

Application

The MIXO series is a system of modular units for special applications that uses the traditional ILME enclosures.

Each enclosure can house different types of connections such as, for example: electric signals and contacts for the conduction of compressed air and liquids with pressure values of up to 8 bars.

The inserts are arranged side by side to form a single compact block which is inserted into metallic frames with mandatory housings. Once the modules have been inserted and locked with the special tabs, the connector can then be inserted into the enclosure.

The modular structure system makes it easy to access a series of contacts inserted in the frame (e.g., for substitution, checks or the addition of signals with new inserts for needs not foreseen during the initial installation) without having to disassemble the entire connector.

The use of standard die-cast aluminium enclosures with degree of protection IP65 provides the possibility of innumerable applications.

The MIXO series may be used with 5 different frame sizes. The following table lists the frames and the metallic enclosures that may be used.

frames	one or two-lever metallic enclosures
CX 01 T	size "49.16"
CX 02 TM/TF	size "44.27"
CX 03 TM/TF	size "57.27"
CX 04 TM/TF	size "77.27"
CX 06 TM/TF	size "104.27"
CX 04 TM/TF (x 2)	size "77.62"
CX 06 TM/TF (x 2)	size "104.62"

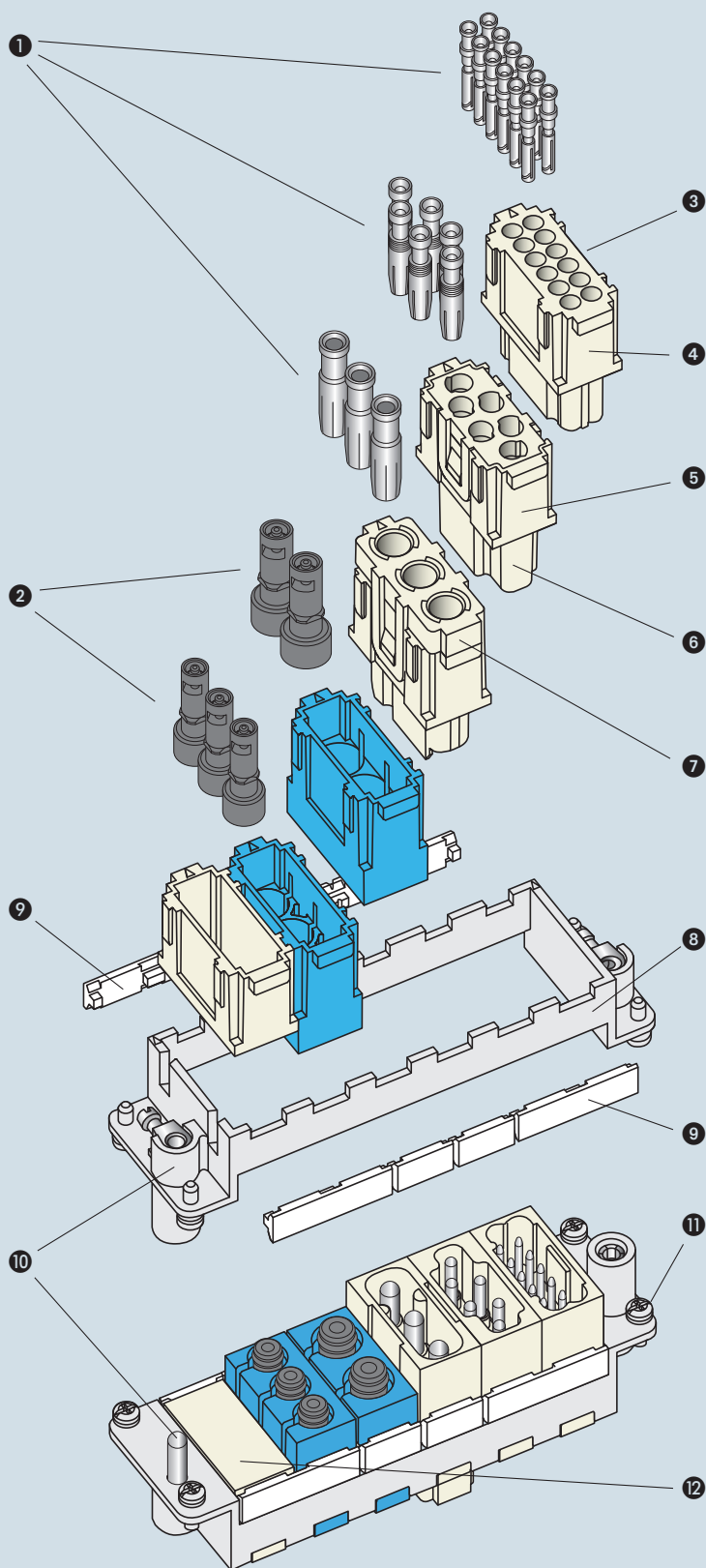
In addition, the MIXO series can be used with the COB series panel supports

frames	panel supports part No.
CX 02 TM/TF	fixed: COB 06 BC and COB TCQ
	mobile: COB TSF , COB TSFS and COB 06 CMS
CX 03 TM/TF	fixed: COB 10 BC and COB TCQ
	mobile: COB TSF , COB TSFS and COB 10 CMS
CX 04 TM/TF	fixed: COB 16 BC and COB TCQ
	mobile: COB TSF , COB TSFS and COB 16 CMS
CX 06 TM/TF	fixed: COB 24 BC and COB TCQ
	mobile: COB TSF , COB TSFS and COB 24 CMS

The MIXO series currently includes 6 different types of inserts. The field of application is provided in the table at the bottom of the next page.

Characteristics

- ❶ electric contacts in silver-plated or gold-plated brass with connections to the conductors via crimping, spring clamp or axial screw.
- ❷ pneumatic contacts in plastic with insertion tube connection
- ❸ modular inserts of identical size with insertion system for forming the complete module and frame lock tab.
- ❹ inserts in self-extinguishing thermoplastic material, reinforced with glass fibre, UL 94-V0 approved, with a working temperature range of -40 °C to +125 °C.
- ❺ inserts in conformance with the requirements of the EN 61984 standard and certified and marked with the UL, CSA, CCC, GL, GOST marks.
- ❻ inserts with asymmetric guide rails to prevent incorrect coupling.
- ❼ position of contacts identified with numbers or codes on both sides of every insert.
- ❽ male/female module carrier frames with mandatory housings and polarity, in die-cast zinc alloy.
- ❾ module lock tab, may be divided according to the number of modules used; guarantees a perfect stability of the modules during wiring and coupling/uncoupling of the connectors.
- ❿ asymmetric earth contacts (two for frame) with wide contact surface to prevent incorrect coupling; when two or more identical connectors of the MIXO series are used, coded pins prevent incorrect coupling (see pages 429, 430 and 431).
- ⓫ captive frame fastening screws, with flexible spring washer.
- ⓬ dummy module for unused frame slots.



inserts	contact type	signal type	connectors and tubes connections	rated current A	rated voltage V	No. of frame slots
CX 01 YF/M	main	electric	crimp	200	1000	2
CX 01 YPEF/M	PE	---	crimp	200	---	2
CX 02 GF/M	main	electric	crimp	100	1000	2
CX 02 7F/M	main	electric	crimp	70	1000	1
CX 02 4AF/M	main	electric	axial screw	40	1000	1
CX 02 4BF/M	main	electric	axial screw	40	1000	1
CX 03 4F/M	main	electric	crimp	40	400/690	1
CX 03 4BF/BM	main	electric	crimp	40	500	1
CX 3/4 XDF/M	main	electric	crimp	40/10	830	1
CX 04 XF/M	main	electric	crimp	40	830	1
CX 05 SF/M	main	electric	spring	16	400	1
CX 06 CF/M	main	electric	crimp	16	500	1
CX 08 CF/M	main	electric	crimp	16	400	1
CX 20 CF/M	main	electric	crimp	16	500	2
CX 12 DF/M	main / auxiliary	electric	crimp	10	250	1
CX 17 DF/M	main / auxiliary	electric	crimp	10	160	1
CX 25 IF/M	main / auxiliary	elettrico	crimp	4	50	1
CX 02 HF/M	main	electric	crimp	16	2900/5000	2
CX 02 BF/M	seat for two shielded connectors (see CX 04 B, CX 01 B, CX 01 BC, CX 08 B)					2
CX 01 BCF/M	main / auxiliary + shield	electric	crimp	16	50	---
CX 01 BF/M	main / auxiliary + shield	electric	crimp	10	50	---
CX 04 BF/M	main / auxiliary + shield	electric	crimp	10	50	---
CX 08 BF/M	main / auxiliary + shield	electric	crimp	5	50	---
CX 03 P	pneumatic Ø 1.6 - 3.0 - 4.0 mm	gas / liquid **	push-in	---	---	1
CX 02 P	pneumatic Ø 6.0 mm	gas / liquid **	push-in	---	---	1
CX FM	none (dummy module)	---	---	---	---	1
CX 01 JF/M	RJ45 + auxiliary	electric	crimp	10	250	2
CX 02 JF/M	RJ45 + auxiliary	electric	crimp	10	250	3
CX 01 UF/M	USB	electric	---	---	---	1
CX 01 9VF/M	D-SUB	electric	crimp	5	50	1
CX 04 LF/M	POF / MOST / coaxial	optic / electric	crimp / solder	---	---	1

**** Warning:** For obvious reasons of safety, the VDE standard does not permit electric contacts to be present within the same connector group together with contacts for the transmission of liquids. In addition, the use of pneumatic air contacts requires an appropriate filtering and dehydration system to prevent dangerous condensation. Contacts may be used for pressure values of up to a maximum of 8 bar/116 psi.

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 correspondind 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.

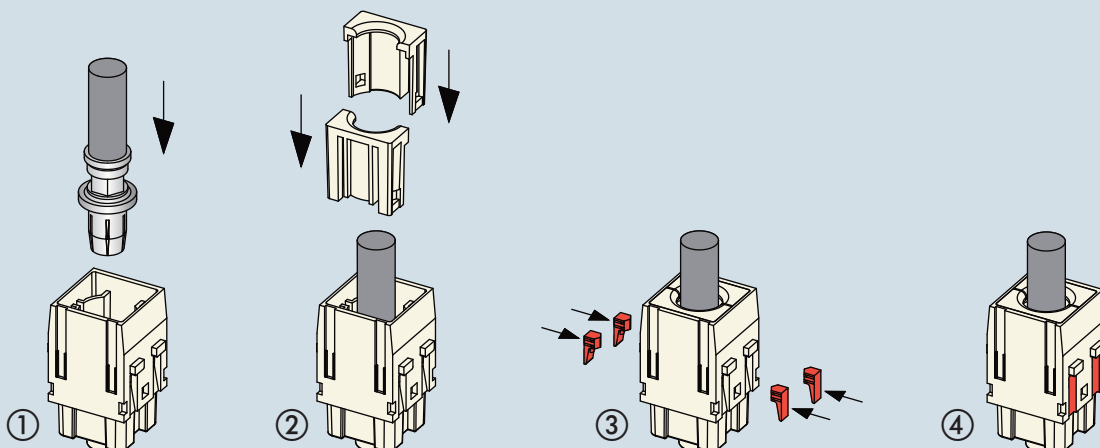
The crimping operation can be carried out quickly and efficiently with the CYPZ **hand operated hydraulic pliers**, which is pre-fitted with the suitable locator. Suitable crimp dies available on request.

code inserts (MIXO series)		CX..Y
No. of poles	main contact	1
	auxiliary contacts	--
rated current ¹⁾		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 ²⁾		(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 ²	16, 25, 35, 50, 70
	AWG	6, 4, 2, 1, 2/0
stripping lenght	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

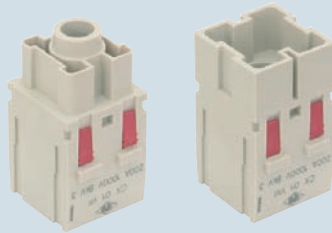


the modular inserts must be installed in suitable frames which are then mounted in traditional housings * or COB panel support

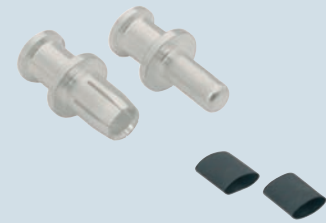
frames for modular units * page: 195

* enclosures: housings or high construction hoods

modular units,
crimp connections



200A silver plated crimp contacts
heat shrink tube



description

part No.

part No.

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

CX 01 YF
CX 01 YM

200A female crimp contacts

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

200A male crimp contacts

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

CYFA 16
CYFA 25
CYFA 35
CYFA 50
CYFA 70

CYMA 16
CYMA 25
CYMA 35
CYMA 50
CYMA 70

silver plated

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

CR TT

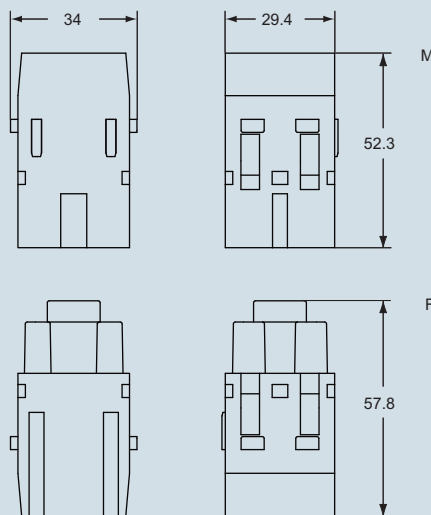
- characteristics according to EN 61984:

200A 1000V 8kV 3

200A 920/1600V 8kV 2

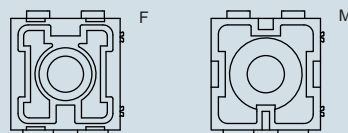
- certifications: (cUL - UL for USA and Canada), (CSA), (CCC), (GL); the certifications shown in brackets are being applied for
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin 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)

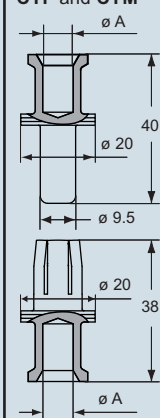
side with reference arrow ▲



- 2 frame slots

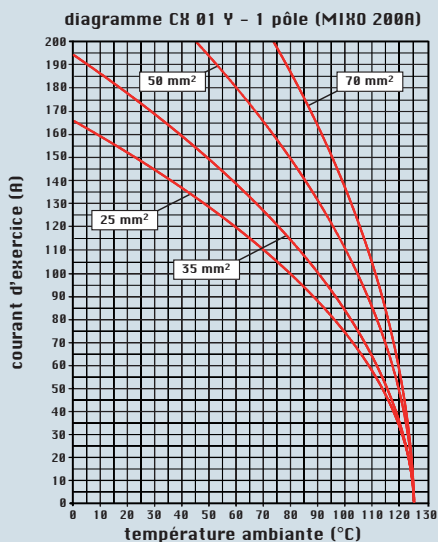
dimensions in mm

CYF and CYM

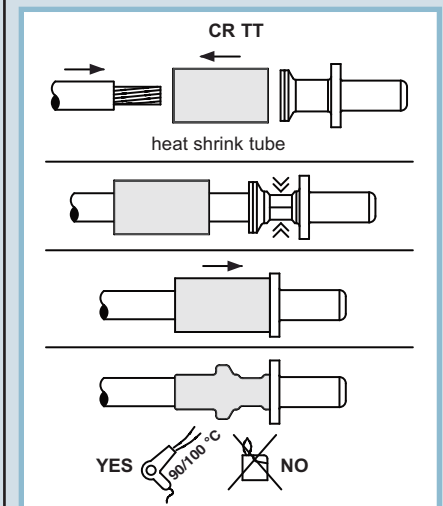


CYF and CYM contacts

conductor section (mm ²)	conductor slot ø 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

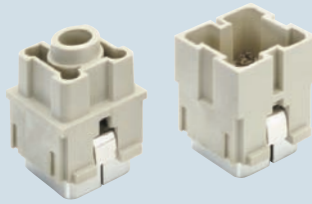


the modular inserts must be installed in suitable frames which are then mounted in traditional housings * or COB panel support

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 mm² AWG 6 one groove (back side)
25 mm² AWG 4 with no grooves
35 mm² AWG 2 one groove
50 mm² AWG 1 two grooves
70 mm² AWG 2/0 with no grooves

CYFA 16
CYFA 25
CYFA 35
CYFA 50
CYFA 70

silver plated

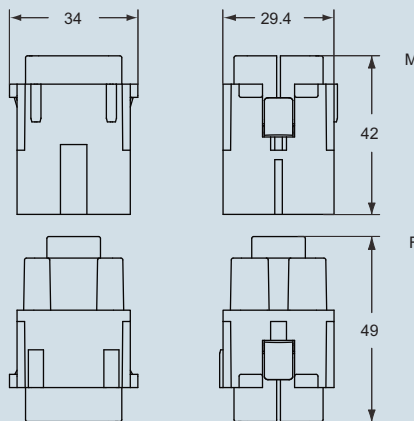
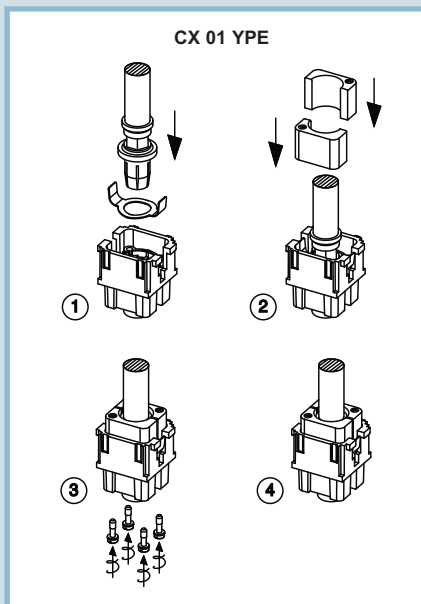
200A male crimp contacts
16 mm² AWG 6 one groove (back side)
25 mm² AWG 4 with no grooves
35 mm² AWG 2 one groove
50 mm² AWG 1 two grooves
70 mm² AWG 2/0 with no grooves

CYMA 16
CYMA 25
CYMA 35
CYMA 50
CYMA 70

- certifications: (cUL - UL for USA and Canada), (CSA), (CCC), (GL); the certifications shown in brackets are being applied for
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0

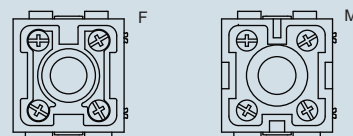
dimensions in mm

dimensions in mm



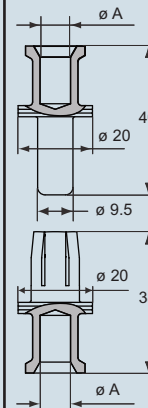
contacts side (front view)

side with reference arrow ▲



- 2 frame slots

CYF and CYM



CYF and CYM contacts

conductor section (mm ²)	conductor slot ø 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:

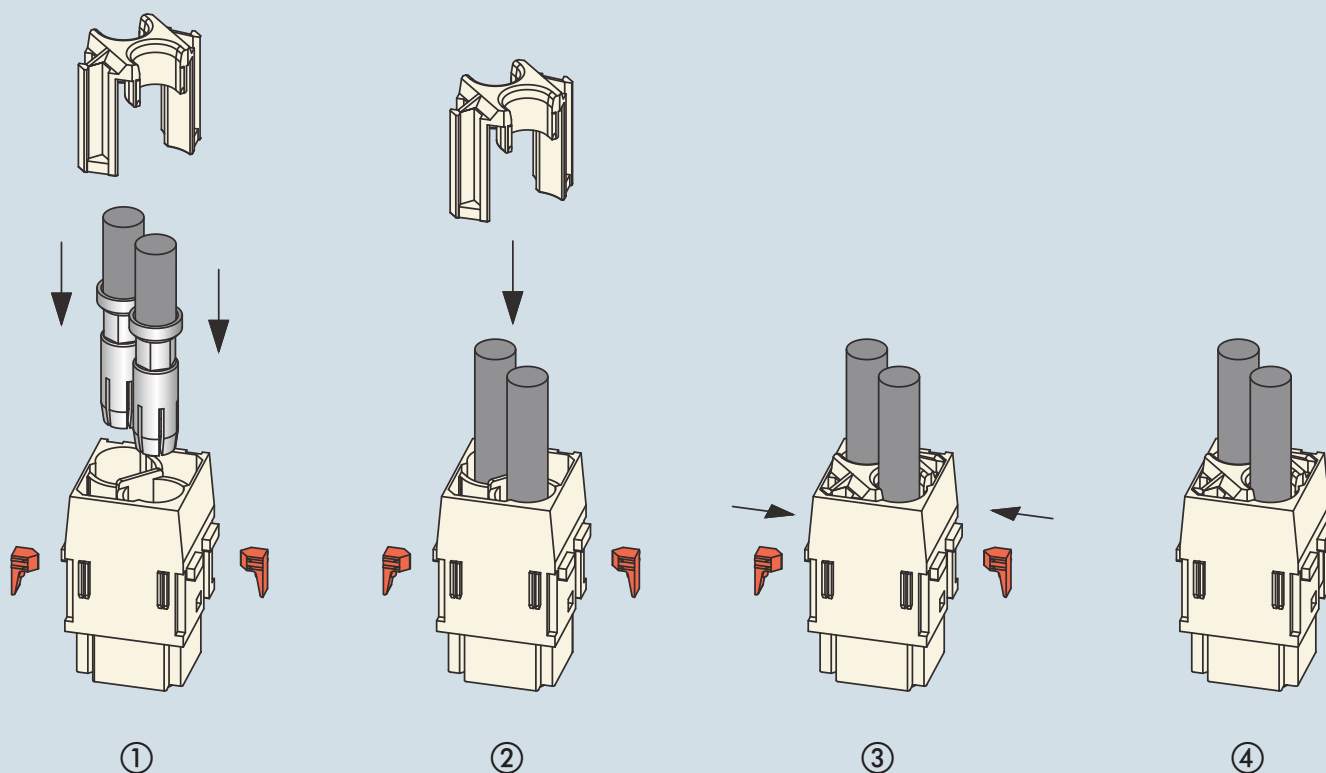
- More **resistant to mechanical stresses** such as vibrations and cable loads
- More **corrosion resistant** (gas tight)
- **Quicker to connect** and ensuring more **consistent results** (regardless of the operators "force")
- The connector is **electrically more efficient** (reduced voltage drop)

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.

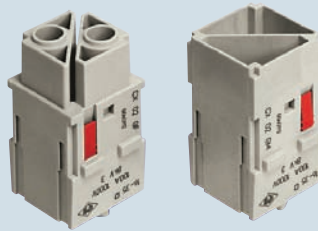


the modular inserts must be installed in suitable frames which in turn are installed in traditional housings * or COB panel support

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 mm² AWG 6 - 5
25 mm² AWG 4 - 3
35 mm² AWG 2

100A male crimp contacts
16 mm² AWG 6 - 5
25 mm² AWG 4 - 3
35 mm² AWG 2

CGFA 16
CGFA 25
CGFA 35

CGMA 16
CGMA 25
CGMA 35

silver plated

cable earthing adapter 16 mm² (AWG 6 - 5)

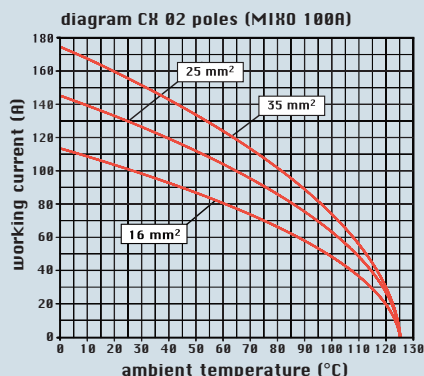
CGT 16

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

- characteristics according to EN 61984:

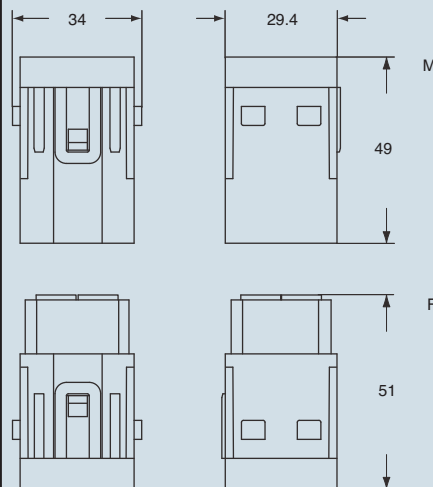
100A 1000V 8kV 3
100A 920/1600V 8kV 2

- 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: ≥ 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



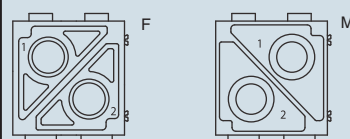
dimensions shown are not binding
and may be changed without notice

dimensions in mm



contacts side (front view)

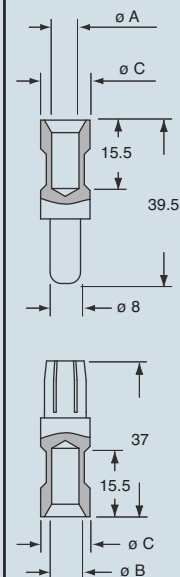
side with reference arrow ▲



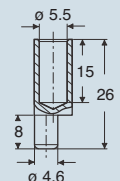
- footprint 2 modules

dimensions in mm

CGF and CGM



CGT 16



CGF and CGM contacts

conductor section (mm ²)	conductor slot ø A (mm)	conductor slot ø B (mm)	conductor slot ø C (mm)	conductor stripping length (mm)
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):

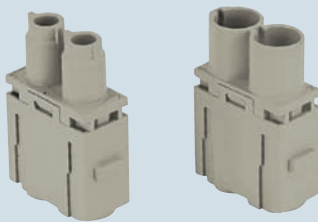
- 1) Strip 15 mm of flexible PE protective cable
- 2) Crimp the cable on the CGT 16 adapter by using the CGPZ pliers with the CGD 16 C matrix
- 3) Fix the adapter tip in the larger earth terminal (6 mm²) of frames CX...TM/TF
- 4) To be used with bulkhead mounting housings or high construction hoods
- 5) Cannot be used with T-TYPE series

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



NEW

70A silver plated crimp contacts



NEW

description

part No.

part No.

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

CX 02 7F
CX 02 7M

70A female crimp contacts
10 mm² AWG 8 - 7
16 mm² AWG 6 - 5
25 mm² AWG 4 - 3

CX7FA 10
CX7FA 16
CX7FA 25

70A male crimp contacts
10 mm² AWG 8 - 7
16 mm² AWG 6 - 5
25 mm² AWG 4 - 3

CX7MA 10
CX7MA 16
CX7MA 25

silver plated

- characteristics according to EN 61984:

70A 1000V 8kV 3

70A 1600V 12kV 2

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

- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$

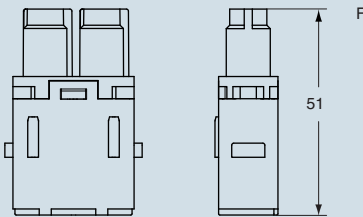
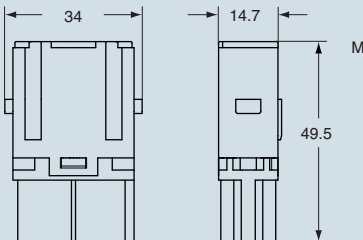
- are made of self-extinguishing thermoplastic resin UL 94 V0

- mechanical life: ≥ 500 cycles

- for contact crimping instructions, please see the crimping tool section (70A contacts, CX7F and CX7M series) on page 474

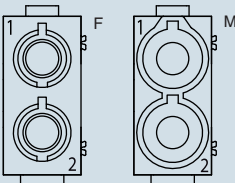
- **C7ES** removal tool

dimensions in mm



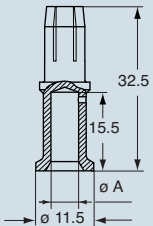
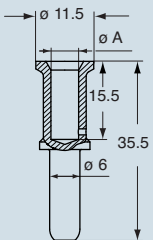
contacts side (front view)

side with reference arrow ▲



- footprint 1 module

dimensions in mm



contacts CX7F and CX7M

conductor section (mm ²)	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

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

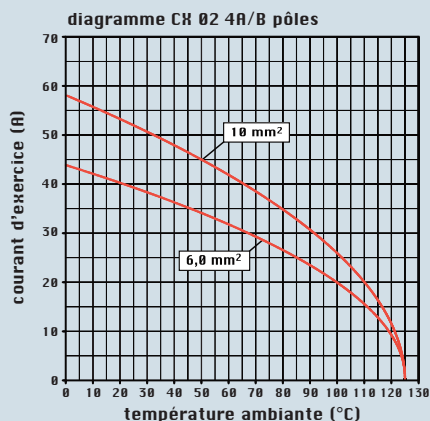
- UL, CSA, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 0.5 \text{ m}\Omega$

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



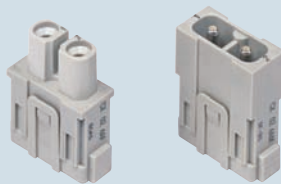
- use flexible cables with sections from 2.5 to 10 mm² or extra flexible cables with sections from 2.5 to 6 mm²
- do not twist the cables
- fully insert the braids in the rear section of the contact

conductor section (mm²)	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**



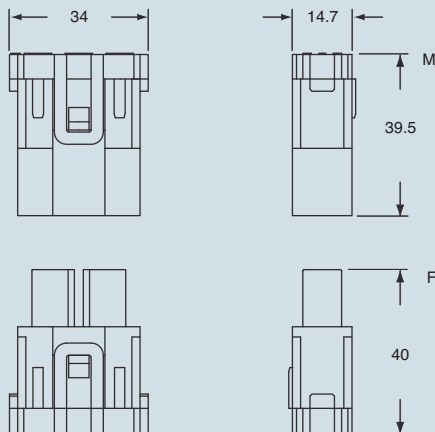
modular units,
screw terminal connection
2.5 ÷ 8 mm²



part No.

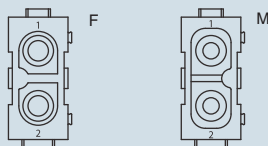
CX 02 4AF
CX 02 4AM

dimensions in mm



contacts side (front view)

side with reference arrow ▲



- inserts for Ø 4mm cables, section: 2.5-8 mm² - AWG 14-8
- footprint 1 module

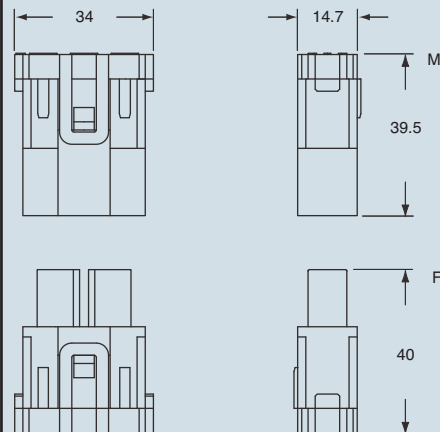
modular units,
screw terminal connection
6 ÷ 10 mm²



part No.

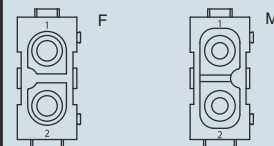
CX 02 4BF
CX 02 4BM

dimensions in mm



contacts side (front view)

side with reference arrow ▲



- inserts for Ø 4.8 mm cables, section: 6-10 mm² - 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_{max}) for power circuits
- 4 slots for CD crimped contacts (10A_{max}) 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 ¹⁾	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 ²⁾		(cUL), (CSA), (CCC), (GL)
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 ²	1.5÷6
	AWG	16÷10
conductor cross-section auxiliary contacts	mm ²	0.14÷2.5
	AWG	26÷14
stripping length main contacts	mm	9 (1.5÷2.5 mm ²) 9.6 (4÷6 mm ²)
	mm	8 (0.14÷1.5 mm ²) 6 (2.5 mm ²)
mechanical endurance (rating cycles)		≥500

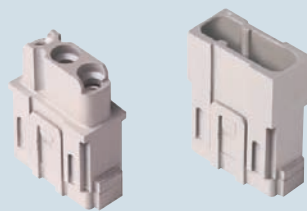
1) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.

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

the modular inserts must be installed in suitable frames which 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 mm² AWG 16
2.5 mm² AWG 14
4 mm² AWG 12
6 mm² AWG 10

40A male crimp contacts

1.5 mm² AWG 16
2.5 mm² AWG 14
4 mm² AWG 12
6 mm² 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

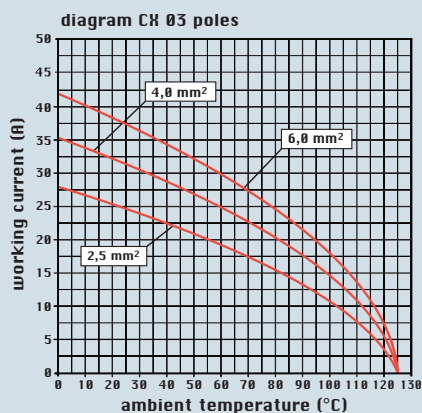
silver plated

* cable diameter up to 5 mm

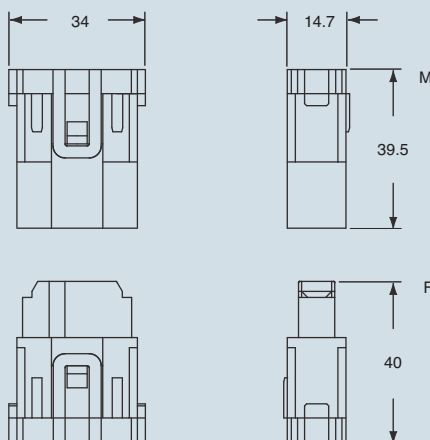
- characteristics according to EN 61984:

40A 400/690V 6kV 3

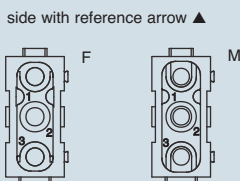
- UL, CSA, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 0.3 \text{ m}\Omega$
- 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



dimensions in mm

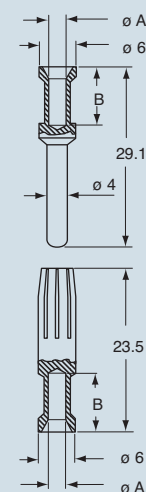


contacts side (front view)



- footprint 1 module

dimensions in mm



CXF and CXM contacts

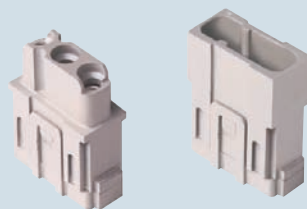
conductor section mm ²	conductor slot ø A (mm)	conductors stripping length B (mm)
1.5	1.8	9
2.5	2.2	9
4	2.85	9.6
6	3.5	9.6

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

part No.

CX 03 4BF *
CX 03 4BM *

part No.

40A female crimp contacts

1.5 mm² AWG 16
2.5 mm² AWG 14
4 mm² AWG 12
6 mm² AWG 10
10 mm² AWG 8

40A male crimp contacts

1.5 mm² AWG 16
2.5 mm² AWG 14
4 mm² AWG 12
6 mm² AWG 10
10 mm² AWG 8

CXFA 1.5
CXFA 2.5
CXFA 4.0
CXFA 6.0
CXFA 10

CXMA 1.5
CXMA 2.5
CXMA 4.0
CXMA 6.0
CXMA 10

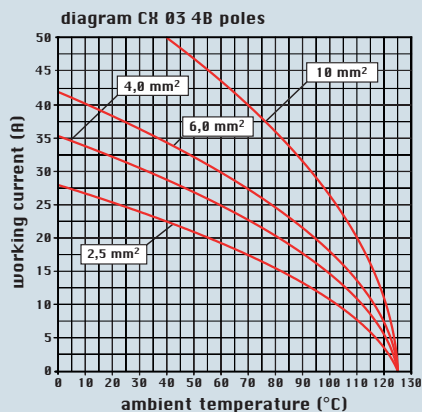
silver plated

* cable diameter up to 7.5 mm
contact section up to 10 mm²

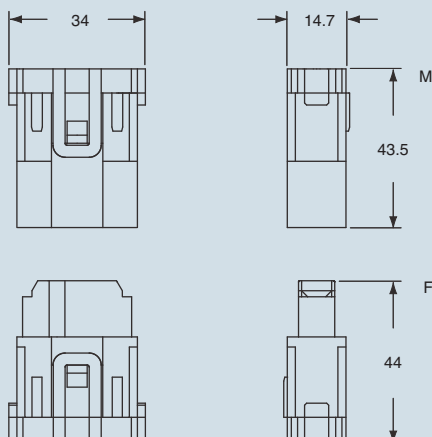
- characteristics according to EN 61984:

40A 500V 6kV 3

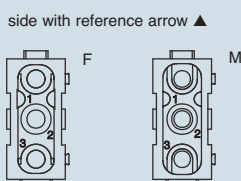
- certifications: (UL), (CSA), (GOST); the certifications shown in brackets are being applied for
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 0.3 \text{ m}\Omega$
- for contact crimping instructions (1.5 ÷ 10 mm²), 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



dimensions in mm

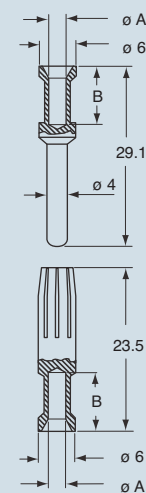


contacts side (front view)



- footprint 1 module

dimensions in mm



CXF and CXM contacts

conductor section mm ²	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_{max})** 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 ¹⁾		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 ²⁾		(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 ²	1,5÷6
stripping lenght main contacts	mm	9 (1,5÷2,5 mm ²)
		9,6 (4÷6 mm ²)
mechanical endurance (rating cycles)		≥ 500

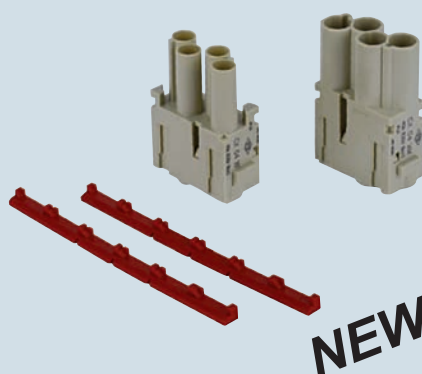
1) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.

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**

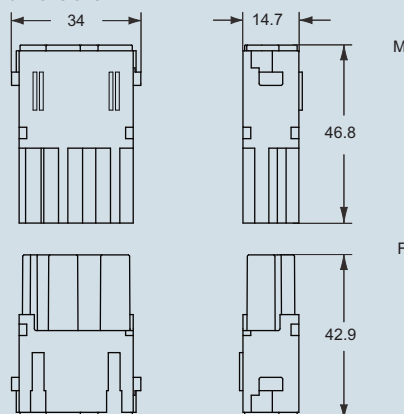


description	part No.	part No.
without contacts (to be ordered separately) - female inserts for female contacts - male inserts for male contacts	CX 04 XF CX 04 XM	

40A female crimp contacts			
1.5 mm ² AWG 16		CXFA 1.5	silver plated
2.5 mm ² AWG 14		CXFA 2.5	
4 mm ² AWG 12		CXFA 4.0	
6 mm ² AWG 10		CXFA 6.0	
40A male crimp contacts			
1.5 mm ² AWG 16		CXMA 1.5	
2.5 mm ² AWG 14		CXMA 2.5	
4 mm ² AWG 12		CXMA 4.0	
6 mm ² AWG 10		CXMA 6.0	

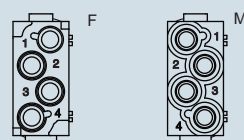
- characteristics according to EN 61984:
40A 830V 8kV 3
40A 1000V 8kV 2
- certifications: cUL (UL for USA and Canada), (CSA), (CCC), (GL); the certifications shown in brackets are being applied for
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 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

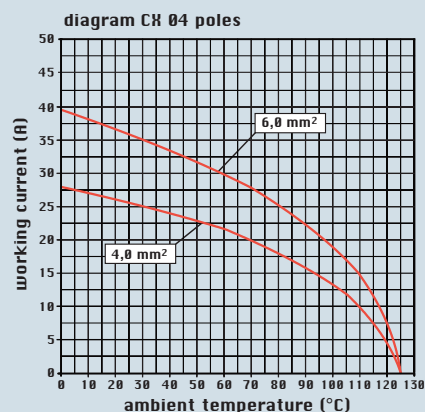


contacts side (front view)

side with referen

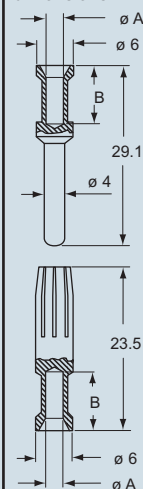


- 1 frame slot



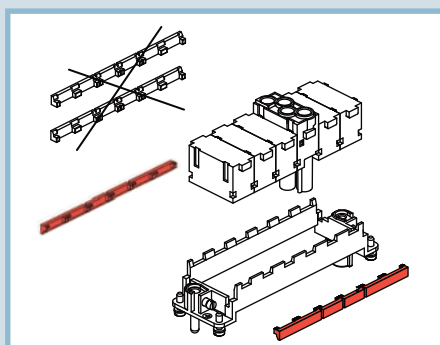
dimensions shown are not binding
and may be changed without notice

dimensions in mm



CXF and CXM contacts

conductor section mm ²	conductor slot ø 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

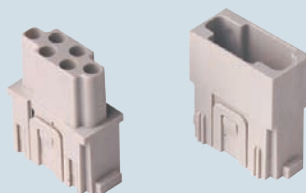


Female inserts are supplied with two red lock tabs that must be used instead of those supplied with the frames.

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



16A crimp contacts normal or for advanced opening 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 female contacts

CX 06 CF
CX 06 CM

16A female contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male crimp contacts for advanced opening

0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three 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

silver plated

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

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

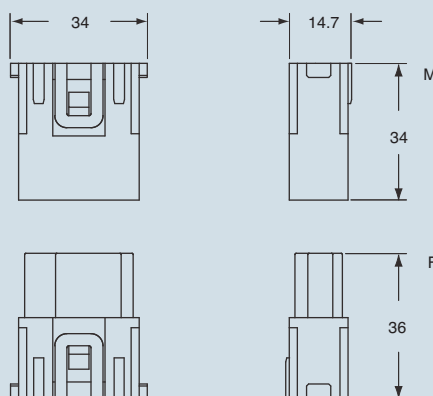
CCMD 0.3
CCMD 0.5
CCMD 0.7
CCMD 1.0
CCMD 1.5
CCMD 2.5
CCMD 3.0
CCMD 4.0

CC 0.5 AN
CC 0.7 AN
CC 1.0 AN
CC 1.5 AN
CC 2.5 AN

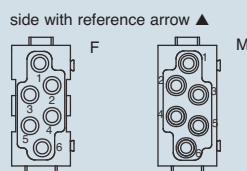
- characteristics according to EN 61984:

- 16A 500V 6kV 3**
- 16A 400/690V 6kV 2**
- UL, CSA, CCC, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 1 \text{ m}\Omega$
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486
- for maximum current load, see the following load curves inserts, for more information see page 500

dimensions in mm



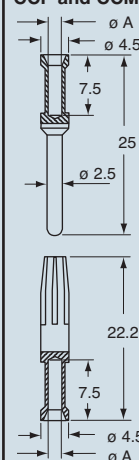
contacts side (front view)



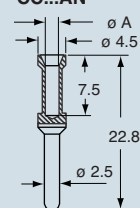
- footprint 1 module

dimensions in mm

CCF and CCM

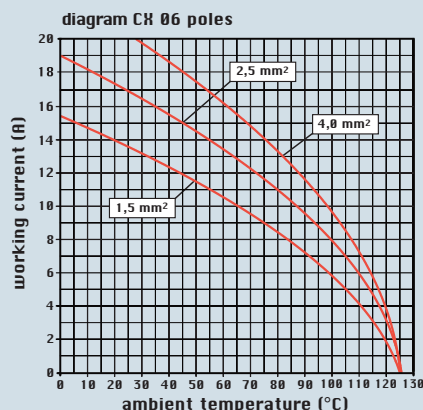


CC...AN



CCF, CCM and CC...AN contacts

conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(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

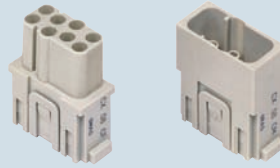


dimensions shown are not binding and may be changed without notice

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



16A crimp contacts
normal or for advanced opening
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 female contacts

CX 08 CF
CX 08 CM

16A female contacts
0.14-0.37 mm² AWG 26-22 three grooves
0.5 mm² AWG 20 with no grooves
0.75 mm² AWG 18 one groove (back side)
1 mm² AWG 18 one groove
1.5 mm² AWG 16 two grooves
2.5 mm² AWG 14 three grooves
3 mm² AWG 12 one wide groove
4 mm² AWG 12 with no grooves

16A male contacts
0.14-0.37 mm² AWG 26-22 three grooves
0.5 mm² AWG 20 with no grooves
0.75 mm² AWG 18 one groove (back side)
1 mm² AWG 18 one groove
1.5 mm² AWG 16 two grooves
2.5 mm² AWG 14 three grooves
3 mm² AWG 12 one wide groove
4 mm² AWG 12 with no grooves

16A male crimp contacts for advanced opening
0.5 mm² AWG 20 with no grooves
0.75 mm² AWG 18 one groove (back side)
1 mm² AWG 18 one groove
1.5 mm² AWG 16 two grooves
2.5 mm² AWG 14 three 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

silver plated

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

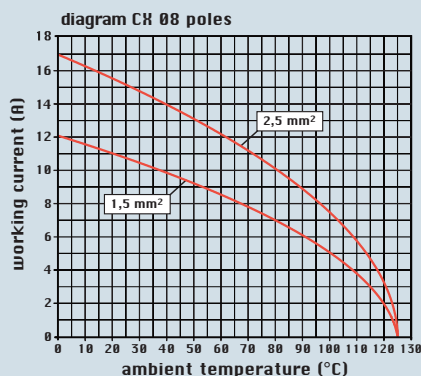
CCMA 0.3
CCMA 0.5
CCMA 0.7
CCMA 1.0
CCMA 1.5
CCMA 2.5
CCMA 3.0
CCMA 4.0

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

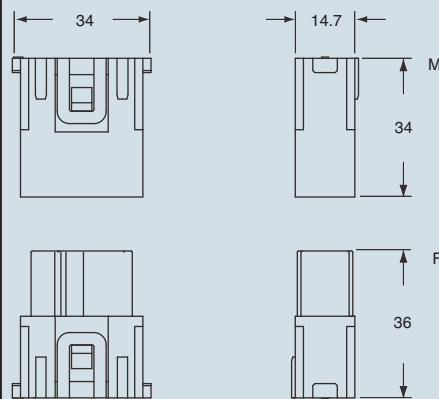
CC 0.5 AN
CC 0.7 AN
CC 1.0 AN
CC 1.5 AN
CC 2.5 AN

- characteristics according to EN 61984:

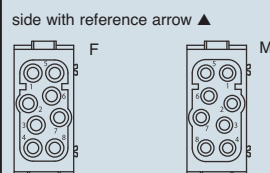
- 16A 400V 6kV 3
- 16A 400/690V 6kV 2
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 1 \text{ m}\Omega$
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486
- for maximum current load, see the following load curves inserts, for more information see page 500



dimensions in mm



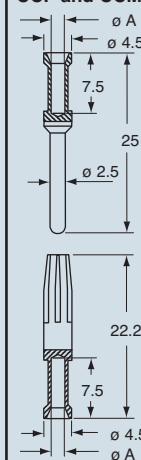
contacts side (front view)



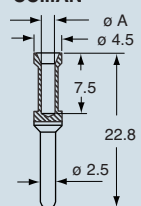
- footprint 1 module

dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC...AN contacts

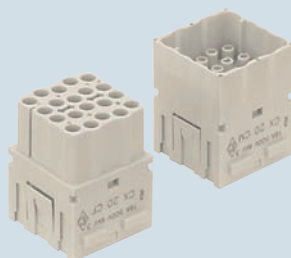
conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

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

* on request, version with 3 fastened CX 20 CF/CM inserts with poles numbered from 1 – 60
references: **CX 60 CF**, **CX 60 CM**

modular units, crimp connections



16A crimp contacts normal or for advanced opening 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 female contacts *

CX 20 CF
CX 20 CM

16A female contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male crimp contacts for advanced opening

0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three 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

silver plated

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

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

CC 0.5 AN
CC 0.7 AN
CC 1.0 AN
CC 1.5 AN
CC 2.5 AN

- characteristics according to EN 61984:

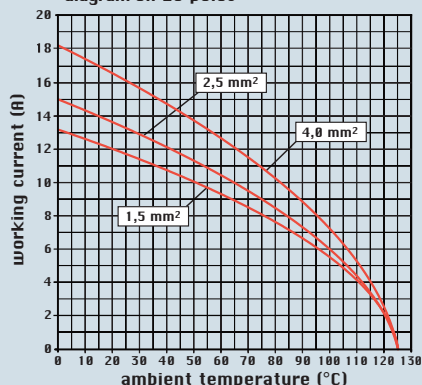
16A 500V 6kV 3

16A 830V 8kV 2

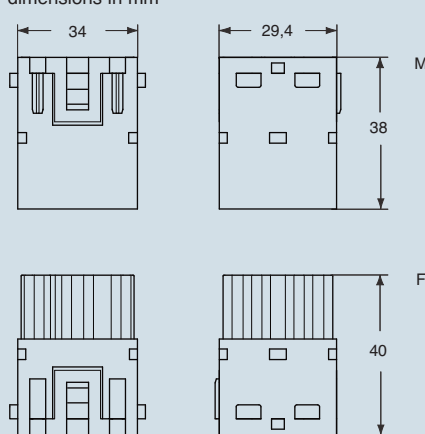
- certifications: cUL (UL for USA and Canada), CSA, GOST
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 1 \text{ m}\Omega$

- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486
- for maximum current load, see the following load curves inserts, for more information see page 500

diagram CX 20 poles

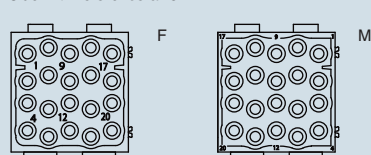


dimensions in mm



contacts side (front view)

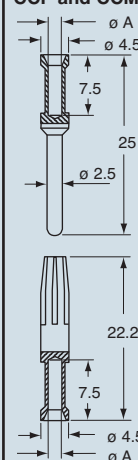
side with reference arrow ▲



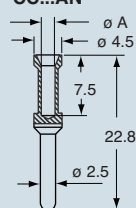
- footprint 2 modules

dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC...AN contacts

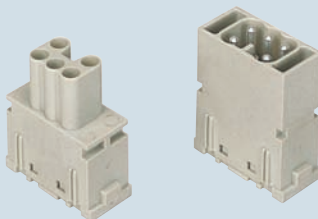
conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

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,
spring connection



description

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

part No.

CX 05 SF
CX 05 SM

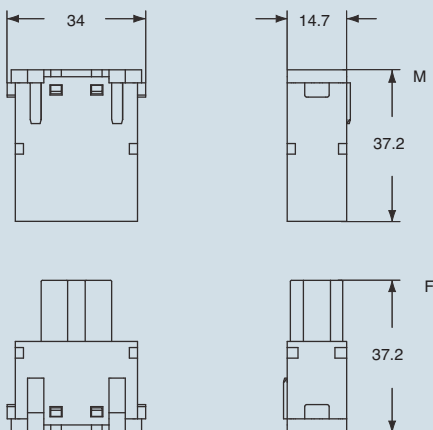
- characteristics according to EN 61984:

16A 400V 6kV 3

16A 500V 6kV 2

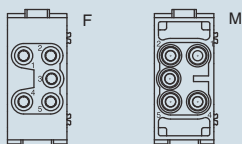
- UL, CSA, CCC, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 500

dimensions in mm

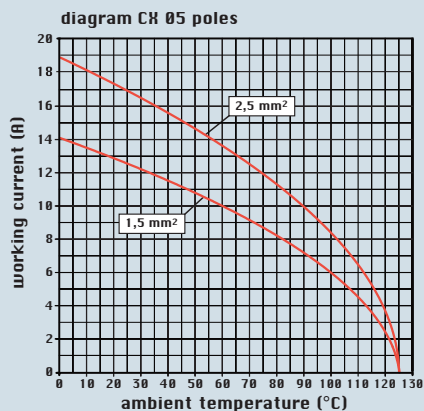


contacts side (front view)

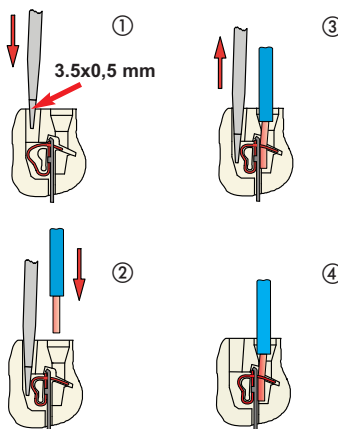
side with reference arrow ▲



- inserts for section conductors: 0.14 - 2.5 mm² - AWG 26 - 14
- conductors stripping length: 9...11 mm
- footprint 1 module



connection with spring terminal



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: 195

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

- characteristics according to EN 61984 **:

16A 2900/5000V 15kV 3

** used for guidance as applicable

- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 1 \text{ m}\Omega$
- for contact crimping, see the crimp tool section (16A CCF and CCM series contacts) on pages 466, 470, 480, 482, 484, 486

high voltage modular units,
crimp connections
contact holder removal tool



16A crimp contacts
silver and gold plated



description

part No.

part No.

part No.

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

CX 02 HF
CX 02 HM

contact holder removal tool

CHES

16A female contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	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

silver plated

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

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

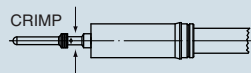
How to use the MIXO HT module

Wiring and assembly:

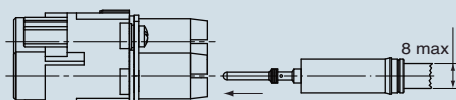
- Strip the wire by 9.5 mm length and insert it into the contact holder



- Crimp series CC contact (16A max) on the stripped wire



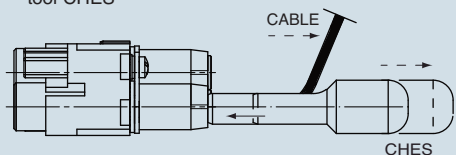
- Insert the contact holder into the module



Heat shrinking tubes to be applied on the rear side of the module and over the contact holder are furnished together with the product

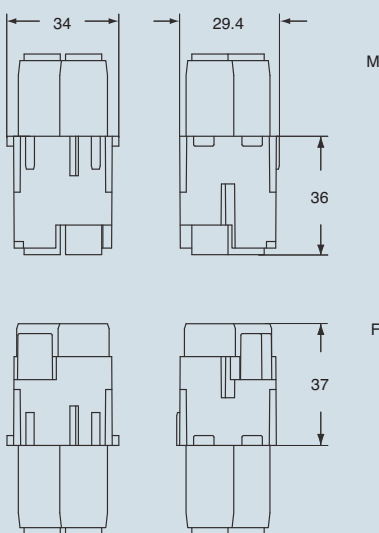
Removal:

- Remove the contact holder by means of the proper tool CHES



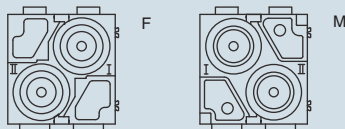
dimensions shown are not binding
and may be changed without notice

dimensions in mm



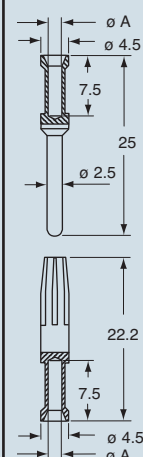
contacts side (front view)

side with reference arrow ▲



- footprint 2 modules

dimensions in mm



CCF and CCM contacts

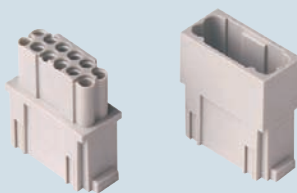
conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

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

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 female contacts

CX 12 DF

CX 12 DM

10A female crimp contacts

0.14-0.37 mm² AWG 26-22

0.5 mm² AWG 20

0.75 mm² AWG 18

1 mm² AWG 18

1.5 mm² AWG 16

2.5 mm² AWG 14

10A male crimp contacts

0.14-0.37 mm² AWG 26-22

0.5 mm² AWG 20

0.75 mm² AWG 18

1 mm² AWG 18

1.5 mm² AWG 16

2.5 mm² AWG 14

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

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:

10A 160V 2,5kV 3

10A 250V 4kV 2

- UL, CSA, CCC, GL, GOST certified

- rated voltage according to UL/CSA: 600V

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

- ambient temperature limit: $-40^\circ\text{C} \dots +125^\circ\text{C}$

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

- mechanical life: ≥ 500 cycles

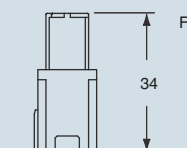
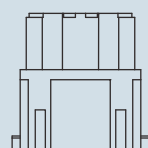
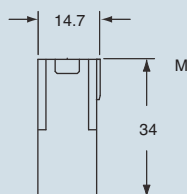
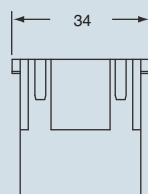
- contact resistance: $\leq 3 \text{ m}\Omega$

- PCBs interface, see article CIF 2.4

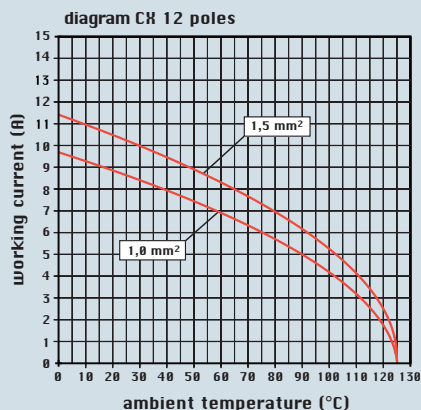
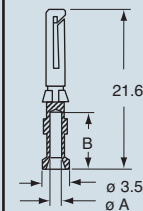
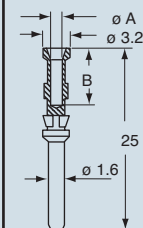
- for contact crimping, see the crimp tool section (10A contacts, CDF and CDM series) on pages 466, 470, 480, 482, 484, 486

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

dimensions in mm

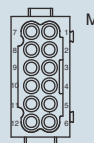
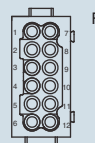


dimensions in mm



contacts side (front view)

side with reference arrow ▲



- footprint 1 module

CDF and CDM contacts

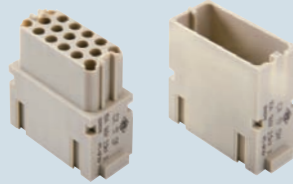
conductor section mm ²	conductor slot ø A (mm)	conductors stripping length B (mm)
0.14-0.37	0.9	8
0.5	1.1	8
0.75	1.3	8
1.0	1.45	8
1.5	1.8	8
2.5	2.2	6

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

10A crimp contacts
silver and gold plated



NEW



description

part No.

part No.

part No.

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

CX 17 DF
CX 17 DM

10A female contacts
0.14-0.37 mm² AWG 26-22 identification No. 1
0.5 mm² AWG 20 identification No. 2
0.75 mm² AWG 18 identification No. ②
1 mm² AWG 18 identification No. 3
1.5 mm² AWG 16 identification No. 4
2.5 mm² AWG 14 identification No. 5

10A male contacts
0.14-0.37 mm² AWG 26-22 identification No. 1
0.5 mm² AWG 20 identification No. 2
0.75 mm² AWG 18 identification No. ②
1 mm² AWG 18 identification No. 3
1.5 mm² AWG 16 identification No. 4
2.5 mm² 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

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

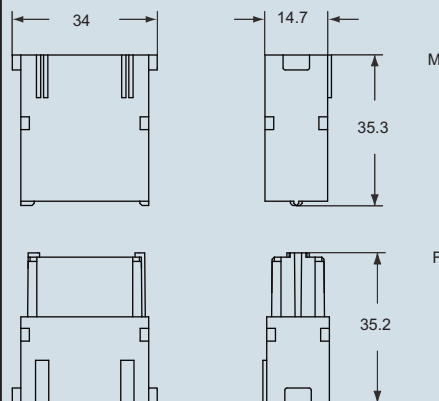
- characteristics according to EN 61984:

10A 160V 2,5kV 3

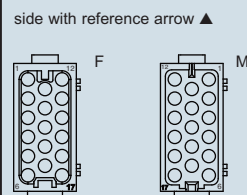
10A 250V 4kV 2

- certifications: (UL), (CSA), (CCC); 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: ≥ 500 cycles
- contact resistance: $\leq 3 \text{ m}\Omega$
- for contact crimping, see the crimp tool section (10A contacts, CDF and CDM series) on pages 466, 470, 480, 482, 484, 486
- for maximum current load, see the following load curves inserts, for more information see page 500

dimensions in mm

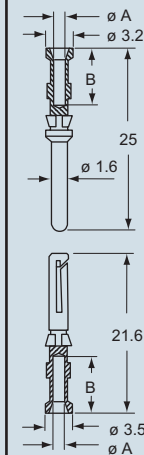


contacts side (front view)



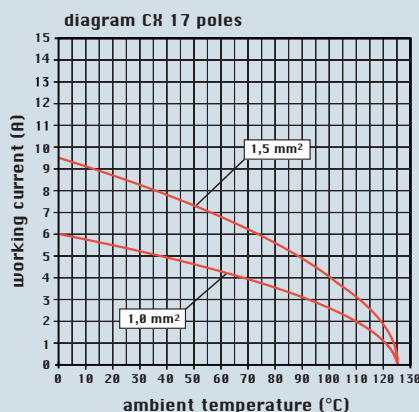
- 1 frame slot

dimensions in mm



CDF and CDM contacts

conductor section mm ²	conductor slot ø 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



dimensions shown are not binding
and may be changed without notice

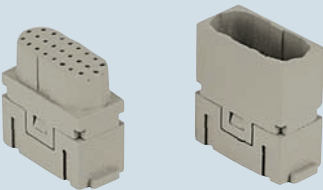


the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units page: 194 - 195

- we recommend the use of CRF / CRM code pins

modular units,
crimp connections



NEW

crimp contacts
gold plated



description

part No.

part No.

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

CX 25 IF
CX 25 IM

4A female crimp contacts
0.08-0.21 mm² AWG 28-24
0.13-0.33 mm² AWG 26-22
0.33-0.52 mm² AWG 22-20

4A male crimp contacts
0.08-0.21 mm² AWG 28-24
0.13-0.33 mm² AWG 26-22
0.33-0.52 mm² AWG 22-20

CIFD 0.2
CIFD 0.3
CIFD 0.5

CIMD 0.2
CIMD 0.3
CIMD 0.5

gold plated

- characteristics according to EN 61984:

4A 50V 0.8kV 3

4A 160V 2.5kV 2

- 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: ≥ 500 cycles

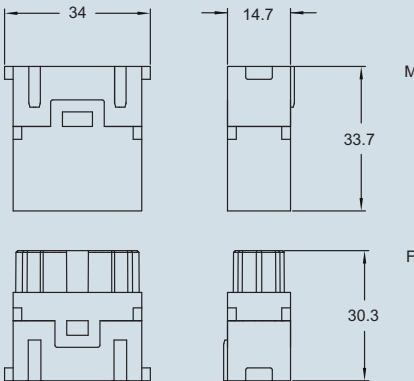
- for crimp contacts CI series using:

CIPZ D crimping tool

CITP D turret head

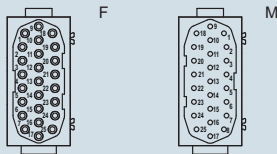
CIES insertion / removal tool

dimensions in mm



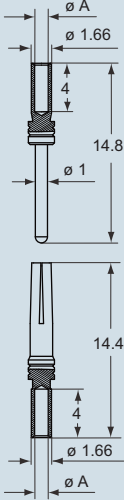
contacts side (front view)

side with reference arrow ▲



- 1 frame slot

dimensions in mm



CIF, CIM contacts

conductor section mm ²	conductor slot $\varnothing A$ (mm)	conductors stripping length (mm)
0.08-0.21	0.64	4
0.13-0.33	0.90	4
0.33-0.52	1.12	4

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

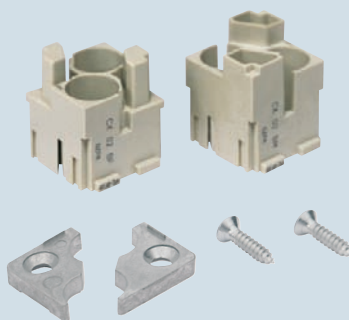
frames for modular units page: 195

- characteristics according to EN 61984:

10A 50V 0,8kV 3

- UL, CSA, CCC (no CX 01 B), GOST certified
- rated voltage according to UL/CSA: 50V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit:
-40 °C ... +70 °C (CX 01 B and CX 04 B)
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 3 \text{ m}\Omega$ (no CX 02 B)
- coaxial connector CX 01 B cables with a typical impedance of 75Ω (attenuation see page 501)
- CX 04 B multi-axial connector for STP cables with 2 pairs and terminations compliant with EN 50173-1 Cat. 5 (100 MHz), compatible with 4-wire field bus protocols
- extraction tool for BUS shielded connectors from MIXO BUS insert part No. CX BES see page 440

seat for shielded connectors
metal adaptor



shielded connectors
10A crimp contacts, silver or gold plated

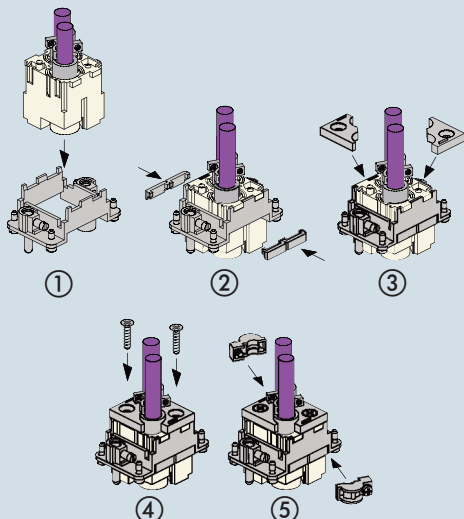


description	part No.	part No.	part No.
seat for two shielded connectors - female insert, two seats for BUS connectors - male insert, two seats for BUS connectors	CX 02 BF CX 02 BM		
shielded BUS multi axial connectors, 4 poles + shield - female insert, four contact seats + shield - male insert, four contact seats + shield		CX 04 BF CX 04 BM	
shielded BUS coaxial connectors, 1 pole + shield - female insert, one contact seats + shield - male insert, one contact seats + shield		CX 01 BF CX 01 BM	
metal adaptor (optional)	CR GND		
10A female crimp contacts 0.14-0.37 mm ² AWG 26-22 0.5 mm ² AWG 20 0.75 mm ² AWG 18 1 mm ² AWG 18 1.5 mm ² AWG 16 2.5 mm ² AWG 14		<div> <div> silver plated </div> <div> gold plated </div> </div>	
10A male crimp contacts 0.14-0.37 mm ² AWG 26-22 0.5 mm ² AWG 20 0.75 mm ² AWG 18 1 mm ² AWG 18 1.5 mm ² AWG 16 2.5 mm ² AWG 14			

Note:

The shielded connectors have their shield insulated from the enclosure's earthing point.
If you wish to earth-connect the shield, install on the panel an anchorage for shielded cables CR..ST (see page 425) or the CR GND metal adaptor.

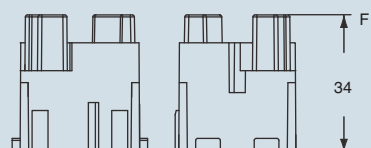
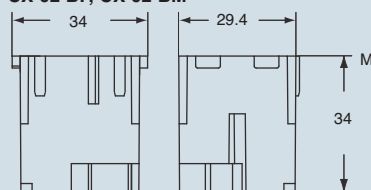
Use of the CR GND metal adaptor



dimensions shown are not binding
and may be changed without notice

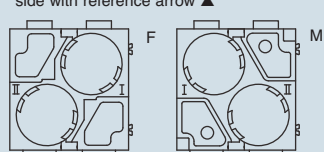
dimensions in mm

CX 02 BF, CX 02 BM

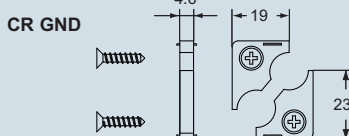


contacts side (front view)

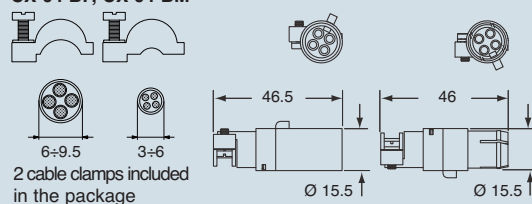
side with reference arrow ▲



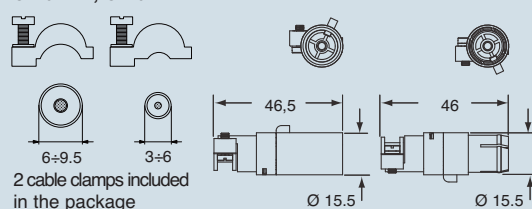
- footprint 2 modules



CX 04 BF, CX 04 BM



CX 01 BF, CX 01 BM



- conductors stripping length see page 178
- crimp contacts dimensions (CDF and CDM) see page 178
- for contact crimping, see the crimp tool section (10A contacts, CDF and CDM series) on pages 466, 470, 480, 482, 484, 486

MIXO modular units 8 poles + shield (each connector) 5A - 50V



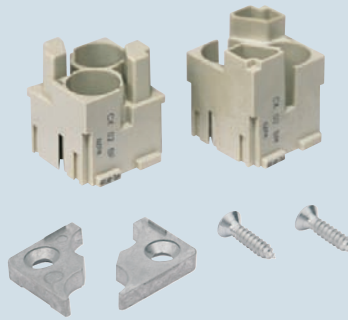
the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units page: 195

- characteristics according to EN 61984:

- 5A 50V 0,8kV 3**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 50V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +70^\circ\text{C}$ (CX 08 B)
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- maximum \varnothing of the insulator: 2.4 mm
- for crimp 5A contacts CI series using:
 - CIPZ D** crimping tool
 - CITP D** turret head
 - CIES** insertion / removal tool
- extraction tool for BUS shielded connectors from MIXO BUS insert part No. CX BES see page 440

seat for shielded connectors
metal adaptor



shielded connectors
5A crimp contacts, gold plated



NEW

description

part No.

part No.

seat for two shielded connectors
- female insert, two seats for BUS connectors
- male insert, two seats for BUS connectors

CX 02 BF
CX 02 BM

shielded BUS multi axial connectors, 8 poles + shield
- female insert, eight contact seats + shield
- male insert, eight contact seats + shield

CX 08 BF
CX 08 BM

metal adaptor (optional)

CR GND

5A female crimp contacts

0.08-0.21 mm² AWG 24-28
0.13-0.33 mm² AWG 26÷20
0.33-0.52 mm² AWG 20-22

CIFD 0.2
CIFD 0.3
CIFD 0.5

5A male crimp contacts

0.08-0.21 mm² AWG 24-28
0.13-0.33 mm² AWG 26÷20
0.33-0.52 mm² AWG 20-22

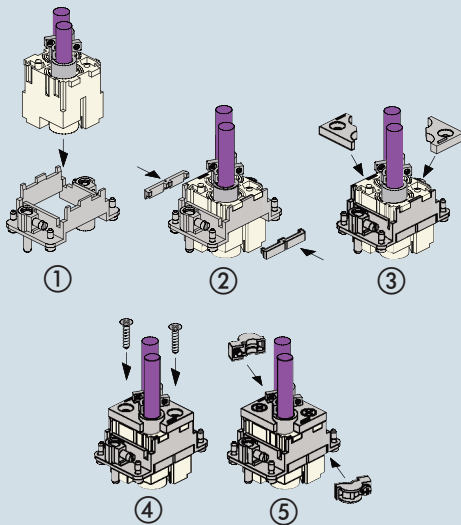
CIMD 0.2
CIMD 0.3
CIMD 0.5

gold plated

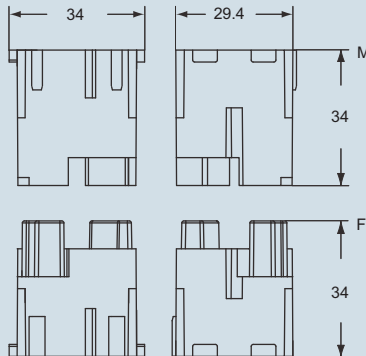
Note:

The shielded connectors have their shield insulated from the enclosure's earthing point.
If you wish to earth-connect the shield, install on the panel an anchorage for shielded cables CR..ST (see page 425) or the CR GND metal adaptor.

Use of the CR GND metal adaptor

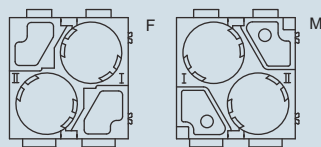


dimensions in mm
CX 02 BF, CX 02 BM



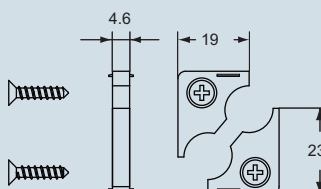
contacts side (front view)

side with reference arrow ▲

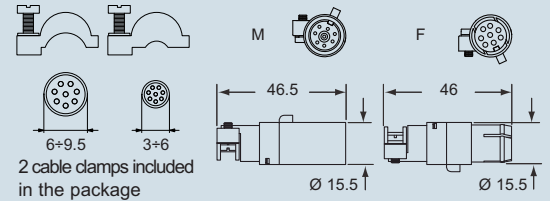


- 2 frame slots

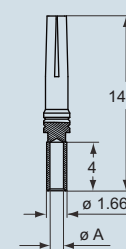
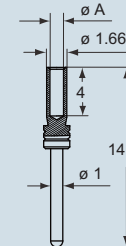
CR GND



CX 08 BF, CX 08 BM

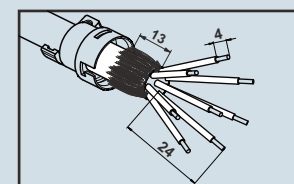


CIF and CIM



CIF, CIM contacts

conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4



dimensions shown are not binding
and may be changed without notice

MIXO modular units 1 pole + shield (each connector) 16A - 50V



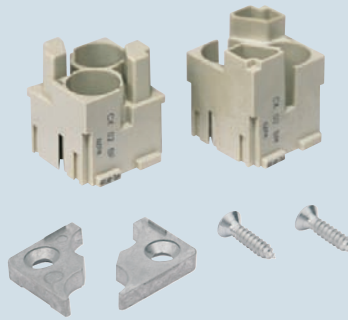
the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units page: 195

- characteristics according to EN 61984:

- 16A 50V 0,8kV 3**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 50V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40^\circ\text{C} \dots +70^\circ\text{C}$ (CX 01 BC)
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 1 \text{ m}\Omega$ (no CX 02 B)
- CX 01 BC shielded connector for **cable with a typical impedance of 50 Ω** (atténuation see page 501)
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF and CCM series) on pages 466, 470, 480, 482, 484, 486
- extraction tool for BUS shielded connectors from MIXO BUS insert part No. CX BES see page 440

seat for shielded connectors metal adaptor



shielded connectors 16A crimp contacts, silver or gold plated



NEW

description

part No.

part No.

part No.

- seat for two shielded connectors
- female insert, two seats for BUS connectors
- male insert, two seats for BUS connectors

CX 02 BF
CX 02 BM

- shielded BUS coaxial connectors, 1 pole + shield
- female insert, one contact seats + shield
- male insert, one contact seats + shield

CX 01 BCF
CX 01 BCM

metal adaptor (optional)

CR GND

16A female contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm ²	AWG 26-22	three grooves
0.5 mm ²	AWG 20	with no grooves
0.75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1.5 mm ²	AWG 16	two grooves
2.5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

silver plated

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

gold plated

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

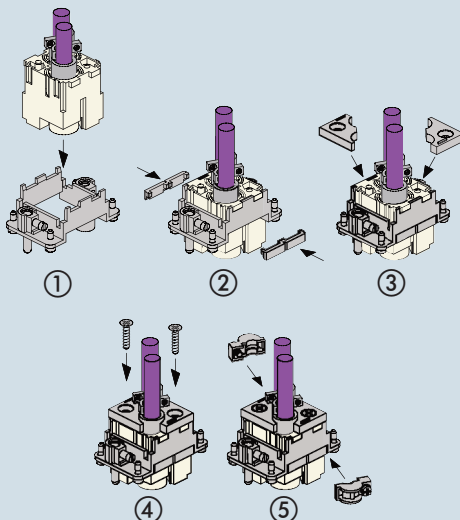
CCMA 0.3
CCMA 0.5
CCMA 0.7
CCMA 1.0
CCMA 1.5
CCMA 2.5
CCMA 3.0
CCMA 4.0

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

Note:

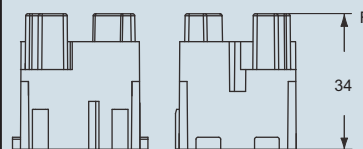
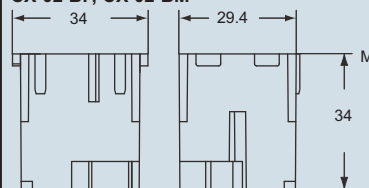
The shielded connectors have their shield insulated from the enclosure's earthing point.
If you wish to earth-connect the shield, install on the panel an anchorage for shielded cables CR..ST (see page 425) or the CR GND metal adaptor.

Use of the CR GND metal adaptor



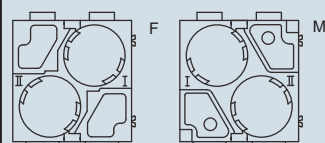
dimensions shown are not binding and may be changed without notice

dimensions in mm
CX 02 BF, CX 02 BM



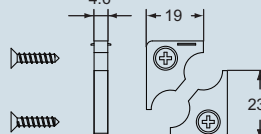
contacts side (front view)

side with reference arrow ▲

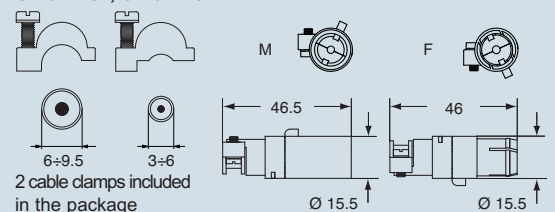


- 2 frame slots

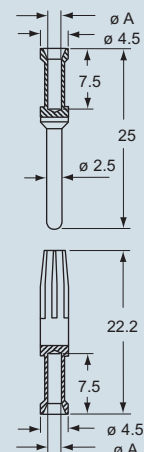
CR GND



CX 01 BCF, CX 01 BCM

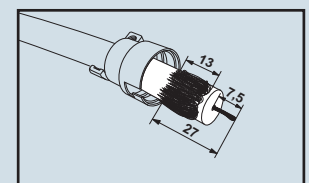


CCF and CCM



CCF and CCM contacts

conductor section mm ²	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



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

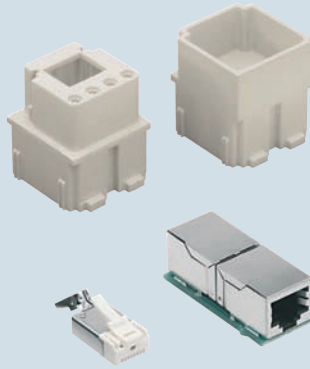
- characteristics according to EN 61984:

10A 250V 4kV 3

- cUL (UL for USA and Canada) CSA, GOST certified
- insulation resistance: $\geq 10 \text{ G}\Omega$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 3 \text{ m}\Omega$
- for contact crimping, see the crimp tool section (10A contacts, CDF and CDM series) on pages 466, 470, 480, 482, 484, 486

WARNING: ,the female inserts can only be used on high or flush mounting enclosures

housing for RJ45 connectors, RJ45 connectors



10A crimp contacts silver and gold plated



description	part No.	part No.	part No.
without RJ45 connector and without contacts (to be ordered separately)			
- socket inserts for 1 RJ45 female connector and for 4 10A (CDF) female contacts	CX 01 JF		
- plug inserts for 1 RJ45 male connector and for 4 10A (CDM) male contacts	CX 01 JM		
- RJ45 female connector, 8 data contacts	CX 8 JF *		
- RJ45 female connector, 8 data contacts / 2 power contacts	CX 8/2 JF *		
- RJ45 male connector, 4 data contacts	CX 4 JM		
- RJ45 male connector, 4 data contacts / 2 power contacts	CX 4/2 JM		
- RJ45 male connector, 6 data contacts / 2 power contacts	CX 6/2 JM		
- RJ45 male connector, 8 data contacts	CX 8 JM		
- RJ45 male connector, 4 data contacts cat. 5 e	CX 4E JM		
10A female crimp contacts			
0.14-0.37 mm ² AWG 26-22		CDFA 0.3	CDFD 0.3
0.5 mm ² AWG 20		CDFA 0.5	CDFD 0.5
0.75 mm ² AWG 18		CDFA 0.7	CDFD 0.7
1 mm ² AWG 18		CDFA 1.0	CDFD 1.0
1.5 mm ² AWG 16		CDFA 1.5	CDFD 1.5
2.5 mm ² AWG 14		CDFA 2.5	CDFD 2.5
10A male crimp contacts			
0.14-0.37 mm ² AWG 26-22		CDMA 0.3	CDMD 0.3
0.5 mm ² AWG 20		CDMA 0.5	CDMD 0.5
0.75 mm ² AWG 18		CDMA 0.7	CDMD 0.7
1 mm ² AWG 18		CDMA 1.0	CDMD 1.0
1.5 mm ² AWG 16		CDMA 1.5	CDMD 1.5
2.5 mm ² AWG 14		CDMA 2.5	CDMD 2.5

* 4 pole version on request, part No. **CX 4 JF** and **CX 4/2 JF** with "crossover" link

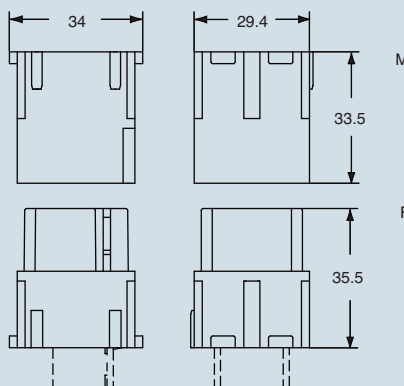
RJ45 connector features:

- RJ45 insert, Class 5 Ethernet
- nominal current: 2.1A at 70 °C
- nominal voltage: 50VDC / 35VAC
- IDC terminal:
- for 0.22 mm² - 0.24 mm² (AWG 24) data cables
- for 0.34 mm² - 0.38 mm² (AWG 22) power cables
- temperature range: from -40°C to 120 °C
- nickel plated brass screening
- crimp pliers: **CJPZY**
- screened cable stripper: **CJST**

crimp contacts dimensions (CDF and CDM) see page 178

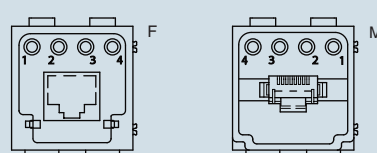
dimensions in mm

CX 01 JF, CX 01 JM



contacts side (front view)

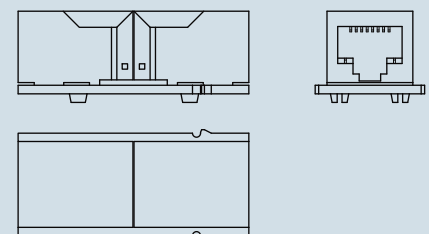
side with reference arrow ▲



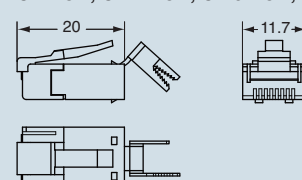
- footprint 2 modules

dimensions in mm

CX 4 JF, CX 4/2 JF, CX 8 JF, CX 8/2 JF



CX 4 JM, CX 4/2 JM, CX 6/2 JM, CX 8 JM, CX 4E JM



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

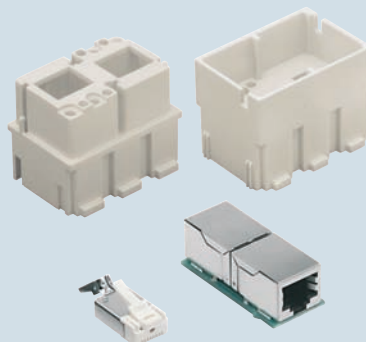
- characteristics according to EN 61984:

10A 250V 4kV 3

- cUL (UL for USA and Canada) CSA, GOST certified
- insulation resistance: $\geq 10 \text{ G}\Omega$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 3 \text{ m}\Omega$
- for contact crimping, see the crimp tool section (10A contacts, CDF and CDM series) on pages 466, 470, 480, 482, 484, 486

WARNING: the female inserts can only be used on high or flush mounting enclosures

housing for RJ45 connectors, RJ45 connectors



10A crimp contacts silver and gold plated



description

part No.

part No.

part No.

without RJ45 connector and without contacts (to be ordered separately)

- socket inserts for 2 RJ45 female connectors and for 8 10A (CDF) female contacts
- plug inserts for 2 RJ45 male connectors and for 8 10A (CDM) male contacts

CX 02 JF

CX 02 JM

- RJ45 female connector, 8 data contacts
- RJ45 female connector, 8 data contacts / 2 power contacts

CX 8 JF *

CX 8/2 JF *

- RJ45 male connector, 4 data contacts
- RJ45 male connector, 4 data contacts / 2 power contacts
- RJ45 male connector, 6 data contacts / 2 power contacts
- RJ45 male connector, 8 data contacts
- RJ45 male connector, 4 data contacts cat. 5 e

CX 4 JM

CX 4/2 JM

CX 6/2 JM

CX 8 JM

CX 4E JM

10A female crimp contacts

0.14-0.37 mm ²	AWG 26-22
0.5 mm ²	AWG 20
0.75 mm ²	AWG 18
1 mm ²	AWG 18
1.5 mm ²	AWG 16
2.5 mm ²	AWG 14

10A male crimp contacts

0.14-0.37 mm ²	AWG 26-22
0.5 mm ²	AWG 20
0.75 mm ²	AWG 18
1 mm ²	AWG 18
1.5 mm ²	AWG 16
2.5 mm ²	AWG 14

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

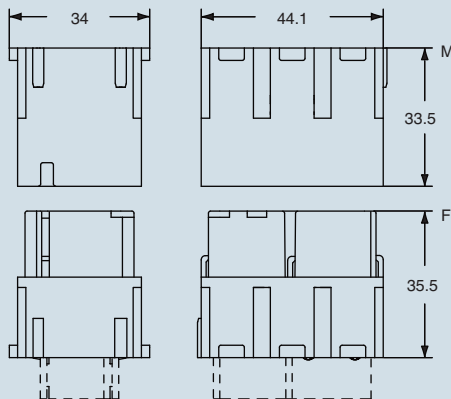
CDMA 0.3
CDMA 0.5
CDMA 0.7
CDMA 1.0
CDMA 1.5
CDMA 2.5

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

* 4 pole version on request, part No. **CX 4 JF** and **CX 4/2 JF** with "crossover" link

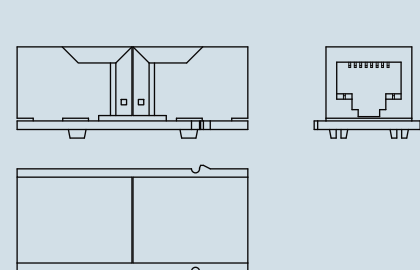
dimensions in mm

CX 02 JF, CX 02 JM



dimensions in mm

CX 4 JF, CX 4/2 JF, CX 8 JF, CX 8/2 JF



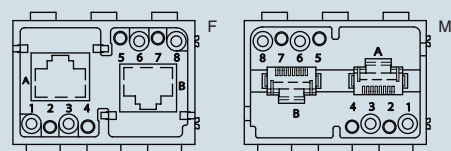
RJ45 connector features:

- RJ45 insert, Class 5 Ethernet
- nominal current: 2.1A at 70 °C
- nominal voltage: 50VDC / 35VAC
- IDC terminal:
 - for 0.22 mm² - 0.24 mm² (AWG 24) data cables
 - for 0.34 mm² - 0.38 mm² (AWG 22) power cables
- temperature range: from -40°C to 120 °C
- nickel plated brass screening
- crimp pliers: **CJPZY**
- screened cable stripper: **CJST**

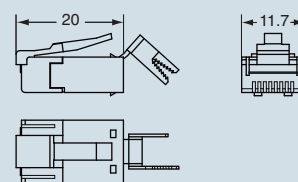
crimp contacts dimensions (CDF and CDM) see page 178

contacts side (front view)

side with reference arrow ▲



CX 4 JM, CX 4/2 JM, CX 6/2 JM, CX 8 JM, CX 4E JM



dimensions shown are not binding and may be changed without notice

- footprint 3 modules

MIXO modular units for 1 USB connector

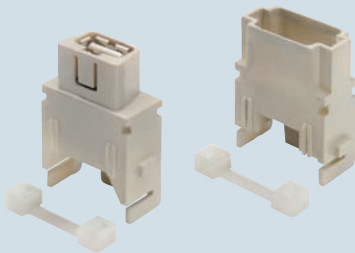


the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units page: 194 - 195

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

housing for USB male connectors,
USB female - female connectors



NEW

patch cable USB



NEW

description	part No.	part No.
<p>- female insert with USB female - female connector - male insert without USB male connector (patch cable to be ordered separately)</p>	<p>CX 01 UF CX 01 UM</p>	
patch cable USB-A / USB-A, 2 m **	dimensions in mm	dimensions in mm
<p>** 5 m on request</p> <p>USB connector features:</p> <ul style="list-style-type: none">- USB-A / USB-A Hi-Speed - 2.0 insert- temperature range: from -25 °C to +80 °C <div data-bbox="67 1021 523 1429"><p>FIXING</p></div> <div data-bbox="67 1473 523 1906"><p>REOPENING</p></div>	<p>dimensions in mm</p>	<p>dimensions in mm</p>
<p>dimensions shown are not binding and may be changed without notice</p>	<p>contacts side (front view)</p> <p>side with reference arrow ▲</p> <p>- 1 frame slot</p>	<p>USB A-M</p> <p>1 4</p> <p>1 4</p> <p>SHIELD SHIELD</p>

MIXO modular units for 9-pole crimp D-SUB connector



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

* enclosures: housings or high construction hoods

- characteristics according to EN 61984:

5A 50V 0,8kV 3

- certifications: (UL), (CSA), (CCC); the certifications shown in brackets are being applied for

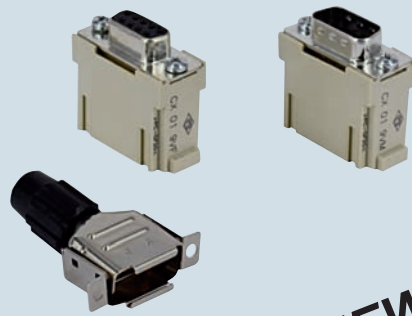
- for crimp 5A contacts CI series using:

CIPZ D crimping tool

CIVTP D turret head

CIVES insertion / removal tool

module adapter for 1 D-SUB connector



NEW

5A crimp contacts for D-SUB, gold plated



description

part No.

part No.

seat for 1 D-SUB connector and shield (included)

- female insert with connector
- male insert with connector

CX 01 9VF
CX 01 9VM

5A female crimp contacts

0.08-0.13 mm² AWG 28-26

0.20-0.52 mm² AWG 24-20

5A male crimp contacts

0.08-0.13 mm² AWG 28-26

0.20-0.52 mm² AWG 24-20

CIVFD 0.1
CIVFD 0.5

CIVMD 0.1
CIVMD 0.5

gold plated

we recommend the use of CRF CX / CRM CX code pins

Required material:

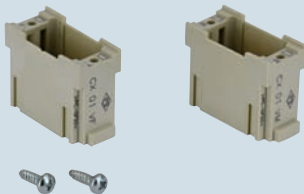
- Seat for 1 D-SUB connector (without connector and shield):

CX 01 VM (for male connector)

CX 01 VF (for female connector)

Can also be used with 15-pole D-SUB Hi-Density connectors.

For further information, please contact I.L.M.E. SpA.



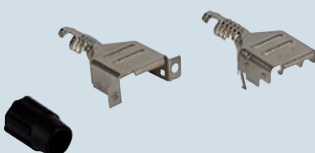
- Special version with cable contacts section 0.32-0.82 mm² AWG 22-18

CIVFD 0.8 female

CIVMD 0.8 male

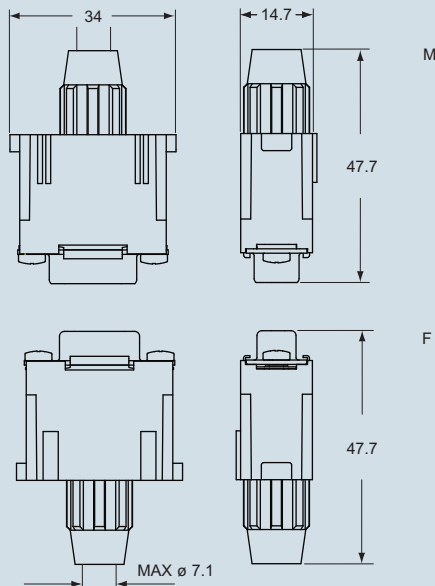


- CR CX VS shield for CX 01 VM/VF inserts



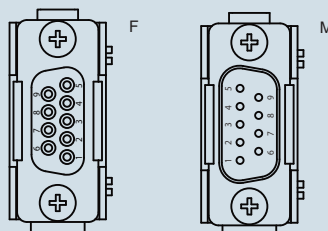
dimensions in mm

CX 01 9VF, CX 01 9VM



contacts side (front view)

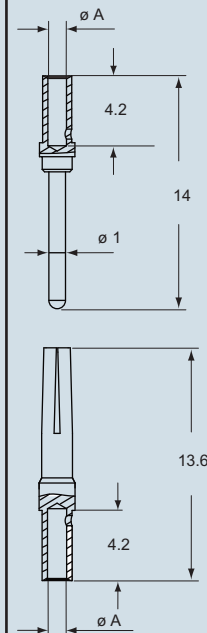
side with reference arrow ▲



- footprint 1 module

dimensions in mm

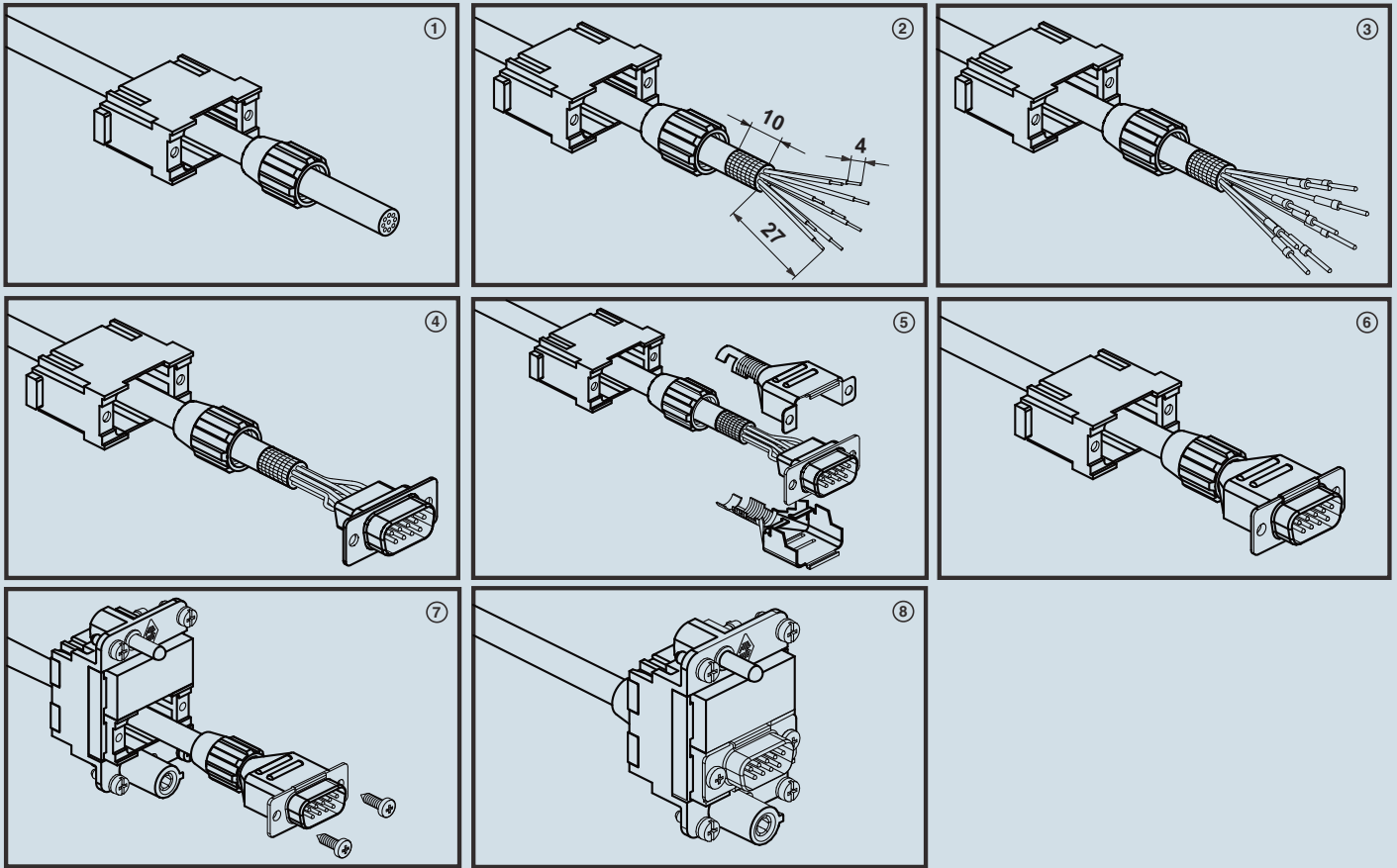
CIVF and CIVM



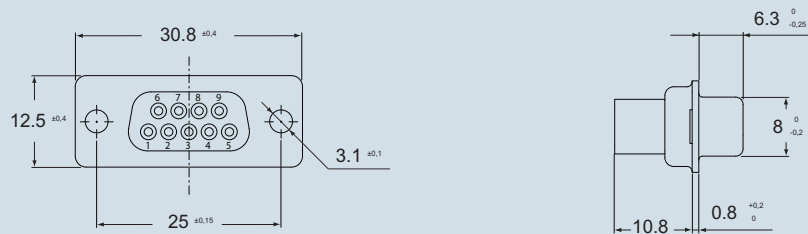
CIVF and CIVM contacts

conductor section mm ²	conductor slot ø A (mm)	conductors stripping length (mm)
0.08+0.13	0.63	4
0.20+0.52	1.14	4

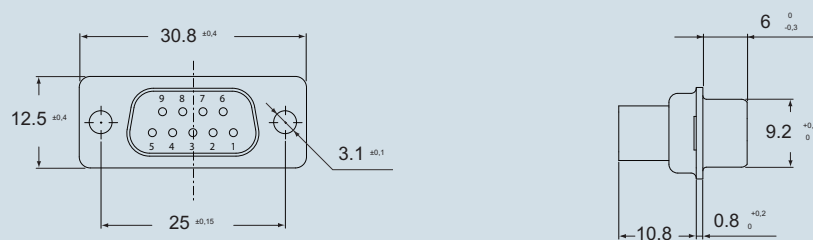
dimensions shown are not binding and may be changed without notice



9-pole female CRIMP D-SUB connector (can be used with CX 01 VF)



9-pole male CRIMP D-SUB connector (can be used with CX 01 VM)



dimensions in mm

MIXO inserts for multipole connectors for fibre optic and coaxial contacts.

LWL contacts according to CECC 78 001-801 (former DIN 41 626 part 3) for 1 / 2.2 mm POF (Polymer Optical Fibre) and 1.5 / 2.3 MOST (Media Oriented System Transport) optical fibre.

Coaxial contacts (DIN 41 626) 50 ohm and 75 ohm.

The new MIXO insert allows the use of contacts for fibre optic and contacts for coaxial cables.

To protect against EMC-problems (electromagnetic interference) and for the realization of galvanic separations on BUS applications of PROFINET/Ethernet fields, solutions with optical fibres are recommended.

Fibre optic connectors are many industrial applications, particularly, modern railway vehicles, converters, wind energy, naval equipments and robots.

The new connectors can be used in applications from -40 °C up to +85°C even in case of frequent temperature variability.

The inserts can be mounted in CX .. TF/TM frames and in the relative enclosures for industrial applications to achieve IP65/66/67/68/69K degree of protection (according to the required versions). The realization of mixed connectors electrical/optical are also possible.



These new inserts have the same features as the standard MIXO series with easy module fixing system.

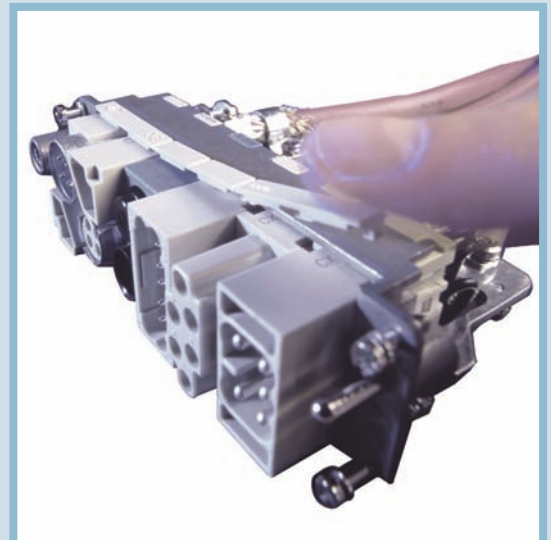
On request we may provide also POF (Ø 2.2 mm external diameter, Ø 1.0 mm fibre) and MOST-POF (Ø 2,3 mm external diameter, Ø 1.0 mm fibre) contacts for use at higher temperatures and high temperature variations.

For further optical fibre versions, please contact us.

To assemble the contacts it is needed to cut and strip the cable, to crimp the contact (even gluing is possible) and then to grind the fibre tip protruding from the contact.

In the same MIXO insert it is also possible to use coaxial connectors for 50 ohm (RG 316/U, RG 174/U and RG 188 A/U) and 75 ohm (RG 179 B/U, RG 187 A/U and TZX 75 101) cables.

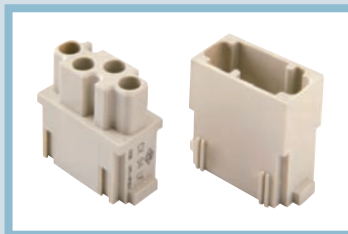
To remove both male and female contacts please use the correct extraction tool.



CECC 78 001-801 contacts
(DIN 41 626, part 3)



Mixo insert
for 4 optical fibre contacts



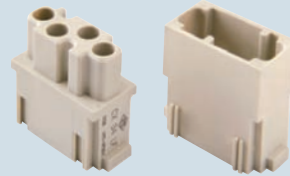
DIN 41 626 contacts



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**



NEW

POF / MOST crimp contacts



NEW

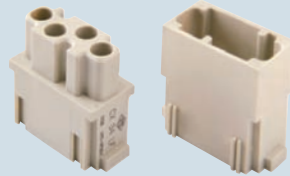
description	part No.	part No.
without contacts (to be ordered separately) - female inserts for female contacts - male inserts for male contacts	CX 04 LF CX 04 LM	
female contacts POF * 1.0 mm male contacts POF * 1.0 mm		CX PLF CX PLM
female contacts MOST ** 1/1.5 mm male contacts MOST ** 1/1.5 mm		CX MLF CX MLM
<p>* POF = POLYMER OPTICAL FIBRE ** MOST = MEDIA ORIENTED SYSTEM TRANSPORT</p> <p>- ambient temperature limit: -40 °C ... +85 °C - inserts are made of self-extinguishing thermoplastic resin UL 94 V0 - mechanical life: ≥ 500 cycles - max external diameter: 2.2 mm (POF) 2.3 mm (MOST) - polymer fibre diameter: 1.0 mm (POF) 1/1.5 mm (MOST)</p> <p>- attenuation: < 2.5 dB - to crimp contacts CX PLF / PLM and CX MLF / MLM please use tool CLPZ R (see the crimping tool section on page 488)</p> <p>We recommend to use CLASS enclosures with two levers or V-Type enclosures (with one or two levers) that provides a higher coupling depth due to the higher locking force they produce. We further suggest the use of code pins CRF CX / CRM CX.</p>	<p>dimensions in mm</p> <p>CX 04 LF / LM</p> <p>contacts side (front view)</p> <p>side with reference arrow ▲</p> <p>- 1 frame slot</p>	<p>dimensions in mm</p> <p>cable stripping for fibre optic</p> <p>male contact</p> <p>female contact</p>

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: 194 - 195

modular units,
crimp / solder connections



NEW

crimp / solder coaxial contacts



NEW

description

part No.

part No.

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

CX 04 LF
CX 04 LM

female coaxial contacts 50Ω
male coaxial contacts 50Ω

CX 50 F
CX 50 M

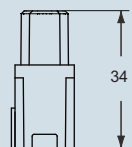
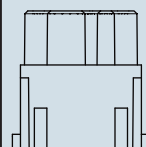
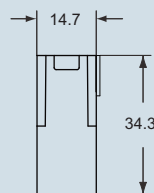
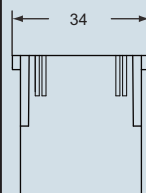
female coaxial contacts 75Ω
male coaxial contacts 75Ω

CX 75 F
CX 75 M

- inserts are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- in accordance with standard DIN 41625 part 2
- finishing: contact surfaces and body gold plated, back end and ferrule nickel plated
- frequency range: ≤ 2 GHz
- reflection coefficient: ≤ 0.1
- rated voltage: 50V
- rated current: 1.5A
- to crimp contacts CX 50 M/F, CX 75 M/F use tool COPZ (see the crimping tool section on page 490)

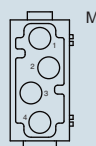
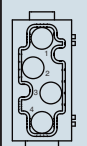
dimensions in mm

CX 04 LF / LM



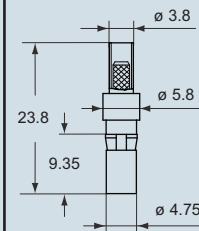
contacts side (front view)

side with reference arrow ▲

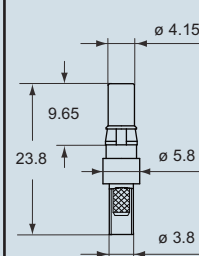


- 1 frame slot

dimensions in mm

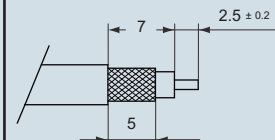


M (CX 50 M / CX 75 M)



F (CX 50 F / CX 75 F)

conductor stripping



coaxial contacts	for cables	ø external	part No.
50Ω	RG 316/U	2,49 $\pm 0,1$	CX 50 F CX 50 M
	RG 174/U	2,79 $\pm 0,127$	
	RG 188 A/U	2,79 max	
75Ω	RG 179 B/U	2,54 $\pm 0,127$	CX 75 F CX 75 M
	RG 187 A/U	2,79 max	
	TZC 75 101	2,79 max	

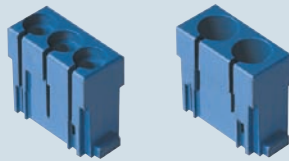
dimensions shown are not binding
and may be changed without notice

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: 194 - 195

- UL, CSA, CCC, GL, GOST certified
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles

modular units with 2 or 3 seats



pneumatic contacts with or without closing valve



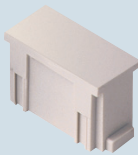
description	part No.	part No.
without contacts (to be ordered separately) - inserts with 3 housings for tube $\varnothing 1.6 \div 4.0$ - inserts with 2 housings for tube $\varnothing 6.0$	CX 03 P CX 02 P	
female contacts without closing valve - for tubes with internal $\varnothing 1.6$ mm - for tubes with internal $\varnothing 3$ mm - for tubes with internal $\varnothing 4$ mm - for tubes with internal $\varnothing 6$ mm male contacts without closing valve - for tubes with internal $\varnothing 1.6$ mm - for tubes with internal $\varnothing 3$ mm - for tubes with internal $\varnothing 4$ mm - for tubes with internal $\varnothing 6$ mm		CX 1.6 PF CX 3.0 PF CX 4.0 PF CX 6.0 PF CX 1.6 PM CX 3.0 PM CX 4.0 PM CX 6.0 PM
female contacts with closing valve - for tubes with internal $\varnothing 1.6$ mm - for tubes with internal $\varnothing 3$ mm - for tubes with internal $\varnothing 4$ mm - for tubes with internal $\varnothing 6$ mm male contacts (use contacts without closing valve)		CX 1.6 VC CX 3.0 VC CX 4.0 VC CX 6.0 VC
Warnings: 1) Please note that the VDE-Directives do not allow the combination of electrical and liquid connections within the same connector for clear safety reasons. 2) CRM/F CX (page 430) code pins and guides must be used for pneumatic contacts modules. These pins also provide coding if pneumatic contacts modules are used exclusively.	dimensions in mm contacts side (front view) side with reference arrow ▲ - footprint 1 module	dimensions in mm <div> CX 1.6 PF/M </div> <div> CX 3.0 PF/M </div> <div> CX 4.0 PF/M </div> <div> CX 6.0 PF/M </div>

dimensions shown are not binding and may be changed without notice

the modular units inserts must be installed in suitable frames which in turn are installed in traditional housings or COB panel support. Alternatively, individual modules with a width of 14.7, can be installed in plastic supports.

frames for modular units page: 194 - 195

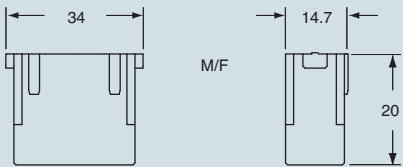
dummy module



UNDER DEVELOPMENT

description	part No.
dummy module for unused frame seats	CX FM

dimensions in mm



- footprint 1 module

dimensions shown are not binding
and may be changed without notice

1) Calculate the number of frame slots taken up by the required inserts
frame slot 1, 2 or 3 modules



	No. of frame slots
CX 02 4AF/M	1
CX 02 4BF/M	1
CX 03 4F/M	1
CX 03 4BF/M	1
CX 3/4 XDF/M	1
CX 04 XF/M	1
CX 05 SF/M	1
CX 06 CF/M	1
CX 08 CF/M	1
CX 12 DF/M	1
CX 17 DF/M	1
CX 25 IF/M	1
CX 03 P	1
CX 02 P	1
CX FM	1
CX 01 UF/M	1
CX 04 LF/M	1
CX 01 9VF/M	1
CX 02 7F/M	1



	No. of frame slots
CX 01 YF/M	2
CX 01 YPEF/M	2
CX 02 GF/M	2
CX 20 CF/M	2
CX 02 HF/M	2
CX 02 BF/M	2
CX 01 JF/M	2

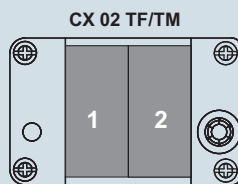


	No. of frame slots
CX 02 JF/M	3

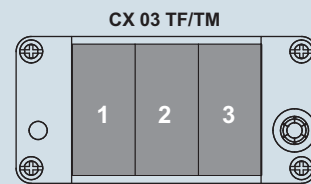
2) Select the right frame according to the number of required modules
available 1, 2, 3, 4 and 6 modules



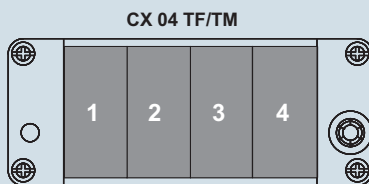
1 module



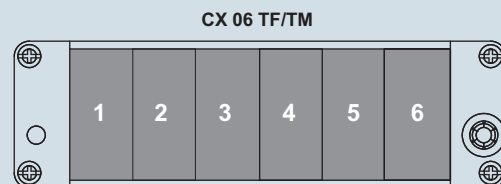
2 modules



3 modules

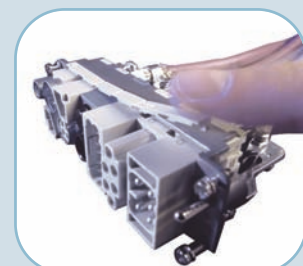


4 modules



6 modules

Fill the unused frame slots by using CX FM dummy module





enclosures:	
size "49.16"	page:
C-TYPE IP65/IP66	208 - 210
aggressive environments	326
EMC	346
panel supports:	page:
COB + adaptor	410 - 412

frames for modular units

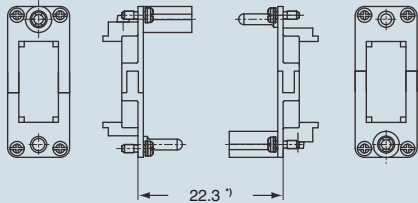
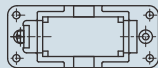
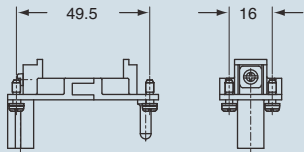


description	part No.
-------------	----------

for CZ enclosures, size 49.16	CX 01 T
-------------------------------	---------

- die-cast zinc alloy frames
- with VDE ground contacts
- possibility of mounting female and male modular units on the same frame
- polarisation on frames
- code pins CR..CX

dimensions in mm



*) distance for electric contacts: max 24 mm
distance for pneumatic contacts: max 23.5 mm

- small earth terminal for cables from 1-2,5 mm², AWG 18-14

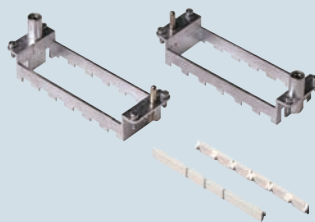
dimensions shown are not binding
and may be changed without notice

enclosures: page:

C-TYPE IP65/IP66	218 - 248
C7 IP67 stainless steel lever	254 - 257
V-TYPE IP65/IP66 stainless steel lever	260 - 275
T-TYPE IP65 insulating	282 - 285
JEI zinc-plated steel lever	288 - 295
BIG hoods	304 - 319
aggressive environments	329 - 334
EMC	348 - 351
central lever	360 - 368
IP68	374 - 389

panel supports: page:
COB 410 - 411

frames for modular units with lock-in tabs

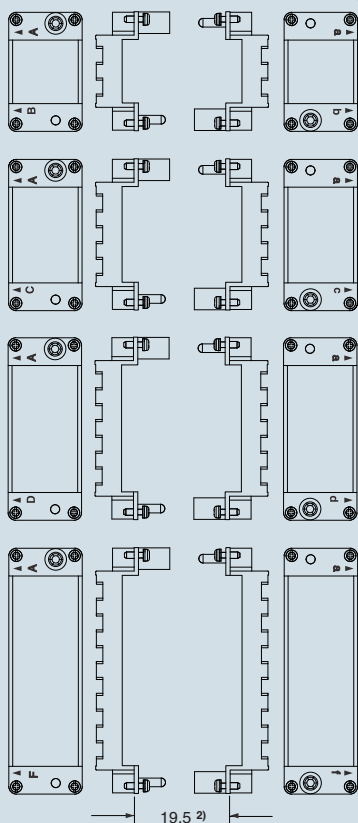


description	part No.	part No.	
frames for modular units (module lock-in tabs included)	type for hoods	type for housings	for housings size
- for 2 modular units	CX 02 TM	CX 02 TF	44.27
- for 3 modular units	CX 03 TM	CX 03 TF	57.27
- for 4 modular units	CX 04 TM	CX 04 TF	77.27 and 77.62
- for 6 modular units	CX 06 TM	CX 06 TF	104.27 and 104.62

lock-in tabs for modular units (6 units) dividable	CX CFM		
--	---------------	--	--

polarisation of frames with relative identification letters and couplings

frame for hoods ¹⁾ frames for housings ¹⁾

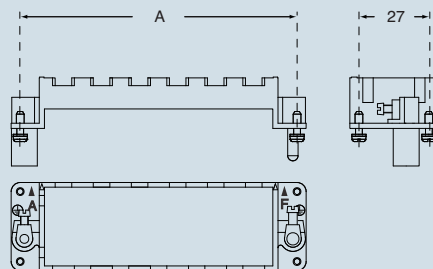


¹⁾ the frames can be used either in hoods or housings, for a correct coupling please use both frame types (one with upper-case letters and the other with lower-case letters)

²⁾ distance for electric and fibre optic contacts: max 21 mm
distance for pneumatic contacts: max 20.5 mm

dimensions shown are not binding and may be changed without notice

dimensions in mm

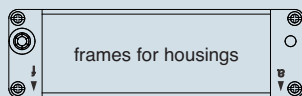
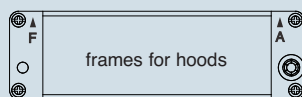


part No.	A (mm)	for housings size
CX 02 TM / TF	44	44.27
CX 03 TM / TF	57	57.27
CX 04 TM / TF	77.5	77.27 and 77.62
CX 06 TM / TF	104	104.27 and 104.62

- large earth terminal for cables from 4-6 mm², AWG 12-10
- small earth terminal for cables from 1-2,5 mm², AWG 18-14

position of modules (contact side view)

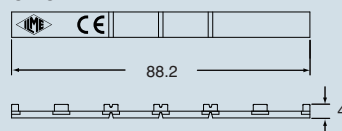
side with reference arrow ▲



side with reference arrow ▲

When two or more identical connectors of the MIXO series are used, coded pins are used prevent incorrect coupling (CR...CX series).

CX CFM



- die-cast zinc alloy frames
- with VDE ground contacts
- possibility of mounting female and male modular units on the same frame
- frames supplied with lock-in tab to attach units
- polarisation on frames
- code pins CR..CX

Warning

the module support frames are marked:

- with upper-case letters **A-B**, **A-C**, **A-D** and **A-F** (for use in hoods)
- with lower-case letters **a-b**, **a-c**, **a-d** and **a-f** (for use in housings)

Positioning the modules in the frames according to the respective letters is ensuring the specular assembly of modules, for which the hood will be coupled correctly to the housing.