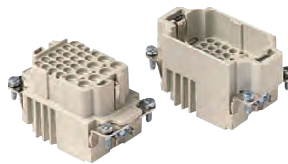


# CX 8 poles (16 A – 230/400 V) + 24 poles (10 A – 160 V) + ⊕

enclosures: size "57.27"	page:
C-TYPE IP65 or IP66/IP69	393 - 401
C7 IP67, two levers	438
V-TYPE IP65 or IP66/IP69, single lever	448 - 453
BIG hoods	468 - 469
T-TYPE IP65 insulating	482 - 483
T-TYPE / W IP66/IP69 insulating	490
HYGIENIC T-TYPE / H IP66/IP69	502
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	507
W-TYPE for aggressive environments	522
E-Xtreme® corrosion proof	532 - 533, 543, 552 - 553
EMC	579
Central lever	606 - 608
LS-TYPE	620 - 621
IP68	636 - 639
panel supports: COB	page: 652 - 653

inserts, crimp connections

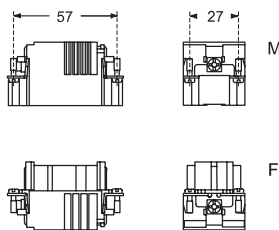


description	part No.
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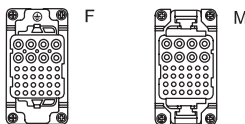
without contacts (to be ordered separately)  
female inserts for female contacts  
male inserts for male contacts

CXF 8/24  
CXM 8/24

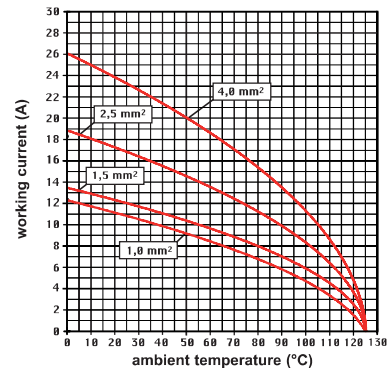
- characteristics according to EN 61984:  
**16 A 230/400 V 4 kV 3**  
**16 A 400 V 4 kV 2**  
**10 A 160 V 2,5 kV 3**  
**10 A 250 V 4 kV 2**
- certified
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance:  
 ≤ 1 mΩ (8 poles)  
 ≤ 3 mΩ (24 poles)
- **it is recommended to crimp the contacts with crimping tools homologated by ILME**  
 (please see the crimping tool section 16 A contacts, CCF, CCM, CC...AN series and 10 A contacts CDF, CDM series on pages 708 - 741)
- PCBs interface, see article CIF 2.4 (10 A contacts)
- for max. current load see the connector inserts derating diagrams on the side; for more information see page 28



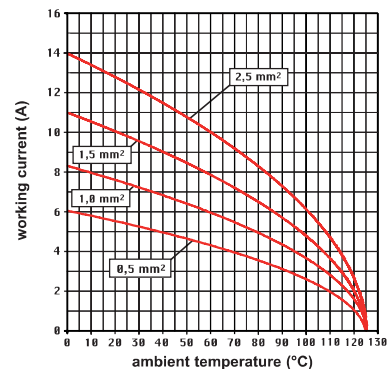
contacts side (front view)



CX 8/24 power poles connector inserts  
Maximum current load derating diagram



CX 8/24 auxiliary poles connector inserts  
Maximum current load derating diagram



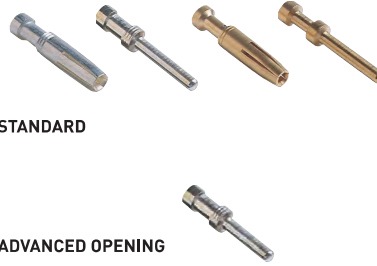
**Note:** for connector with power poles and auxiliary poles simultaneously loaded in the combinations

power poles	auxiliary poles
4,0 mm <sup>2</sup>	2,5 mm <sup>2</sup>
2,5 mm <sup>2</sup>	1,5 mm <sup>2</sup>
1,5 mm <sup>2</sup>	1,0 mm <sup>2</sup>
1,0 mm <sup>2</sup>	0,5 mm <sup>2</sup>

with power / auxiliary current ratios = 1,6 / 1

CX 8/24

**16 A crimp contacts  
standard or for advanced opening  
silver and gold plated**



STANDARD

ADVANCED OPENING

**10 A crimp contacts  
silver and gold plated**



CX 8/24

description	part No.	part No.	part No.	part No.
<b>16 A female contacts</b>				
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	<b>CCFA 0.3</b>	<b>CCFD 0.3</b>
0,5 mm <sup>2</sup>	AWG 20	with no grooves	<b>CCFA 0.5</b>	<b>CCFD 0.5</b>
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	<b>CCFA 0.7</b>	<b>CCFD 0.7</b>
1 mm <sup>2</sup>	AWG 18	one groove	<b>CCFA 1.0</b>	<b>CCFD 1.0</b>
1,5 mm <sup>2</sup>	AWG 16	two grooves	<b>CCFA 1.5</b>	<b>CCFD 1.5</b>
2,5 mm <sup>2</sup>	AWG 14	three grooves	<b>CCFA 2.5</b>	<b>CCFD 2.5</b>
3 mm <sup>2</sup>	AWG 12	one wide groove	<b>CCFA 3.0</b>	<b>CCFD 3.0</b>
4 mm <sup>2</sup>	AWG 12	with no grooves	<b>CCFA 4.0</b>	<b>CCFD 4.0</b>
<b>16 A male contacts</b>				
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	<b>CCMA 0.3</b>	<b>CCMD 0.3</b>
0,5 mm <sup>2</sup>	AWG 20	with no grooves	<b>CCMA 0.5</b>	<b>CCMD 0.5</b>
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	<b>CCMA 0.7</b>	<b>CCMD 0.7</b>
1 mm <sup>2</sup>	AWG 18	one groove	<b>CCMA 1.0</b>	<b>CCMD 1.0</b>
1,5 mm <sup>2</sup>	AWG 16	two grooves	<b>CCMA 1.5</b>	<b>CCMD 1.5</b>
2,5 mm <sup>2</sup>	AWG 14	three grooves	<b>CCMA 2.5</b>	<b>CCMD 2.5</b>
3 mm <sup>2</sup>	AWG 12	one wide groove	<b>CCMA 3.0</b>	<b>CCMD 3.0</b>
4 mm <sup>2</sup>	AWG 12	with no grooves	<b>CCMA 4.0</b>	<b>CCMD 4.0</b>
<b>16 A male crimp contacts for advanced opening</b>				
0,5 mm <sup>2</sup>	AWG 20	with no grooves	<b>CC 0.5 AN</b>	
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	<b>CC 0.7 AN</b>	
1 mm <sup>2</sup>	AWG 18	one groove	<b>CC 1.0 AN</b>	
1,5 mm <sup>2</sup>	AWG 16	two grooves	<b>CC 1.5 AN</b>	
2,5 mm <sup>2</sup>	AWG 14	three grooves	<b>CC 2.5 AN</b>	
<b>10 A female contacts</b>				
0,14-0,37 mm <sup>2</sup>	AWG 26-22	identification No. 1	<b>CDFA 0.3</b>	<b>CDFD 0.3</b>
0,5 mm <sup>2</sup>	AWG 20	identification No. 2	<b>CDFA 0.5</b>	<b>CDFD 0.5</b>
0,75 mm <sup>2</sup>	AWG 18	identification No. ②	<b>CDFA 0.7</b>	<b>CDFD 0.7</b>
1 mm <sup>2</sup>	AWG 18	identification No. 3	<b>CDFA 1.0</b>	<b>CDFD 1.0</b>
1,5 mm <sup>2</sup>	AWG 16	identification No. 4	<b>CDFA 1.5</b>	<b>CDFD 1.5</b>
2,5 mm <sup>2</sup>	AWG 14	identification No. 5	<b>CDFA 2.5</b>	<b>CDFD 2.5</b>
<b>10 A male contacts</b>				
0,14-0,37 mm <sup>2</sup>	AWG 26-22	identification No. 1	<b>CDMA 0.3</b>	<b>CDMD 0.3</b>
0,5 mm <sup>2</sup>	AWG 20	identification No. 2	<b>CDMA 0.5</b>	<b>CDMD 0.5</b>
0,75 mm <sup>2</sup>	AWG 18	identification No. ②	<b>CDMA 0.7</b>	<b>CDMD 0.7</b>
1 mm <sup>2</sup>	AWG 18	identification No. 3	<b>CDMA 1.0</b>	<b>CDMD 1.0</b>
1,5 mm <sup>2</sup>	AWG 16	identification No. 4	<b>CDMA 1.5</b>	<b>CDMD 1.5</b>
2,5 mm <sup>2</sup>	AWG 14	identification No. 5	<b>CDMA 2.5</b>	<b>CDMD 2.5</b>

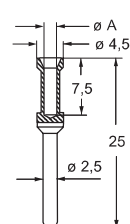
**CCF, CCM and CC...AN contacts**

conductor section mm <sup>2</sup>	conductor slot $\varnothing A$ (mm)	conductors stripping length (mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
0,75	1,3	7,5
1,0	1,45	7,5
1,5	1,8	7,5
2,5	2,2	7,5
3	2,55	7,5
4	2,85	7,5

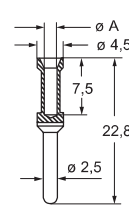
**CDF and CDM contacts**

conductor section mm <sup>2</sup>	conductor slot $\varnothing A$ (mm)	conductors stripping length B (mm)
0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

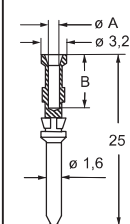
**CCF and CCM**



**CC...AN**



**CDF and CDM**



\* for basic or high thickness gold plating, please refer to page 675

\* for basic or high thickness gold plating, please refer to page 674

## CX 6/12

## TECHNICAL FEATURES

This combined connector, in addition to the traditional lateral protective earth contact with screw connection, is provided by contact seats for:

- ▶ 6 **CX** series crimp contacts up to the maximum size 10 for working current up to **40 A** and rated voltage up to **690 V**, and
- ▶ 12 **CD** series crimp contacts for working current up to **10 A** and rated voltage up to **230/400V**.

The removable crimp contacts of the **CX** series are held by resilient elements of the connector insert contact holder, while the removable crimp contacts of the **CD** series are equipped with their own retention means.

Compared to the **CX 6/36** combined connector of the same size "77.27" (see page 198) on the 6 power poles it allows the use of wires

with a rated cross-sectional area (CSA) up to 10 mm<sup>2</sup> / 8 AWG whereas the CX 6/36 on the same 6 power poles is limited to size 6.0 for conductors up to 6 mm<sup>2</sup> / 10 AWG rated CSA.

The lower number of auxiliary contacts (12 instead of 36) of this connector insert, is largely rewarded by the fact that these contacts can be used for voltages up to 230/400 V, hence also for motors of non-negligible power, while in the CX 6/36 connector due to their higher density, the auxiliary contacts (of the same CD series) are limited to use at 160 V.

The presence of 230/400 V rated auxiliaries therefore suggests for these 12 contacts the possible use also in drives of up to 4 three-phase motors for the control of e.g. 4 lower power axes, while the two high power axes can be served by the 6 power poles of this connector.

## SUM-UP

- ☑ **Crimp connection**
- ☑ **Great resistance to strong vibrations**
- ☑ **For wires: up to 10 mm<sup>2</sup> (AWG 8)**
- ☑ **Auxiliary crimp contacts: silver or gold plated**

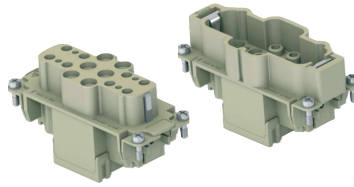


Inserts series		CX 6/12	
No. of poles	main contact	6 + ⊕ (40 A)	
	auxiliary contacts	12 (10 A)	
rated current		40 A	10 A
EN 61984 pollution degree 3	rated voltage	690 V	230 V/400 V
	rated impulse withstand voltage	8 kV	4 kV
	pollution degree	3	3
contact resistance		≤ 0,3 mΩ (40 A) ≤ 1 mΩ (16 A)	
insulation resistance		≥ 10 GΩ	
ambient temperature limit (°C)	min	-40 °C	
	max	+125 °C	
degree of protection	with enclosures (according to version)	IP65, IP66/IP69, IP66/IP67/IP69, IP66/IP68/IP69	
	without enclosures (in mated condition)	IP20 (IPXXB)	
conductor connections		crimp	
conductor cross-section	mm <sup>2</sup>	1,5 ..... 10	
	AWG	16 - 8	
conductor cross-section (CC contact series)	mm <sup>2</sup>	0,14 ..... 2,5	
	AWG	26 - 14	
CX/CC stripping length	mm	8 / 9 / 15	
mechanical endurance (mating cycles)		≥ 500	

# CX 6 poles (40A - 690V) + 12 poles (10A - 230/400V) + ⊕

enclosures: size "77.27"	page:
C-TYPE IP65 or IP66/IP69	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65 or IP66/IP69, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments	523
E-Xtreme® corrosion proof	534 - 535, 544, 554 - 555
EMC	580
Central lever	609 - 611
LS-TYPE	622 - 623
IP68	640 - 643
panel supports: COB	page: 652 - 653

inserts, crimp connections



40A and 10A crimp contacts  
silver and gold plated



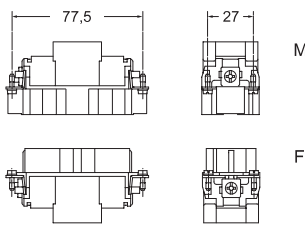
description	part No.	part No.	part No.
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without contacts (to be ordered separately)  
female inserts for female contacts  
male inserts for male contacts

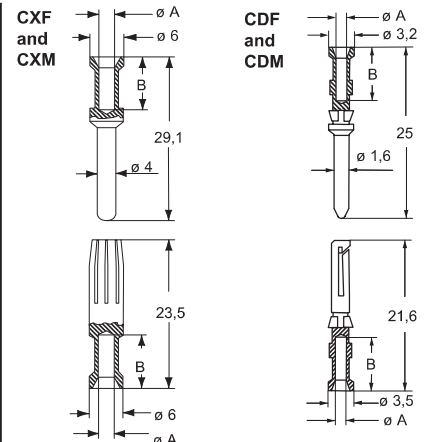
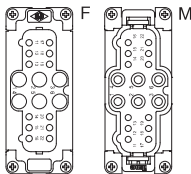
CXF 6/12  
CXM 6/12

40A female crimp contacts			
1,5 mm <sup>2</sup> AWG 16		CXFA 1.5	silver plated
2,5 mm <sup>2</sup> AWG 14		CXFA 2.5	
4 mm <sup>2</sup> AWG 12		CXFA 4.0	
6 mm <sup>2</sup> AWG 10		CXFA 6.0	
10 mm <sup>2</sup> AWG 8		CXFA 10	
40A male crimp contacts			
1,5 mm <sup>2</sup> AWG 16		CXMA 1.5	+ for basic or high thickness gold plating, please refer to page 674
2,5 mm <sup>2</sup> AWG 14		CXMA 2.5	
4 mm <sup>2</sup> AWG 12		CXMA 4.0	
6 mm <sup>2</sup> AWG 10		CXMA 6.0	
10 mm <sup>2</sup> AWG 8		CXMA 10	
10A female contacts			
0,14-0,37 mm <sup>2</sup> AWG 26-22 identification No. 1		CDFA 0.3	gold plated+
0,5 mm <sup>2</sup> AWG 20 identification No. 2		CDFA 0.5	
0,75 mm <sup>2</sup> AWG 18 identification No. ②		CDFA 0.7	
1 mm <sup>2</sup> AWG 18 identification No. 3		CDFA 1.0	
1,5 mm <sup>2</sup> AWG 16 identification No. 4		CDFA 1.5	
2,5 mm <sup>2</sup> AWG 14 identification No. 5		CDFA 2.5	
10A male contacts			
0,14-0,37 mm <sup>2</sup> AWG 26-22 identification No. 1		CDMA 0.3	CDMD 0.3
0,5 mm <sup>2</sup> AWG 20 identification No. 2		CDMA 0.5	
0,75 mm <sup>2</sup> AWG 18 identification No. ②		CDMA 0.7	
1 mm <sup>2</sup> AWG 18 identification No. 3		CDMA 1.0	
1,5 mm <sup>2</sup> AWG 16 identification No. 4		CDMA 1.5	
2,5 mm <sup>2</sup> AWG 14 identification No. 5		CDMA 2.5	CDMD 2.5

- characteristics according to EN 61984:
- 40A 690V 8kV 3**
- 10A 230/400V 4kV 3**
- certified
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance:
  - ≤ 0,3 mΩ (6 poles)
  - ≤ 1 mΩ (12 poles)
- cable diameter: up to 7,5 mm
- contact section: up to 10 mm<sup>2</sup>
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 40A contacts, CXF, CXM series and 10A contacts CDF, CDM series on pages 708 - 741
- for max. current load see the connector inserts derating diagram below; for more information see page 28

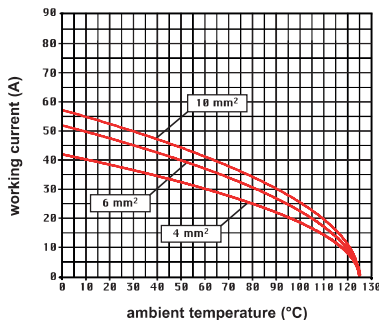


contacts side (front view)



CXF and CXM contacts		
conductor section mm <sup>2</sup>	conductor slot ø A (mm)	conductors stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6
10	4,3	15
CDF and CDM contacts		
0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

CX 6/12 power poles connector inserts  
Maximum current load derating diagram



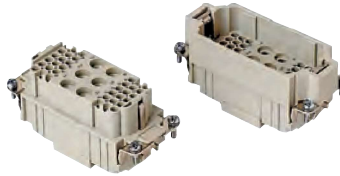
# CX 6 poles (40A - 690V) + 36 poles (10A - 160V) + ⊕

enclosures: size "77.27"	page:
C-TYPE IP65 or IP66/IP69	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65 or IP66/IP69, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments	523
E-Xtreme® corrosion proof	534 - 535, 544, 554 - 555
EMC	580
Central lever	609 - 611
LS-TYPE	622 - 623
IP68	640 - 643

panel supports: COB	page: 652 - 653
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- PCBs interface, see article CIF 2.4 (10A contacts)

## inserts, crimp connections



## 40A and 10A crimp contacts silver and gold plated



description	part No.	part No.	part No.
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without contacts (to be ordered separately)  
female inserts for female contacts  
male inserts for male contacts

**CXF 6/36**  
**CXM 6/36**

40A female crimp contacts  
1,5 mm<sup>2</sup> AWG 16  
2,5 mm<sup>2</sup> AWG 14  
4 mm<sup>2</sup> AWG 12  
6 mm<sup>2</sup> AWG 10

**CXFA 1.5**  
**CXFA 2.5**  
**CXFA 4.0**  
**CXFA 6.0**

silver plated

\* for basic or high thickness gold plating, please refer to page 674

40A male crimp contacts  
1,5 mm<sup>2</sup> AWG 16  
2,5 mm<sup>2</sup> AWG 14  
4 mm<sup>2</sup> AWG 12  
6 mm<sup>2</sup> AWG 10

**CXMA 1.5**  
**CXMA 2.5**  
**CXMA 4.0**  
**CXMA 6.0**

10A female contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 identification No. 1  
0,5 mm<sup>2</sup> AWG 20 identification No. 2  
0,75 mm<sup>2</sup> AWG 18 identification No. ②  
1 mm<sup>2</sup> AWG 18 identification No. 3  
1,5 mm<sup>2</sup> AWG 16 identification No. 4  
2,5 mm<sup>2</sup> AWG 14 identification No. 5

**CDFA 0.3**  
**CDFA 0.5**  
**CDFA 0.7**  
**CDFA 1.0**  
**CDFA 1.5**  
**CDFA 2.5**

**CDFD 0.3**  
**CDFD 0.5**  
**CDFD 0.7**  
**CDFD 1.0**  
**CDFD 1.5**  
**CDFD 2.5**

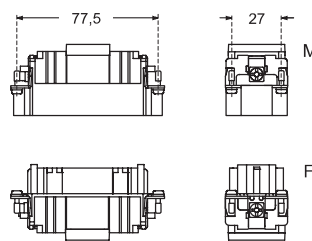
gold plated+

10A male contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 identification No. 1  
0,5 mm<sup>2</sup> AWG 20 identification No. 2  
0,75 mm<sup>2</sup> AWG 18 identification No. ②  
1 mm<sup>2</sup> AWG 18 identification No. 3  
1,5 mm<sup>2</sup> AWG 16 identification No. 4  
2,5 mm<sup>2</sup> AWG 14 identification No. 5

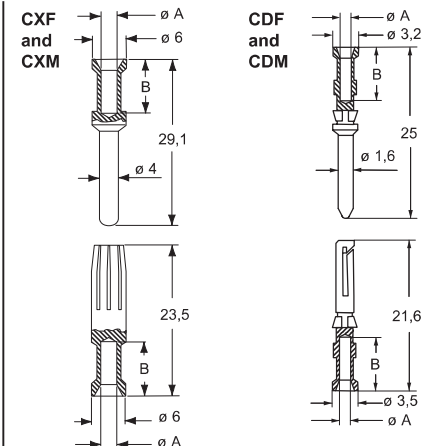
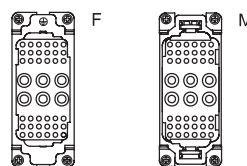
**CDMA 0.3**  
**CDMA 0.5**  
**CDMA 0.7**  
**CDMA 1.0**  
**CDMA 1.5**  
**CDMA 2.5**

**CDMD 0.3**  
**CDMD 0.5**  
**CDMD 0.7**  
**CDMD 1.0**  
**CDMD 1.5**  
**CDMD 2.5**

- characteristics according to EN 61984:  
**40A 690V 8kV 3**  
**10A 160V 2,5kV 3**  
**10A 250V 4kV 2**
- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (6 poles), ≤ 1 mΩ (36 poles)
- for max. current load see the connector inserts derating diagram below; for more information see page 28



contacts side (front view)



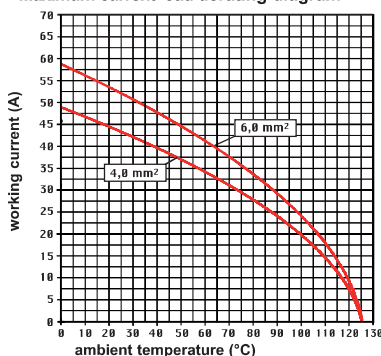
### CXF and CXM contacts

conductor section mm <sup>2</sup>	conductor slot ø A (mm)	conductors stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6

### CDF and CDM contacts

0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

**CX 6/36 power poles connector inserts**  
Maximum current load derating diagram

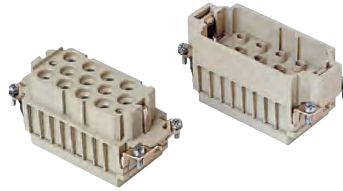


- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 40A contacts, CXF, CXM series and 10A contacts CDF, CDM series on pages 708 - 741

# CX 12 poles (40A - 690V) + 2 poles (10A - 250V) + ⊕

enclosures: size "77.27"	page:
C-TYPE IP65 or IP66/IP69	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65 or IP66/IP69, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments	523
E-Xtreme® corrosion proof	534 - 535, 544, 554 - 555
EMC	580
Central lever	609 - 611
LS-TYPE	622 - 623
IP68	640 - 643
panel supports:	page:
COB	652 - 653

inserts, crimp connections



40A and 10A crimp contacts silver and gold plated



description	part No.	part No.	part No.
-------------	----------	----------	----------

without contacts (to be ordered separately)  
female inserts for female contacts  
male inserts for male contacts

CXF 12/2  
CXM 12/2

40A female crimp contacts  
1,5 mm<sup>2</sup> AWG 16  
2,5 mm<sup>2</sup> AWG 14  
4 mm<sup>2</sup> AWG 12  
6 mm<sup>2</sup> AWG 10

CXFA 1.5  
CXFA 2.5  
CXFA 4.0  
CXFA 6.0

silver plated

\* for basic or high thickness gold plating, please refer to page 674

40A male crimp contacts  
1,5 mm<sup>2</sup> AWG 16  
2,5 mm<sup>2</sup> AWG 14  
4 mm<sup>2</sup> AWG 12  
6 mm<sup>2</sup> AWG 10

CXMA 1.5  
CXMA 2.5  
CXMA 4.0  
CXMA 6.0

10A female contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 identification No. 1  
0,5 mm<sup>2</sup> AWG 20 identification No. 2  
0,75 mm<sup>2</sup> AWG 18 identification No. ②  
1 mm<sup>2</sup> AWG 18 identification No. 3  
1,5 mm<sup>2</sup> AWG 16 identification No. 4  
2,5 mm<sup>2</sup> AWG 14 identification No. 5

CDDA 0.3  
CDDA 0.5  
CDDA 0.7  
CDDA 1.0  
CDDA 1.5  
CDDA 2.5

CDFD 0.3  
CDFD 0.5  
CDFD 0.7  
CDFD 1.0  
CDFD 1.5  
CDFD 2.5

gold plated<sup>+</sup>

10A male contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 identification No. 1  
0,5 mm<sup>2</sup> AWG 20 identification No. 2  
0,75 mm<sup>2</sup> AWG 18 identification No. ②  
1 mm<sup>2</sup> AWG 18 identification No. 3  
1,5 mm<sup>2</sup> AWG 16 identification No. 4  
2,5 mm<sup>2</sup> AWG 14 identification No. 5

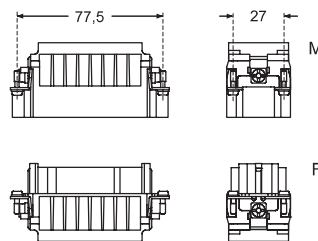
CDMA 0.3  
CDMA 0.5  
CDMA 0.7  
CDMA 1.0  
CDMA 1.5  
CDMA 2.5

CDMD 0.3  
CDMD 0.5  
CDMD 0.7  
CDMD 1.0  
CDMD 1.5  
CDMD 2.5

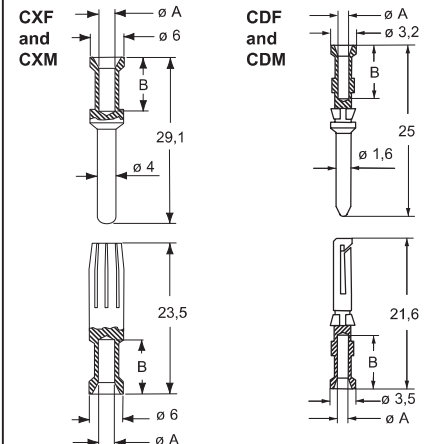
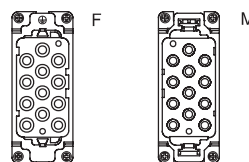
- characteristics according to EN 61984:

**40A 690V 8kV 3**  
**10A 250V 4kV 3**

- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (12 poles), ≤ 1 mΩ (2 poles)
- for max. current load see the connector inserts derating diagram below; for more information see page 28



contacts side (front view)



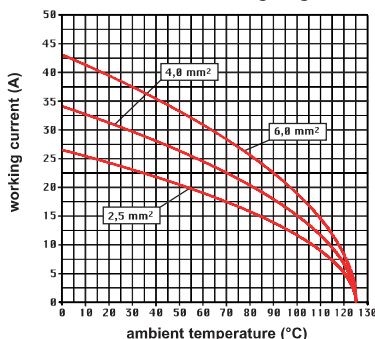
CXF and CXM contacts

conductor section mm <sup>2</sup>	conductor slot ø A (mm)	conductors stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6

CDF and CDM contacts

0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

CX 12/2 power poles connector inserts  
Maximum current load derating diagram

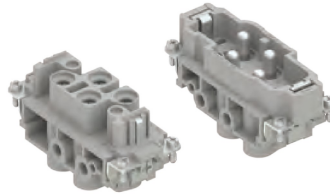


- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 40A contacts, CXF, CXM series and 10A contacts CDF, CDM series on pages 708 - 741

# CX 4 poles (80A - 830V) + ⊕

enclosures: size "77.27"	page:
C-TYPE IP65 or IP66/IP69	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65 or IP66/IP69, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments	523
E-Xtreme® corrosion proof	534 - 535, 544, 554 - 555
EMC	580
Central lever	609 - 611
LS-TYPE	622 - 623
IP68	640 - 643
panel supports:	page:
COB	652 - 653

inserts,  
screw terminal connection

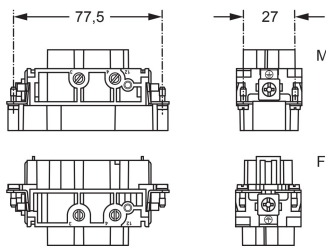


**RATING 830V**  
 **SILVER PLATED CONTACTS**

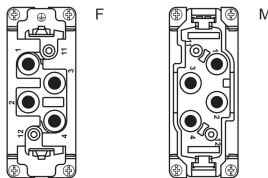
description	part No.
-------------	----------

female inserts with female contacts	<b>CXF 4/0</b>
male inserts with male contacts	<b>CXM 4/0</b>

- characteristics according to EN 61984:  
**80A 830V 8kV 3**
- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$
- made of self-extinguishing thermoplastic resin  
UL 94V-0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0,3 \text{ m}\Omega$
- for max. current load see the connector inserts derating diagram below; for more information see page 28

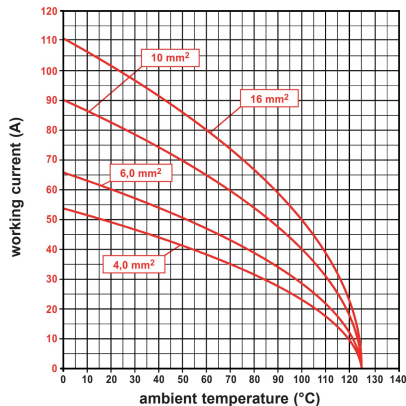


contacts side (front view)



- 80A contacts**
- without plate for section conductors:  
4 - 16 mm<sup>2</sup> - AWG 12 - 6
  - conductors stripping length: 14 mm
  - terminal screw torque: 2,5 Nm (22.1 lb.in),  
for more information see page 20 and 21

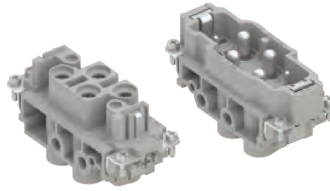
**CX 4/0 poles connector inserts**  
**Maximum current load derating diagram**



# CX 4 poles (80A - 830V) + 2 poles (16A - 400V) + ⊕

enclosures: size "77.27"	page:
C-TYPE IP65 or IP66/IP69	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65 or IP66/IP69, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments	523
E-Xtreme® corrosion proof	534 - 535, 544, 554 - 555
EMC	580
Central lever	609 - 611
LS-TYPE	622 - 623
IP68	640 - 643
panel supports: COB	page: 652 - 653

inserts,  
screw terminal connection

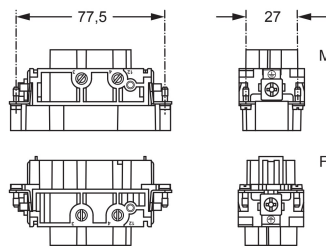


**Q RATING 830V**  
**Q SILVER PLATED CONTACTS**

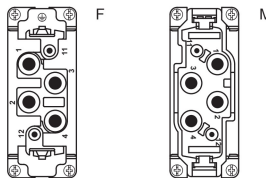
description part No.

female inserts with female contacts **CXF 4/2**  
male inserts with male contacts **CXM 4/2**

- characteristics according to EN 61984:  
**80A 830V 8kV 3**  
**16A 400V 6kV 3**  
**16A 400/690V 6kV 2**
- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10$  G $\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  
 $\leq 0,3$  m $\Omega$  (4 poles)  
 $\leq 1$  m $\Omega$  (2 poles)
- for max. current load see the connector inserts derating diagrams on the side; for more information see page 28



contacts side (front view)



**NOTE**

Any cross-sectional area on the signal side higher than that combined to the relevant cross-sectional area on the power side may be used, but with the derating curve for the cross-sectional area given as combined to that on the power side.

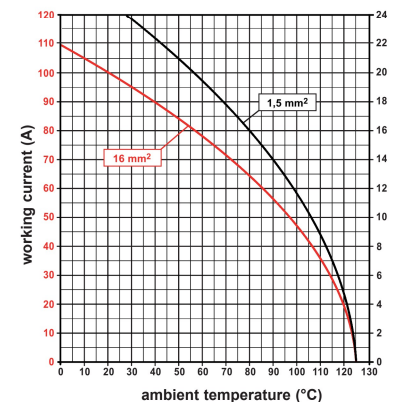
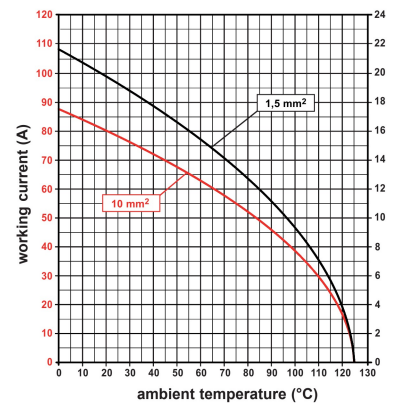
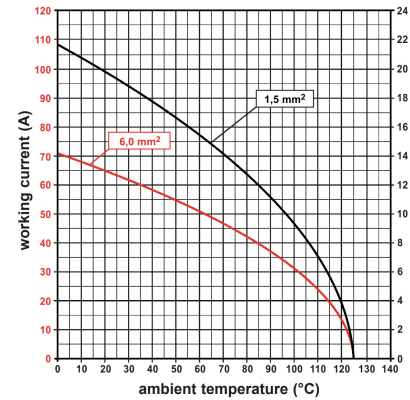
**80A contacts**

- without plate for section conductors:  
4 - 16 mm<sup>2</sup> - AWG 12 - 6
- conductors stripping length: 14 mm
- terminal screw torque: 2,5 Nm (22.1 lb.in), for more information see page 20 and 21

**16A contacts**

- without plate for section conductors:  
0,25 - 2,5 mm<sup>2</sup> - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 20 and 21

**CX 4/2 poles connector inserts**  
Maximum current load derating diagram





enclosures:  
size "77.27"

page:

For 180 °C

588

inserts,  
screw terminal connection



**RATING 830V**

**180 °C**

**SILVER PLATED CONTACTS**

description

part No.

use in temperatures up to 180 °C  
female inserts with female contacts, brown  
male inserts with male contacts, brown

**CXF 4/0 RY**  
**CXM 4/0 RY**

- characteristics according to EN 61984:

**80A 830V 8kV 3**

- certified

- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$

- ambient temperature limit: -40 °C ... +180 °C

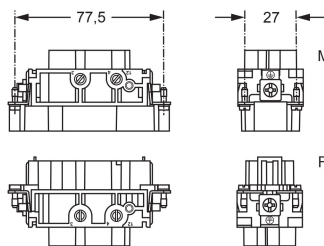
- made of self-extinguishing thermoplastic resin  
UL 94V-0

- mechanical life:  $\geq 500$  cycles

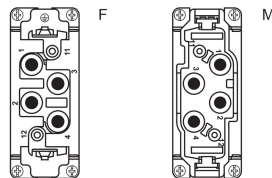
- contact resistance:

$\leq 0,3 \text{ m}\Omega$

- for max. current load see the connector inserts derating  
diagram below; for more information see page 28



contacts side (front view)



**80A contacts**

- without plate for section conductors:

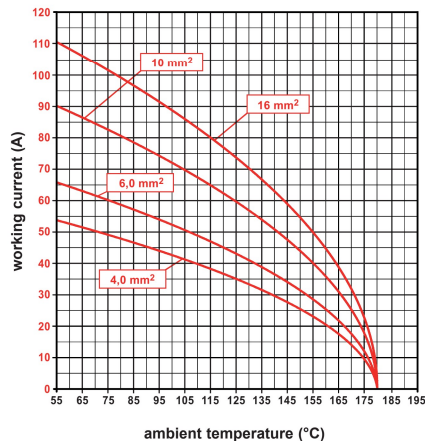
4-16 mm<sup>2</sup> - AWG 12-6

- conductors stripping length: 14 mm

- terminal screw torque: 2,5 Nm (22.1 lb.in),

for more information see page 20 and 21

**CX...RY 4/0 poles connector inserts**  
**Maximum current load derating diagram**



enclosures:  
size "77.27"

page:

For 180 °C

588

inserts,  
screw terminal connection



**RATING 830V**  
 **180 °C**  
 **SILVER PLATED CONTACTS**

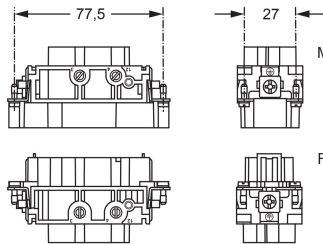
description

part No.

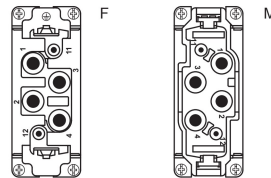
use in temperatures up to 180 °C  
female inserts with female contacts, brown  
male inserts with male contacts, brown

**CXF 4/2 RY**  
**CXM 4/2 RY**

- characteristics according to EN 61984:  
**80A 830V 8kV 3**  
**16A 400V 6kV 3**  
**16A 400/690V 6kV 2**
- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40 \text{ °C} \dots +180 \text{ °C}$
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  
 $\leq 0,3 \text{ m}\Omega$  (4 poles)  
 $\leq 1 \text{ m}\Omega$  (2 poles)
- for max. current load see the connector inserts derating diagrams on the side; for more information see page 28



contacts side (front view)



**NOTE**

Any cross-sectional area on the signal side higher than that combined to the relevant cross-sectional area on the power side may be used, but with the derating curve for the cross-sectional area given as combined to that on the power side.

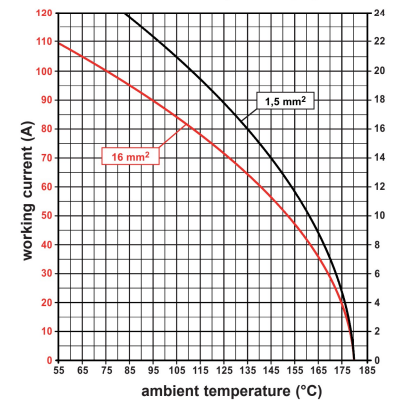
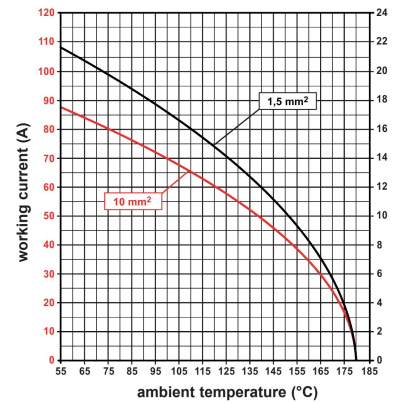
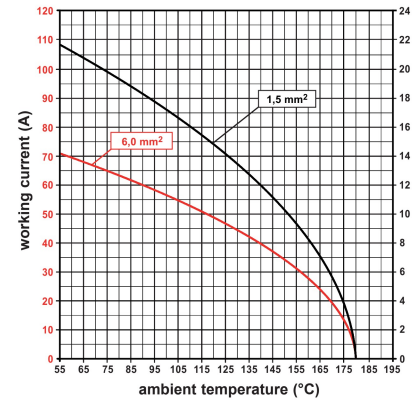
**80A contacts**

- without plate for section conductors:  
4 -  $16 \text{ mm}^2$  - AWG 12 - 6
- conductors stripping length: 14 mm
- terminal screw torque: 2,5 Nm (22.1 lb.in), for more information see page 20 and 21

**16A contacts**

- without plate for section conductors:  
0,25 -  $2,5 \text{ mm}^2$  - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 20 and 21

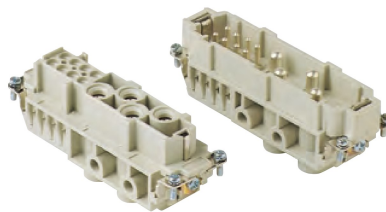
**CX..RY 4/2 poles connector inserts**  
**Maximum current load derating diagram**



# CX - CX...RY 4 poles (80A - 400V) + 8 poles (16A - 230/400V) + $\oplus$ PPS-GF40 VARIANT

enclosures: size "104.27"	page:
<b>CX 4/8:</b>	
C-TYPE IP65 or IP66/IP69	412 - 423
C7 IP67, two levers	441 - 442
V-TYPE IP65 or IP66/IP69, single lever	459 - 463
BIG hoods	472 - 473
T-TYPE IP65 insulating	486 - 487
T-TYPE / W IP66/IP69 insulating	492
HYGIENIC T-TYPE / H IP66/IP69	504
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	509
W-TYPE for aggressive environments	524
E-Xtreme® corrosion proof 536 - 537, 545, 556 - 557	
EMC	581
Central lever	612 - 614
LS-TYPE	624 - 625
IP68	644 - 647
<b>panel supports:</b>	
COB	652 - 653
<b>CX 4/8 RY:</b>	
For 180 °C	589

inserts,  
screw terminal connection



**Q SILVER PLATED CONTACTS**

part No.

inserts,  
screw terminal connection



**180 °C**

**Q SILVER PLATED CONTACTS**

part No

description

female inserts with female contacts  
male inserts with male contacts

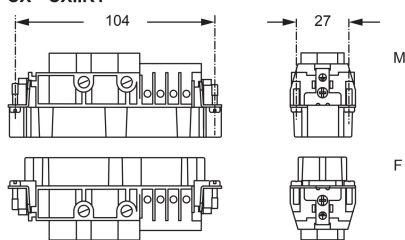
CXF 4/8  
CXM 4/8

use in temperatures up to 180 °C  
female inserts with female contacts  
male inserts with male contacts

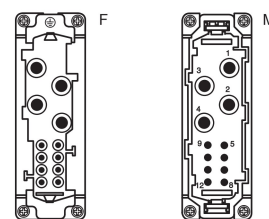
CXF 4/8 RY  
CXM 4/8 RY

- characteristics according to EN 61984:  
**80A 400V 6kV 3**  
**80A 400/690V 6kV 2**  
**16A 230/400V 4kV 3**  
**16A 400V 4kV 2**
- certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C (CX)
- ambient temperature limit: -40 °C ... +180 °C (CX...RY)
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  
 $\leq 0,3 \text{ m}\Omega$  (4 poles)  
 $\leq 1 \text{ m}\Omega$  (8 poles)
- for max. current load see the connector inserts derating diagrams on the side; for more information see page 28

CX - CX...RY



contacts side (front view)



**80A contacts**

- without plate for section conductors:  
4 - 16 mm<sup>2</sup> - AWG 12 - 6
- conductors stripping length: 14 mm
- terminal screw torque: 2,5 Nm (22.1 lb.in), for more information see page 20 and 21

**16A contacts**

- with plate for section conductors:  
0,75 - 2,5 mm<sup>2</sup> - AWG 18 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 20 and 21

The derating curves for the connector's **power** (red) and **signal** (black) portions provided in the diagram are valid for the following combinations of cross-sectional area on the power side and on the signal side:

- power 4 mm<sup>2</sup> with signal 1 mm<sup>2</sup>;
- power 6 mm<sup>2</sup> with signal 1 mm<sup>2</sup>;
- power 10 mm<sup>2</sup> or 6 mm<sup>2</sup> with signal 1,5 mm<sup>2</sup>;
- power 16 mm<sup>2</sup> with signal 2,5 mm<sup>2</sup>;

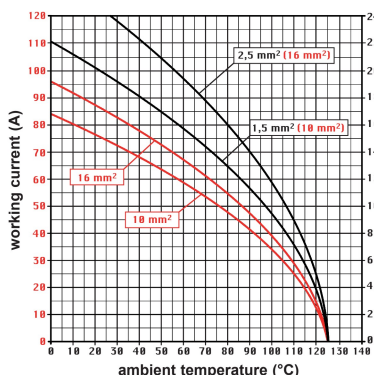
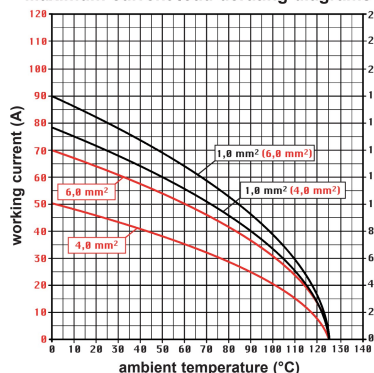
**NOTE 1**

Any cross-sectional area on the signal side higher than that combined to the relevant cross-sectional area on the power side may be used, but with the derating curve for the cross-sectional area given as combined to that on the power side.

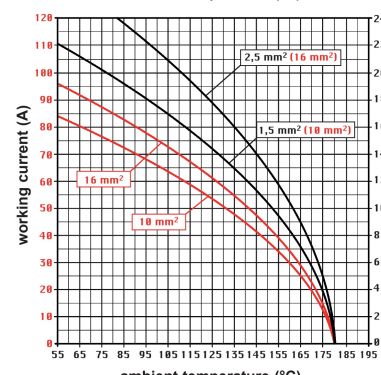
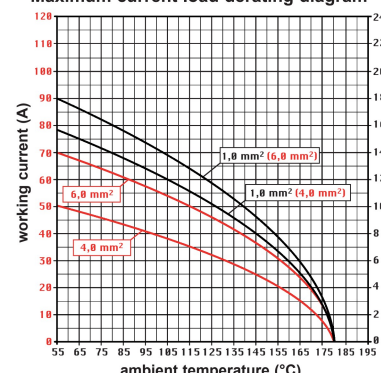
**NOTE 2**

Any cross-sectional area on the signal side lower than that combined to the relevant cross-sectional area on the power side (e.g. 1 mm<sup>2</sup> signal with 16 mm<sup>2</sup> power) may be used at the current indicated for the signal cross-sectional area belonging to the closest lower cross-sectional area on the power side (i.e. the 1 mm<sup>2</sup> curve combined to the 6 mm<sup>2</sup> power section).

**CX 4/8 poles connector inserts**  
Maximum current load derating diagrams



**CX...RY 4/8 poles connector inserts**  
Maximum current load derating diagram



CX - CX...RY 4/8

## CX 6/6 inserts 100A/16A version

The CX series of combined “power /auxiliaries” connector inserts has been enhanced with **insert, CX 6/6 suitable for currents up to 100A** in the power side and 16A on the auxiliaries side, for crimp contacts series CG (100A max) and series CC (16A max) several benefits over conventional screw or axial screw contacts:

- more **resistant to mechanical stresses** such as vibrations, shock and cable loads;
- more **corrosion resistant** (gas tight);
- **quicker to connect** and ensuring more **consistent results** (regardless of the operators “force”);
- the connector is **electrically more efficient** (reduced voltage drop).

This innovative insert design, by following the same concepts of the MIXO 100A CX..G model, **patented by ILME**, ensures a quicker fitting and removal of crimped contacts.

The **provided locking keys** firmly fasten the contact holder.

The power contacts may be removed **without any special tool**, using a simple screwdriver (e.g.: 0,5 x 3 mm, 0,5 x 3,5 mm, 0,6 x 4 mm and 0,8 x 4 mm flat blade).

The removal of auxiliary contacts series CC requires the CQES extraction tool. See figure below.

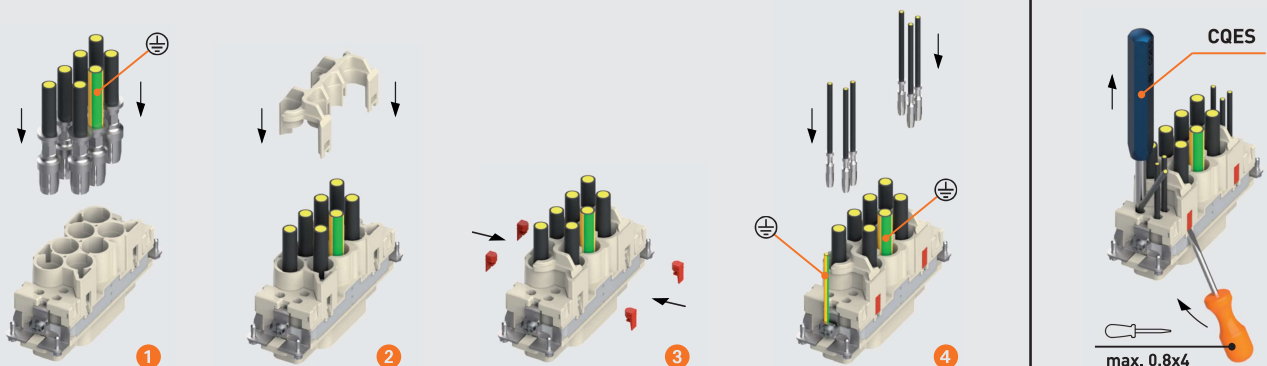
The crimping operation may be carried out quickly and efficiently with the **hand operated hydraulic pliers**, which is pre-fitted with the suitable locator. Suitable crimp dies are available on request.

Inserts series		CX 6/6	
No. of poles	main contact	6 + ⊕ (100A) **	
	auxiliary contacts	6 (16A)	
rated current <sup>1)</sup>		100A	16A
EN 61984	rated voltage	690V	400V
	rated impulse withstand voltage	8kV	6kV
	pollution degree	3	3
contact resistance		≤ 0,3 mΩ (100A) ≤ 1 mΩ (16A)	
insulation resistance		≥ 10 GΩ	
ambient temperature limit (°C)	min	-40 °C	
	max	+125 °C	
degree of protection	with enclosures (according to version)	IP65, IP66/IP69, IP66/IP67/IP69, IP66/IP68/IP69	
	without enclosures (in mated condition)	IP20 (IPXXB)	
conductor connections *		crimp	
conductor cross-section (CG contact series)	mm <sup>2</sup>	8 - 10, 16, 25, 35	
	AWG	8 - 7, 6 - 5, 4 - 3, 2	
conductor cross-section (CC contact series)	mm <sup>2</sup>	0,14 ..... 4,0	
	AWG	26 - 12	
CG/CC stripping length	mm	15 / 7,5	
mechanical endurance (mating cycles)		≥ 500	

<sup>1)</sup> Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.

\* max external conductor Ø = 11,5 mm  
\*\* the power PE contact is not included and must be the same size as the power contacts used (for a total n° at contacts = 7)

### CX 6/6 Assembling instructions



# CX 6 poles + ⚡ (100A - 690V) + 6 poles (16A - 400V) + ⚡

enclosures: size "104.27"	page:
C-TYPE IP65 or IP66/IP69	412 - 423
C7 IP67, two levers	441 - 442
V-TYPE IP65 or IP66/IP69, single lever	459 - 463
BIG hoods	472 - 473
T-TYPE IP65 insulating	486 - 487
T-TYPE / W IP66/IP69 insulating	492
HYGIENIC T-TYPE / H IP66/IP69	504
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	509
W-TYPE for aggressive environments	524
E-Xtreme® corrosion proof	536 - 537, 545, 556 - 557
EMC	581
Central lever	612 - 614
LS-TYPE	624 - 625
IP68	644 - 647

panel supports:	page:
COB	652 - 653

enclosures:  
bulkhead mounting housings, high construction housings  
or high construction hoods

## inserts, crimp connections



## 100A and 16A crimp contacts silver and gold plated



description	part No.	part No.	part No.
-------------	----------	----------	----------

without contacts (to be ordered separately)  
female inserts for female contacts  
male inserts for male contacts

**CXF 6/6**  
**CXM 6/6**

100A female crimp contacts  
8 - 10 mm<sup>2</sup> AWG 8 - 7  
16 mm<sup>2</sup> AWG 6 - 5  
25 mm<sup>2</sup> AWG 4 - 3  
35 mm<sup>2</sup> AWG 2

**CGFA 10**  
**CGFA 16**  
**CGFA 25**  
**CGFA 35**

100A male crimp contacts  
8 - 10 mm<sup>2</sup> AWG 8 - 7  
16 mm<sup>2</sup> AWG 6 - 5  
25 mm<sup>2</sup> AWG 4 - 3  
35 mm<sup>2</sup> AWG 2

**CGMA 10**  
**CGMA 16**  
**CGMA 25**  
**CGMA 35**

silver plated

\* for basic or high  
thickness gold  
plating, please refer  
to page 675

16A female contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 one groove  
0,5 mm<sup>2</sup> AWG 20 with no grooves  
0,75 mm<sup>2</sup> AWG 18 one groove (back side)  
1 mm<sup>2</sup> AWG 18 one groove  
1,5 mm<sup>2</sup> AWG 16 two grooves  
2,5 mm<sup>2</sup> AWG 14 three grooves  
3 mm<sup>2</sup> AWG 12 one wide groove  
4 mm<sup>2</sup> AWG 12 with no grooves

**CCFA 0.3**  
**CCFA 0.5**  
**CCFA 0.7**  
**CCFA 1.0**  
**CCFA 1.5**  
**CCFA 2.5**  
**CCFA 3.0**  
**CCFA 4.0**

**CCFD 0.3**  
**CCFD 0.5**  
**CCFD 0.7**  
**CCFD 1.0**  
**CCFD 1.5**  
**CCFD 2.5**  
**CCFD 3.0**  
**CCFD 4.0**

gold plated

16A male contacts  
0,14-0,37 mm<sup>2</sup> AWG 26-22 one groove  
0,5 mm<sup>2</sup> AWG 20 with no grooves  
0,75 mm<sup>2</sup> AWG 18 one groove (back side)  
1 mm<sup>2</sup> AWG 18 one groove  
1,5 mm<sup>2</sup> AWG 16 two grooves  
2,5 mm<sup>2</sup> AWG 14 three grooves  
3 mm<sup>2</sup> AWG 12 one wide groove  
4 mm<sup>2</sup> AWG 12 with no grooves

**CCMA 0.3**  
**CCMA 0.5**  
**CCMA 0.7**  
**CCMA 1.0**  
**CCMA 1.5**  
**CCMA 2.5**  
**CCMA 3.0**  
**CCMA 4.0**

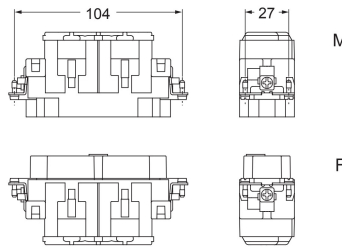
**CCMD 0.3**  
**CCMD 0.5**  
**CCMD 0.7**  
**CCMD 1.0**  
**CCMD 1.5**  
**CCMD 2.5**  
**CCMD 3.0**  
**CCMD 4.0**

- characteristics according to EN 61984:

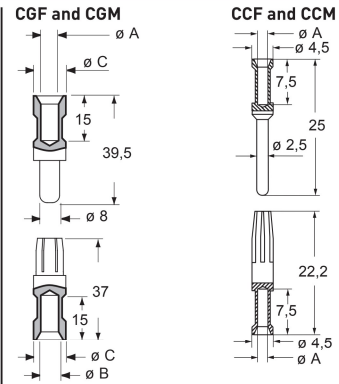
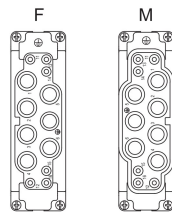
**100A 690V 8kV 3**  
**16A 400V 6kV 3**

- cULus (UL for USA and Canada),

- BUREAU VERITAS ENEC certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (100A), ≤ 1 mΩ (16A)
- for max. current load see the connector inserts derating diagram below; for more information see page 28



contacts side (front view)

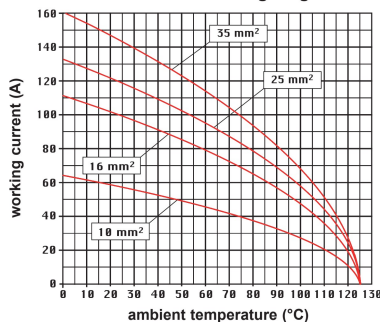


CGF and CGM contacts				
conductor section (mm <sup>2</sup> )	conductor slot ø A (mm)	ø B (mm)	ø C (mm)	conductor stripping length (mm)
8-10	4,3	4,3	13	15
16	5,5	5,5	13	15
25	7,0	7,0	13	15
35	7,9	8,2	12,5	15

CCF and CCM contacts		
conductor section (mm <sup>2</sup> )	conductor slot ø A (mm)	conductors stripping length (mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
0,75	1,3	7,5
1,0	1,45	7,5
1,5	1,8	7,5
2,5	2,2	7,5
3	2,55	7,5
4	2,85	7,5

**CX 6/6 power poles connector inserts**  
**Maximum current load derating diagram**



- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 100A contacts CGF, CGM series and 16A contacts CCF, CCM series) on pages 708 - 741