

## MIXO CX..Y 200A version modular inserts.

The MIXO series has been enhanced with a **new insert, suitable for currents up to 200A** and with **new, CY series crimp contacts** featuring 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 following the same concepts of the MIXO 100A CX..G model, **patented by ILME**, ensures a quicker fitting and removal of crimped contacts.

The **four provided keys** firmly fasten the contact holder and; once the insert is joined to other inserts (and it is installed in the corresponding MIXO frame) the connection is totally secure and **extremely resistant, even under the most severe stresses** such as vibration and shock.

The contacts can be removed **without any special tool**, using a simple screwdriver.

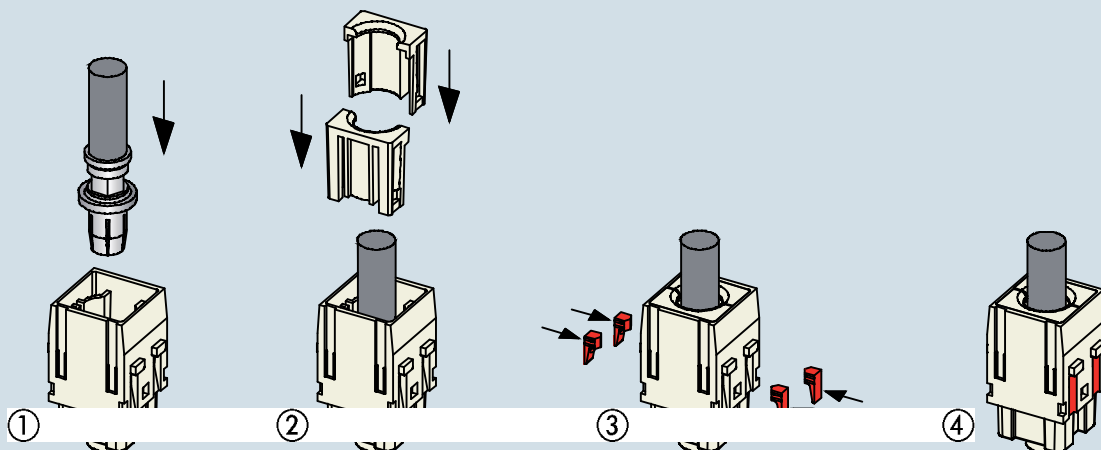
The crimping operation can be carried out quickly and efficiently with the CYPZ **hand operated hydraulic pliers**, which is pre-fitted with the suitable locator. Suitable crimp dies available on request.

code inserts (MIXO series)		CX..Y
No. of poles	main contact	1
	auxiliary contacts	--
rated current <sup>1)</sup>		200A
EN 61984 pollution degree 3	rated voltage	1000V
	rated impulse withstand voltage	8kV
	pollution degree	3
UL/CSA certification	rated voltage (a.c../d.c.)	600V
certifications <sup>2)</sup>		(cUL), (CSA), (CCC), (GL)
contact resistance		≤ 0.2 mΩ
insulation resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40
	max	+125
degree of protection	with enclosures (according to version)	IP65, IP66, IP67, IP68, IP69K
	without enclosures	IP20
conductor connections *		crimp
conductor cross-section	mm <sup>2</sup>	16, 25, 35, 50, 70
	AWG	6, 4, 2, 1, 2/0
stripping length	mm	15
mechanical endurance (rating cycles)		≥500

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

2) Certifications shown in brackets are currently being applied for.

\* max external conductor Ø = 16 mm

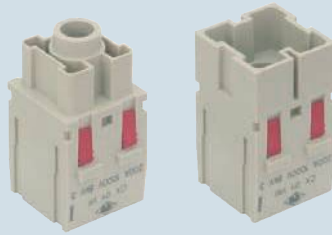


the modular inserts must be installed in suitable frames which are then mounted in traditional housings \* or COB panel support

frames for modular units \* ..... page: 195

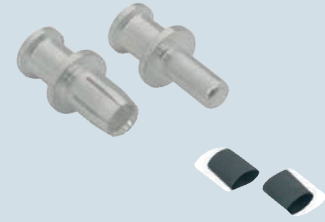
\* enclosures: housings or high construction hoods

modular units,  
crimp connections



**NEW**

200A silver plated crimp contacts  
heat shrink tube



description

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

200A female crimp contacts

16 mm <sup>2</sup>	AWG 6	one groove (back side)
25 mm <sup>2</sup>	AWG 4	with no grooves
35 mm <sup>2</sup>	AWG 2	one groove
50 mm <sup>2</sup>	AWG 1	two grooves
70 mm <sup>2</sup>	AWG 2/0	with no grooves

200A male crimp contacts

16 mm <sup>2</sup>	AWG 6	one groove (back side)
25 mm <sup>2</sup>	AWG 4	with no grooves
35 mm <sup>2</sup>	AWG 2	one groove
50 mm <sup>2</sup>	AWG 1	two grooves
70 mm <sup>2</sup>	AWG 2/0	with no grooves

heat shrink tube for CYFA/CYMA 16 contacts or for conductor with total external Ø < 10 mm

part No.

CX 01 YF  
CX 01 YM

part No.

CYFA 16  
CYFA 25  
CYFA 35  
CYFA 50  
CYFA 70

silver plated

CYMA 16  
CYMA 25  
CYMA 35  
CYMA 50  
CYMA 70

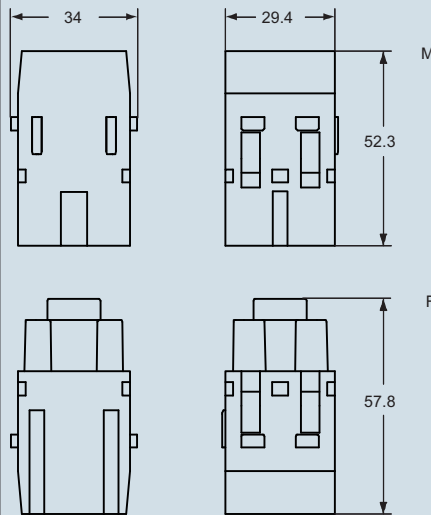
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- characteristics according to EN 61984:

**200A 1000V 8kV 3**  
**200A 920/1600V 8kV 2**

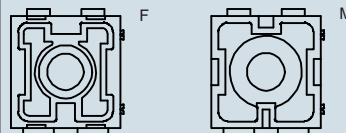
- certifications: cUL (UL for USA and Canada), CCC
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,2 mΩ
- for maximum current load, see the following load curves inserts, for more information see page 499

dimensions in mm



contacts side (front view)

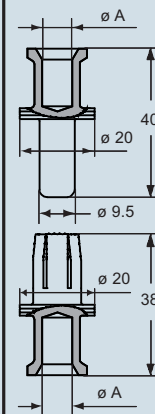
side with reference arrow ▲



- 2 frame slots

dimensions in mm

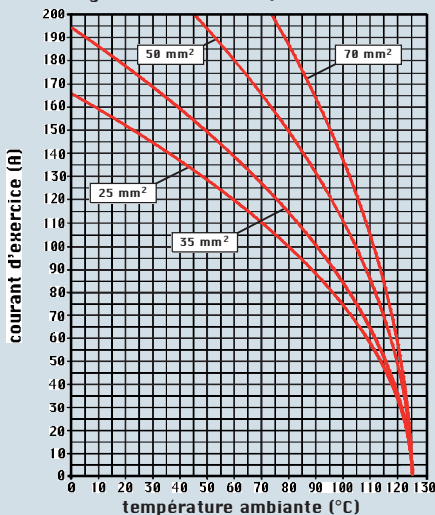
**CYF and CYM**



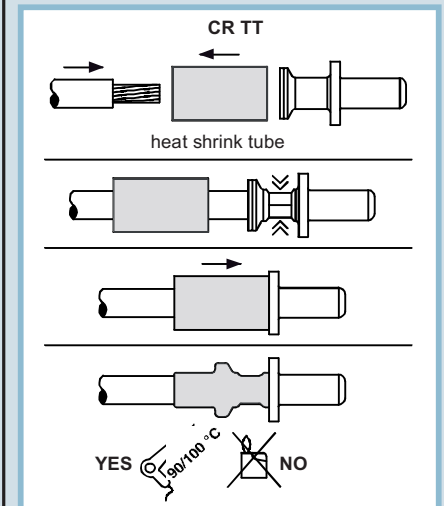
**CYF and CYM contacts**

conductor section (mm <sup>2</sup> )	conductor slot diameter (mm)	conductor stripping length (mm)
16	6.1	15
25	7.0	15
35	8.2	15
50	9.8	15
70	11.8	15

diagramme CX 01 Y - 1 pôle (MIHO 200A)



dimensions shown are not binding and may be changed without notice

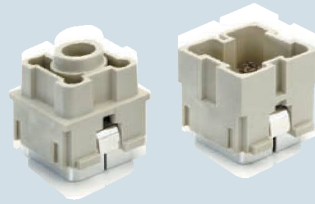


the modular inserts must be installed in suitable frames which are then mounted in traditional housings \* or COB panel support

frames for modular units \* ..... page: 195

\* enclosures: housings or high construction hoods

modular units,  
crimp connections  
PE module for earth termination



**NEW**

200A silver plated crimp contacts



description

part No.

part No.

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

**CX 01 YPEF**  
**CX 01 YPEM**

200A female crimp contacts  
16 mm<sup>2</sup> AWG 6 one groove (back side)  
25 mm<sup>2</sup> AWG 4 with no grooves  
35 mm<sup>2</sup> AWG 2 one groove  
50 mm<sup>2</sup> AWG 1 two grooves  
70 mm<sup>2</sup> AWG 2/0 with no grooves

**CYFA 16**  
**CYFA 25**  
**CYFA 35**  
**CYFA 50**  
**CYFA 70**

silver plated

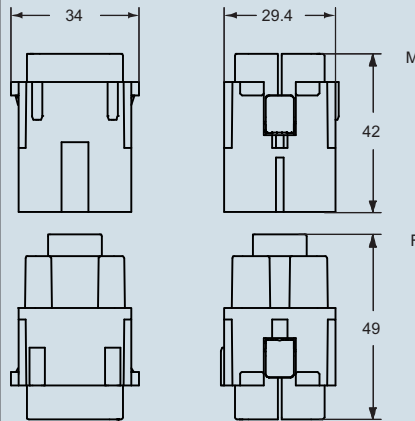
200A male crimp contacts  
16 mm<sup>2</sup> AWG 6 one groove (back side)  
25 mm<sup>2</sup> AWG 4 with no grooves  
35 mm<sup>2</sup> AWG 2 one groove  
50 mm<sup>2</sup> AWG 1 two grooves  
70 mm<sup>2</sup> AWG 2/0 with no grooves

**CYMA 16**  
**CYMA 25**  
**CYMA 35**  
**CYMA 50**  
**CYMA 70**

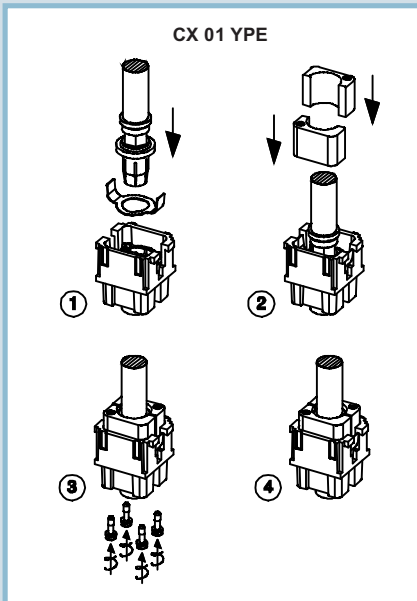
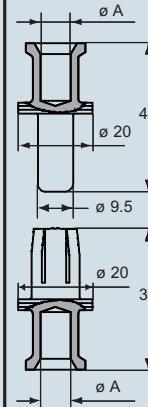
- certifications: cUL (UL for USA and Canada), CCC  
- ambient temperature limit: -40 °C ... +125 °C  
- are made of self-extinguishing thermoplastic resin  
UL 94 V0

dimensions in mm

dimensions in mm

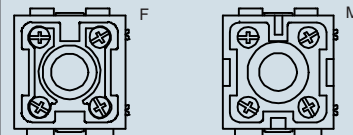


**CYF and CYM**



contacts side (front view)

side with reference arrow ▲



- 2 frame slots

**CYF and CYM contacts**

conductor section (mm <sup>2</sup> )	conductor slot $\phi$ A (mm)	conductor stripping length (mm)
16	6.1	15
25	7.0	15
35	8.2	15
50	9.8	15
70	11.8	15

dimensions shown are not binding and may be changed without notice

**MIXO CX..G 100A version modular inserts.**

The MIXO series has been enhanced with a **new insert, suitable for currents up to 100A** and with **new**, CG series crimp contacts featuring several benefits over conventional screw contacts as they are:

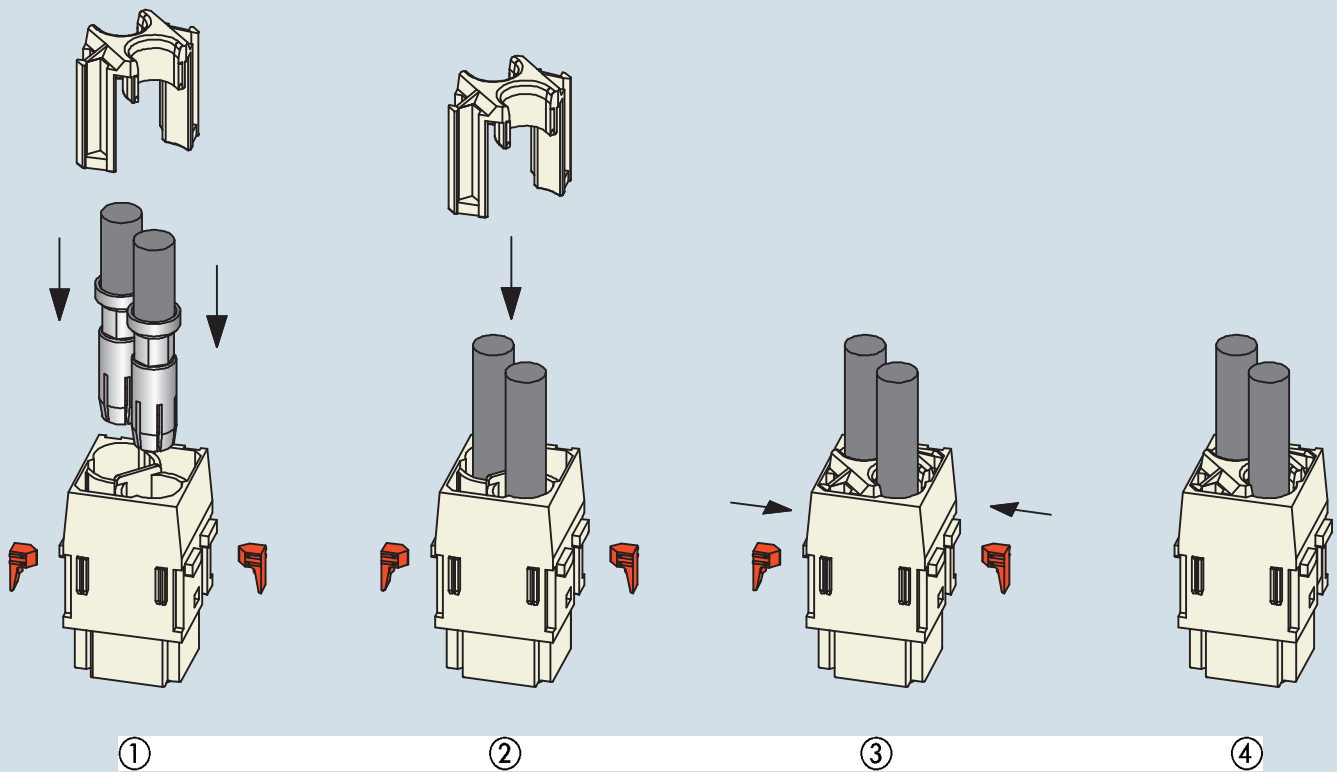
- More **resistant to mechanical stresses** such as vibrations and cable loads
- More **corrosion resistant** (gas tight)
- **Quicker to connect** and ensuring more **consistent results** (regardless of the operators "force")
- The connector is **electrically more efficient** (reduced voltage drop)

This innovative insert design, **patented by ILME**, ensures a quicker fitting and removal of crimped contacts.

The plates provided firmly fasten the contact holder and, once the insert is mated to other inserts and is inserted in the MIXO frame, the connection is totally secure and **extremely resistant, even to the most severe stresses** such as vibrations.

The contacts can be removed **without having to use any special tools** but by simply using a screwdriver.

The crimping operation can be carried out quickly and effectively thanks to the CGPZ **hydraulically operated pliers provided** which, on request, can be supplied with the required locator and dies.



the modular inserts must be installed in suitable frames which in turn are installed in traditional housings \* or COB panel support

frames for modular units \* ..... page: 195

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

modular units,  
crimp connections



100A silver plated crimp contacts,  
PE adapter



description

part No.

part No.

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

**CX 02 GF**  
**CX 02 GM**

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

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

silver plated

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

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

cable earthing adapter 16 mm<sup>2</sup>(AWG 6 - 5)

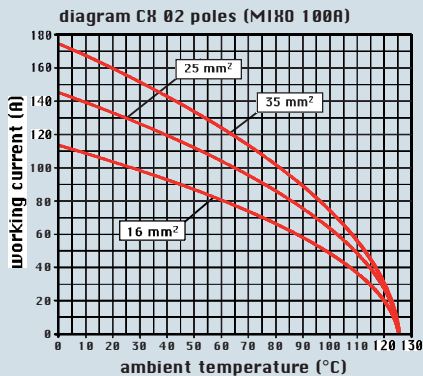
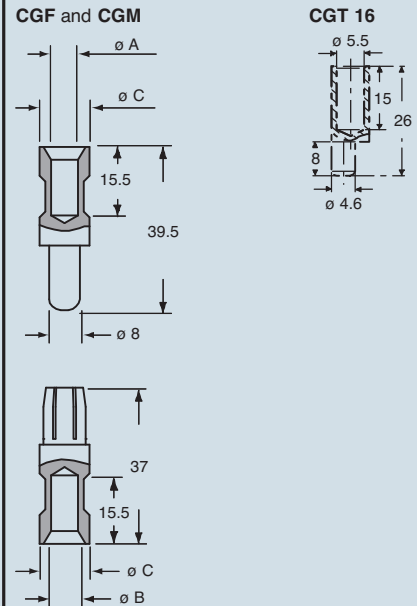
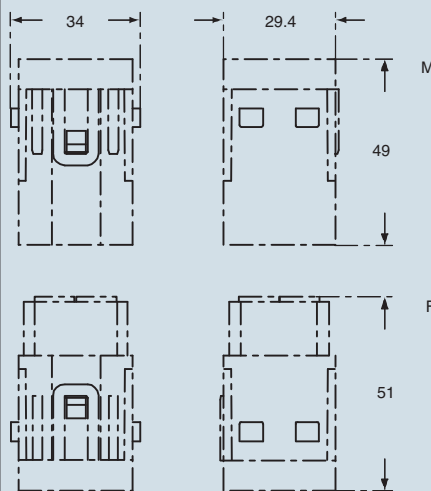
**CGT 16**

\*\* on request, version with pole 3/4 numbering, references: **CX 02 GFN**, **CX 02 GMN**

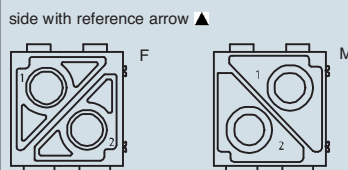
dimensions in mm

dimensions in mm

- characteristics according to EN 61984:  
**100A 1000V 8kV 3**  
**100A 920/1600V 8kV 2**
- certifications: cUL (UL for USA and Canada), CCC, GL, GOST
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0,3 \text{ m}\Omega$
- for contact crimping instructions, please see the crimping tool section (100A contacts, CGF and CGM series) on page 476
- for maximum current load, see the following load curves inserts, for more information see page 499



contacts side (front view)



- footprint 2 modules

**CGF and CGM contacts**

conductor section (mm <sup>2</sup> )	conductor slot (mm)	conductor (mm)	conductor (mm)	conductor stripping length (mm)
	ø A	ø B	ø C	
16	5.5	5.5	13	15
25	7.0	7.0	13	15
35	7.9	8.2	12.5	15

**How to use the PE adapter (CGT 16):**

- 1) Strip 15 mm of flexible PE protective cable
- 2) Crimp the cable on the CGT 16 adapter by using the CGPZ pliers with the CGD 16 C matrix
- 3) Fix the adapter tip in the larger earth terminal (6 mm<sup>2</sup>) of frames CX...TM/TF
- 4) To be used with bulkhead mounting housings or high construction hoods
- 5) Cannot be used with T-TYPE series

dimensions shown are not binding and may be changed without notice

the modular inserts must be installed in suitable frames which in turn are installed in traditional housings \* or COB panel support

frames for modular units \* ... page: 194 - 195

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

modular units,  
crimp connections



**AVAILABLE**

70A silver plated crimp contacts



**AVAILABLE**

description

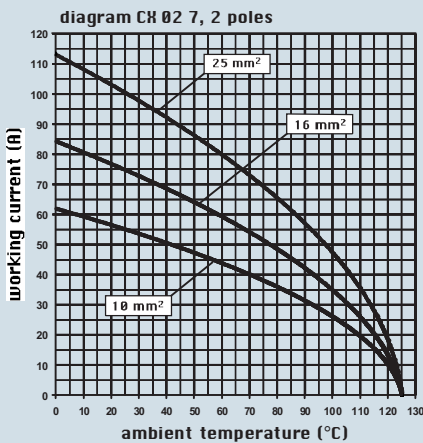
without contacts (to be ordered separately)  
- female inserts for female contacts  
- male inserts for female contacts

70A female crimp contacts  
10 mm<sup>2</sup> AWG 8 - 7  
16 mm<sup>2</sup> AWG 6 - 5  
25 mm<sup>2</sup> AWG 4 - 3

70A male crimp contacts  
10 mm<sup>2</sup> AWG 8 - 7  
16 mm<sup>2</sup> AWG 6 - 5  
25 mm<sup>2</sup> AWG 4 - 3

- characteristics according to EN 61984:

- 70A 1000V 8kV 3**
- 70A 1600V 12kV 2**
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- for crimp contacts CX7 series use:  
**CX7PZ** crimping tool  
**CGD 10 C, CGD 16 C, CGD 25 C** crimp matrixes  
**C7ES** removal tool



part No.

**CX 02 7F**  
**CX 02 7M**

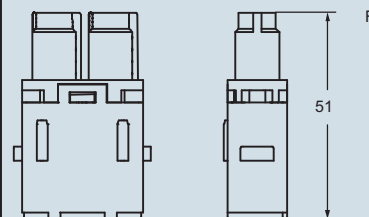
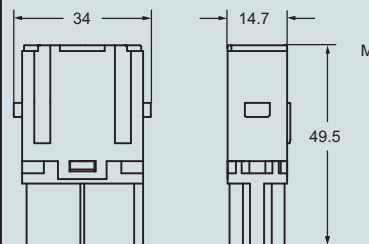
part No.

**CX7FA 10**  
**CX7FA 16**  
**CX7FA 25**

**silver plated**

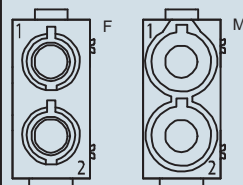
**CX7MA 10**  
**CX7MA 16**  
**CX7MA 25**

dimensions in mm



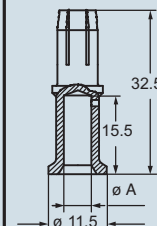
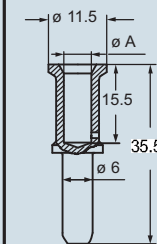
contacts side (front view)

side with reference arrow ▲



- 1 frame slot

dimensions in mm



**contacts CX7F and CX7M**

conductor section (mm <sup>2</sup> )	conductor slot $\varnothing A$ (mm)	conductor stripping length (mm)
10	4.3	15
16	5.5	15
25	7.0	15

dimensions shown are not binding and may be changed without notice

**MIXO**

the modular inserts must be installed in suitable frames which in turn are installed in traditional housings or COB panel support

frames for modular units ..... page: 194 - 195

- characteristics according to EN 61984:

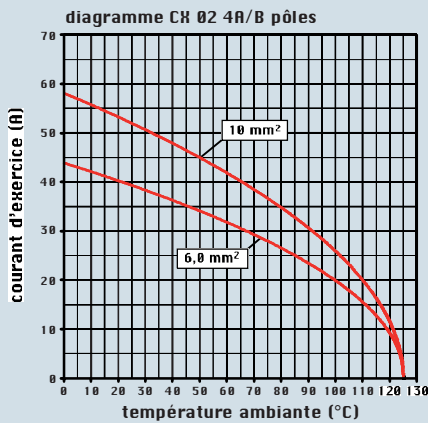
- 40A 1000V 8kV 3**
- 40A 1600V 12kV 2**
- UL, CSA, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0,5 \text{ m}\Omega$

description

- female inserts with female contacts
- male inserts with female contacts

- female inserts with female contacts
- male inserts with female contacts

- for maximum current load, see the following load curves inserts, for more information see page 500



- use flexible cables with sections from 2.5 to 10 mm<sup>2</sup> or extra flexible cables with sections from 2.5 to 6 mm<sup>2</sup>
- do not twist the cables
- fully insert the braids in the rear section of the contact

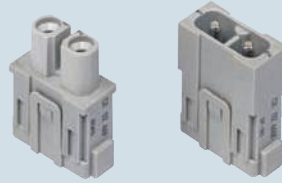
conductor section (mm <sup>2</sup> )	conductor stripping length (mm)	tightening torque (Nm)
2.5	5+1	1.5
4	5+1	1.5
6	8+1	2
10	8+1	2

- insert a 2 mm hexagonal key in the front section of the contact and tighten by keeping the cable held down in position
- a 2 mm hexagonal key can be supplied on request, reference **CX AS**



dimensions shown are not binding and may be changed without notice

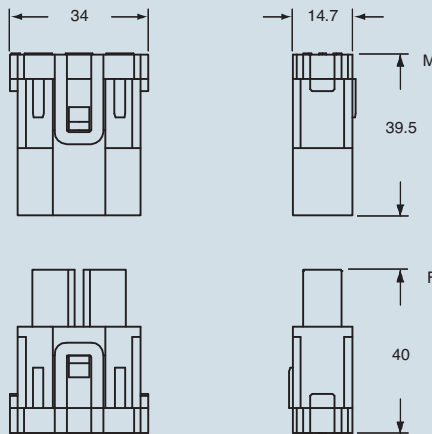
modular units, screw terminal connection 2.5 - 8 mm<sup>2</sup>



part No.

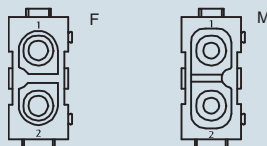
**CX 02 4AF**  
**CX 02 4AM**

dimensions in mm



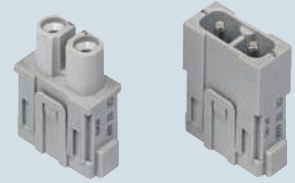
contacts side (front view)

side with reference arrow ▲



- inserts for  $\varnothing 4$  mm cables, section: 2.5-8 mm<sup>2</sup> - AWG 14-8
- footprint 1 module

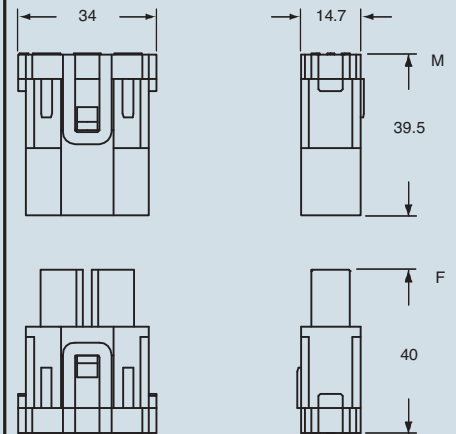
modular units, screw terminal connection 6 - 10 mm<sup>2</sup>



part No.

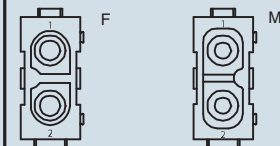
**CX 02 4BF**  
**CX 02 4BM**

dimensions in mm



contacts side (front view)

side with reference arrow ▲



- inserts for  $\varnothing 4.8$  mm cables, section: 6-10 mm<sup>2</sup> - AWG 10-8
- footprint 1 module

## MIXO CX 3/4 XD modular connectors

CX 3/4 XD connectors have the following characteristics:

- 3 slots for CX crimped contacts (40A<sub>max</sub>) for power circuits
- 4 slots for CD crimped contacts (10A<sub>max</sub>) for signal circuits

Their key characteristic lies in the fact that they guarantee maximum safety even in case of accidental contact with fingers (IPXXB or IP2X).

Safety is guaranteed as standard on female contacts, but also on male contacts. This feature is important as it ensures full compliance with the recent safety standard EN 60204-1, concerning electric equipment fitted on machines and in particular with the requirements of Article 6.2.4 concerning protection against residual voltage.

Live parts having a residual voltage greater than 60V after the supply has been disconnected shall be discharged to 60V or less within a time period of 5 s after disconnection of the supply voltage provided that this rate of discharge does not interfere with the proper functioning of the equipment. Exempted from this requirement are components having a stored charge of 60 µC or less. Where this specified rate of discharge would interfere with the proper functioning of the equipment, a durable warning notice drawing attention to the hazard and stating the delay required before the enclosure may be opened shall be displayed at an easily visible location on or immediately adjacent to the enclosure containing the capacitances.

In the case of plugs or similar devices, the withdrawal of which results in the exposure of conductors (for example pins), the discharge time shall not exceed 1 s, otherwise such conductors shall be protected against direct contact to at least an IP2X or IPXXB. If neither a discharge time of 1 s nor a protection of at least IP2X or IPXXB can be achieved (for example in the case of removable collectors on conductor wires, conductors bars, or slip-ring assemblies, see 12.7.4), additional switching devices or an appropriate warning device (for example a warning notice in accordance with 16.1) shall be applied.

The IP2X or IPXXB protection offered by CX 3/4 XDM modules fitted with CX and CD contacts ensures greater design flexibility as it enables, for example, connectors to be used for drives of electric motors (frequency converters) and in all applications where voltage could be present on both sides of the connector (for example power circuits in loop configuration, opening, circuits of battery-chargers).

Thanks to the enhanced insulation, the rated voltage of the module is equivalent to 830V, in compliance with standards EN 61984 and EN 60664-1, with an impulse withstand voltage of 8 kV for pollution degree 3 even between signal contacts.

code inserts (MIXO series)		CX..XD
No. of poles	main contacts	3
	auxiliary contacts	4
rated current <sup>1)</sup>	main contacts	40A
	auxiliary contacts	10A
EN 61984 pollution degree 3	rated voltage	830V
	rated impulse withstand voltage	8kV
	pollution degree	3
UL/CSA certification	rated voltage (a.c./d.c.)	600V
certifications <sup>2)</sup>		cUL, CCC
contact resistance	main contacts	≤ 0.3 mΩ
	auxiliary contacts	≤ 3 mΩ
insulation resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40
	max	+125
degree of protection	with enclosures	IP65, IP66, IP67, IP68, IP69K (according to type)
	without enclosures	IP20, also on male contacts
conductor connections		crimp
conductor cross-section main contacts	mm <sup>2</sup>	1.5÷6
	AWG	16÷10
conductor cross-section auxiliary contacts	mm <sup>2</sup>	0.14÷2.5
	AWG	26÷14
stripping length main contacts	mm	9 (1.5÷2.5 mm <sup>2</sup> ) 9.6 (4÷6 mm <sup>2</sup> )
		8 (0.14÷1.5 mm <sup>2</sup> ) 6 (2.5 mm <sup>2</sup> )
mechanical endurance (rating cycles)		≥500

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

2) Certifications shown in brackets are currently being applied for.

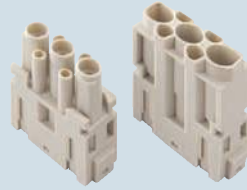


the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units ..... page: 194 - 195

- male and female contacts to test of contact with fingers
- for contact crimping, see the crimp tool section (40A contacts CXF, CXM series and 10A contacts CDF, CDM series) on pages 466, 468, 470, 480, 482, 484, 486

modular units, crimp connections



**NEW**

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

**CX 3/4 XDF**  
**CX 3/4 XDM**

**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

**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

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

**silver plated**

**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**

**silver plated**

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

**gold plated**

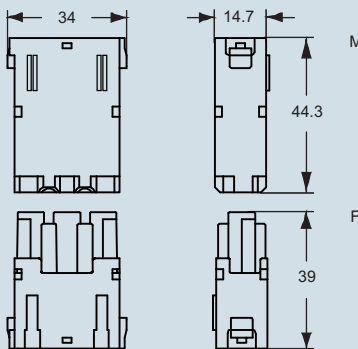
**10A male contacts**  
0.14-0.37 mm<sup>2</sup> AWG 26-22 identification No. 1  
0.5 mm<sup>2</sup> AWG 20 identification No. 2  
0.75 mm<sup>2</sup> AWG 18 identification No. ②  
1 mm<sup>2</sup> AWG 18 identification No. 3  
1.5 mm<sup>2</sup> AWG 16 identification No. 4  
2.5 mm<sup>2</sup> AWG 14 identification No. 5

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

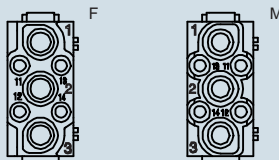
**CDMD 0.3**  
**CDMD 0.5**  
**CDMD 0.7**  
**CDMD 1.0**  
**CDMD 1.5**  
**CDMD 2.5**

- characteristics according to EN 61984:  
**3 poles 40A 830V 8kV 3**  
**4 poles 10A 830V 8kV 3**
- certifications: cUL (UL for USA and Canada), CCC
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10$  G $\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0.3$  m $\Omega$  (3 poles)  
 $\leq 3$  m $\Omega$  (4 poles)
- for maximum current load, see the following load curves inserts, for more information see page 500

dimensions in mm



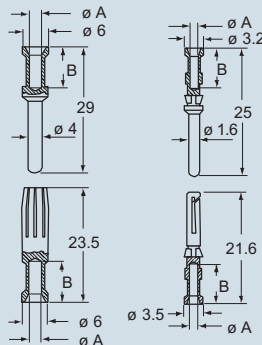
contacts side (front view)  
side with reference arrow ▲



- 1 frame slot

dimensions in mm

**CXF and CXM**      **CDF and CDM**

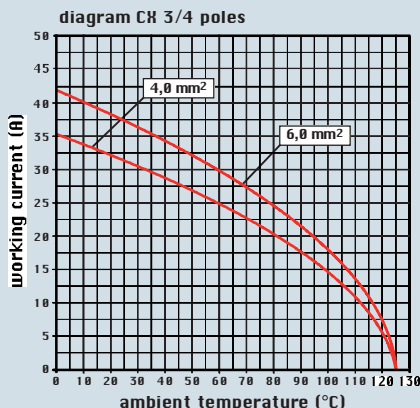


**CDF and CDM contacts**

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

**CXF and CXM contacts**

conductor section mm <sup>2</sup>	conductor slot $\varnothing A$ (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



dimensions shown are not binding and may be changed without notice

the modular inserts must be installed in suitable frames which in turn are installed in traditional housings or COB panel support

frames for modular units ..... page: 194 - 195

modular units,  
crimp connections



40A crimp contacts  
silver plated



description

part No.

part No.

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

**CX 03 4F \***  
**CX 03 4M \***

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

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

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

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

silver plated

\* cable diameter up to 5 mm

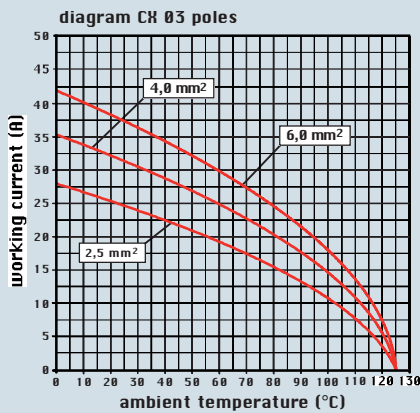
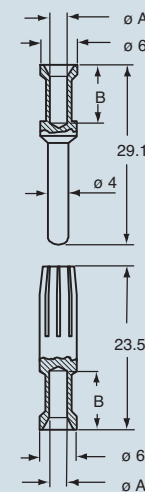
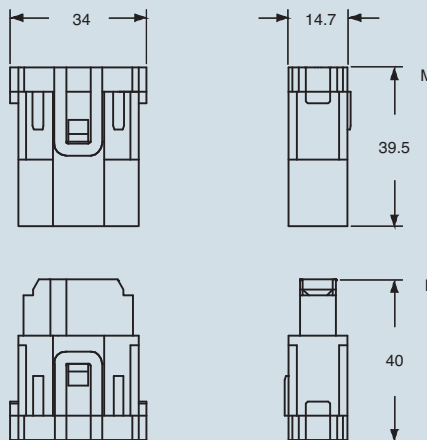
dimensions in mm

dimensions in mm

- characteristics according to EN 61984:

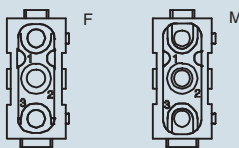
**40A 400/690V 6kV 3**

- UL, CSA, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0.3 \text{ m}\Omega$
- for contact crimping instructions, please see the crimping tool section (40A contacts, CXF and CXM series) on pages 468, 470 and 486
- for maximum current load, see the following load curves inserts, for more information see page 500



contacts side (front view)

side with reference arrow ▲



- footprint 1 module

**CXF and CXM contacts**

conductor section mm <sup>2</sup>	conductor slot $\varnothing A$ (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

dimensions shown are not binding and may be changed without notice

the modular inserts must be installed in suitable frames which in turn are installed in traditional housings or COB panel support

frames for modular units ..... page: 194 - 195

modular units,  
crimp connections



**NEW**

40A crimp contacts  
silver plated



description

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

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
10 mm <sup>2</sup>	AWG 8

40A male crimp contacts

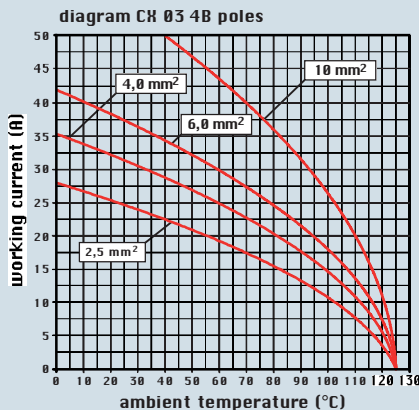
1.5 mm <sup>2</sup>	AWG 16
2.5 mm <sup>2</sup>	AWG 14
4 mm <sup>2</sup>	AWG 12
6 mm <sup>2</sup>	AWG 10
10 mm <sup>2</sup>	AWG 8

\* cable diameter up to 7.5 mm  
contact section up to 10 mm<sup>2</sup>

- characteristics according to EN 61984:

**40A 500V 6kV 3**

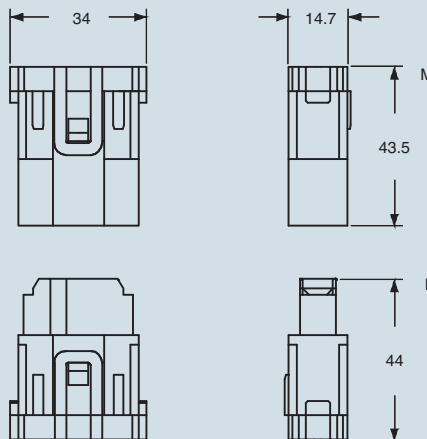
- certifications: (UL), (CSA), (GOST); the certifications shown in brackets are being applied for
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 0.3 \text{ m}\Omega$
- for contact crimping instructions (1.5 ÷ 10 mm<sup>2</sup>), please see the crimping tool section (40A contacts, CXF and CXM series) on pages 468, 470 and 486
- for maximum current load, see the following load curves inserts, for more information see page 500



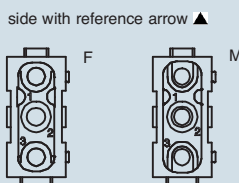
part No.

**CX 03 4BF \***  
**CX 03 4BM \***

dimensions in mm



contacts side (front view)



- footprint 1 module

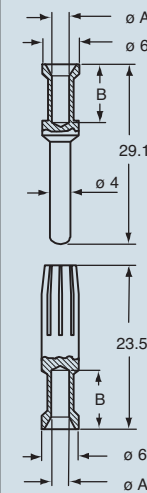
part No.

**CXFA 1.5**  
**CXFA 2.5**  
**CXFA 4.0**  
**CXFA 6.0**  
**CXFA 10**

silver plated

**CXMA 1.5**  
**CXMA 2.5**  
**CXMA 4.0**  
**CXMA 6.0**  
**CXMA 10**

dimensions in mm



**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

dimensions shown are not binding  
and may be changed without notice

## MIXO CX 4 X modular connectors

The new **CX 04 X** inserts have the same dimensions of **CX 03 4F/M** inserts, **but have 4 seats for crimp contacts series CX (40A<sub>max</sub>)** used in power circuits.

Thanks to the enhanced insulation, the rated voltage of the module is equivalent to 830V, in compliance with standards EN 61984 and EN 60664-1, with an impulse withstand voltage of 8 kV for pollution degree 3 even between signal contacts.

Their key characteristic **lies in the fact that they guarantee maximum safety even in case of accidental contact with fingers (IPXXB or IP2X)**. Safety is guaranteed as standard on female contacts, but also on male contacts.

This feature is important as it ensures full compliance with the recent safety standard **EN 60204-1**, concerning electric equipment fitted on machines and in particular with the requirements of Article 6.2.4 *concerning protection against residual voltage*:

*Live parts having a residual voltage greater than 60V after the supply has been disconnected shall be discharged to 60V or less within a time period of 5 s after disconnection of the supply voltage provided that this rate of discharge does not interfere with the proper functioning of the equipment.*

*Exempted from this requirement are components having a stored charge of 60 μC or less.*

*Where this specified rate of discharge would interfere with the proper functioning of the equipment, a durable warning notice drawing attention to the hazard and stating the delay required before the enclosure may be opened shall be displayed at an easily visible location on or immediately adjacent to the enclosure containing the capacitances.*

*In the case of plugs or similar devices, the withdrawal of which results in the exposure of conductors (for example pins), the discharge time shall not exceed 1 s, otherwise such conductors shall be protected against direct contact to at least an IP2X or IPXXB. If neither a discharge time of 1 s nor a protection of at least IP2X or IPXXB can be achieved (for example in the case of removable collectors on conductor wires, conductors bars, or slip-ring assemblies, see 12.7.4), additional switching devices or an appropriate warning device (for example a warning notice in accordance with 16.1) shall be applied.*

The IP2X or IPXXB protection offered by **CX 04 XM** modules fitted with CX contacts ensures greater design flexibility as it enables, for example, connectors to be used for drives of electric motors (frequency converters) and in all applications where voltage could be present on both sides of the connector (for example power circuits in loop configuration, opening, circuits of battery-chargers).

### NOTE

Female inserts are supplied with two red lock tabs that must be used to assemble the inserts on the frame instead of the grey ones supplied with the frame.

code inserts (MIXO series)		CX..X
No. of poles	main contacts	4
rated current <sup>1)</sup>		40A
EN 61984 pollution degree 3	rated voltage	830V
	rated impulse withstand voltage	8kV
	pollution degree	3
UL/CSA certification	rated voltage (a.c./d.c.)	600V
certifications <sup>2)</sup>		(cUL), (CSA), (CCC), (GL)
contact resistance		≤ 0,3 mΩ
insulated resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40
	max	+125
degree of protection	with enclosures	IP65, IP66, IP67, IP68, IP69K (according to type)
	without enclosures	IP20 also on male contacts
conductor connections		crimp
conductor cross-section main contacts	mm <sup>2</sup>	1.5+6
stripping length main contacts	mm	9 (1.5+2.5 mm <sup>2</sup> ) 9.6 (4+6 mm <sup>2</sup> )
mechanical endurance (rating cycles)		≥ 500

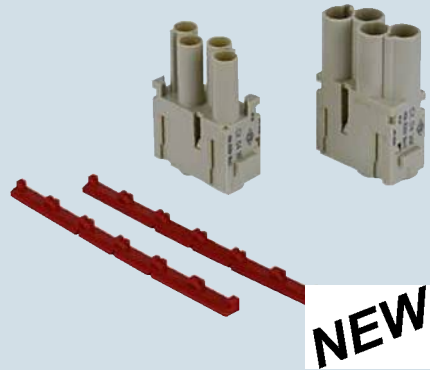
1) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.

2) Certifications shown in brackets are currently being applied for.

the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units ..... page: 194 - 195

modular units, crimp connections



40A crimp contacts silver plated



description

part No.

part No.

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

CX 04 XF  
CX 04 XM

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

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

- characteristics according to EN 61984:

**40A 830V 8kV 3**  
**40A 1000V 8kV 2**

- certifications: cUL (UL for USA and Canada), (CSA), (CCC), (GL); the certifications shown in brackets are being applied for

- rated voltage according to UL/CSA: 600V

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

- ambient temperature limit: -40 °C ... +125 °C

- are made of self-extinguishing thermoplastic resin UL 94 V0

- mechanical life:  $\geq 500$  cycles

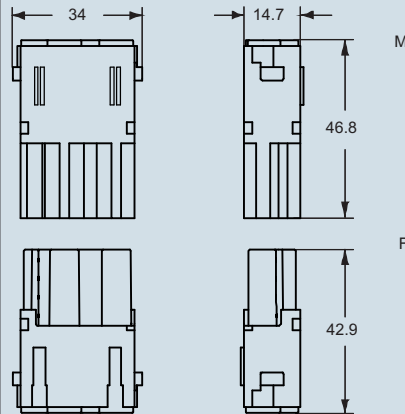
- contact resistance:  $\leq 0.3 \text{ m}\Omega$

- for contact crimping instructions, please see the crimping tool section (40A contacts, CXF and CXM series) on pages 468, 470 and 486

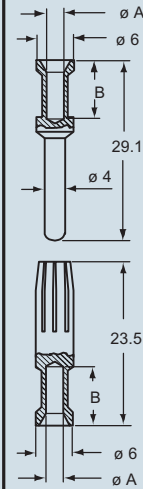
- male and female contacts to test of contact with fingers

- for maximum current load, see the following load curves inserts, for more information see page 500

dimensions in mm

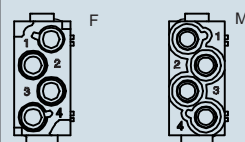


dimensions in mm

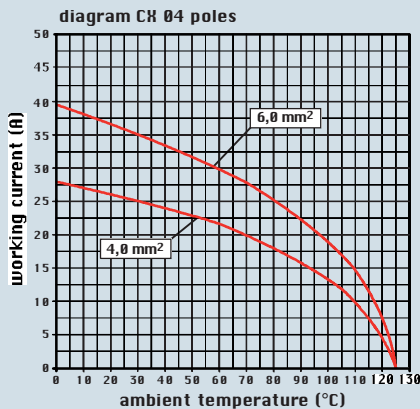


contacts side (front view)

side with reference arrow ▲

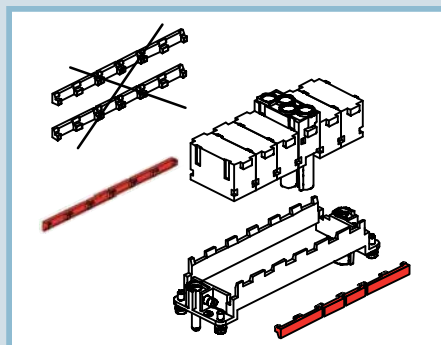


- 1 frame slot



CXF and CXM contacts

conductor section mm <sup>2</sup>	conductor slot $\varnothing A$ (mm)	conductor stripping length B (mm)
1.5	1.8	9
2.5	2.2	9
4	2.85	9.6
6	3.5	9.6



Female inserts are supplied with two red lock tabs that must be used instead of those supplied with the frames.

dimensions shown are not binding and may be changed without notice