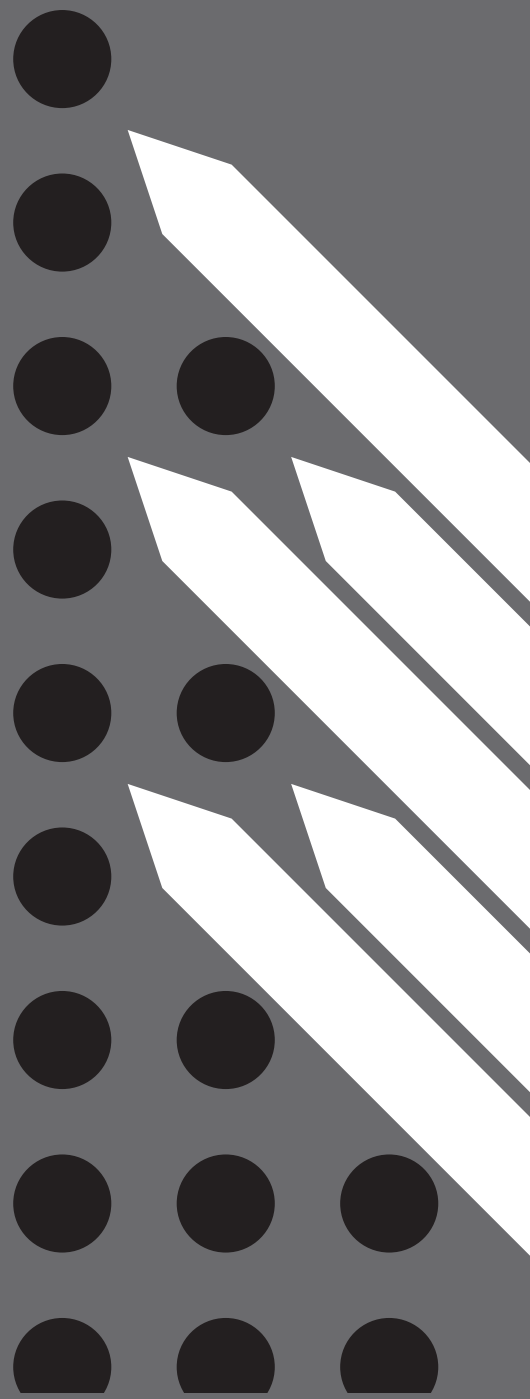


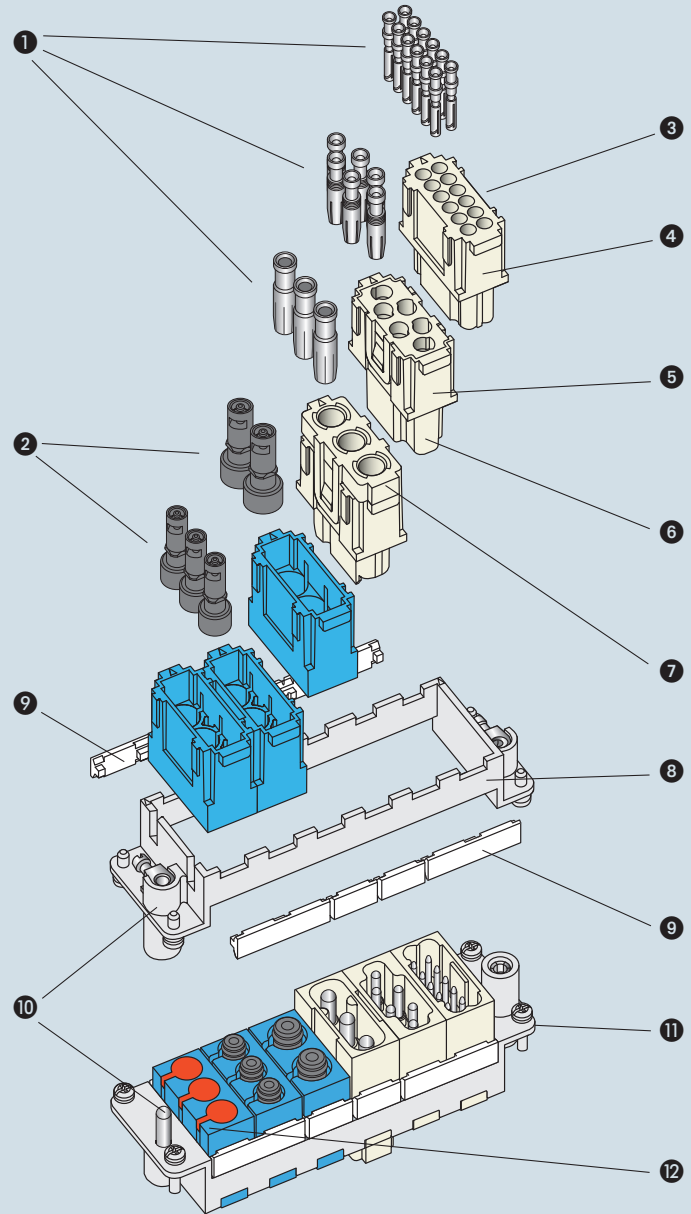
# Supplement to CN.07 catalogue New products 2010

G - 10  
ENGLISH



## Characteristics

- 1 electric contacts in silver-plated or gold-plated brass with connections to the conductors via crimping, spring clamp or axial screw.
- 2 pneumatic contacts in plastic with push-in tube connection.
- 3 modular inserts of identical size with insertion system for forming the complete module and frame lock tab.
- 4 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.
- 5 inserts in conformance with the requirements of the EN 61984 standard and certified and marked with the UL, CSA, CCC, GL marks.
- 6 inserts with asymmetric guide rails to prevent incorrect coupling.
- 7 position of contacts identified with numbers or codes on both sides of every insert.
- 8 male/female module carrier frames with predetermined locations and polarization, in die-cast zinc alloy.
- 9 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.
- 10 asymmetric earth contacts (two for frame) with wide contact surface prevent incorrect coupling; when two or more identical connectors of the MIXO series are used, coded pins prevent incorrect coupling (see Catalogue CN.07).
- 11 captive frame fastening screws, with flexible spring washer.
- 12 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 02 GF/M   | main                           | electric                                | crimp                            | 100             | 1000            | 2                  |
| CX 02 4AF/M  | main                           | electric                                | axial screw                      | 40              | 1000            | 1                  |
| CX 03 4F/M   | main                           | electric                                | crimp                            | 40              | 400/690         | 1                  |
| CX 3/4 XDF/M | main                           | electric                                | crimp                            | 40/10           | 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 02 HF/M   | main                           | electric                                | crimp                            | 16              | 2900/5000       | 2                  |
| CX 02 BF/M   | multiaxial 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                            | ---             | ---             | 2                  |
| CX 02 JF/M   | RJ45 + auxiliary               | electric                                | crimp                            | ---             | ---             | 3                  |
| CX 01 UF/M   | USB                            | electric                                | ---                              | ---             | ---             | 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 corresponding MIXO frame) the connection is totally secure and **extremely resistant, even under the most severe stresses** such as vibration and shock.

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

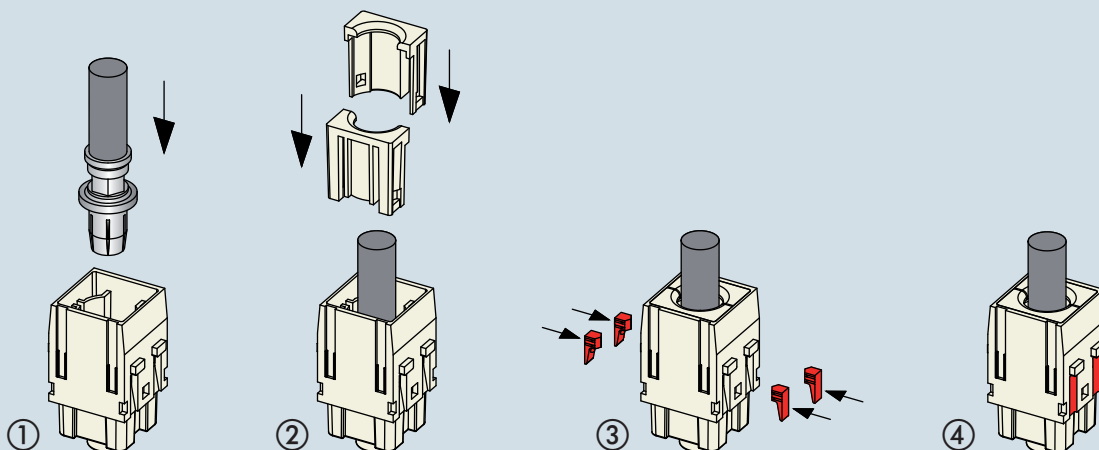
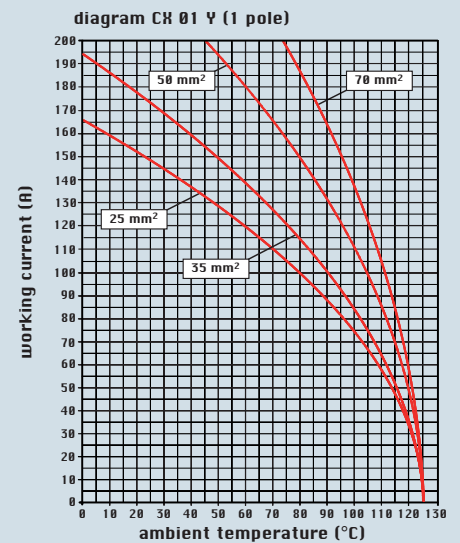
The crimping operation can be carried out quickly and efficiently with the **CYPZ hand operated hydraulic pliers**, which is pre-fitted with the suitable locator. Suitable crimp dies available on request.

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

\* max external conductor Ø = 16 mm

- 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.

**load curves - MIXO series (CX 01 Y)**



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: 151\*\*

\* enclosures: housings or high construction hoods

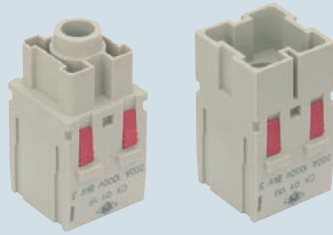
- characteristics according to EN 61984:

**200A 1000V 8kV 3**

- certifications: (cULus), (E), (CCC); the certifications shown in brackets are being applied for  
 - for maximum current load, see the insert load curve MIXO series (CX 01 Y)

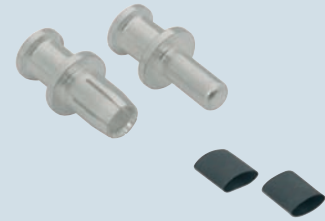
\*\* refer to catalogue page CN.07

modular units,  
crimp connections



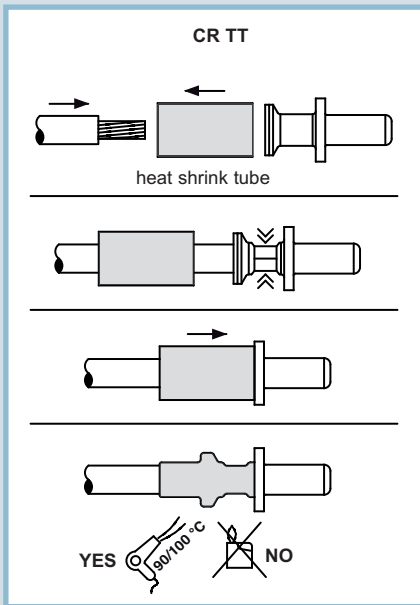
**NEW**

200A silver plated crimp contacts  
heat shrink tube

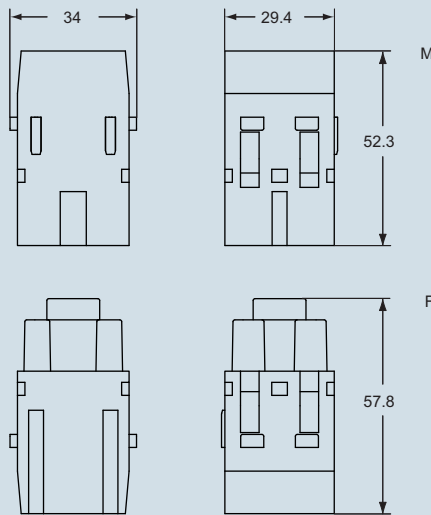


| description  | part No.                           | part No.   |
|--|------------------------------------|--|
| without contacts (to be ordered separately)<br>- female inserts for female contacts<br>- male inserts for female contacts  | <b>CX 01 YF</b><br><b>CX 01 YM</b> |  |
| <b>200A female crimp contacts</b><br>16 mm <sup>2</sup> AWG 6 one groove (back side)<br>25 mm <sup>2</sup> AWG 4 with no grooves<br>35 mm <sup>2</sup> AWG 2 one groove<br>50 mm <sup>2</sup> AWG 1 two grooves<br>70 mm <sup>2</sup> AWG 2/0 with no grooves<br><br><b>200A male crimp contacts</b><br>16 mm <sup>2</sup> AWG 6 one groove (back side)<br>25 mm <sup>2</sup> AWG 4 with no grooves<br>35 mm <sup>2</sup> AWG 2 one groove<br>50 mm <sup>2</sup> AWG 1 two grooves<br>70 mm <sup>2</sup> AWG 2/0 with no grooves |                                    | <b>CYFA 16</b><br><b>CYFA 25</b><br><b>CYFA 35</b><br><b>CYFA 50</b><br><b>CYFA 70</b><br><br><b>CYMA 16</b><br><b>CYMA 25</b><br><b>CYMA 35</b><br><b>CYMA 50</b><br><b>CYMA 70</b> |
| heat shrink tube for CYFA/CYMA 16 contacts or for conductor with total external Ø < 10 mm  |                                    | <b>CR TT</b>   |

silver plated

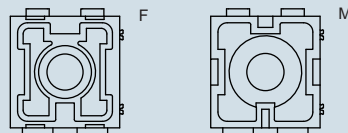


dimensions in mm



contacts side (front view)

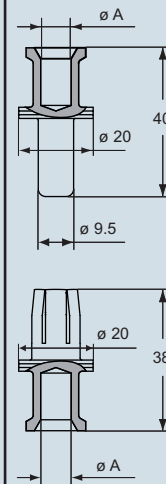
side with reference arrow ▲



- 2 frame slots

dimensions in mm

**CYF and CYM**



**CYF and CYM contacts**

| conductor section (mm <sup>2</sup> ) | ø slot 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: 151\*\*

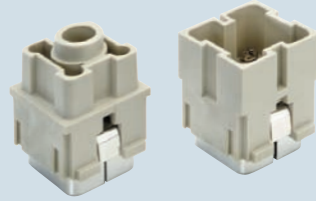
\* enclosures: housings or high construction hoods

- characteristics according to EN 61984:  
**200A**

- certifications: (c ), (), (), (); the certifications shown in brackets are being applied for

\*\* refer to catalogue page CN.07

modular units,  
crimp connections  
PE earth's module



**AVAILABLE  
2<sup>nd</sup> QUARTER 2010**

200A silver plated crimp contacts



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

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

**CX 01 YPEF  
CX 01 YPEM**

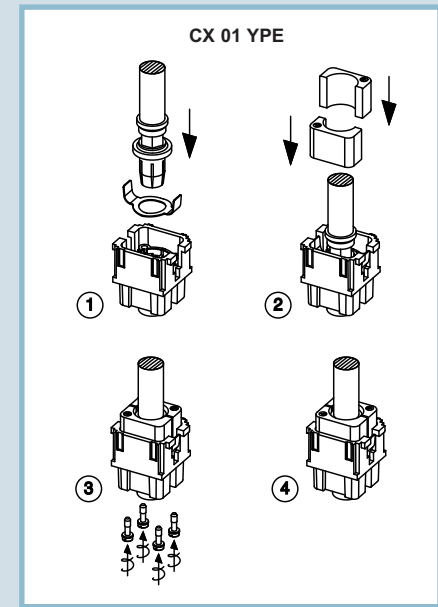
**200A female crimp contacts**  
16 mm<sup>2</sup> AWG 6 one groove (back side)  
25 mm<sup>2</sup> AWG 4 with no grooves  
35 mm<sup>2</sup> AWG 2 one groove  
50 mm<sup>2</sup> AWG 1 two grooves  
70 mm<sup>2</sup> AWG 2/0 with no grooves

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

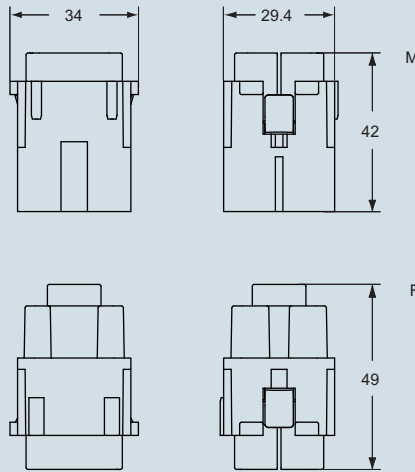
silver plated

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

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

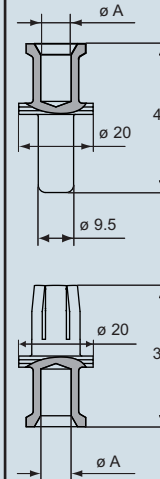


dimensions in mm



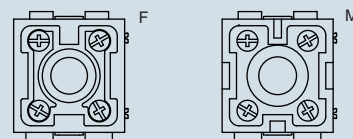
dimensions in mm

**CYF and CYM**



contacts side (front view)

side with reference arrow ▲



**CYF and CYM contacts**

| conductor section (mm <sup>2</sup> ) | ø slot 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                              |

- 2 frame slots

dimensions shown are not binding and may be changed without notice

for contacts of insert series:  
**MIXO** ..... (200A)

**hand crimp pliers, locators,  
 crimping dies**



| description  | part No.   |
|--|--|
| hydraulic hand crimping pliers for <b>CY 200A</b> series contacts tool model CEMBRE HT 45 complete with removable ILME locator CYPZ LOC for CY contacts (crimping dies are not included) *   | <b>CYPZ</b>  |
| ILME locator for CY contacts   | <b>CYPZ LOC</b>  |
| crimping dies<br>- for CY contacts section 16 mm <sup>2</sup> (AWG 6)<br>- for CY contacts section 25 mm <sup>2</sup> (AWG 4) and section 35 mm <sup>2</sup> (AWG 2)<br>- for CY contacts section 50 mm <sup>2</sup> (AWG 1)<br>- for CY contacts section 70 mm <sup>2</sup> (AWG 2/0) | <b>CGD 25 C</b><br><b>CYD 35 C</b><br><br><b>CYD 50 C</b><br><b>CYD 70 C</b> |

\* It is also possible to use the CYPZ pliers with the CG 100A contact series, by simply fitting the CGPZ LOC with the appropriate crimping dies CGD 16 C, CGD 25 C or CGD 35 C purchased separately.

**General specifications**

The CYPZ pliers are a hydraulically operated tool suitable for manually crimping ILME CY series (200A max) removable crimp contacts which may be used in MIXO series type CY.

By using a suitable, hexagonal footprint crimp matrix pair, these pliers allow crimped connections to be made which conform to the highest quality standards.

The main features of these pliers are listed below:

- Scope of application: suitable for crimping wire terminals for up to 150 mm<sup>2</sup> flexible copper wires.
- Force developed: 50 kN (6 tons)
- Nominal operating pressure: 600 bar (8.600psi)
- Dimensions: length 346 mm (13.6")
  - width (locked moving handle) 130 mm (5.1")
  - width (free moving handle) 250 mm (9.8")
- Weight: (without matrixes and without ILME locator) 2.0kg (4.4lbs)
- Recommended oil: AGIP ARNICA 32 or SHELL TELLUS OIL TX 32 or equivalent
- Other features: please read the user and maintenance manual supplied with the tool.

The pliers are equipped with a locator specifically designed for ILME CY series crimp contacts already fitted on the moving part of the pliers head by means of the Allen screw provided.

This CYPZ LOC locator is available on request if it needs replacing.

**NOTE:** It is also possible to use the CYPZ pliers with the CG100A contact series, by simply fitting the CGPZ LOC with the appropriate crimping dies CGD 16 C, CGD 25 C or CGD 3 5C purchased separately.

**User instructions**

**1) Preliminary operations**

According to requirements, the pliers can be fitted with one or more pairs of crimp matrixes selected from the matrixes listed in the catalogue, to crimp the contacts shown in the table below:

| article ref.    | punching | contacts                | mm <sup>2</sup> | AWG (mm <sup>2</sup> ) |
|-----------------|----------|-------------------------|-----------------|------------------------|
| <b>CGD 25 C</b> | ME 5     | <b>CYMA 16, CYFA 16</b> | 16              | 6 (13.3)               |
| <b>CYD 35 C</b> |          | <b>CYMA 25, CYFA 25</b> | 25              | 4 (21.2)               |
|                 | ME 9     | <b>CYMA 35, CYFA 35</b> | 35              | 2 (33.6)               |
| <b>CYD 50 C</b> | ME 12    | <b>CYMA 50, CYFA 50</b> | 50              | 1 (42.4)               |
| <b>CYD 70 C</b> | ME 17    | <b>CYMA 70, CYFA 70</b> | 70              | 2/0 (67.4)             |

**NOTE:** The CY series crimp contacts are only suitable for crimping flexible copper wires featuring a nominal section shown in the table with the crimp matrixes shown in the table. Any contacts – wires – matrixes combination which does not conform to these instructions is not physically possible (ex: using 35 mm<sup>2</sup> contacts with CGD 25 C matrixes is not possible because the pliers head would not close) or produces non conforming crimped connections or not usable in the MIXO series CY type connector modules.

Open the tool head by moving the matrix supporting hook (22) outwards until the matrix support (21) is released.

With reference to Figures 1 and 2, select a pair of matrixes suitable to the type of contact and insert them in the housings: one in the matrix support (21), the other one in the matrix pusher support (26). (NB: the two matrixes of each pair are the same). Insert the contact by resting it in the locator with the tip forward, then close the head. The contact crimp housing will be accessible in the mouth between the matrixes.

Remove the moving handle (36) by removing the handle locking belt from the handle. Before carrying out the next operations, make sure the head is fully closed to avoid damages.

The pliers head can rotate by 180° in relation to the body, thus allowing the operator to work in the most comfortable position.

**WARNING: do not force the head by trying to rotate it when the tool is under pressure.**

**2) Closing the dies**

If possible, rest the pliers head on a work top, then move the moving handle to start moving the matrixes closer to the contact, then carry on moving them until the contact is locked between the matrixes.

Push the correctly stripped and suitable long (15 mm) wire all the way in the contact crimp housing by carefully checking that the braids are fully compacted, are not damaged and, above all, are all fully inserted.

Correctly pushing the contact in the locator ensures that the matrixes are exactly in the right area to compress (the contact crimp shaft centre).

Make sure that the locator is free from any residue which would alter the position of the contact.

**3) Crimping**

Continue to operate the moving handle (pumping): the piston will gradually move forward until the matrixes come into contact. Continue the pumping action until the maximum pressure valve clicks in.

**4) Releasing the dies**

Fully press the pressure release lever (50) located on the pliers pumping body until the piston goes back and the matrixes open.

To remove the crimped contact, re-open the pliers head.

**5) Storage**

Fully return the piston as described in paragraph 4, then lock the moving handle in position by using the belt provided.

**Cleaning and maintenance**

The tool is very sturdy and does not require any special care; a correct operation is ensured by following a few simple precautions.

The tool is supplied with a user and maintenance manual, which gives all detailed instructions.

Read this manual before use.

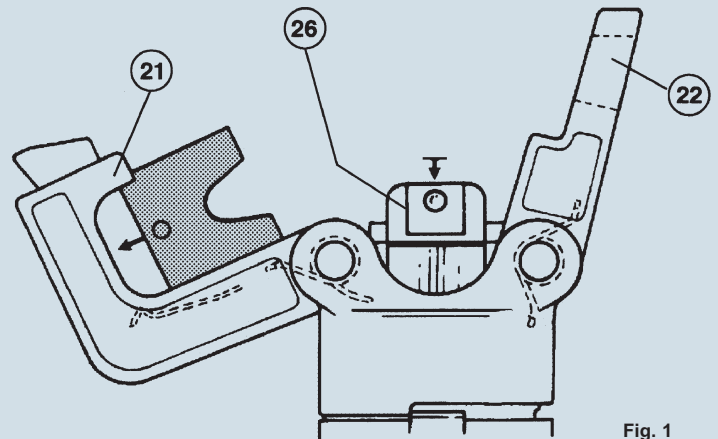


Fig. 1

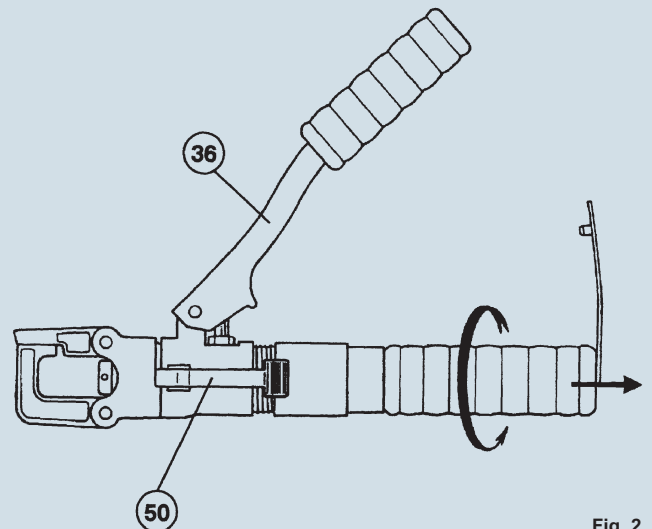


Fig. 2

**MIXO CX 3/4 XD modular connectors**

CX 3/4 XD connectors have the following characteristics:

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

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

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

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

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

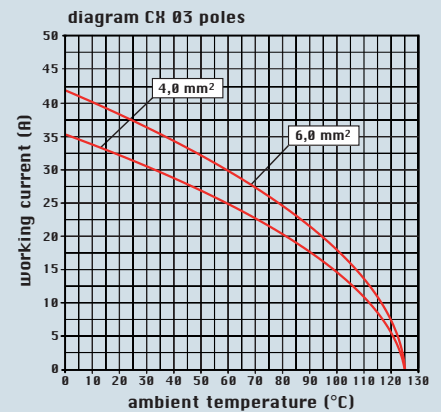
The IP2X or IPXXB protection offered by CX 3/4 XDM modules fitted with CX and CD contacts ensures greater design flexibility as it enables, for example, connectors to be used for drives of electric motors (frequency converters) and in all applications where voltage could be present on both sides of the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

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

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

- 1) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.
- 2) Certifications shown in brackets are currently being applied for.

load curves - MIXO series (CX 3/4 XD)





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: 151\*

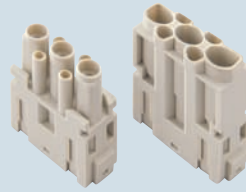
- characteristics according to EN 61984:

**3 poles 40A 830V 8kV 3**  
**4 poles 10A 830V 8kV 3**

- certifications: (c), (us), (S), (CC), (U); the certifications shown in brackets are being applied for
- for maximum current load, see the insert load curve MIXO series page 6
- for contact crimping, see the crimp tool section (40A contacts CXF, CXM series and 10A contacts CDF, CDM series) on pages 296, 298, 300, 304, 306, 308 \*
- male and female contacts to test of contact with fingers
- maximum Ø of the insulator, contacts of power: 5 mm

\* refer to catalogue page CN.07

modular units,  
 crimp connections



**AVAILABLE**  
**2<sup>nd</sup> QUARTER 2010**

40A and 10A crimp contacts  
 silver and gold plated



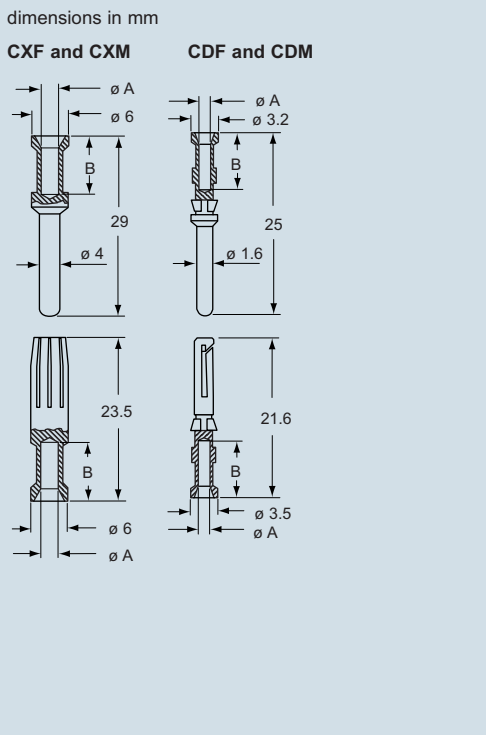
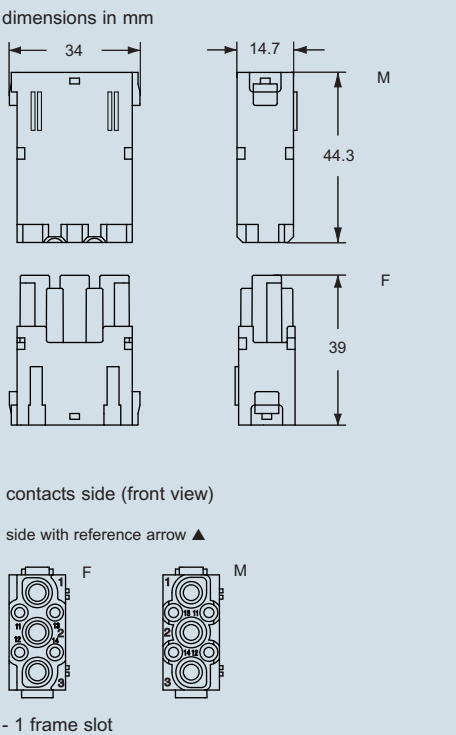
| description  | part No.                               | part No.   | part No.   |
|--|--|--|--|
| without contacts (to be ordered separately)<br>- female inserts for female contacts<br>- male inserts for male contacts  | <b>CX 3/4 XDF</b><br><b>CX 3/4 XDM</b> |  |  |
| <b>40A female crimp contacts</b><br>1.5 mm <sup>2</sup> AWG 16<br>2.5 mm <sup>2</sup> AWG 14<br>4 mm <sup>2</sup> AWG 12<br>6 mm <sup>2</sup> AWG 10   |  | <b>CXFA 1.5</b><br><b>CXFA 2.5</b><br><b>CXFA 4.0</b><br><b>CXFA 6.0</b>                                       | <b>silver plated</b>   |
| <b>40A male crimp contacts</b><br>1.5 mm <sup>2</sup> AWG 16<br>2.5 mm <sup>2</sup> AWG 14<br>4 mm <sup>2</sup> AWG 12<br>6 mm <sup>2</sup> AWG 10   |  | <b>CXMA 1.5</b><br><b>CXMA 2.5</b><br><b>CXMA 4.0</b><br><b>CXMA 6.0</b>                                       |  |
| <b>10A female contacts</b><br>0.14-0.37 mm <sup>2</sup> AWG 26-22 identification No. 1<br>0.5 mm <sup>2</sup> AWG 20 identification No. 2<br>0.75 mm <sup>2</sup> AWG 18 identification No. ②<br>1 mm <sup>2</sup> AWG 18 identification No. 3<br>1.5 mm <sup>2</sup> AWG 16 identification No. 4<br>2.5 mm <sup>2</sup> AWG 14 identification No. 5 |  | <b>CDFA 0.3</b><br><b>CDFA 0.5</b><br><b>CDFA 0.7</b><br><b>CDFA 1.0</b><br><b>CDFA 1.5</b><br><b>CDFA 2.5</b> | <b>silver plated</b><br><br><br><br><br><b>gold plated</b>   |
| <b>10A male contacts</b><br>0.14-0.37 mm <sup>2</sup> AWG 26-22 identification No. 1<br>0.5 mm <sup>2</sup> AWG 20 identification No. 2<br>0.75 mm <sup>2</sup> AWG 18 identification No. ②<br>1 mm <sup>2</sup> AWG 18 identification No. 3<br>1.5 mm <sup>2</sup> AWG 16 identification No. 4<br>2.5 mm <sup>2</sup> AWG 14 identification No. 5   |  | <b>CDMA 0.3</b><br><b>CDMA 0.5</b><br><b>CDMA 0.7</b><br><b>CDMA 1.0</b><br><b>CDMA 1.5</b><br><b>CDMA 2.5</b> | <b>CDMD 0.3</b><br><b>CDMD 0.5</b><br><b>CDMD 0.7</b><br><b>CDMD 1.0</b><br><b>CDMD 1.5</b><br><b>CDMD 2.5</b> |

| CXF and CXM contacts              |                         |        |
|-----------------------------------|-------------------------|--------|
| conductor section mm <sup>2</sup> | conductor slot ø A (mm) | B (mm) |
| 1.5                               | 1.8                     | 9      |
| 2.5                               | 2.2                     | 9      |
| 4                                 | 2.85                    | 9.6    |
| 6                                 | 3.5                     | 9.6    |

| CDF and CDM contacts              |                         |        |
|-----------------------------------|-------------------------|--------|
| conductor section mm <sup>2</sup> | conductor slot ø A (mm) | 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      |

- stripping length see section feature of inserts on page 13 catalogue CN.07



dimensions shown are not binding and may be changed without notice

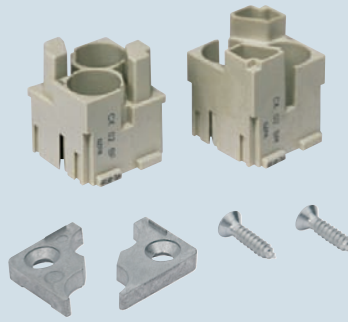
the modular inserts must be installed in suitable frames which are then mounted in traditional housings or COB panel support

frames for modular units ..... page: 151\*

- characteristics according to EN 61984:  
**5A 50V 0,8kV 3**
- certifications: UL, CSA, CCC (CX 08 B are being applied for)
- extraction tool for BUS shielded connectors from MIXO BUS insert part No. CX BES see page 277 \*
- maximum Ø 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

\* refer to catalogue page CN.07

## seat for shielded connectors metal adaptor



## shielded connectors 5A crimp contacts, gold plated



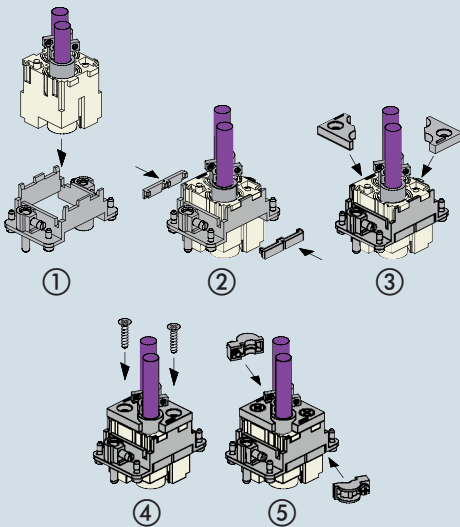
**AVAILABLE  
2<sup>nd</sup> QUARTER 2010**

| description   | part No.                           | part No.  |
|---|------------------------------------|---|
| seat for two shielded connectors<br>- female insert, two seats for BUS connectors<br>- male insert, two seats for BUS connectors                      | <b>CX 02 BF</b><br><b>CX 02 BM</b> |   |
| shielded BUS multi axial connectors, 8 poles + shield<br>- female insert, eight contact seats + shield<br>- male insert, eight contact seats + shield |                                    | <b>CX 08 BF</b><br><b>CX 08 BM</b>                    |
| metal adaptor (optional)  | <b>CR GND</b>                      |   |
| 5A female crimp contacts<br>0.08+0.21 mm <sup>2</sup> AWG 24÷28<br>0.13+0.33 mm <sup>2</sup> AWG 22÷26<br>0.33+0.52 mm <sup>2</sup> AWG 20÷22         |                                    | <b>CIFD 0.2</b><br><b>CIFD 0.3</b><br><b>CIFD 0.5</b> |
| 5A male crimp contacts<br>0.08+0.21 mm <sup>2</sup> AWG 24÷28<br>0.13+0.33 mm <sup>2</sup> AWG 22÷26<br>0.33+0.52 mm <sup>2</sup> AWG 20÷22           |                                    | <b>CIMD 0.2</b><br><b>CIMD 0.3</b><br><b>CIMD 0.5</b> |

gold plated

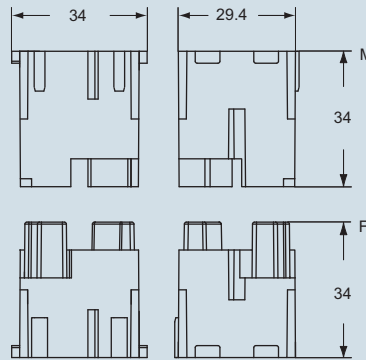
**Note:**  
The shielded connectors have their shield insulated from the enclosure's earthing point.  
If you wish to earth-connect the shield, install on the panel an anchorage for shielded cables CR..ST (see page 266 catalogue CN.07) or the CR GND metal adaptor.

### Use of the CR GND metal adaptor



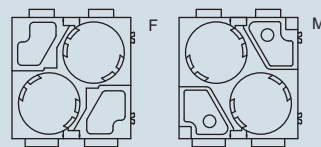
dimensions in mm

### CX 02 BF, CX 02 BM



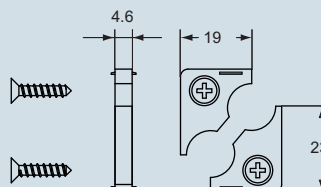
contacts side (front view)

side with reference arrow ▲

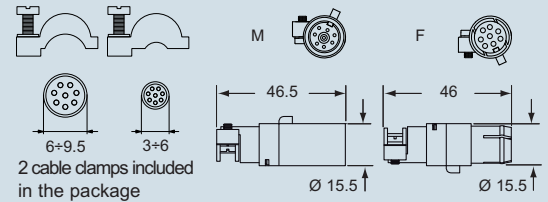


- 2 frame slots

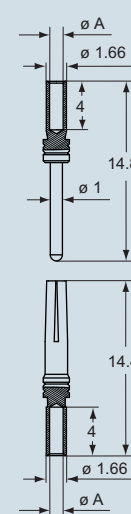
### CR GND



### CX 08 BF, CX 08 BM



### CIF and CIM



### CIF, CIM contacts

| conductor section mm <sup>2</sup> | conductor slot ø A (mm) |
|-----------------------------------|-------------------------|
| 0.08+0.21                         | 0.64                    |
| 0.13+0.33                         | 0.90                    |
| 0.33+0.52                         | 1.12                    |

dimensions shown are not binding and may be changed without notice

for contacts of insert series:

page

MIXO ..... (5A)

8

manual crimping tool  
turret head



**AVAILABLE  
2<sup>nd</sup> QUARTER 2010**

insertion / removal tool



description

part No.

part No.

crimping tool for **5A** contacts  
DANIELS AFM8 model (turret excluded)

CIPZ D

turret head  
- for **5A** contacts (CIFD and CIMD series)

CITP D

insertion tool:  
for insertion of the contacts into the inserts, and  
removal tools:  
for the extraction of contacts from the inserts  
- for **5A** contacts

CIES



**N.B.:**  
CITP D turret head to be ordered separately

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: 151\*

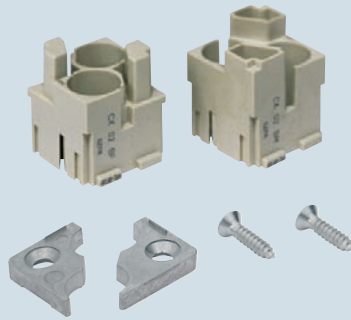
- characteristics according to EN 61984:

**16A 50V 0,8kV 3**

- certifications: UL, CSA, CCC (CX 01 BC are being applied for)
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF and CCM series) on pages 296, 300, 304, 306, 308 \*
- extraction tool for BUS shielded connectors from MIXO BUS insert part No. CX BES see page 277 \*

\* refer to catalogue page CN.07

**seat for shielded connectors metal adaptor**



**shielded connectors 16A crimp contacts, silver and gold plated**

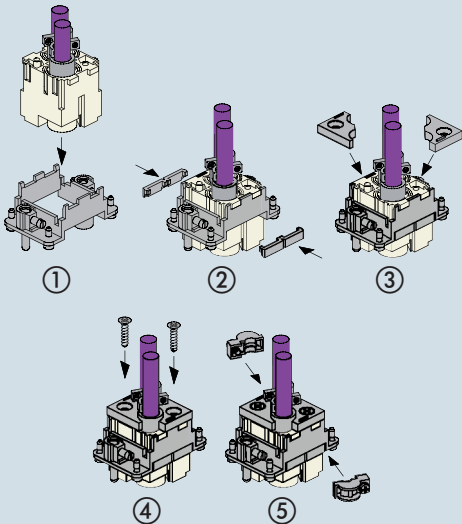


**AVAILABLE 2<sup>nd</sup> QUARTER 2010**

| description   | part No.                           | part No.                             | part No.           |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
|---|------------------------------------|--------------------------------------|--------------------|---------------------|--------|-----------------|----------------------|--------|------------------------|-------------------|--------|------------|---------------------|--------|-------------|---------------------|--------|---------------|-------------------|--------|-----------------|-------------------|--------|-----------------|---------------------------|-----------|---------------|---------------------|--------|-----------------|----------------------|--------|------------------------|-------------------|--------|------------|---------------------|--------|-------------|---------------------|--------|---------------|-------------------|--------|-----------------|-------------------|--------|-----------------|--|---|-----------------|----------------------|-----------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|
| seat for two shielded connectors<br>- female insert, two seats for BUS connectors<br>- male insert, two seats for BUS connectors  | <b>CX 02 BF</b><br><b>CX 02 BM</b> |                                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| shielded BUS coaxial connectors, 1 pole + shield<br>- female insert, one contact seats + shield<br>- male insert, one contact seats + shield  |                                    | <b>CX 01 BCF</b><br><b>CX 01 BCM</b> |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| metal adaptor (optional)  | <b>CR GND</b>                      |                                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <p><b>16A female contacts</b></p> <table border="1"> <tr><td>0.14+0.37 mm<sup>2</sup></td><td>AWG 26+22</td><td>three grooves</td></tr> <tr><td>0.5 mm<sup>2</sup></td><td>AWG 20</td><td>with no grooves</td></tr> <tr><td>0.75 mm<sup>2</sup></td><td>AWG 18</td><td>one groove (back side)</td></tr> <tr><td>1 mm<sup>2</sup></td><td>AWG 18</td><td>one groove</td></tr> <tr><td>1.5 mm<sup>2</sup></td><td>AWG 16</td><td>two grooves</td></tr> <tr><td>2.5 mm<sup>2</sup></td><td>AWG 14</td><td>three grooves</td></tr> <tr><td>3 mm<sup>2</sup></td><td>AWG 12</td><td>one wide groove</td></tr> <tr><td>4 mm<sup>2</sup></td><td>AWG 12</td><td>with no grooves</td></tr> </table> <p><b>16A male contacts</b></p> <table border="1"> <tr><td>0.14+0.37 mm<sup>2</sup></td><td>AWG 26+22</td><td>three grooves</td></tr> <tr><td>0.5 mm<sup>2</sup></td><td>AWG 20</td><td>with no grooves</td></tr> <tr><td>0.75 mm<sup>2</sup></td><td>AWG 18</td><td>one groove (back side)</td></tr> <tr><td>1 mm<sup>2</sup></td><td>AWG 18</td><td>one groove</td></tr> <tr><td>1.5 mm<sup>2</sup></td><td>AWG 16</td><td>two grooves</td></tr> <tr><td>2.5 mm<sup>2</sup></td><td>AWG 14</td><td>three grooves</td></tr> <tr><td>3 mm<sup>2</sup></td><td>AWG 12</td><td>one wide groove</td></tr> <tr><td>4 mm<sup>2</sup></td><td>AWG 12</td><td>with no grooves</td></tr> </table> | 0.14+0.37 mm <sup>2</sup>          | AWG 26+22                            | three grooves      | 0.5 mm <sup>2</sup> | AWG 20 | with no grooves | 0.75 mm <sup>2</sup> | AWG 18 | one groove (back side) | 1 mm <sup>2</sup> | AWG 18 | one groove | 1.5 mm <sup>2</sup> | AWG 16 | two grooves | 2.5 mm <sup>2</sup> | AWG 14 | three grooves | 3 mm <sup>2</sup> | AWG 12 | one wide groove | 4 mm <sup>2</sup> | AWG 12 | with no grooves | 0.14+0.37 mm <sup>2</sup> | AWG 26+22 | three grooves | 0.5 mm <sup>2</sup> | AWG 20 | with no grooves | 0.75 mm <sup>2</sup> | AWG 18 | one groove (back side) | 1 mm <sup>2</sup> | AWG 18 | one groove | 1.5 mm <sup>2</sup> | AWG 16 | two grooves | 2.5 mm <sup>2</sup> | AWG 14 | three grooves | 3 mm <sup>2</sup> | AWG 12 | one wide groove | 4 mm <sup>2</sup> | AWG 12 | with no grooves |  | <table border="1"> <tr><td><b>CCFA 0.3</b></td><td rowspan="8"><b>silver plated</b></td><td><b>CCFD 0.3</b></td><td rowspan="8"><b>gold plated</b></td></tr> <tr><td><b>CCFA 0.5</b></td><td><b>CCFD 0.5</b></td></tr> <tr><td><b>CCFA 0.7</b></td><td><b>CCFD 0.7</b></td></tr> <tr><td><b>CCFA 1.0</b></td><td><b>CCFD 1.0</b></td></tr> <tr><td><b>CCFA 1.5</b></td><td><b>CCFD 1.5</b></td></tr> <tr><td><b>CCFA 2.5</b></td><td><b>CCFD 2.5</b></td></tr> <tr><td><b>CCFA 3.0</b></td><td><b>CCFD 3.0</b></td></tr> <tr><td><b>CCFA 4.0</b></td><td><b>CCFD 4.0</b></td></tr> <tr><td><b>CCMA 0.3</b></td><td></td><td><b>CCMD 0.3</b></td><td></td></tr> <tr><td><b>CCMA 0.5</b></td><td></td><td><b>CCMD 0.5</b></td><td></td></tr> <tr><td><b>CCMA 0.7</b></td><td></td><td><b>CCMD 0.7</b></td><td></td></tr> <tr><td><b>CCMA 1.0</b></td><td></td><td><b>CCMD 1.0</b></td><td></td></tr> <tr><td><b>CCMA 1.5</b></td><td></td><td><b>CCMD 1.5</b></td><td></td></tr> <tr><td><b>CCMA 2.5</b></td><td></td><td><b>CCMD 2.5</b></td><td></td></tr> <tr><td><b>CCMA 3.0</b></td><td></td><td><b>CCMD 3.0</b></td><td></td></tr> <tr><td><b>CCMA 4.0</b></td><td></td><td><b>CCMD 4.0</b></td><td></td></tr> </table> | <b>CCFA 0.3</b> | <b>silver plated</b> | <b>CCFD 0.3</b> | <b>gold plated</b> | <b>CCFA 0.5</b> | <b>CCFD 0.5</b> | <b>CCFA 0.7</b> | <b>CCFD 0.7</b> | <b>CCFA 1.0</b> | <b>CCFD 1.0</b> | <b>CCFA 1.5</b> | <b>CCFD 1.5</b> | <b>CCFA 2.5</b> | <b>CCFD 2.5</b> | <b>CCFA 3.0</b> | <b>CCFD 3.0</b> | <b>CCFA 4.0</b> | <b>CCFD 4.0</b> | <b>CCMA 0.3</b> |  | <b>CCMD 0.3</b> |  | <b>CCMA 0.5</b> |  | <b>CCMD 0.5</b> |  | <b>CCMA 0.7</b> |  | <b>CCMD 0.7</b> |  | <b>CCMA 1.0</b> |  | <b>CCMD 1.0</b> |  | <b>CCMA 1.5</b> |  | <b>CCMD 1.5</b> |  | <b>CCMA 2.5</b> |  | <b>CCMD 2.5</b> |  | <b>CCMA 3.0</b> |  | <b>CCMD 3.0</b> |  | <b>CCMA 4.0</b> |  | <b>CCMD 4.0</b> |  |
| 0.14+0.37 mm <sup>2</sup>   | AWG 26+22                          | three grooves                        |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 0.5 mm <sup>2</sup>   | AWG 20                             | with no grooves                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 0.75 mm <sup>2</sup>  | AWG 18                             | one groove (back side)               |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 1 mm <sup>2</sup>   | AWG 18                             | one groove                           |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 1.5 mm <sup>2</sup>   | AWG 16                             | two grooves                          |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 2.5 mm <sup>2</sup>   | AWG 14                             | three grooves                        |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 3 mm <sup>2</sup>   | AWG 12                             | one wide groove                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 4 mm <sup>2</sup>   | AWG 12                             | with no grooves                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 0.14+0.37 mm <sup>2</sup>   | AWG 26+22                          | three grooves                        |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 0.5 mm <sup>2</sup>   | AWG 20                             | with no grooves                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 0.75 mm <sup>2</sup>  | AWG 18                             | one groove (back side)               |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 1 mm <sup>2</sup>   | AWG 18                             | one groove                           |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 1.5 mm <sup>2</sup>   | AWG 16                             | two grooves                          |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 2.5 mm <sup>2</sup>   | AWG 14                             | three grooves                        |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 3 mm <sup>2</sup>   | AWG 12                             | one wide groove                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| 4 mm <sup>2</sup>   | AWG 12                             | with no grooves                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 0.3</b>   | <b>silver plated</b>               | <b>CCFD 0.3</b>                      | <b>gold plated</b> |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 0.5</b>   |                                    | <b>CCFD 0.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 0.7</b>   |                                    | <b>CCFD 0.7</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 1.0</b>   |                                    | <b>CCFD 1.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 1.5</b>   |                                    | <b>CCFD 1.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 2.5</b>   |                                    | <b>CCFD 2.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 3.0</b>   |                                    | <b>CCFD 3.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCFA 4.0</b>   |                                    | <b>CCFD 4.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 0.3</b>   |                                    | <b>CCMD 0.3</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 0.5</b>   |                                    | <b>CCMD 0.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 0.7</b>   |                                    | <b>CCMD 0.7</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 1.0</b>   |                                    | <b>CCMD 1.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 1.5</b>   |                                    | <b>CCMD 1.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 2.5</b>   |                                    | <b>CCMD 2.5</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 3.0</b>   |                                    | <b>CCMD 3.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |
| <b>CCMA 4.0</b>   |                                    | <b>CCMD 4.0</b>                      |                    |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |                           |           |               |                     |        |                 |                      |        |                        |                   |        |            |                     |        |             |                     |        |               |                   |        |                 |                   |        |                 |  |   |                 |                      |                 |                    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |  |

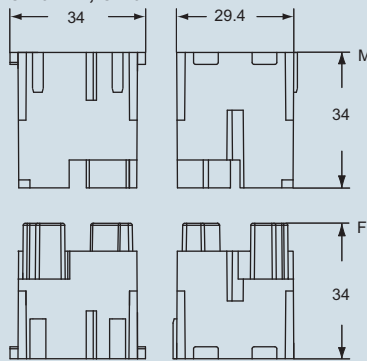
**Note:**  
The shielded connectors have their shield insulated from the enclosure's earthing point.  
If you wish to earth-connect the shield, install on the panel an anchorage for shielded cables CR..ST (see page 266 catalogue CN.07) or the CR GND metal adaptor.

**Use of the CR GND metal adaptor**

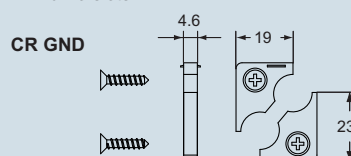
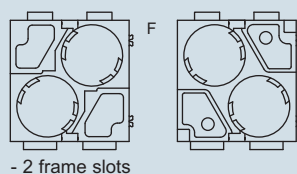


dimensions shown are not binding and may be changed without notice

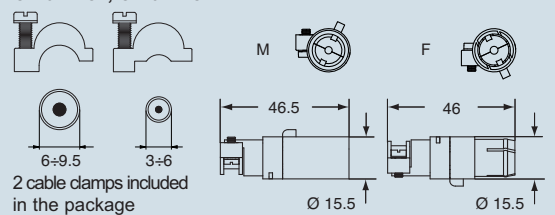
**dimensions in mm CX 02 BF, CX 02 BM**



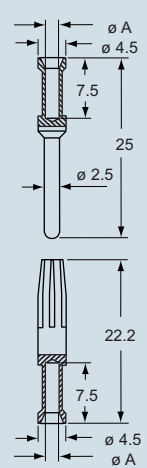
**contacts side (front view) side with reference arrow ▲**



**CX 01 BCF, CX 01 BCM**



**CCF and CCM**



**CCF, CCM contacts**

| conductor section mm <sup>2</sup> | conductor slot ø A (mm) |
|-----------------------------------|-------------------------|
| 0,14+0,37                         | 0,9                     |
| 0,5                               | 1,1                     |
| 0,75                              | 1,3                     |
| 1,0                               | 1,45                    |
| 1,5                               | 1,8                     |
| 2,5                               | 2,2                     |
| 3                                 | 2,55                    |
| 4                                 | 2,85                    |

- stripping length see section feature of inserts on page 13 catalogue CN.07

| inserts   | page      |
|---|-----------|
| <b>CDC</b> ..... 10, 16 poles + ⊕                                   | 67-69 *   |
| <b>CQ</b> ..... 5 poles + ⊕   | 63 *      |
| <b>CQE</b> .. 10, 18, 32, 46, 64, 92 poles + ⊕                      | 74-79 *   |
| <b>CCE</b> .... 6, 10, 16, 24, 32, 48 poles + ⊕                     | 86-96 *   |
| <b>CMCE</b> <b>3+2, 6+2, 10+2, 16+2, 12+4, 20+4, 32+4</b> poles + ⊕ | 114-125 * |
| <b>CX</b> ..... <b>8/24</b> poles + ⊕                               | 129 *     |
| <b>CX 02 H</b> 2 poles MIXO series                                  | 145 *     |
| <b>CX 06 C</b> 6 poles MIXO series                                  | 140 *     |
| <b>CX 08 C</b> 8 poles MIXO series                                  | 141 *     |
| <b>CX 20 C</b> 20 poles MIXO series                                 | 142 *     |
| <b>CX 01 BC</b> 1 polo + schermo                                    | 12        |

- for crimp contacts, see the crimp tool section (16A, CCF and CCM series contacts) pages 296, 300, 304, 306, 308 \*

\* refer to catalogue page CN.07

**16A crimp contacts silver plated**



**NEW**

**16A crimp contacts gold plated**



**NEW**

| description  | part No.        |
|--|-----------------|
| 16A, 0.14-0.37 mm <sup>2</sup> , AWG 26-22 female contacts | <b>CCFA 0.3</b> |
| 16A, 0.14-0.37 mm <sup>2</sup> , AWG 26-22 male contacts   | <b>CCMA 0.3</b> |

| description  | part No.        |
|--|-----------------|
| 16A, 0.14-0.37 mm <sup>2</sup> , AWG 26-22 female contacts | <b>CCFD 0.3</b> |
| 16A, 0.14-0.37 mm <sup>2</sup> , AWG 26-22 male contacts   | <b>CCMD 0.3</b> |

The CCF/CCM 0.3 extend the CCF/CCM contacts series already shown on the technical connectors catalogue CN.07 and they require the same crimping tools (according to EN 60352-2).

We report hereunder the tables for the manual adjustment of selector dial (crimping depth) which are on crimping tools for our contacts CC series according to the used conductor's section.

- Manual crimping tool Daniels CCPZ MIL + turret heads CCTP 16
- Pneumatic crimping tool Daniels CCPZP + turret heads CCTP 16
- Pneumatic crimping tool Daniels CCPZPA + positioner

| contact     | section mm <sup>2</sup> | AWG | Sel. No. |
|-------------|-------------------------|-----|----------|
| CCMA/FA 0.3 | 0.14 (0.12 - 0.15)      | 26  | 5        |
|             | 0.25 (0.22 - 0.25)      | 24  | 5        |
| CCMD/FD 0.3 | 0.37 (0.34 - 0.37)      | 22  | 6        |

Note: the table with adjustment dates that is on the tools already shown the indication.

- Manual crimping tool Rennsteig CCPZ RN

| contact     | section mm <sup>2</sup> | AWG | Sel. No. |
|-------------|-------------------------|-----|----------|
| CCMA/FA 0.3 | 0.14 (0.12 - 0.15)      | 26  | 1.2      |
|             | 0.25 (0.22 - 0.25)      | 24  | 1.3      |
| CCMD/FD 0.3 | 0.37 (0.34 - 0.37)      | 22  | 1.3      |

Note: the table with adjustment dates that is on the tool will soon be updated.

- Stripping crimping machine Zoller+Frohlich ZFU-CD

| contact     | section mm <sup>2</sup> | AWG | crimping depth |
|-------------|-------------------------|-----|----------------|
| CCMA/FA 0.3 | 0.25 (0.22 - 0.25)      | 24  | 1.2            |
|             | 0.37 (0.34 - 0.37)      | 22  | 1.2            |

Note: AWG 26 - stripping and crimping not applicable due to the too small conductor's section.

AWG 24 and AWG 22 - stripping and crimping realizable upon change of standard programme 1A, reducing the crimping depth from 1.3 to 1.2 mm.

- Manual crimping tool Rennsteig CCPZ TP

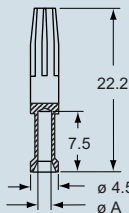
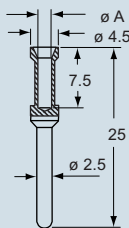
| contact     | section mm <sup>2</sup> | AWG | Sel. No. |
|-------------|-------------------------|-----|----------|
| CCMA/FA 0.3 | 0.14 (0.12 - 0.15)      | 26  | -1       |
|             | 0.25 (0.22 - 0.25)      | 24  | -1       |
| CCMD/FD 0.3 | 0.37 (0.34 - 0.37)      | 22  | -1       |

Note: -1 is the first (outer) crimp nest in the tool

dimensions shown are not binding and may be changed without notice

dimensions in mm

**CCF and CCM**



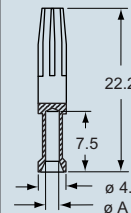
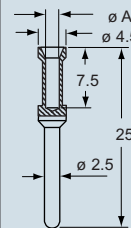
**CCF and CCM contacts**

| conductor section mm <sup>2</sup> | ø slot A (mm) |
|-----------------------------------|---------------|
| 0.14+0.37                         | 0.9           |

- stripping length 7.5 mm

dimensions in mm

**CCF and CCM**



**CCF and CCM contacts**

| conductor section mm <sup>2</sup> | ø slot A (mm) |
|-----------------------------------|---------------|
| 0.14+0.37                         | 0.9           |

- stripping length 7.5 mm



## IMPORTANT NOTES

The products in this catalogue cannot guarantee the best functionality on installation, as this depends mainly on their correct "putting into service" which must be performed in compliance with the applicable system safety standards and according to the "rule of the art".

The products shown in this catalogue are deemed to form connections mainly for electrical circuits, therefore they have to be assembled according to the user's best choice for the different applications.

For such choices, as well as for uses of single components and/or for uses with purposes other than those herein declared, I.L.M.E. SpA refuses any liability for the application results and/or for product incorrect use and/or unsuccessful performances.

The connectors must not be connected or disconnected when live or under load.

After wiring the inserts we recommend to verify the protective earth terminals continuity.

The connector inserts operation is guaranteed only if mounted by four screws on a rigid plane (provided by hoods/housings).

I.L.M.E. SpA is not responsible for any different application.

The installer must verify and ensure the correct coupling and operation of the protective earth connection.

For all inserts with screw-type terminals it is important that the correct torque is applied to the screws in order to prevent damage to the conductor, the screw or the terminal.

Crimping tools and contacts should be supplied by the same manufacturer.

The termination of spring-clamp connector inserts is guaranteed only when the specified screwdriver is correctly used for actuating the spring (see indication in the specific catalogue and, where applied, on the insert) and the operating principles are followed.

To prevent incorrect coupling please respect the polarity drawing (contacts side view) when two similar inserts are mounted in double-sized hood or housing. To avoid coupling mismatch we recommend the use of coding pins when two or more similar connectors are mounted close together.

The complete connectors (enclosures and inserts) guarantee the IP degree of protection when coupled and locked with their closing levers. In order to ensure the same degree of protection provided by the connector housings, the cable glands or other accessories used to close cable outlets must also have at least an equivalent IP degree of protection.

In order to prevent stress on the contacts, the connectors must be coupled and uncoupled in the axial direction with respect to the contacts, without bending and pulling the attached conductor bundles or cables.

ILME connectors, inserts and enclosures are generally compatible with similar/equivalent products from other manufacturers, according to the last samples we tested.

The full interchangeability cannot be granted by ILME as we cannot be considered responsible for technical changes made by other manufacturers.

In particular, ILME cannot guarantee the full performances of our IP68 enclosures (Series CG) if coupled with other manufacturers' products.

I.L.M.E. SpA takes no responsibility in verifying whether the components herein contained comply with the specific regulations of fields of application.