. 1688220000, for securing contacts into the insert.  
The contact is safely positioned in the insert when it audibly clicks into place.

## Stamped crimp contacts for module CM-20

Contact diameter of pin Ø 1 mm

Cross-section mm <sup>2</sup>	AWG	Plating	Version	Type	Part No.	Qty.
0.08-0.2	28...24	Au	Male	HDC-C-M20-SCG0.08-0.2Au	1682420000	300
			Female	HDC-C-M20-BCG0.08-0.2Au	1682430000	300
0.2-0.52	24...20	Au	Male	HDC-C-M20-SCG0.2-0.52Au	1682440000	300
			Female	HDC-C-M20-BCG0.2-0.52Au	1682450000	300

1) Bandolier contacts wrapped on reel

## Turned crimp contacts for module CM-HE

Contact diameter of pin Ø 1 mm

Cross-section mm <sup>2</sup>	AWG	Plating	Version	Type	Part No.	Qty.
0.5	20	Au	Male	HDC-C-HE-SM0.5Au	1651420000	100
			Female	HDC-C-HE-SM0.5Ag	1200500000	100
0.5	20	Au	Female	HDC-C-HE-BM0.5Au	1651470000	100
			Female	HDC-C-HE-BM0.5Ag	1201100000	100
0.75 - 1.00	18	Au	Male	HDC-C-HE-SM0.75-1.00Au	1651430000	100
			Female	HDC-C-HE-SM0.75-1.00Ag	1200600000	100
0.75 - 1.00	18	Au	Female	HDC-C-HE-BM0.75-1.00Au	1651480000	100
			Female	HDC-C-HE-BM0.75-1.00Ag	1201200000	100
1.5	16	Au	Male	HDC-C-HE-SM1.5Au	1651440000	100
			Female	HDC-C-HE-SM1.5Ag	1200700000	100
1.5	16	Au	Female	HDC-C-HE-BM1.5Au	1651490000	100
			Female	HDC-C-HE-BM1.5Ag	1201300000	100
2.5	14	Au	Male	HDC-C-HE-SM2.5Au	1651450000	100
			Female	HDC-C-HE-SM2.5Ag	1200800000	100
2.5	14	Au	Female	HDC-C-HE-BM2.5Au	1651500000	100
			Female	HDC-C-HE-BM2.5Ag	1201400000	100
4.0	12	Au	Male	HDC-C-HE-SM4.0Au	1651460000	100
			Female	HDC-C-HE-SM4.0Ag	1200900000	100
4.0	12	Au	Female	HDC-C-HE-BM4.0Au	1651510000	100
			Female	HDC-C-HE-BM4.0Ag	1201500000	100

## Crimping tools

Special type for HE male and female contact

### CZB 1



Type	Description	Part No.	Qty.
CZB 1	crimping tool for 1.5...4.0 mm <sup>2</sup> conductor cross-section	9012710000	1

Preferred type for turned HE, HD and HDD contacts and ConCept contacts

### CTX CM



### HDC-CM 20



Type	Description	Part No.	Qty.
CTX CM 3.6	crimping tool for Ø 3.6 mm contacts with 4.0...10.0 mm <sup>2</sup> conductor cross-section of ConCept module CM-3	9018480000	1
CTX CM 1.6/2.5	crimping tool for Ø 1.6 mm/Ø 2.5 mm contacts with 0.14...2.5 mm <sup>2</sup> conductor cross-section, of turned HE-, turned HD-, HDD and ConCept contacts	9018490000	1
HDC-CM-3	crimping tool 1.5...10 mm <sup>2</sup> conductor cross-section of ConCept module CM-3	1700890000	1
HDC-CM-20	crimping tool for Ø 1.0 mm D-Sub contacts with 0.08...0.52 mm <sup>2</sup> conductor cross-section of ConCept module CM-20	1700900000	1

## Screwdriver

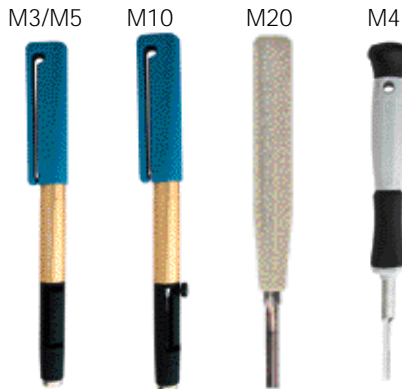
### SD



Type	Description	Part No.	Qty.
SD 0.6 x 3.5 x 100	for slotted screws	9008330000	1

## Contact removal tool<sup>3)</sup> for ConCept contacts

### HDC-DW



Type	for ConCept modules	Part No.	Qty.
HDC-DW-M3	HDC-CM-3	1688240000	1
HDC-DW-M5	HDC-CM-5	1688230000	1
HDC-DW-M10 <sup>1)</sup>	HDC-CM-10	1688220000	1
HDC-DW-M20	HDC-CM-20	1688210000	1
HDC-DW-M4 <sup>2)</sup>	HDC-CM-HE	1760170000	1

## Module removal tool for ConCept modules

### HDC-DW-MOD



Type	Description	Part No.	Qty.
HDC-DW-MOD <sup>4)</sup>	Module removal tool	1688200000	1

<sup>1)</sup> Tool for removal of turned HD contacts

<sup>2)</sup> Tool for removal of HE contacts

<sup>3)</sup> Please do not loosen the contact more than 3 times

<sup>4)</sup> Tool for removal of ConCept modules from frames.

Not necessary for HE modules.

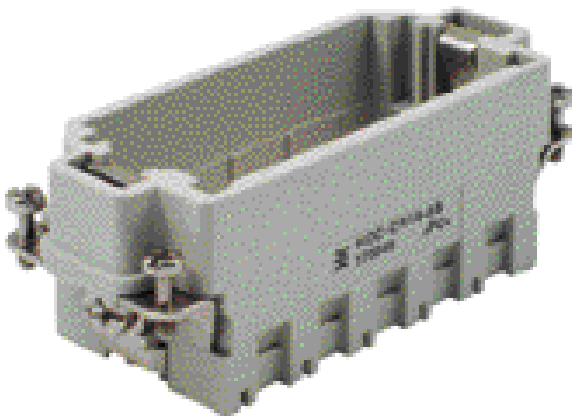




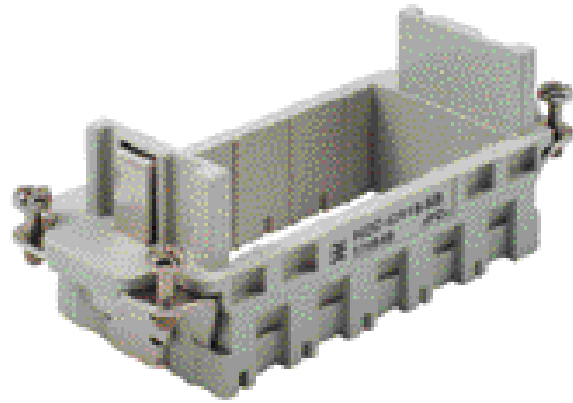


# Frames Group Size 6

## Frames CR 16 / 5 Modules

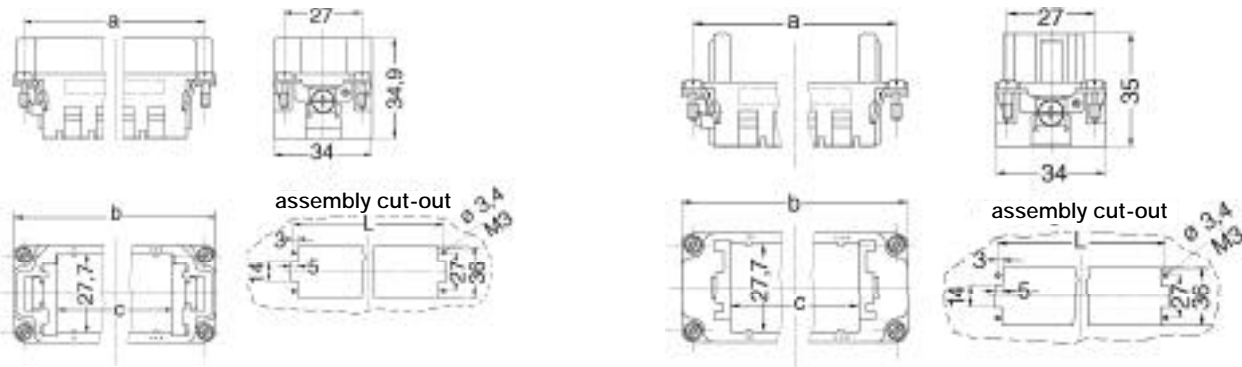


Male frame



Female frame

### Dimensions

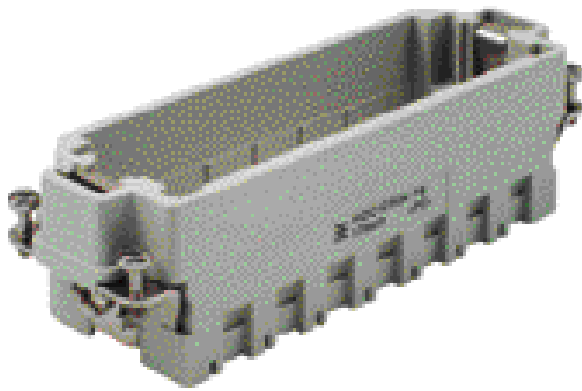


Color		Black	Grey							
Version	Type	Part No.	Part No.	Qty.	a mm (in)	b mm (in)	c mm (in)	L mm (in)	Remarks	Group size
Male	HDC-CR16-5S	1682220000	1758480000	5	77.5 (3.05)	84.5 (3.33)	57.5 (2.26)	77.5 (3.05)	For 5 modules	6 (10)
Female	HDC-CR16-5B	1682230000	1758490000	5	77.5 (3.05)	84.5 (3.33)	57.5 (2.26)	77.5 (3.05)	For 5 modules	6 (10)
Male <sup>1)</sup>	HDC-CR16-5S-2		1758520000	5	77.5 (3.05)	84.5 (3.33)	57.5 (2.26)	77.5 (3.05)	For 5 modules	10
Female <sup>1)</sup>	HDC-CR16-5B-2		1758530000	5	77.5 (3.05)	84.5 (3.33)	57.5 (2.26)	77.5 (3.05)	For 5 modules	10

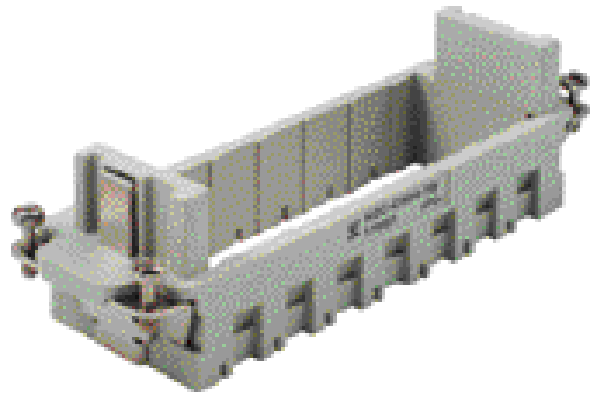
<sup>1)</sup> additional markings for the use of two frames in one housing.  
2 frames = group size 10.

# Frames Group Size 8

## Frames CR 24 / 7 modules

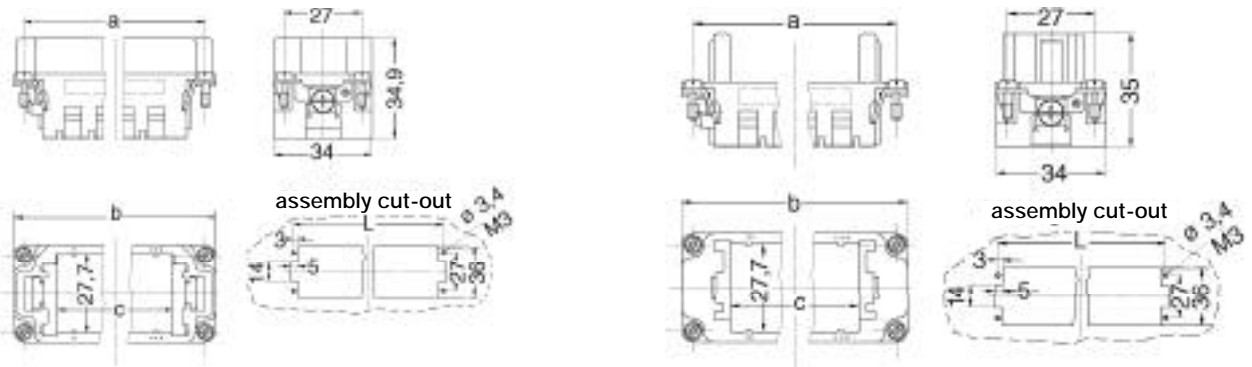


Male frame



Female frame

### Dimensions



Color		Black	Grey							
Version	Type	Part No.	Part No.	Qty.	a mm (in)	b mm (in)	c mm (in)	L mm (in)	Remarks	Group size
Male	HDC-CR24-7S	1682240000	1758500000	5	104 (4.09)	111 (4.37)	80.5 (3.17)	104 (4.09)	for 7 modules	8 (12)
Female	HDC-CR24-7B	1682250000	1758510000	5	104 (4.09)	111 (4.37)	80.5 (3.17)	104 (4.09)	for 7 modules	8 (12)
Male <sup>2)</sup>	HDC-CR24-7S-2		1758540000	5	104 (4.09)	111 (4.37)	80.5 (3.17)	104 (4.09)	for 7 modules	12
Female <sup>2)</sup>	HDC-CR24-7B-2		1758550000	5	104 (4.09)	111 (4.37)	80.5 (3.17)	104 (4.09)	for 7 modules	12

<sup>2)</sup> additional markings for the use of two frames in one housing.  
2 frames = group size 12.