Multipole connectors

2020

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THE TRADITION
OF INNOVATION SINCE 1945

ILME designs and manufactures complete solutions for industrial connections.
Headquartered in Milan and with subsidiaries in the key countries driving the progress of automation, ILME is an industry leader in the main world markets.
People are vital to success and growth at ILME, sharing a passion for innovation, utmost responsibility and participation.
The Company is committed to developing technology in the areas that most impact the future of the industries it serves: high quality and safe wiring, research on the most suitable materials, rapid turnaround and readily available services while striving for energy saving and environmental safeguard.

COMMITMENT TO INDUSTRY

Technological innovation is the main pillar of ILME competitiveness.
In the electrical connection sector of industrial automation, characterized by the need for top performance and reliability, ILME is an acknowledged leader with its own patents and a global benchmark supplier of major companies worldwide.
ILME offers a fully integrated range of high-quality products and services for every type of connection to suit any application requirements.


AUTOMATION


RAILWAY


ENERGY


NAVAL


FOOD & BEVERAGE


AGRONOMY


OUTDOOR


TRANSPORT


LIGHT & SOUND


PLASTIC


CHEMICAL


AIRPORT

IMPORTANT NOTES

1 ILME designs and manufactures complete solutions for Heavy Duty electrical power connections.
The connector (although offered to the user as a variety of elements, usually inserts and enclosures, to allow the selection of the ideal combination) has been **designed as a complete connector** and tested to be compliant with the essential safety requirements of the EU Low Voltage Directive 2006/95/EC (2014/35/EU from April 20, 2016) and in particular the EN 61984 standard. The design of this "whole" system guarantees that every allowed combination of inserts, enclosures and accessories cannot result as improper.

2 The products in this catalogue alone cannot guarantee the best functionality upon installation, as this depends also 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". Therefore the effectiveness of the installation of the connector depends on the choices of the end user who must also take into account the following safety requirements.

3 Connectors must **not be connected or disconnected when live or under load.**

4 After wiring the inserts it is necessary **to verify the continuity of the protective earth connections.**

5 The **correct coupling of the inserts** is guaranteed only if they are installed (with the four fixing screws supplied *) inside the corresponding enclosures or onto compatible accessories in this catalogue. ILME S.p.A. is not responsible for any different application.

6 Wiring of **screw-type terminal connections** must be carried out applying the correct tightening torque in order to avoid false contacts or damage to the conductor, the screw or the terminal.

7 **Crimping tools** and **crimp contacts** used should preferably be supplied by the same manufacturer to avoid difficulties with the insertion and retention or damaging of the contacts themselves.

8 Correct wiring of **spring-clamp connection inserts** is guaranteed only when the correct screwdriver indicated in the specific catalogue, or possibly on the insert, is used **.

9 Avoid forcing the contacts during **connection and disconnection.** 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.

10 Installation of two **inserts side by side,** in enclosures with two bays, must respect the polarity drawing marked on the insert (or the contact side view, as shown in this catalogue) to avoid inverted coupling.

11 Installation of two or more identical **connectors side by side** is recommended only with the use of **coding pins** in order to avoid mismatched couplings.

12 In order to keep the declared **degree of protection** (IP code according to EN 60529, or Enclosure Type Rating according to ANSI/UL 50E), enclosures must be completed with cable glands and/or other accessories with at least an equal degree of protection.

13 Moreover, the declared **degree of protection** (IP code according to EN 60529, or Enclosure Type Rating according to ANSI/UL 50E) is guaranteed when the enclosures, complete with inserts, are coupled and locked with their locking levers (or devices).

14 Connector inserts and their enclosures are generally compatible with similar/equivalent products from other manufacturers, according to the last samples tested. Full compatibility cannot be guaranteed in the event of technical changes made by other manufacturers.
In particular, maximum performance of IP68 enclosures (CG Series) cannot be guaranteed when coupled with other manufacturers' products.

15 **Spare parts** are supplied in minimum quantities only with the purpose to replace damaged parts. To avoid invalidation of warranty, products should be modified or repaired only by ILME: the integrity of their functionality - e.g. their degree of protection - can no longer be guaranteed if products are modified/repaired by end-users. In any case, the liability for correct choice, assembly and use is totally at charge of the installer and the end-user.

16 ILME S.p.A. takes no responsibility in verifying whether the components herein contained comply with any specific regulations of fields of application.

17 ILME cannot be held responsible for individual components in **uses other than those described in this catalogue.**
ILME cannot be held responsible for **incorrect connector selection** in relation to the environmental conditions of the application (e.g.: influence of ambient temperature, moisture, environmental pollution, etc.).

* Except one fixing screw for size "21.21" inserts, two fixing screws for size "32.13" inserts.
** Except for **SQUICH®** inserts (with spring-clamp terminals with actuator button) that do not require any tool to operate the terminal.

CE MARKING

As from 1st January 1997, in order to make available electrical products on the European market, the manufacturer must ensure that these bear the relevant **CE marking,** in line with the Low Voltage Directive 73/23/ EEC* (implemented in Italy as L. D. 18-10-1977 no. 791) and its modification 93/68/EEC* (implemented in Italy as L.D. 25-11-1996 no. 626/96, published in the supplement to the Gazzetta Ufficiale of 14-12-1996).

The CE marking must be visible on the product or, if this is not possible, on the packaging, the instructions for use or on the warranty certificate. It acts as a declaration by the manufacturer that the product complies with all relevant EU directives regarding its field of application.

ILME products bear the CE marking on the actual product or its packaging.

Almost all ILME products fall within the scope of the Low Voltage Directive. An EU declaration of conformity is required in order to be able to apply the CE marking. This declaration, to which the market is not directly entitled, must be made available to the controlling authorities (in Italy, the Ministry of Economic Development) at all times. In it, the manufacturer declares the technical safety standard(s) followed in the design and manufacture of the product. These standards must be, in decreasing order of preference:

— a European standard (EN prefix)
— a European harmonisation document (HD prefix)
— an international IEC standard
— a national standard
— in the absence of reference standards, the manufacturer's internal specifications guaranteeing compliance with the basic safety requirements of the directive.

Conformity with harmonised technical standards (i.e. ratified by CENELEC) also constitutes presumption of conformity with the basic safety requirements of the directives.

The CE marking of ILME products results from the declaration of conformity of the product to harmonised standards or international IEC standards.

Through the CE marking, ILME declares full compliance, not merely with the directive's basic safety requirements, but also with those international or national standards on which voluntary safety certification markings are based (e.g. IMQ and VDE). In this way, ILME intends to give the CE marking the value of self-certification in terms of safety, given the loss in legal value of voluntary certifications issued by third parties, ratified by directive 93/68/EEC*.

Notwithstanding the above, practically all ILME products still bear voluntary conformity markings.

The above mentioned EU declaration of conformity becomes null and void when the assembly of products includes one or more components not manufactured by ILME and without CE marking.

⚠ **The information contained in this catalogue is not binding and may be changed without notice.**

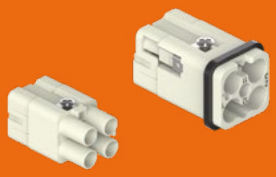
*** Note:** The subsequent legal reference for the Low Voltage Directive was 2006/95/EC, as consolidation of the original Directive 73/23/EEC + Directive 93/68/EEC. On 29th March 2014, the Official Journal of the European Union published the new Low Voltage directive 2014/35/EU dd. 26th February 2014, a recast version of directive 2006/95/EC, which is in force since 20th April 2016.

UNI EN ISO 9001: 2015
Design, manufacture and distribution
of industrial electrical equipment (IAF 19)
Certificate No. 50 100 11133

2020 PRODUCTS

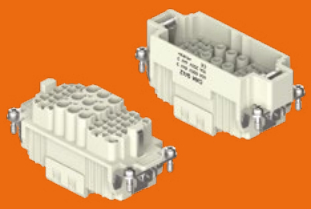
Inserts 14

CQ4 SERIES COMBINED INSERT “21.21”



CQ4F /M 03/2 14
Technical features 15 - 17

CX SERIES COMBINED INSERT



CXF /M 9/42 18
Technical features 19 - 21

MIXO modular units 22

MIXO SERIES
General Overview 22

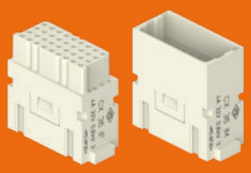
THE COMPLETE RANGE 24

TECHNICAL CHARACTERISTICS 25

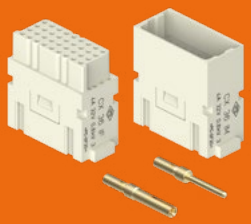
MIXO NOVELTIES 26
MIXO series advantages 27

MIXO modular units

MIXO SERIES

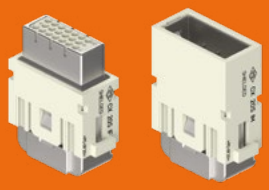


CX 36 IF /IM 28
Technical features 29 - 30

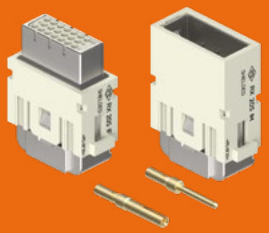


CX 36 IF /IM
HNM VERSION 32

HNM MIXO FRAMES 33

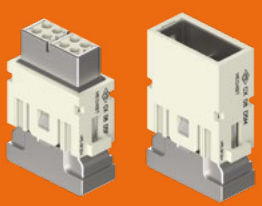


CX 20S IF /IM 34
Technical features 35 - 41

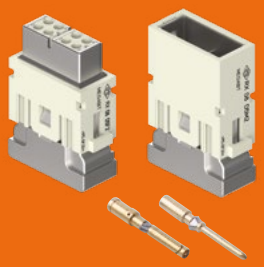


RX 20S IF /IM
HNM VERSION 38

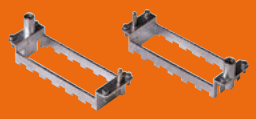
HNM MIXO FRAMES 39



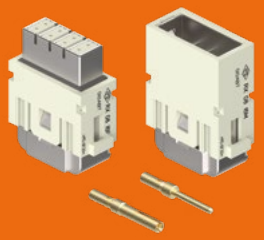
MIXO MEGABIT
CX 08 D5F /D5M, CX 08 D5F2 /D5M2 42
Technical features 43 - 53



RX 08 D5F /D5M, RX 08 D5F2 /D5M2
HNM VERSION 46 - 47

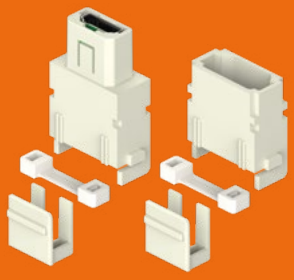


HNM MIXO FRAMES 48



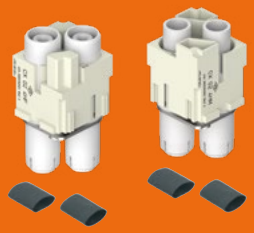
MIXO GIGABIT RX 08 I6F /I6M
HNM VERSION 54

HNM MIXO FRAMES 55



MIXO HDMI MODULE
CX 01 MIF /MIM
CW 2 MIAM PATCH CORD 56
Technical features 57 - 59

MIXO RJ45 CAT. 6_A
CX 01 J8AIF /J8BIF /J8PIF 60
Technical features 61 - 63



MIXO HT MODULE 40 A 2 POLES
CX 02 4HF /4HM 64
Technical features 65 - 67

MIXO 9-POLE SHIELDED
CX 01 9VF2 /9VM2 68
Technical features 69 - 71

Contacts 72

CRIMP CONTACTS

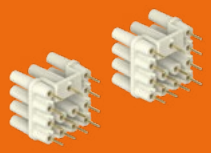
CI SERIES CRIMP CONTACTS (5 A)
BASIC GOLD PLATING
HIGH THICKNESS GOLD PLATING
CIF2D /CIM2D 0.2/0.3/0.5/0.7
CIFJD /CIMJD 0.2/0.3/0.5/0.7 72
Technical features 73 - 75

SI SERIES STAMPED CRIMP CONTACTS (5 A)
SIF..D /SIM..D 76
Technical features 77 - 79

RI SERIES HNM CRIMP CONTACTS (5 A)
RIFD /MD 80
Technical features 81 - 83

CX7 SERIES SIZE 6.0 CRIMP CONTACTS
CX7FA /MA 6.0 84
Technical features 85 - 87

PCB Adapters 88



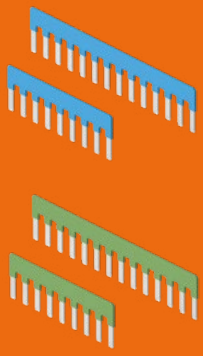
PCB INTERFACE ADAPTER
FOR CQ 12 CIF INSERTS
CIF Q12 2.4

SPECIAL CQ 12 INSERTS
FOR PCB ADAPTERS
CQF 12 CIF /CQM 12 CIF 88
Technical features 89 - 91

PCB INTERFACE ADAPTER
FOR CQ 07 INSERTS
CIF Q07 2.4 92
Technical features 93 - 95

PCB INTERFACE ADAPTER
FOR CQ 05 INSERTS
CIF Q05 2.4 96
Technical features 97 - 99

Accessories 100



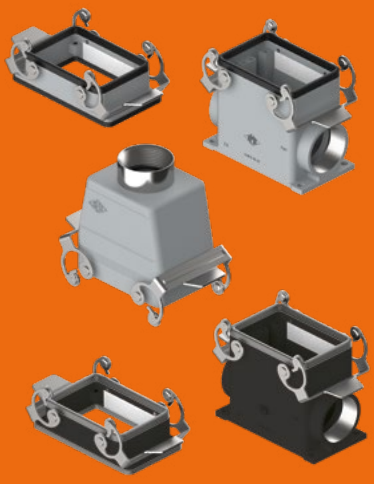
PARALLEL BRIDGES
CR BDSH
FOR CDSH-SQUICH®
CONNECTOR INSERTS 100
Technical features 101 - 105

Enclosures 106

CKH - MKH
HYGIENIC ENCLOSURES
SIZE “21.21” 106
Technical features 107 - 115

T-TYPE ENCLOSURES
WITH INTEGRATED PROTECTIVE
EARTH JUMPERS 116
Technical features 117

BIG HOODS
WITH INTEGRATED SPECIAL
SELF-CENTRING
FLOATING FRAME 118
Technical features 119 - 123



SIZE “66.40” ENCLOSURES
WITH FULL METAL LOCKING
LEVERS 124
Technical features 125 - 131

COB SUPPORT FOR “21.21” INSERTS
FOR DIN RAIL MOUNT 132
Technical features 133 - 135

Boxes 136

T-BOX
T-JUNCTION BOX
FOR “21.21” INSERTS 136
Technical features 137 - 139

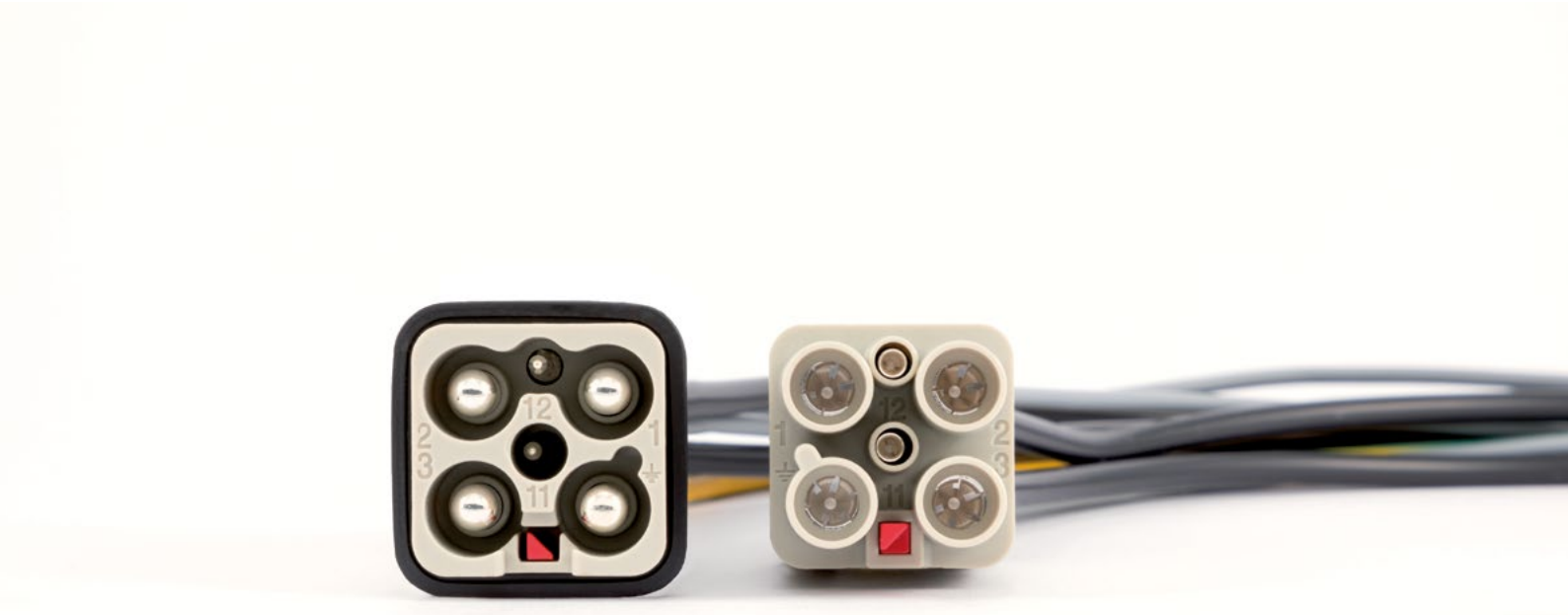
Crimping tools 140

Technical features 141 - 145

Part numbers index 152

CQ4 SERIES COMBINED INSERT “21.21”

CQ4F /M 03/2



CQ4 Series - Combined insert “21.21”

3 poles + ⏚ power: 40 A 400 V 6 kV 3

2 poles auxiliary: 10 A 250 V 4 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CQ4F /M 03/2

- Proprietary design, in the same space of the currently available CQ4 03, it features two additional auxiliary contacts plus one (optional) coding pin.

- Combined insert size “21.21” (first ever) for use with 4 (3P + ⏚) removable crimp contacts series **CX** up to size **6.0** (6 mm² / 10 AWG) for power and 2 removable crimp contacts series **CD** up to size **2.5** (2,5 mm² / 14 AWG) for auxiliaries.

- Suitable to drive a 1-axis power motion control system (feeding the 3Φ AC motor of the axis) with its 2-pole braking circuit, while the encoder signals are served by a separate second connector, for ease of shielding against interferences typical of PWM variable frequency drivers.

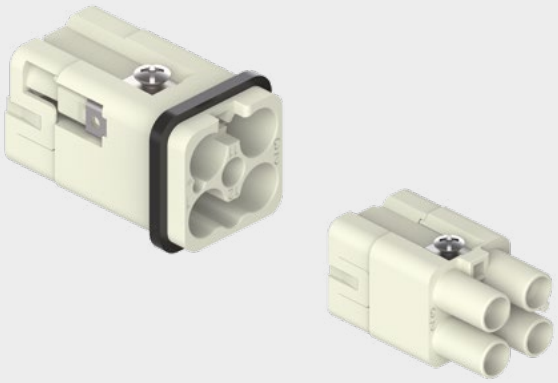
- One optional coding pin, **CR Q03/2** (red colour), to realize 4 different codings and avoid mismating in case of installation of up to four similar connectors nearby.

- EN/IEC 61984 ratings:
  - 3P + ⏚ power: **40 A** **400 V** **6 kV** **3**
  - 2P auxiliary: **10 A** **250 V** **4 kV** **3**

- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +125 °C.

- Max diameter of wire sheathing:
  - **5,0 mm** for 3P + ⏚ 40 A power contacts,
  - **3,8 mm** for 2P 10 A auxiliary contacts.

original proprietary design for high density combination of power and brakes contacts



CQ4F /M 03/2 combined “21.21” 3 poles + ⏚ (40 A - 400 V) + 2 poles (10 A - 250 V)

enclosures:
size “21.21”

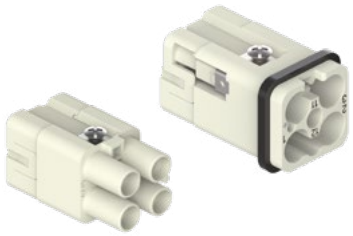
pages:

Insulating type 339 - 348
Metallic type 349 - 363
W-TYPE for aggressive environments 512 - 518
EMC 564 - 572
IP68 628 - 631
E-Xtreme® corrosion proof 538 - 539

- cannot be used in angled enclosures (IA/IAP/VA version)

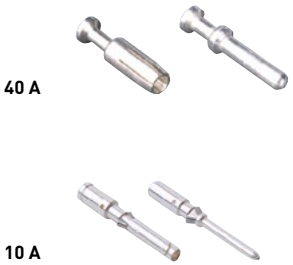
refer to CN.19 pages

inserts, crimp connections



FROM JUNE 2020

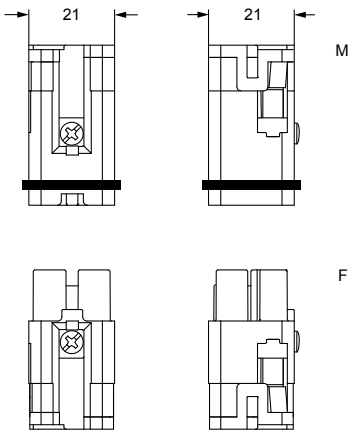
40 A and 10 A crimp contacts
silver plated



description			part No.	part No.
without contacts (to be ordered separately), including PE				
female inserts for female contacts			**CQ4F 03/2**	
male inserts for male contacts			**CQ4M 03/2**	
40 A female crimp contacts				
1,5 mm²	AWG 16			**CXFA 1.5**
2,5 mm²	AWG 14			**CXFA 2.5**
4 mm²	AWG 12			**CXFA 4.0**
6 mm²	AWG 10			**CXFA 6.0**
40 A male crimp contacts				
1,5 mm²	AWG 16			**CXMA 1.5**
2,5 mm₂	AWG 14			**CXMA 2.5**
4 mm²	AWG 12			**CXMA 4.0**
6 mm²	AWG 10			**CXMA 6.0**
10 A female crimp contacts				
0,14-0,37 mm²	AWG 26-22	identification No. 1		**CDFA 0.3**
0,5 mm²	AWG 20	identification No. 2		**CDFA 0.5**
0,75 mm²	AWG 18	identification No. ②		**CDFA 0.7**
1 mm²	AWG 18	identification No. 3		**CDFA 1.0**
1,5 mm²	AWG 16	identification No. 4		**CDFA 1.5**
2,5 mm²	AWG 14	identification No. 5		**CDFA 2.5**
10 A male crimp contacts				
0,14-0,37 mm²	AWG 26-22	identification No. 1		**CDMA 0.3**
0,5 mm²	AWG 20	identification No. 2		**CDMA 0.5**
0,75 mm²	AWG 18	identification No. ②		**CDMA 0.7**
1 mm²	AWG 18	identification No. 3		**CDMA 1.0**
1,5 mm²	AWG 16	identification No. 4		**CDMA 1.5**
2,5 mm²	AWG 14	identification No. 5		**CDMA 2.5**

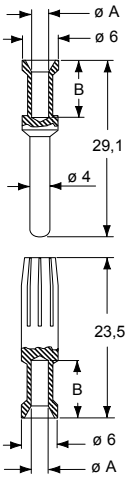
silver plated

- characteristics according to EN/IEC 61984 ratings:
  40 A 400 V 6 kV 3
  10 A 250 V 4 kV 3
- cUL (UL for USA and Canada), CSA, CQC, DNV-GL, BV, EAC pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (CX power contacts)
  ≤ 3 mΩ (CD auxiliary contacts)
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 40A contacts CXF and CXM series and 10A contacts CDF, CDM series,on pages 708 - 741 of CN.19 catalogue).
  For 40 A contacts and 10 A contacts see also new pneumatic crimping tool CCPZP RN (see page 145)
- for max. current load see the connector inserts derating diagrams **under construction**.

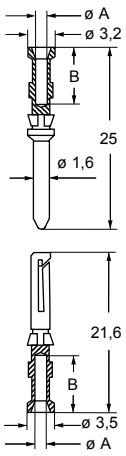


contacts side (front view)

CXF and CXM



CDF and CDM



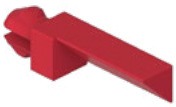
CXF and CXM contacts

conductor cross-sectional (mm²)	conductor slot ø A (mm)	conductor stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6

CDF and CDM contacts

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

coding pin for crimp inserts



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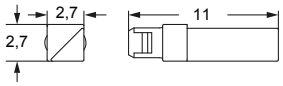
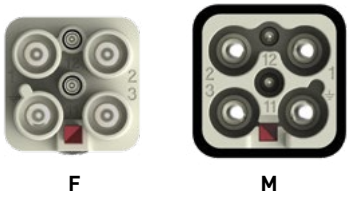
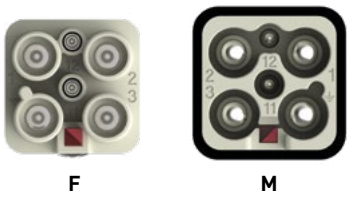
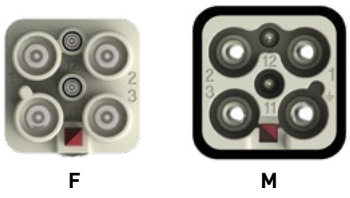
description	part No.
coding pin (optional) for CQ4 03/2 inserts	**CR Q03/2**

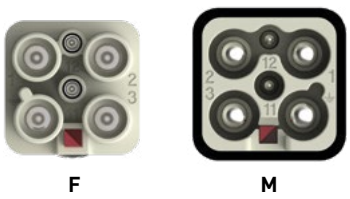


CR Q03/2 CODING OPTIONS



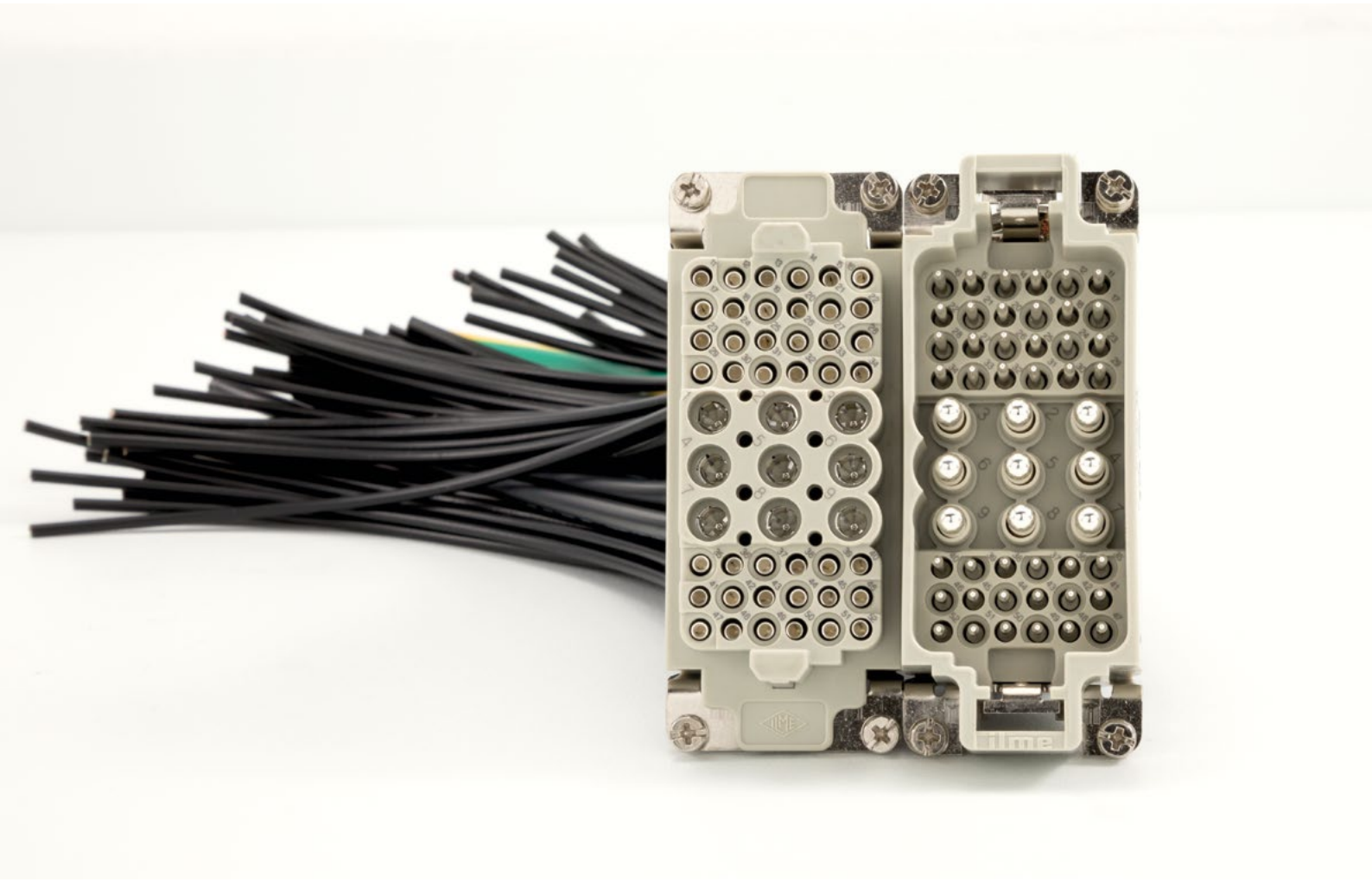






Thanks to the use of the **optional CR Q03/2 coding pin** it is possible to achieve up to **4 different codings**.

CX SERIES COMBINED INSERT
CXF /M 9/42



CX Series - Combined insert

9 poles core high power portion

40 A 690 V 8 kV 3

42 poles peripheral “mid power/auxiliary” portions

10 A 250 V 4 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CXF /M 9/42

- Proprietary design, it expands the range of “power + auxiliaries” combined connector series.

- Combined connector for high power + mid power and a large number of signals and auxiliary circuits.

- EN/IEC 61984 ratings:
  - **40 A 690 V 8 kV 3** (core “high power” portion, 9 contact positions),
  - **10 A 250 V 4 kV 3** (peripheral “mid power/auxiliary” portions, 24+18=42 contact positions)

- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +125 °C.

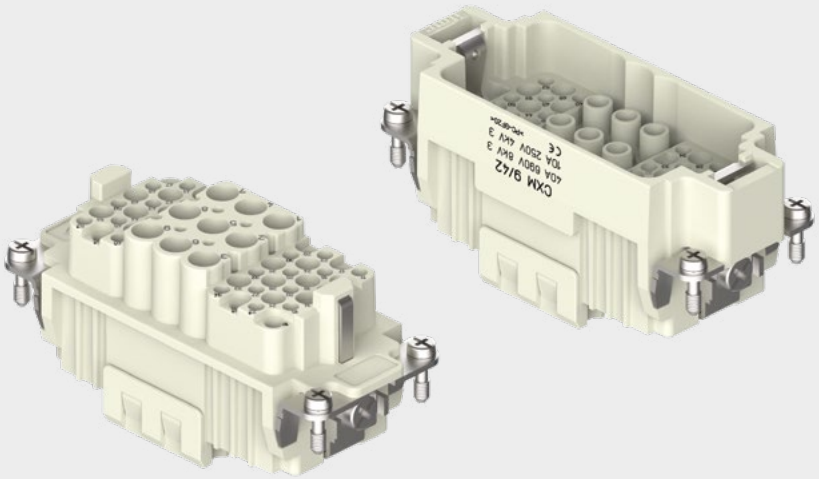
- Suitable for removable crimp contacts series **CX** up to size **6.0** (6 mm² / 10 AWG) and series **CD** up to size **2.5** (2,5 mm² / 14 AWG).

- Covers up to three 3Φ AC motors (3 axes with high-power motion control system) and 24 + 18 = 42 poles in peripheral mid-power/auxiliaries sections, to cover e.g. 4 additional motion control axes with 12 of the 18-pole portion, and the remaining 30 contacts serving auxiliary and signal contacts (I/O, solenoids, etc.).

- Max diameter of wire sheathing:
  - **5,0 mm** in the 9P “high power” core portion,
  - **3,8 mm** in the 42P “mid-power/aux” peripheral portions.

- Matches the wiring of two separate cables in a single connector insert: one cable for powering motors and relevant braking circuits, the other cable for their encoder signals (position control).

proprietary design fulfilling minituarization trend in robotics: more power contacts and more auxiliary contacts in smaller size



CX Combined 9 poles (40 A - 690 V) + 42 poles (10 A - 250 V) + ⏚

enclosures:
size "77.27"

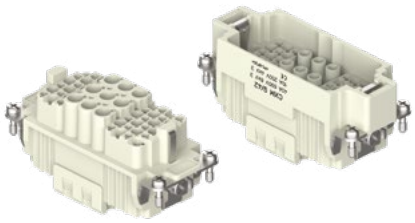
	pages:
C-TYPE IP65/IP66	402 - 411
C7 IP67, two levers	439 - 440
V-TYPE IP65/IP66, single lever	454 - 458
BIG hoods	470 - 471
T-TYPE IP65 insulating	484 - 485
T-TYPE / W IP66/IP69 insulating	491
HYGIENIC T-TYPE / H IP66/IP69	503
HYGIENIC T-TYPE / C IP66/IP69, -50 °C	508
W-TYPE for aggressive environments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

panel supports:

	pages:
COB	652 - 653

refer to CN.19 pages

inserts, crimp connections



FROM MARCH 2020

40 A and 10 A crimp contacts silver and gold plated

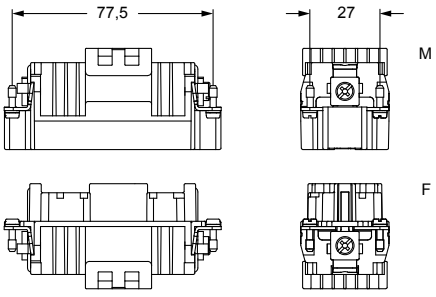
description	part No.	part No.	part No.
without contacts (to be ordered separately)			
female inserts for female contacts	**CXF 9/42**		
male inserts for male contacts	**CXM 9/42**		
40 A female crimp contacts			
1,5 mm² AWG 16		**CXFA 1.5**	
2,5 mm² AWG 14		**CXFA 2.5**	
4 mm² AWG 12		**CXFA 4.0**	
6 mm² AWG 10		**CXFA 6.0**	
40 A male crimp contacts			
1,5 mm² AWG 16		**CXMA 1.5**	
2,5 mm₂ AWG 14		**CXMA 2.5**	
4 mm² AWG 12		**CXMA 4.0**	
6 mm² AWG 10		**CXMA 6.0**	
10 A female contacts			
0,14-0,37 mm² AWG 26-22 identification No. 1		**CDFA 0.3**	**CDFD 0.3**
0,5 mm² AWG 20 identification No. 2		**CDFA 0.5**	**CDFD 0.5**
0,75 mm² AWG 18 identification No. ②		**CDFA 0.7**	**CDFD 0.7**
1 mm² AWG 18 identification No. 3		**CDFA 1.0**	**CDFD 1.0**
1,5 mm² AWG 16 identification No. 4		**CDFA 1.5**	**CDFD 1.5**
2,5 mm² AWG 14 identification No. 5		**CDFA 2.5**	**CDFD 2.5**
10 A male contacts			
0,14-0,37 mm² AWG 26-22 identification No. 1		**CDMA 0.3**	**CDMD 0.3**
0,5 mm² AWG 20 identification No. 2		**CDMA 0.5**	**CDMD 0.5**
0,75 mm² AWG 18 identification No. ②		**CDMA 0.7**	**CDMD 0.7**
1 mm² AWG 18 identification No. 3		**CDMA 1.0**	**CDMD 1.0**
1,5 mm² AWG 16 identification No. 4		**CDMA 1.5**	**CDMD 1.5**
2,5 mm² AWG 14 identification No. 5		**CDMA 2.5**	**CDMD 2.5**

silver plated

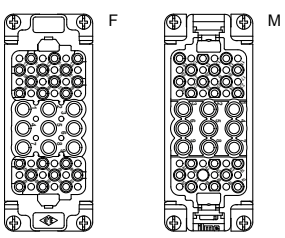
gold plated+

+ for basic or high thickness gold plating, please refer to page 674 of CN.19 catalogue

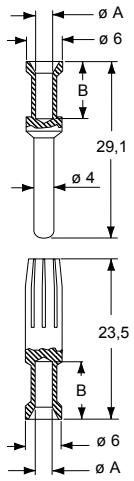
- characteristics according to EN/IEC 61984 ratings:
  40 A 690 V 8 kV 3
  10 A 250 V 4 kV 3
- cUL (UL for USA and Canada), CSA, CQC, DNV-GL, BV, EAC pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (CX power contacts)
  ≤ 3 mΩ (CD auxiliary contacts)
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 40A contacts CXF and CXM series and 10A contacts CDF, CDM series,on pages 708 - 741 of CN.19 catalogue).
  For 40 A contacts and 10 A contacts see also new pneumatic crimping tool CCPZP RN (see page 145)
- for max. current load see the connector inserts derating diagrams **under construction**.



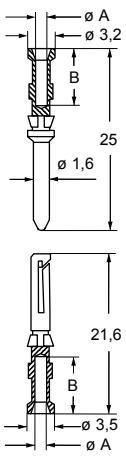
contacts side (front view)



CXF and CXM



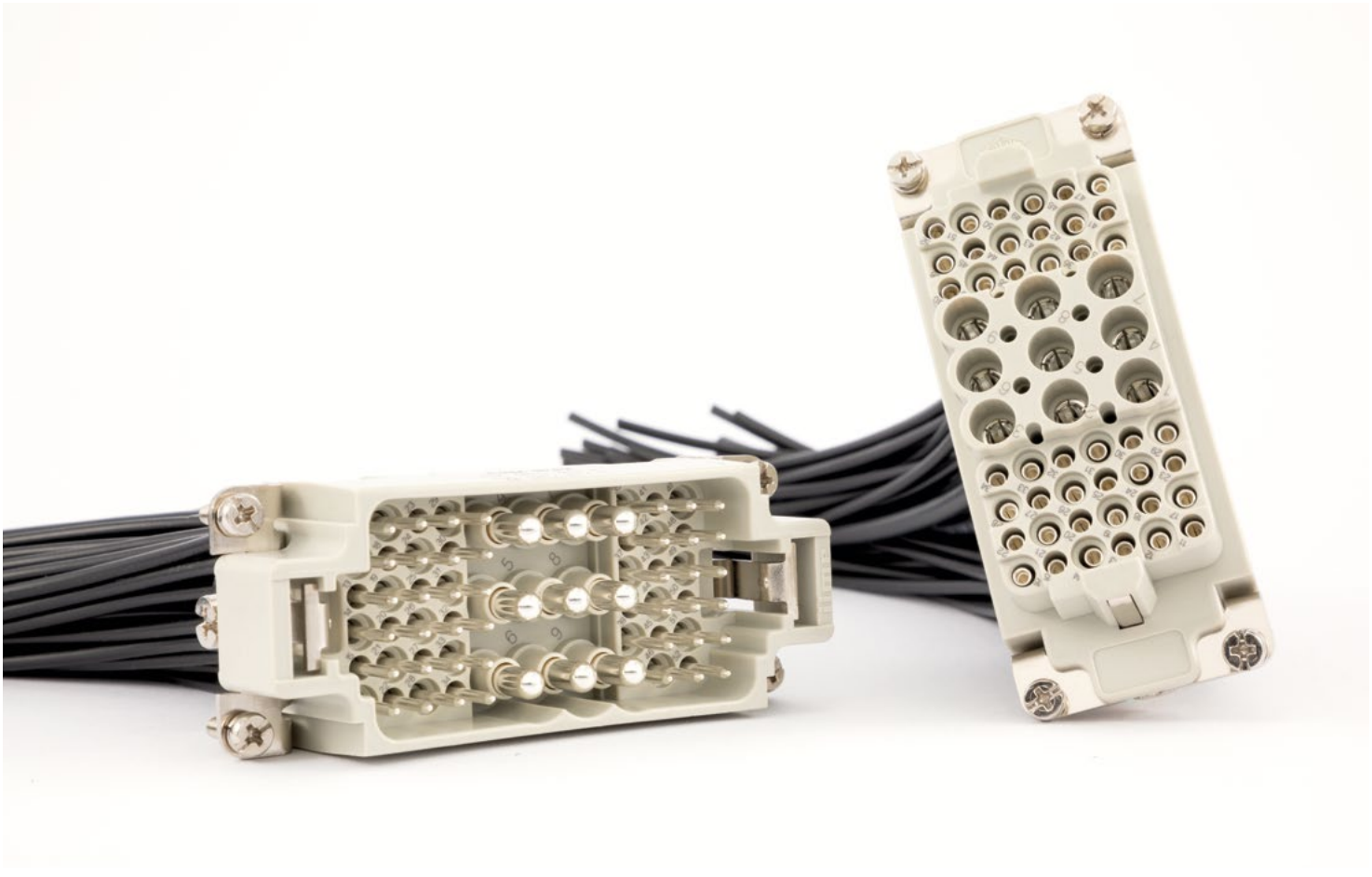
CDF and CDM



CXF and CXM contacts

conductor section mm²	conductor slot ø A (mm)	conductors stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6
CDF and CDM contacts		
0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

CXF 9/42, CXM 9/42 COMBINED INSERT



MIXO SERIES

GENERAL OVERVIEW

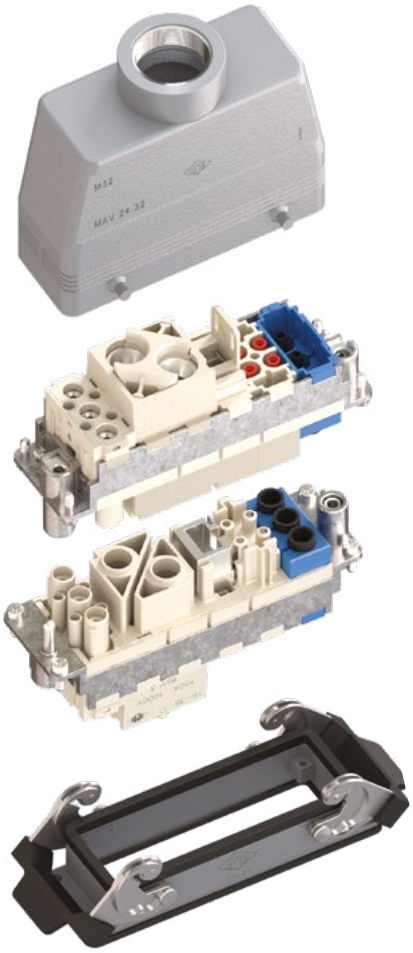
The MIXO series is a system of modular units for special applications that uses the traditional ILME enclosures. Each enclosure can house different types of connections such as: electric signals and contacts for the conduction of compressed air with pressure values of up to 8 bars.

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

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

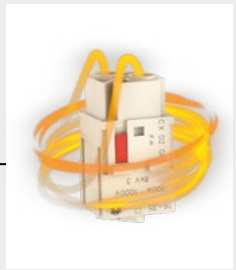
ILME MIXO series of modular connectors is an open connector system that provides versatile configuration to the users' individual requirements, giving the **freedom to assemble a customized connector** from a range of over 50 modules for power electrical, data transmission, optical signals or air. The module range is continuously expanded, allowing new configurations to be realised.

The use of enclosures provides the possibility of innumerable **applications.**



POWER/ SIGNAL

POWER



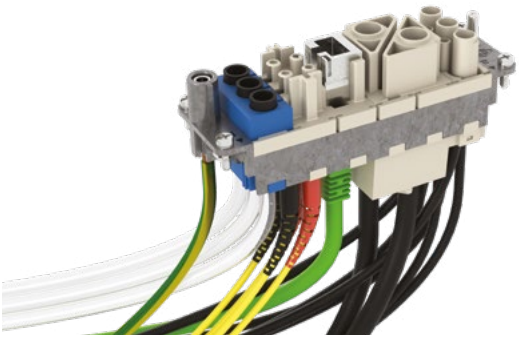
DATA TRANSMISSION

FIBRE OPTIC

PNEUMATIC

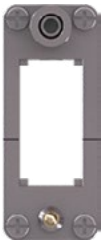
The MIXO series can be used with **5 different frame sizes:**

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



Single sized modules, where specified, can also be installed directly inside **MIXO ONE** enclosures.

CX 01 T
1 module



CX 02 TF/TM
2 modules

CX 03 TF/TM
3 modules

CX 04 TF/TM
4 modules

CX 06 TF/TM
6 modules

Possibility – to be verified case-by-case – to use the recently added MIXO **HNM frames** (provided with special gold plated PE contacts) together with R series of crimp contacts and the relevant connector hoods and housings, to produce, where required, an **HNM connector** (High Number of Matings, up to 10.000 cycles of operation).

Fill the unused frame slots with CX FM dummy module

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

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

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

THE COMPLETE RANGE

2020 products are marked with the ✚ symbol.

Calculate the number of frame slots taken up by the required inserts (frame slot 1, 2 or 3 modules) and select the right frame according to the number of required modules (available 1, 2, 3, 4 and 6 modules).

Single sized modules, where specified, can also be installed directly inside **MIXO ONE** enclosures.

Inserts	Contact type	Signal type	Kind of connection	Rated current (A)	Rated voltage (V)	Number of frame slots
CX 01 YF/M	main	electric	crimp	200	1000	2
CX 01 YPEF/M	PE	—	crimp	200	—	2
CX 01 GF/M	main	electric	crimp	100	830	1
CX 02 GF/M	main	electric	crimp	100	1000	2
CX 02 7F/M	main	electric	crimp	70	1000	1
CX 02 4AF/M	main	electric	axial screw	40	1000	1
CX 02 4BF/M	main	electric	axial screw	40	1000	1
CX 02 4F/M	main	electric	crimp	40	1000	1
CX 03 4F/M	main	electric	crimp	40	400/690	1
CX 03 4BF/BM	main	electric	crimp	40	500	1
CX 3/4 XDF/M	main	electric	crimp	40/10	830	1
CX 04 XF/M	main	electric	crimp	40	830	1
CX 05 SF/M ▲	main	electric	spring	16	400	1
CX 05 SHF/M	main	electric	SQUICH®-spring	16	400	1
CX 06 CF/M	main	electric	crimp	16	500	1
CX 06P CF/M	main	electric	crimp	16	830	1
CX 08 CF/M	main	electric	crimp	16	400	1
CX 08 I6F/M	main + shield	electric	crimp	5	50	1
✚ RX 08 I6F/M (HNM)	main + shield	electric	crimp	5	50	1
✚ CX 08 D5F/F2 M/M2	main + shield	electric	crimp	10	50	1
✚ RX 08 D5F/F2 M/M2 (HNM)	main + shield	electric	crimp	10	50	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 42 DF/M	main / auxiliary	electric	crimp	10	150	2
CX 25 IBF/M	main / auxiliary	electric	crimp	4	50	1
CX 25 IF/M ▲	main / auxiliary	electric	crimp	4	50	1
✚ CX 20S IF/M	main / auxiliary + shield	electric	crimp	4	32	1
✚ RX 20S IF/M (HNM)	main / auxiliary + shield	electric	crimp	4	32	1
✚ CX 36 IF/M	main / auxiliary	electric	crimp	4	32	1
CX 02 CHF/M	main	electric	crimp	16	2500	1
CX 02 HF/M	main	electric	crimp	16	2900 / 5000	2
✚ CX 02 4HF/M	main	electric	crimp	40	2900 / 5000	2
CX 02 BF/M	seat for two shielded connectors (refer to 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	air	push-in	—	—	1
CX 02 P	pneumatic Ø 6,0 mm	air	push-in	—	—	1
CX FM	none (dummy module)	—	—	—	—	1
CX 01 J8F/M/IM	RJ45	electric	crimp / IDC	---	—	1
✚ CX 01 J8AIF/BIF/PIF	RJ45 + shield	electric	IDC	1	50	1
CX 01 JF/M	RJ45 + auxiliary	electric	crimp	10	250	2
CX 02 JF/M	RJ45 + auxiliary	electric	crimp	10	250	3
CX 01 UF/M	USB	electric	—	—	—	1
CX 01 9VF/M	D-SUB	electric	crimp	5	50	1
✚ CX 01 9VF2/M2	D-SUB + shield	electric	crimp	5	50	1
CX 01 9VTF	D-SUB	electric	screw	5	50	1
✚ CX 01 MIF/MIM	HDMI	electric	—	—	—	1
CX 04 LF/M	POF / MOST	optic	crimp	—	—	1
CX 04 RF/M	coaxial	electric	crimp	—	—	1
CX 04 SCF/M	SC fibre optic	optic	crimp/glue	—	—	1

▲ Available upon request

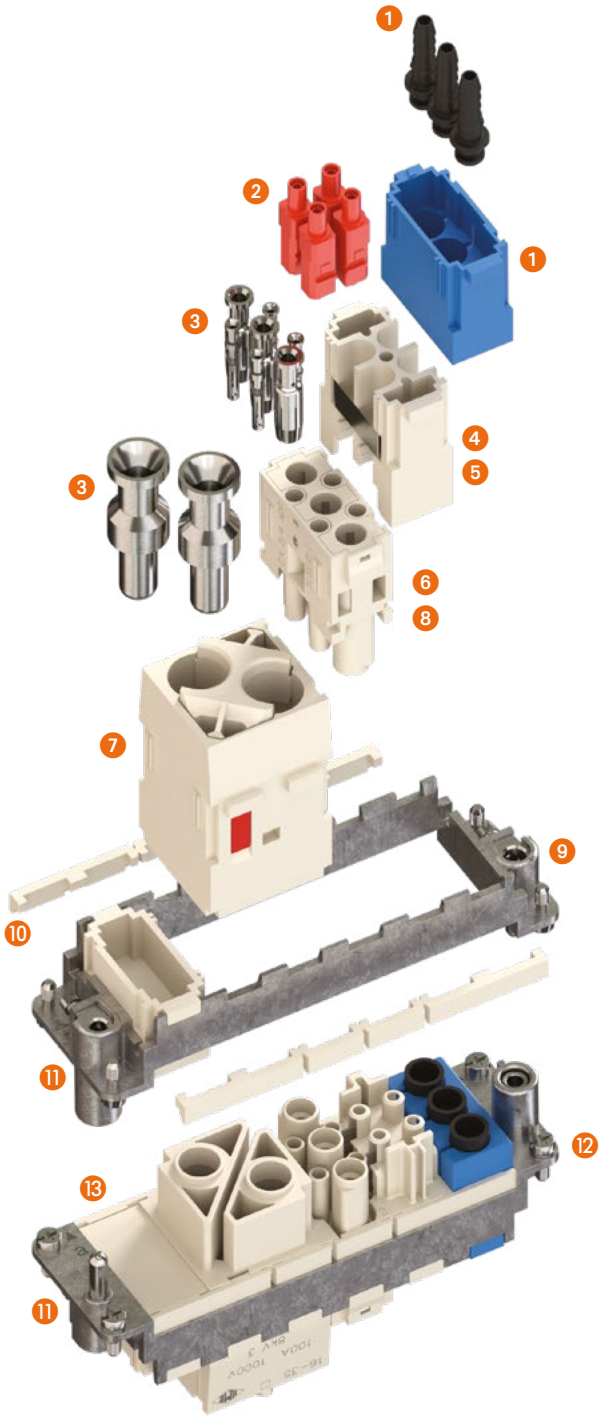
size:
1 frame slot

size:
2 frame slots

size:
3 frame slots

TECHNICAL CHARACTERISTICS

1. Pneumatic contacts in plastic with hose barb connection.
2. Fibre optic contacts SC type.
3. Electric contacts in silver-plated or gold-plated brass with connections to the conductors via crimping, spring clamp or axial screw.
4. Modular inserts of identical size with insertion system for forming the complete module and frame lock tab.
5. Inserts in self-extinguishing thermoplastic material, reinforced with glass fibre, UL 94V-0 approved, with a working temperature range of -40 °C to +125 °C.
6. Inserts in conformance with the requirements of the EN 61984 standard and certified and marked with the UL, CSA, CQC, DNV-GL, BV, EAC marks.
7. Inserts with patented “swallowtails” to prevent incorrect coupling.
8. Position of contacts identified with numbers or codes on both sides of every insert.
9. Male/female module carrier frames with mandatory housings and polarity, in die-cast zinc alloy.
10. Module lock tab, may be divided according to the number of modules used; it guarantees a perfect stability of the modules during wiring and coupling/uncoupling of the connectors.
11. Asymmetric protective earth contacts (two per frame) with wide contact surface to prevent incorrect coupling; when two or more identical connectors of the MIXO series are used, coded pins may prevent incorrect coupling.
12. Captive frame fastening screws, with spring washer.
13. Dummy module for unused frame slots.



ADVANTAGES

- **Easy and user-friendly assembly of the complete multi-module insert before fixing it on the relevant sized metal frame;**
- **use of proprietary ILME technology providing each module with “swallowtails” (lateral keys/keyways), for reciprocal locking of modules and overall assembly of the insert into rigid (non hinged) frames with snap-in locking strips;**
- **faster and easier assembly compared with competitor solutions (easier handling of modules as a complete block than e.g. 6 independent parts);**
- **intermateability at “complete connector” (modules in frame) with other industry standard products;**
- **robust and long lasting prevailing crimp connection technology (largely preferred over screw type technology in high vibration and shock environments).**

Watch our video

MIXO NOVELTIES

The MIXO series, featuring a flexible modular design for utmost versatile connector creation with easy and safe installation, is again furtherly expanded, with the addition of 9 new modules (8 single-sized, 1 double-sized), widening the MIXO portfolio to 53 modules, as follows:

- **CX 36 IF /IM**
  New MIXO 4 A module
  single-sized, 36 poles, 4 A (crimp) – 32 V 0,8 kV 3,
  very high density

- **CX 20S IF /IM**
  New MIXO Shielded 4 A module
  single-sized, 20 poles + shield, 4 A (crimp) – 32 V 0,8 kV 3

- **RX 20S IF /IM**
  New MIXO HNM (High Number of Matings) Shielded 4 A module
  single-sized, 20 poles + shield, 4 A (crimp) – 32 V 0,8 kV 3

- **CX 08 D5F /M (one cable) and CX 08 D5F2 /M2 (two cables)**
  New MIXO Megabit module
  single-sized, 8 poles + shield, 10 A (crimp) – 50 V 0,8 kV 3
  with relevant accessories

- **RX 08 D5F /M (one cable) and CX 08 D5F2 /M2 (two cables)**
  New MIXO HNM (High Number of Matings) Megabit module
  single-sized, 8 poles + shield, 10 A (crimp) – 50 V 0,8 kV 3
  with relevant accessories

- **RX 08 I6F/M**
  New MIXO HNM (High Number of Matings) Gigabit module
  single-sized, 8 poles + shield, 5 A (crimp) – 50 V 0,8 kV 3
  for use with new RI turned crimp HNM contacts

- **CX 01 MIF /MIM**
  New MIXO HDMI module
  single-sized, adapter (male) and coupler (female) for HDMI Type A slim sized patch cords
  CW 2 MIAM (2m length, 5m length CW 5 MIAM upon request), 0,5 A – 40 V 0,8 kV 3

- **CX 01 J8AIF /J8BIF /J8PIF**
  New MIXO RJ45 Cat. 6_A female module with IDC terminations
  single-sized, 8-way shielded RJ45 jack (female connector), with IDC terminations for 4-pair data cables, Cat. 6_A Class E_A, for transmission rates up to 10 Gbit/s (IEEE 802.3an), 1 A – 50 V 0,8 kV 3

- **CX 02 4HF/4HM**
  New MIXO HT module 40A 2 poles
  double-sized, 2 poles, 40 A (crimp) – 2900/5000 V 15 kV 3

- **CX 01 9VF2/9VM2**
  New MIXO 9-pole shielded D-SUB module for 2 cables
  single-sized, 9-pole, 5A (crimp) – 50 V 0,8 kV 3 D-Sub shielded female connector module
  for wiring to two separate cables (double cable clamp on the shield)

Find more information on our products at www.ilme.com

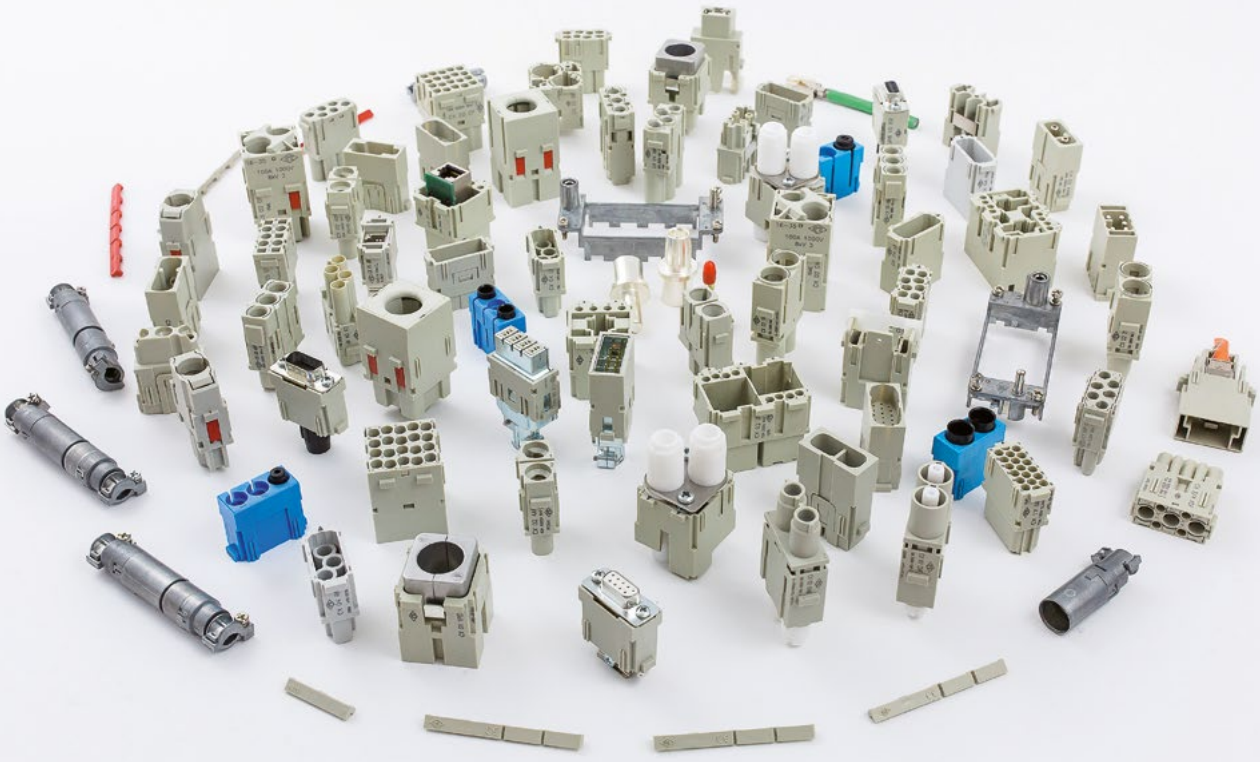
MIXO SERIES ADVANTAGES

- Easy and user-friendly assembly of the complete multi-module insert before fixing it on the relevant sized metal frame;
- use of proprietary ILME technology providing each module with “swallowtail” lateral keys/keyways, for reciprocal locking of modules and overall assembly of the insert into rigid (non hinged) frames with snap-in locking strips;
- faster and easier assembly compared with competitor solutions (e.g. no need for additional, optional plastic stoppers to lock the hinge, no need for a hinged frame at all, easier handling of modules as a complete block than e.g. 6 independent parts);
- intermateability at “complete connector” (modules in frame) with other industry standard products;
- robust and long lasting prevailing crimp connection technology (largely preferred over screw type technology in high vibration and shock environments);
- possibility - to be verified case-by-case - to use the recently added MIXO HNM frames (provided with special gold plated PE contacts) together with crimp contacts R series and the relevant connector hoods and housings, to produce where required an HNM connector (High Number of Matings, up to 10.000 cycles of operation).

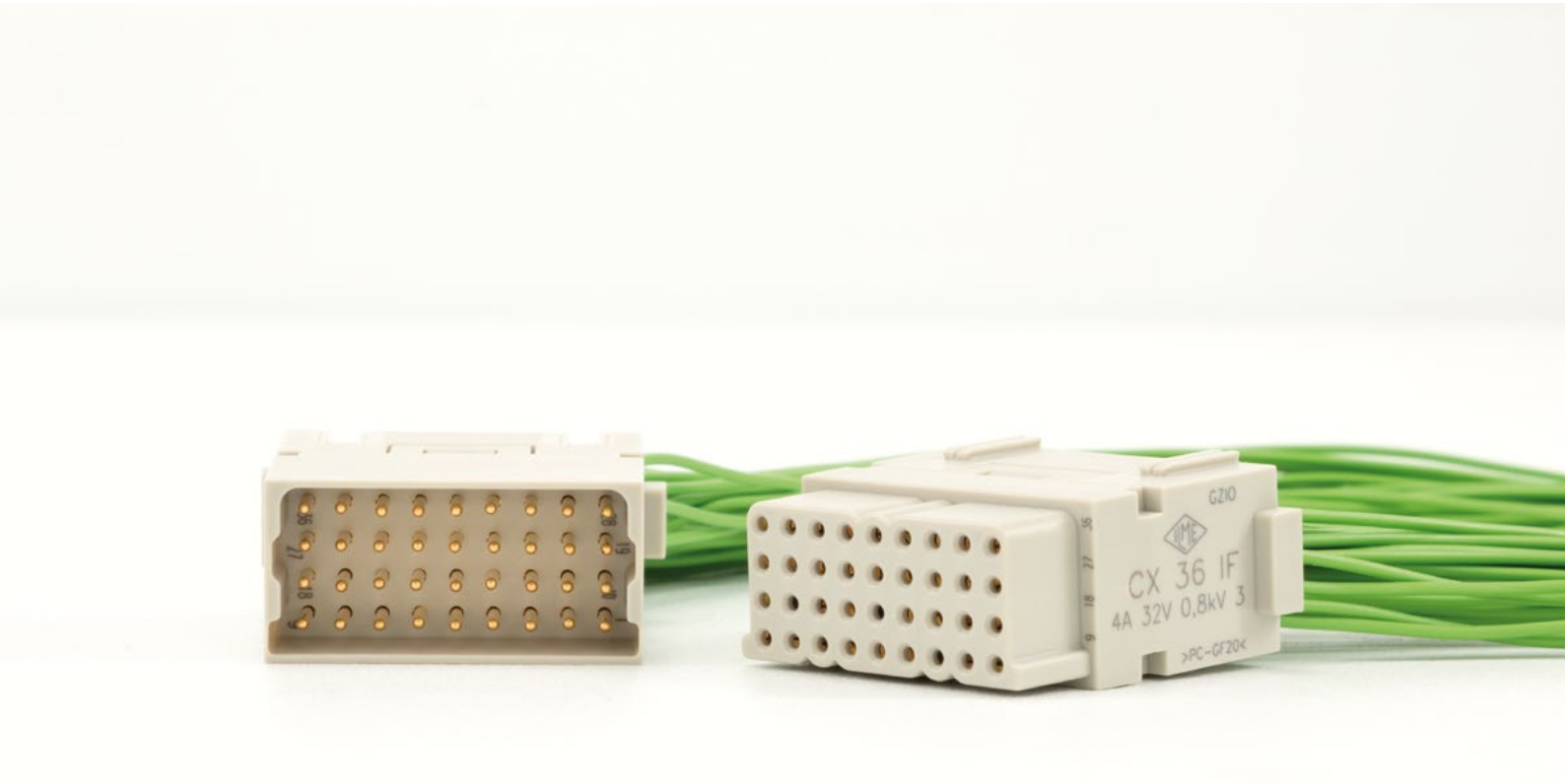
In addition, each of the new modules adds the following individual features:

- miniature-oriented, very high density, 40% higher than previously available for 5A crimp contacts (CX 36 IF/IM);
- robust shielding of larger number of connections (20) for sensitive signals against possible interference by adjacent power contacts used for variable frequency driving of motors (MIXO Shielded CX 20S IF/IM);
- fully shielded connections for two 4-way data bus cables in a single-sized module (miniaturizing trend) (MIXO Megabit module);
- HNM versions of Gigabit module and of new Megabit and Shielded modules, as well as of new CX 36 IF/IM 36 poles module, for use when these modules are foreseen for frequent operation;
- high quality video signal transmission (Ultra HD 4k@60 Hz) in the heavy-duty MIXO modular system (world premiere);
- alternative to the female/female RJ45 Cat 6A CX 01 J8F coupler module, for three different pin assignments (TIA 568A, TIA 568B and PROFINET) with IDC solderless connection (CX 01 J8…IF);
- high tension (2900/4000V) at higher current (40A) needs, widening the portfolio of MIXO HT modules for high tension applications (CX 02 4HF/4HM);
- more versatility at lower cost in serving data bus systems using the D-SUB 9-pole shielded connectors, with cable clamp for 2 shielded cables (CX 01 9VF2/9VM2).

MIXO SERIES AT A GLANCE



MIXO
CX 36 IF /IM



Very high density
MIXO 4 A 36-pole ELV (extra-low voltage) 32 V
connector module for signal transmission,
EN/IEC 61984 ratings: 36 P 4 A 32 V 0,8 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX 36 IF /IM

- **Very high density** 36-pole ELV (extra-low voltage) 32 V connector module for signal transmission.

- 40% higher density than previously available CX 25 IF/IM or the improved CX 25 IBF /IBM for use of size 0.7 wires up to 18 AWG 0,75 mm².

- EN/IEC 61984 ratings: **36 P 4 A 32 V 0,8 kV 3**
  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.

- UL/CSA voltage rating: 30 VAC/DC.

- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +125 °C.

- Suitable either for series **CI** turned crimp contacts sizes **0.2 - 0.3 - 0.5** (size 0.7 not suitable), available with standard gold plating (D), basic gold plating (JD - see page 72), silver plating (A), tin plating (S), or for new series **SI** stamped crimp contacts sizes 0.2 or 0.5 (gold plated, 3 performance levels: 1D - 2D - 3D).

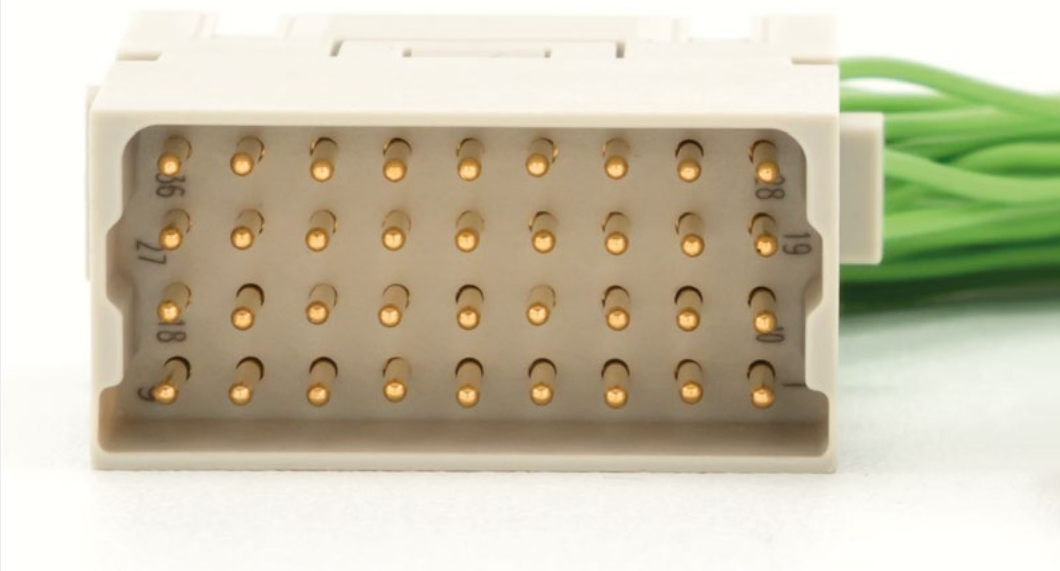
- Covers up to three 3Φ AC motors (3 axes with high-power motion control system) and 24 + 18 = 42 poles in peripheral mid-power/auxiliaries sections, to cover e.g. 4 additional motion control axes with 12 of the 18-pole portion, and the remaining 30 contacts serving auxiliary and signal contacts (I/O, solenoids, etc.).

- Max individual wire sheathing diameter: **1,7 mm**

- **HNM variant** is created using HNM turned crimp contacts series **RI**, for up to 10.000 mating cycles when mounted in HNM MIXO frames **RX 02 /03 /04 /06 TF /TM** (in turn mounted inside HNM connector enclosures), thanks to special lubrication on the shield contact spring.

- Suitable also for MIXO ONE enclosures.

40% higher density than previously available CX 25 IF/IM or CX 25 IBF /IBM

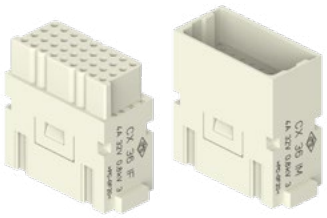


CX 36 IF/IM 36 poles 4 A - 32 V

The modular inserts must be installed in suitable frames which are then mounted in traditional housings or in COB panel support. Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

modular units, crimp connections

CI (4 A) crimp contacts, silver and gold plated



pages:

frames for modular units **33 ***

MIXO ONE enclosures **369**

refer to CN.19 pages
*** refer to NEWS 2020 pages**

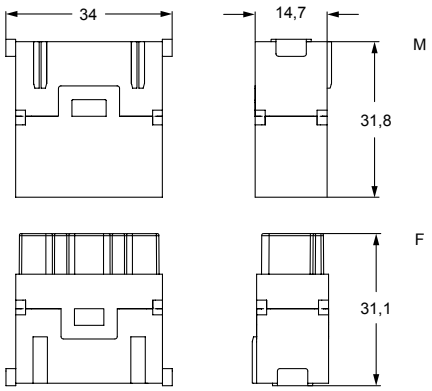
FROM FEBRUARY 2020

description	part No.	part No.	part No.
without contacts (to be ordered separately)			
female inserts for female contacts	**CX 36 IF**		
male inserts for male contacts	**CX 36 IM**		
CI (4 A) female crimp contacts			
0,08-0,21 mm² AWG 28-24		**CIFA 0.2**	**CIFD 0.2**
0,13-0,33 mm² AWG 26-22		**CIFA 0.3**	**CIFD 0.3**
0,33-0,52 mm² AWG 22-20		**CIFA 0.5**	**CIFD 0.5**
CI (4 A) male crimp contacts			
0,08-0,21 mm² AWG 28-24		**CIMA 0.2**	**CIMD 0.2**
0,13-0,33 mm² AWG 26-22		**CIMA 0.3**	**CIMD 0.3**
0,33-0,52 mm² AWG 22-20		**CIMA 0.5**	**CIMD 0.5**

silver plated

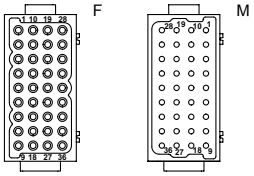
gold plated+

- characteristics according to EN/IEC 61984 ratings:
  4 A 32 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- rated voltage according to UL/CSA: 30 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts CI series use:
  CIPZ D crimping tool
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  CIES insertion / removal tool for contacts 0,2 - 0,5 mm² (see pages 716 - 719 of CN.19 catalogue)
- for max. current load see the connector inserts derating diagrams **under construction**.

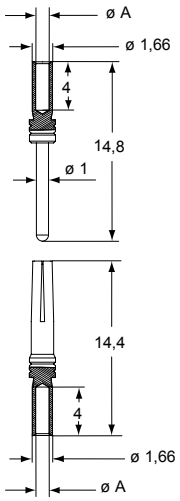


contacts side (front view)

side with reference arrow ▲



- 1 frame slot

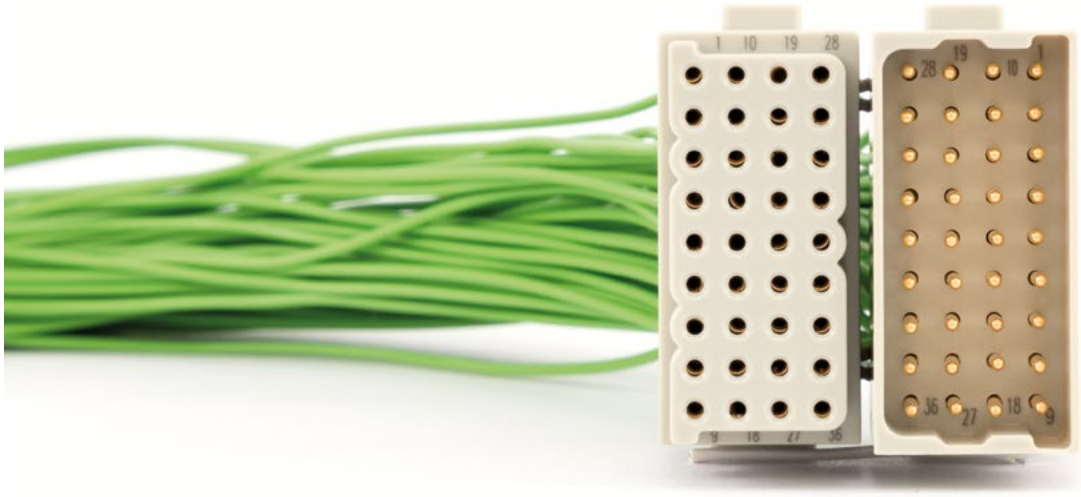


CIF and CIM contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

+ for basic or high thickness gold plating, please refer to page 74

MIXO CX 36 IF/IM



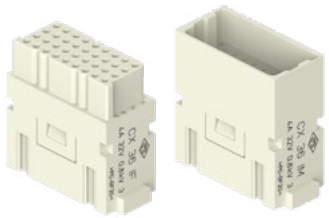
CX 36 IF/IM 36 poles 4 A - 32 V HNM (High Number of Matings)

The modular inserts must be installed in suitable frames which are then mounted in HNM enclosures.

page:

frames for modular units 33

modular units, crimp connections



- **10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES**
- **5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER**

FROM FEBRUARY 2020

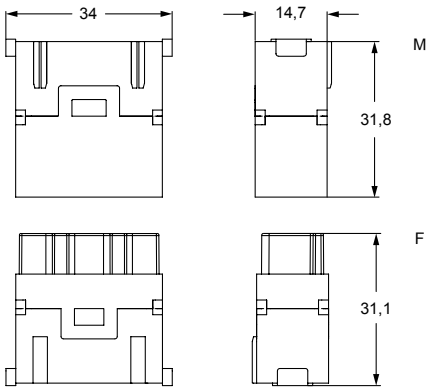
RI (4 A) crimp contacts gold plated

FROM MAY 2020

description	part No.	part No.
without contacts (to be ordered separately)		
female inserts for female contacts	**CX 36 IF**	
male inserts for male contacts	**CX 36 IM**	
RI (4 A) female crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIFD 0.2**
0,13-0,33 mm² AWG 26-22		**RIFD 0.3**
0,33-0,52 mm² AWG 22-20		**RIFD 0.5**
RI (4 A) male crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIMD 0.2**
0,13-0,33 mm² AWG 26-22		**RIMD 0.3**
0,33-0,52 mm² AWG 22-20		**RIMD 0.5**

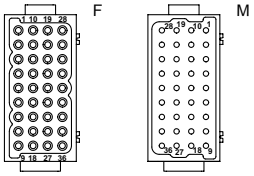
gold plated

- characteristics according to EN/IEC 61984 ratings:
  4 A 32 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- rated voltage according to UL/CSA: 30 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 10.000 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts RI series use:
  CIPZ D crimping tooll
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  CIES insertion / removal tool for contacts 0,2 - 0,5 mm² (see pages 716 - 719 of CN.19 catalogue)
- for max. current load see the connector inserts derating diagrams **under construction**.

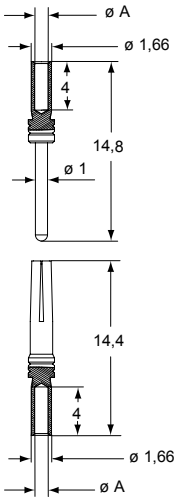


contacts side (front view)

side with reference arrow ▲



- 1 frame slot



RIF and RIM contacts

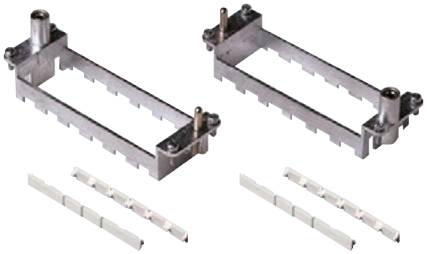
conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

RX 02 TM/TF, RX 03 TM/TF, RX 04 TM/TF, RX 06 TM/TF HNM (High Number of Matings)

enclosures size:		pages:
"44.27"	HNM	592 - 593
	C-TYPE IP65/IP66, single lever	387 - 392
	V-TYPE IP65/IP66, single lever	444 - 447
	E-Xtreme® corrosion proof	530-531, 542, 550-551
"57.27"	HNM	594 - 595
	C-TYPE IP65/IP66, single lever	393 - 401
	V-TYPE IP65/IP66, single lever	448 - 453
	E-Xtreme® corrosion proof	532-533, 543, 552-553
"77.27"	HNM	596 - 597
	C-TYPE IP65/IP66, single lever	402 - 411
	V-TYPE IP65/IP66, single lever	454 - 458
	E-Xtreme® corrosion proof	534-535, 544, 554-555
"104.27"	HNM	598 - 599
	C-TYPE IP65/IP66, single lever	412 - 423
	V-TYPE IP65/IP66, single lever	459 - 463
	E-Xtreme® corrosion proof	536-537, 545, 556-557
"77.62"	C-TYPE IP65/IP66, single lever	424 - 429
	E-Xtreme® corrosion proof	546
"104.62"	C-TYPE IP65/IP66, single lever	430
	E-Xtreme® corrosion proof	547

refer to CN.19 pages

frames for modular units with lock-in tab (included)



10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES

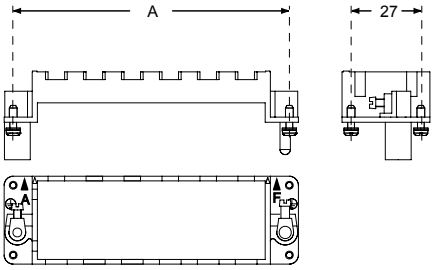
5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

description	part No.	part No.
frames for modular units with lock-in tab included	type for hoods	type for housings
for 2 modular units - for housing size 44.27	**RX 02 TM**	**RX 02 TF**
for 3 modular units - for housing size 57.27	**RX 03 TM**	**RX 03 TF**
for 4 modular units - for housing size 77.27 and 77.62	**RX 04 TM**	**RX 04 TF**
for 6 modular units - for housing size 104.27 and 104.62	**RX 06 TM**	**RX 06 TF**

C-TYPE and V-TYPE 2-lever versions cannot be used to reach 5.000 matings.

- die-cast zinc alloy frames
- protective earth (PE)
- possibility of mounting female and male modular units on the same frame
- frames supplied with lock-in tab to attach units
- polarisation on frames
- coding pins **CR..CX**
- for spare lock-in tab **CX CFM** see SPARE SPARTS catalogue

RX TM / TF



part No.	A (mm)	for housings size
RX 02 TM / TF	44	44.27
RX 03 TM / TF	57	57.27
RX 04 TM / TF	77,5	77.27 and 77.62
RX 06 TM / TF	104	104.27 and 104.62

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

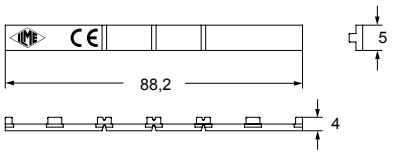
In order to accomodate larger PE conductor cross-sectional area, use CGT PE adapters, see page 319 CN.19 catalogue.

position of modules (contact side view)

side with reference arrow ▲

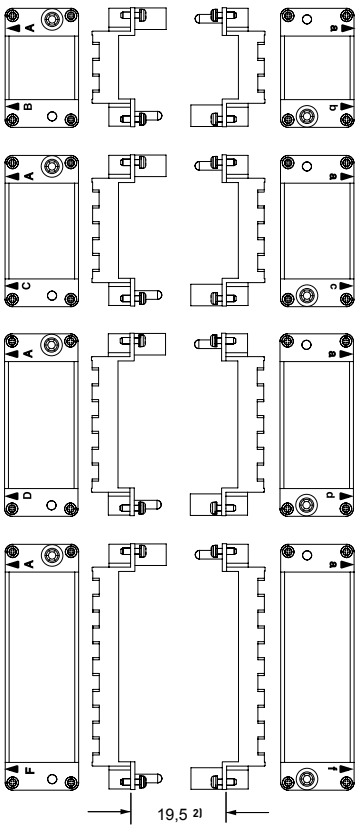
side with reference arrow ▲

CX CFM (lock-in tab)



Polarisation of frames with relative identification letters and couplings

frame for hoods [1] **frames for housings** [1]



[1] **Warning:**
The module support frames are marked:
- FOR HOODS: **upper-case A-B, A-C, A-D and A-F**
- FOR HOUSINGS: **lower-case a-b, a-c, a-d and a-f**

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

[2] Distance for:
- electric and fibre optic contacts: max 21 mm
- pneumatic contacts: max 20,5 mm

MIXO SHIELDED
CX 20S IF /IM

MIXO Shielded

20 poles + shield 4 A module,

EN/IEC 61984 ratings: 4 A 32 V 0,8 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

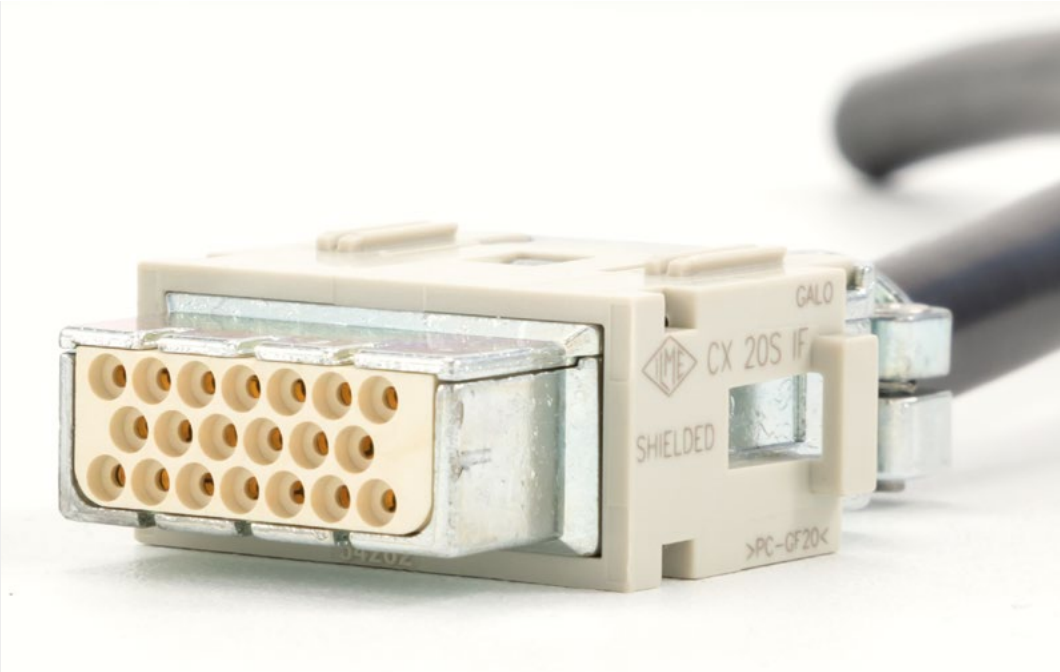
CX 20S IF /IM

- **Shielded** module for up to 20 turned crimp contacts series **CI** (5A) sizes 0.2 to 0.5, covering e.g. up to 10 signals.
- EN/IEC 61984 ratings: **4 A 32 V 0,8 kV 3**

  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +85 °C.
- Max individual wire sheathing diameter: **1,9 mm**
- Protects sensitive signals against possible interference generated by adjacent power contacts, when used in combination with MIXO power modules (10A, 16A, 40A or more) whose wires belong to the same power/signal combined cable (fulfilling the robotics trend in reducing the number of cables).
- **Supplied already complete of module and shielded connector**, turned crimp contacts CI Series separately available for due choice of size **0.2, 0.3 or 0.5** (not suitable for size 0.7).
- Screw fixing **cable clamp** (single cable entry) required for cable screen connection to the module shield, is separately available in 4 different sizes according to the range of cable Ø in mm: 5/7 – 7/10 – 10/12 and 11/14 (new).

  NOTE – Available upon request, as alternative to the screw fixing cable clamps, crimp flange and crimp sleeve cable clamps (same as applicable for the MIXO Gigabit module) to be chosen according to the specific dimension of the cable screen diameter and its insulation diameter (contact ILME Commercial Offices).
- HNM variant part nos. **RX 20S IF /IM** for use with HNM turned crimp contacts series **RI**, for up to 10.000 mating cycles when mounted in HNM MIXO frames **RX 02 /03 /04 /06 TF /TM** (in turn mounted inside HNM connector enclosures), thanks to special lubrication of the contact spring on the shield.
- **Shield separated from the PE circuit** (MIXO frame).
  NOTE – For versions with additional shielding connection to the MIXO frame (single earth/ground reference, preferred in railway rolling stock applications), part nos. **CX 20S IGF /IGM** contact ILME Commercial Offices.
- Suitable also for MIXO ONE enclosures.

all-around shielding separate from protective earth (grounding) potential



CX 20S IF/IM 20 poles + shield 4 A module - 32 V

The modular inserts must be installed in suitable frames which are then mounted in traditional housings or in COB panel support. Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

pages:

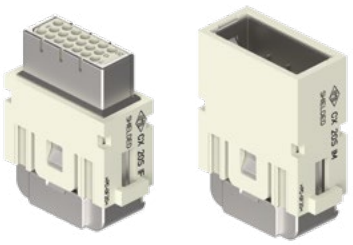
frames for modular units **39 ***

MIXO ONE enclosures **369**

- we recommend the use of CRF / CRM code pins together with relevant MIXO frame

refer to CN.19 pages
*** refer to NEWS 2020 pages**

modular units, crimp connection



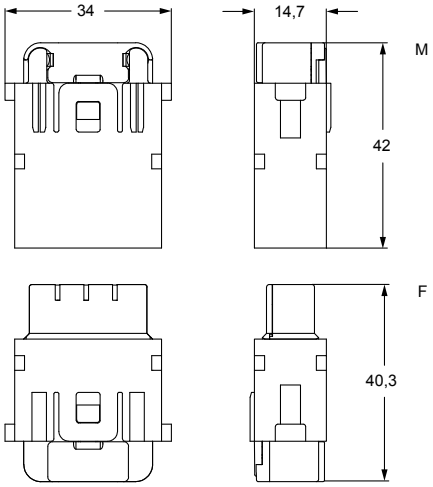
FROM FEBRUARY 2020

cable clamp

description	part No.	part No.
without contacts (to be ordered separately)		
female inserts for female contacts	**CX 20S IF**	
male inserts for male contacts	**CX 20S IM**	
cable clamp for 5-7 mm cable diameter		**CX 5/7 CA**
cable clamp for 7-10 mm cable diameter		**CX 7/10 CA**
cable clamp for 10-12 mm cable diameter		**CX 10/12 CA**
cable clamp for 11-14 mm cable diameter		**CX 11/14 CA**

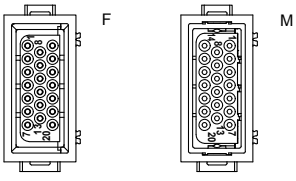
- characteristics according to EN/IEC 61984 ratings:
  4 A 32 V 0,8 kV 3
- c UL us (UL for USA and Canada) certified CSA, DNV-GL, BV pending
- rated voltage according to UL/CSA: 32 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +85 °C
- shield electrically separed from the PE of the housings
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts CI series use:
  CIPZ D crimping tool
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  (see pages 716 - 719 of CN.19 catalogue)
- for max. current load see the connector inserts derating diagrams **under construction**.

CX 20S IF, CX 20S IM



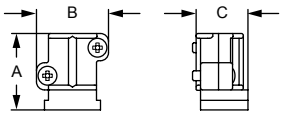
contacts side (front view)

side with reference arrow ▲



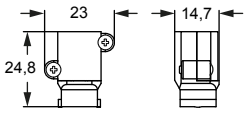
- 1 frame slot

CX 5/7 CA, CX 7/10 CA, CX 10/12 CA



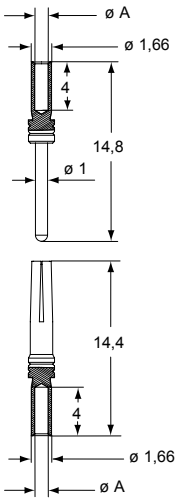
part No.	A	B	C
CX 5/7 CA	19,1	18	12,95
CX 7/10 CA	19,1	18	12,95
CX 10/12 CA	19,1	20,8	12,95

CX 11/14 CA



CI (4 A) crimp contacts
gold plated

description	part No.	
CI (4A) female crimp contacts		
0,08-0,21 mm² AWG 28-24	**CIFD 0.2**	gold plated+
0,13-0,33 mm² AWG 26-22	**CIFD 0.3**	
0,33-0,52 mm² AWG 22-20	**CIFD 0.5**	
CI (4A) male crimp contacts		
0,08-0,21 mm² AWG 28-24	**CIMD 0.2**	
0,13-0,33 mm² AWG 26-22	**CIMD 0.3**	
0,33-0,52 mm² AWG 22-20	**CIMD 0.5**	



CIF and CIM contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

+ for basic or high thickness gold plating, please refer to page 74

RX 20S IF/IM 20 poles + shield 4 A module - 32 V

HNM (High Number of Matings)

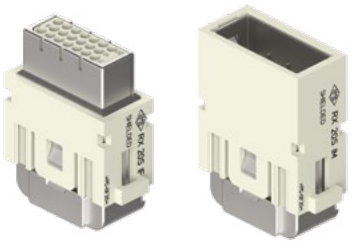
The modular inserts must be installed in suitable frames which are then mounted in HNM enclosures.

page:

frames for modular units **39**

- we recommend the use of CRF / CRM code pins together with relevant MIXO frame

modular units, crimp connection

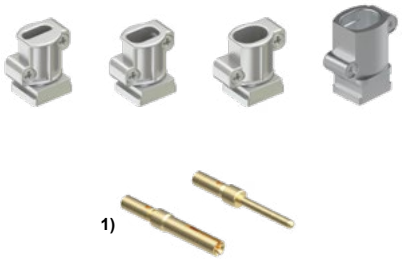


10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES

5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

FROM NOVEMBER 2020

cable clamp
RI (4 A) crimp contacts, gold plated



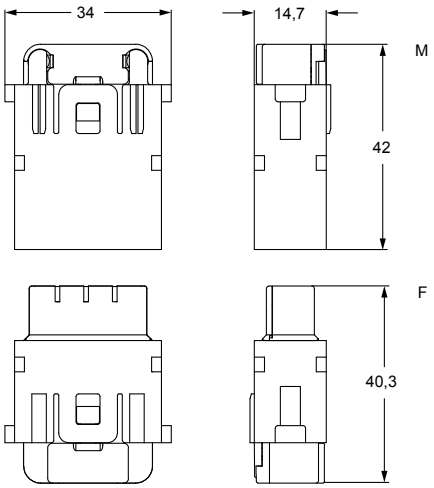
FROM MAY 2020 [1)]

description	part No.	part No.
without contacts (to be ordered separately)		
female inserts for female contacts	**RX 20S IF**	
male inserts for male contacts	**RX 20S IM**	
cable clamp for 5-7 mm cable diameter		**CX 5/7 CA**
cable clamp for 7-10 mm cable diameter		**CX 7/10 CA**
cable clamp for 10-12 mm cable diameter		**CX 10/12 CA**
cable clamp for 11-14 mm cable diameter		**CX 11/14 CA**
RI (4A) female crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIFD 0.2**
0,13-0,33 mm² AWG 26-22		**RIFD 0.3**
0,33-0,52 mm² AWG 22-20		**RIFD 0.5**
RI (4A) male crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIMD 0.2**
0,13-0,33 mm² AWG 26-22		**RIMD 0.3**
0,33-0,52 mm² AWG 22-20		**RIMD 0.5**

gold plated

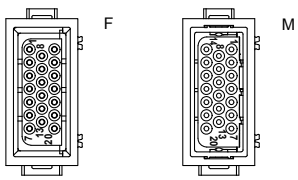
- characteristics according to EN/IEC 61984 ratings:
  4 A 32 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- rated voltage according to UL/CSA: 32 V
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +85 °C
- shield electrically separated from the PE of the housings
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 10.000 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts RI series use:
  CIPZ D crimping tool
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  (see pages 716 - 719 of CN.19 catalogue)
- for max. current load see the connector inserts derating diagrams **under construction**.

RX 20S IF, RX 20S IM



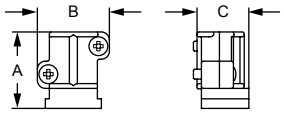
contacts side (front view)

side with reference arrow ▲



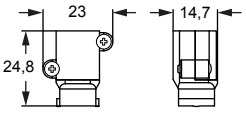
- 1 frame slot

CX 5/7 CA, CX 7/10 CA, CX 10/12 CA

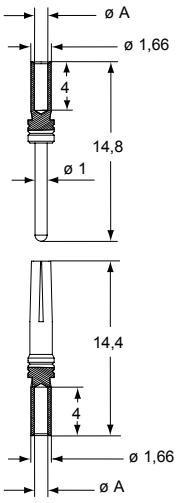


part No.	A	B	C
CX 5/7 CA	19,1	18	12,95
CX 7/10 CA	19,1	18	12,95
CX 10/12 CA	19,1	20,8	12,95

CX 11/14 CA



RIF and **RIM**



RIF and RIM contacts

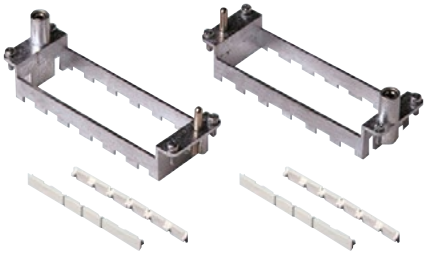
conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

RX 02 TM/TF, RX 03 TM/TF, RX 04 TM/TF, RX 06 TM/TF HNM (High Number of Matings)

enclosures size:		pages:
"44.27"	HNM	592 - 593
	C-TYPE IP65/IP66, single lever	387 - 392
	V-TYPE IP65/IP66, single lever	444 - 447
	E-Xtreme® corrosion proof	530-531, 542, 550-551
"57.27"	HNM	594 - 595
	C-TYPE IP65/IP66, single lever	393 - 401
	V-TYPE IP65/IP66, single lever	448 - 453
	E-Xtreme® corrosion proof	532-533, 543, 552-553
"77.27"	HNM	596 - 597
	C-TYPE IP65/IP66, single lever	402 - 411
	V-TYPE IP65/IP66, single lever	454 - 458
	E-Xtreme® corrosion proof	534-535, 544, 554-555
"104.27"	HNM	598 - 599
	C-TYPE IP65/IP66, single lever	412 - 423
	V-TYPE IP65/IP66, single lever	459 - 463
	E-Xtreme® corrosion proof	536-537, 545, 556-557
"77.62"	C-TYPE IP65/IP66, single lever	424 - 429
	E-Xtreme® corrosion proof	546
"104.62"	C-TYPE IP65/IP66, single lever	430
	E-Xtreme® corrosion proof	547

refer to CN.19 pages

frames for modular units with lock-in tab (included)



10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES

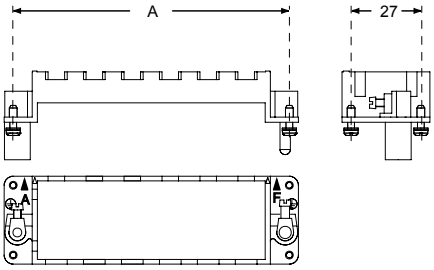
5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

description	part No.	
frames for modular units with lock-in tab included	type for hoods	type for housings
for 2 modular units - for housing size 44.27	**RX 02 TM**	**RX 02 TF**
for 3 modular units - for housing size 57.27	**RX 03 TM**	**RX 03 TF**
for 4 modular units - for housing size 77.27 and 77.62	**RX 04 TM**	**RX 04 TF**
for 6 modular units - for housing size 104.27 and 104.62	**RX 06 TM**	**RX 06 TF**

C-TYPE and V-TYPE 2-lever versions cannot be used to reach 5.000 matings.

- die-cast zinc alloy frames
- protective earth (PE)
- possibility of mounting female and male modular units on the same frame
- frames supplied with lock-in tab to attach units
- polarisation on frames
- coding pins **CR..CX**
- for spare lock-in tab **CX CFM** see SPARE SPARTS catalogue

RX TM / TF



part No.	A (mm)	for housings size
RX 02 TM / TF	44	44.27
RX 03 TM / TF	57	57.27
RX 04 TM / TF	77,5	77.27 and 77.62
RX 06 TM / TF	104	104.27 and 104.62

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

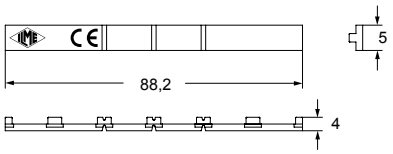
In order to accomodate larger PE conductor cross-sectional area, use CGT PE adapters, see page 319 CN.19 catalogue.

position of modules (contact side view)

side with reference arrow ▲

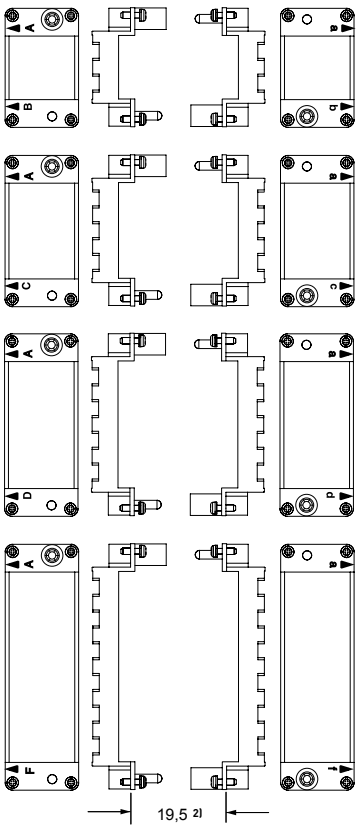
side with reference arrow ▲

CX CFM (lock-in tab)



Polarisation of frames with relative identification letters and couplings

frame for hoods [1] **frames for housings** [1]



[1] **Warning:**
The module support frames are marked:
- FOR HOODS: **upper-case A-B, A-C, A-D and A-F**
- FOR HOUSINGS: **lower-case a-b, a-c, a-d and a-f**

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

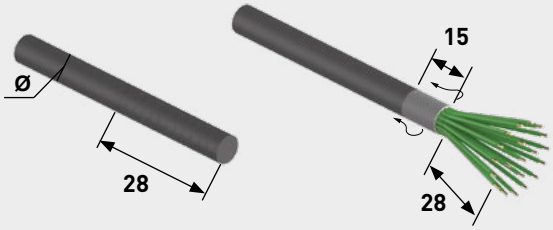
[2] Distance for:
- electric and fibre optic contacts: max 21 mm
- pneumatic contacts: max 20,5 mm

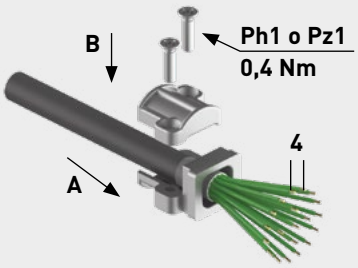
CX 20S IF/IM 20 poles + shield 4 A module - 32 V

ASSEMBLY INSTRUCTIONS

MIXO SHIELDED CX 20S IF

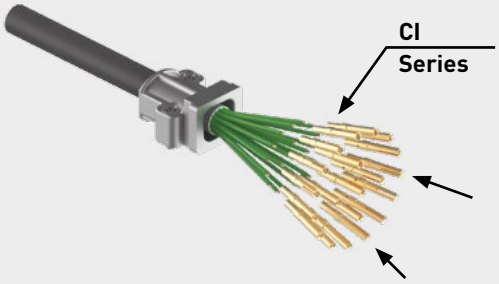
Watch our online tutorial





Cable clamp part No.	∅ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1
CX 11/14 CA	11-14	M 2,5	0,4	Pz1

1



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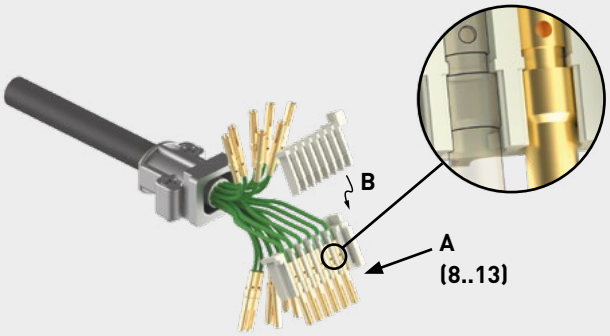

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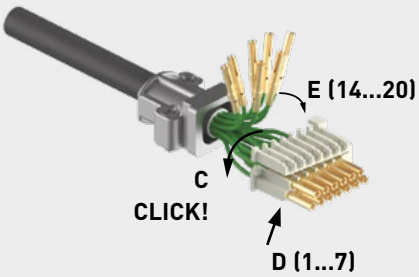

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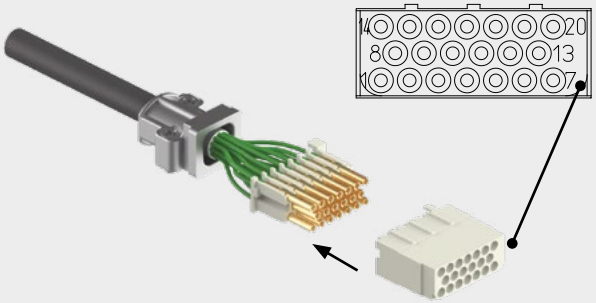

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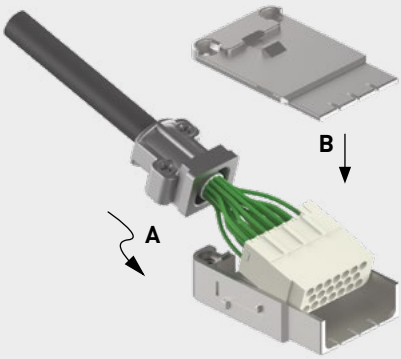

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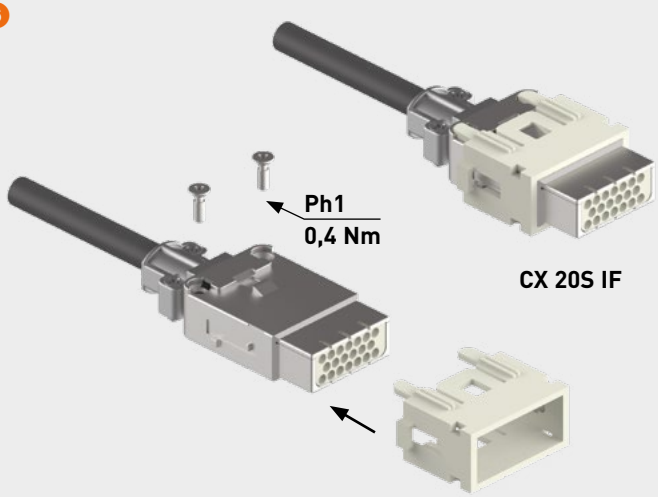
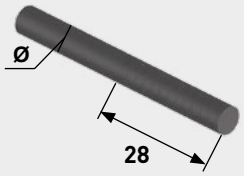


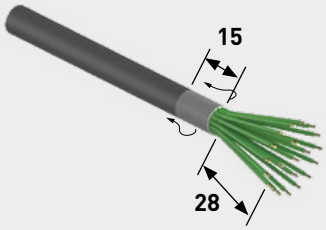
CX 20S IF/IM 20 poles + shield 4 A module - 32 V

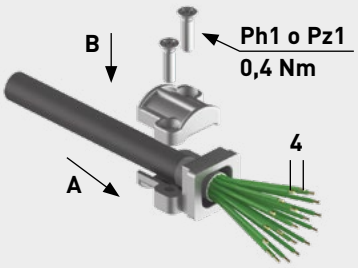
ASSEMBLY INSTRUCTIONS

MIXO SHIELDED CX 20S IM

Watch our online tutorial

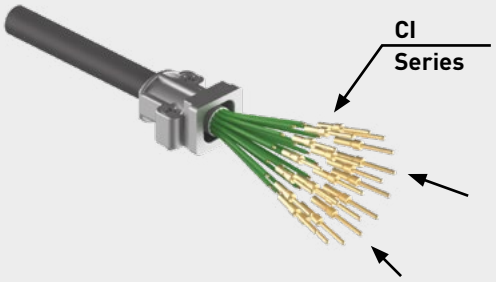






Cable clamp part No.	⌀ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1
CX 11/14 CA	11-14	M 2,5	0,4	Pz1

1



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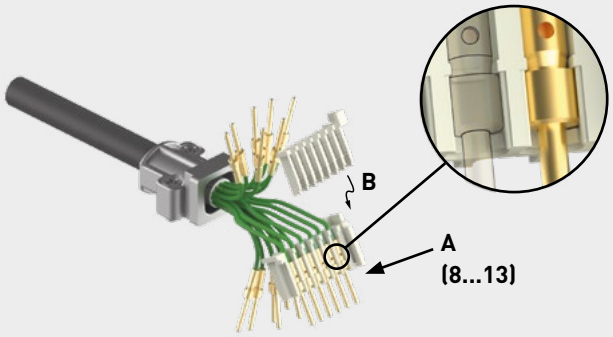

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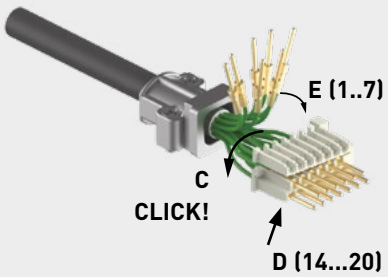

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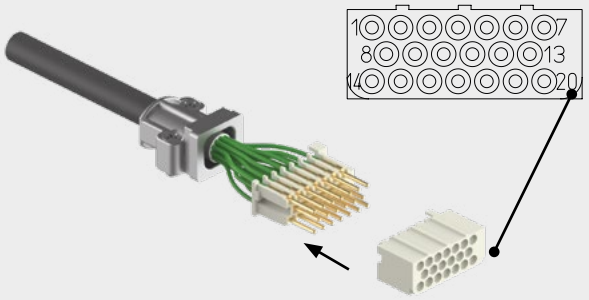

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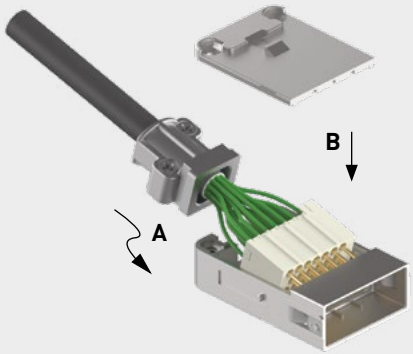

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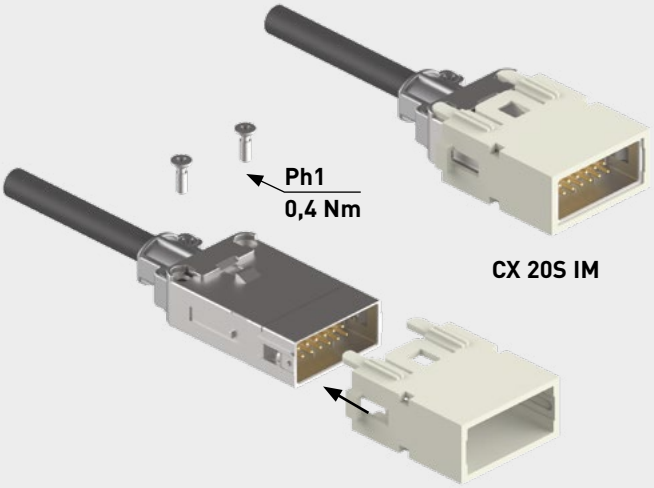


MIXO MEGABIT
CX 08 D5F /M - CX 08 D5F2 /M2

MIXO Megabit module
10 A 8 poles + shield,
CX 08 D5F /M (one cable)
CX 08 D5F2 /M2 (two cables),
EN/IEC 61984 ratings: 10 A 50 V 0,8 kV 3

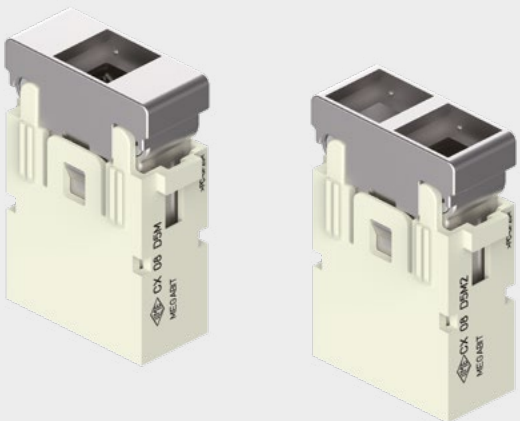
Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX 08 D5F /M - CX 08 D5F2 /M2

- **8P+shield**, for series **CD** 10 A crimp contacts (**D** in the code) 0,14 mm² / 26 AWG … 2,5 mm² /14 AWG (sizes 0.3 through 2.5).
- **Fully shielded** connector module for data transmission, **Megabit Ethernet** Category 5e (**5** in the code), Class D, frequencies up to 100 MHz, data rate up to 100 Mbit/s.
- Available with single cable entry (CX 08 D5F /D5M) or double cable entry (CX 08 D5F2 /D5M2, additional suffix **"2"** in the code):
  - **CX 08 D5F /M** for 1x4-pair + shield data cable (2 x 4 conductors + shield);
  - **CX 08 D5F2 /M2** for or 2x2-pair shield data cable (2 x 2 x 2 conductors + shield).
- Suitable for one or two cables, Ø from 5 mm to 14 mm.
- Screw fixing **cable clamp(s)**, required for cable screen connection to the module shield, is/are separately available in 4 different sizes according to the range of cable Ø in mm: 5/7 – 7/10 – 10/12 and 11/14 (new).
  NOTE – CX 11/14 CA new cable clamp suitable only for single cable entry modules.
- Optionally available, as alternative to the cable clamp, crimp flange and ferrules versions (same as offered for MIXO Gigabit module) to be optimized on the specific dimension of the customer cable.
- EN/IEC 61984 ratings: **10 A 50 V 0,8 kV 3**
  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +85 °C.
  NOTE – The limitation to the ULT is set upon the usual temperature rating of the telecommunication cables (2x2-pair or 1x4-pair), the insulating materials of the inserts and the metal shield might withstand up to 125 °C.
- Two separate contact holders provide two independently shielded 4-pole connectors in the same body.
- May replace in half space the previously available MIXO BUS 2x multi-axial solution (CX 02 BF /BM plus 2x multi-axial shielded circular insert CX 04 BF /BM).
- Shield separated from the PE circuit (MIXO frame);
  NOTE: For versions with additional shield connection to the MIXO frame (single earth/ground reference, preferred in railway rolling stock applications), part nos. **CX 08 D5GF /GM** (single cable entry) or **CX 08 D5GF2 /GM2** (double cable entry) contact ILME Commercial Offices.
- Max individual wire sheathing diameter: **3,6 mm**
- Suitable also for MIXO ONE enclosures.

single cable entry (CX 08 D5F /M) or double cable entry (CX 08 D5F2 /M2)



Megabit 8 poles + shield 10 A - 50 V

The modular inserts must be installed in suitable frames which are then mounted in traditional housings or in COB panel support. Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

pages:

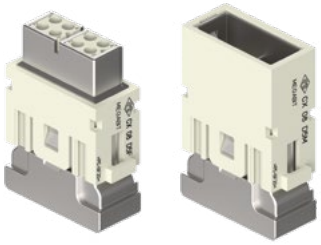
frames for modular units **48 ***

MIXO ONE enclosures **369**

- we recommend the use of CRF / CRM code pins together with relevant MIXO frame

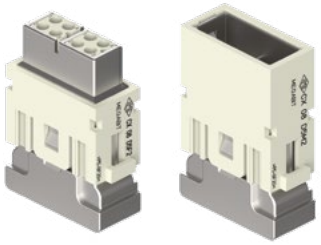
refer to CN.19 pages
*** refer to NEWS 2020 pages**

modular units, crimp connection single cable entry



FROM MARCH 2020

modular units, crimp connection double cable entry

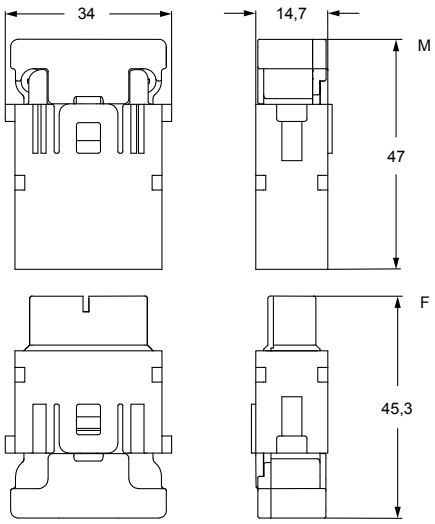


FROM MARCH 2020

description	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	 **CX 08 D5F** **CX 08 D5M**	
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts		 **CX 08 D5F2** **CX 08 D5M2**

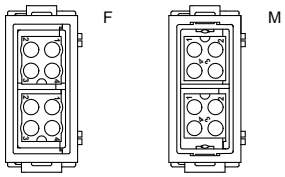
- characteristics according to EN/IEC 61984 ratings:
  10 A 50 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, CQC, DNV-GL, BV pending
- rated voltage according to UL/CSA: 50 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +85 °C
- fully shielded connector module for data transmission, Megabit Ethernet Category 5e (5 in the code), Class D, frequencies up to 100 MHz, data rate up to 100 Mbit/s
- shield electrically separed from the PE circuit MIXO frame
- made of self-extinguishing thermoplastic resin UL 94V-0
- shield made by zinc-alloy
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 10A contacts CDF, CDM series pages 708 - 741 of CN.19 catalogue).
  For 10A contacts CDF, CDM series, see also the new pneumatic crimping tool CCPZP RN (see page 145).

CX 08 D5F, CX 08 D5M



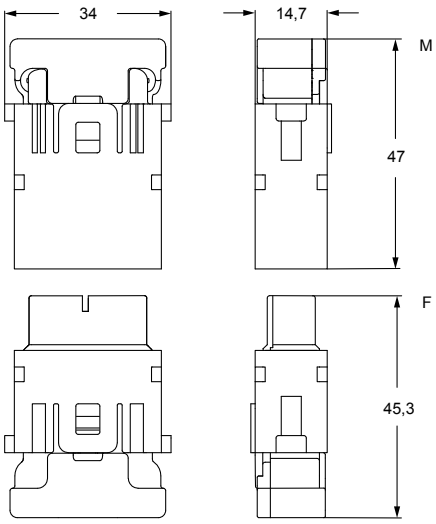
contacts side (front view)

side with reference arrow ▲



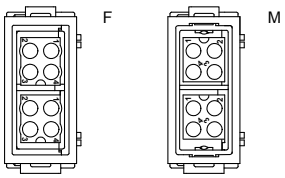
- 1 frame slot

CX 08 D5F2, CX 08 D5M2



contacts side (front view)

side with reference arrow ▲



- 1 frame slot

cable clamp

CD (10 A) crimp contacts gold plated

description	part No.	part No.
cable clamp for 5-7 mm cable diameter	**CX 5/7 CA**	
cable clamp for 7-10 mm cable diameter	**CX 7/10 CA**	
cable clamp for 10-12 mm cable diameter	**CX 10/12 CA**	
cable clamp for 11-14 mm cable diameter *	**CX 11/14 CA**	
10 A female contacts		
0,14-0,37 mm² AWG 26-22 identification No. 1		**CDFD 0.3**
0,5 mm² AWG 20 identification No. 2		**CDFD 0.5**
0,75 mm² AWG 18 identification No. ②		**CDFD 0.7**
1 mm² AWG 18 identification No. 3		**CDFD 1.0**
1,5 mm² AWG 16 identification No. 4		**CDFD 1.5**
2,5 mm² AWG 14 identification No. 5		**CDFD 2.5**
10 A male contacts		
0,14-0,37 mm² AWG 26-22 identification No. 1		**CDMD 0.3**
0,5 mm² AWG 20 identification No. 2		**CDMD 0.5**
0,75 mm² AWG 18 identification No. ②		**CDMD 0.7**
1 mm² AWG 18 identification No. 3		**CDMD 1.0**
1,5 mm² AWG 16 identification No. 4		**CDMD 1.5**
2,5 mm² AWG 14 identification No. 5		**CDMD 2.5**

gold plated÷

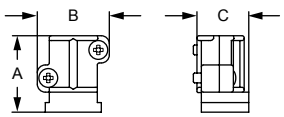
*** only for single cable entry modules**

Upon request we can supply crimp flange and crimp sleeves of different diameters that must be chosen according to the specific cable shield and insulation diameter, please contact ILME Commercial Offices.

crimp flange

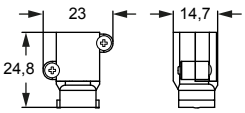
crimp sleeves

CX 5/7 CA, CX 7/10 CA, CX 10/12 CA

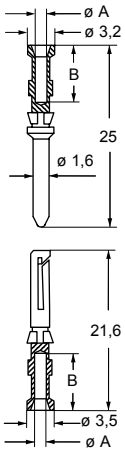


part No.	A	B	C
CX 5/7 CA	19,1	18	12,95
CX 7/10 CA	19,1	18	12,95
CX 10/12 CA	19,1	20,8	12,95

CX 11/14 CA



CDF and **CDM**



CDF and CDM contacts

conductor section mm²	conductor slot ø A (mm)	conductors stripping length B (mm)
0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

÷ for basic or high thickness gold plating, please refer to page 674 of CN.19 catalogue

Megabit 8 poles + shield 10 A - 50 V HNM (High Number of Matings)

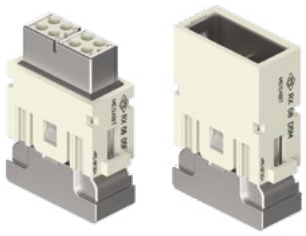
The modular inserts must be installed in suitable frames which are then mounted in HNM enclosures.

page:

frames for modular units **48**

- we recommend the use of CRF / CRM code pins together with relevant MIXO frame

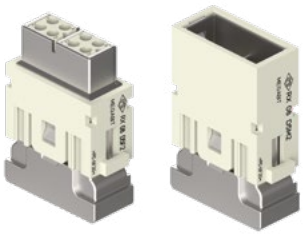
modular units, crimp connection single cable entry



- 10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES
- 5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

FROM NOVEMBER 2020

modular units, crimp connection double cable entry



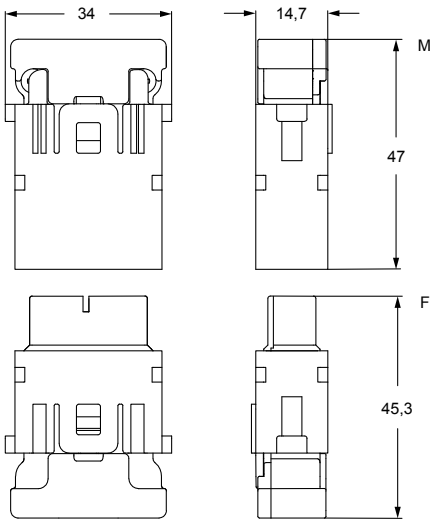
- 10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES
- 5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

FROM NOVEMBER 2020

description	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	**RX 08 D5F** **RX 08 D5M**	
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts		**RX 08 D5F2** **RX 08 D5M2**

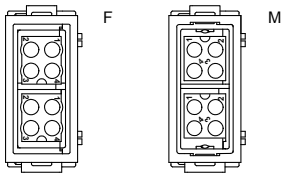
- characteristics according to EN/IEC 61984 ratings:
  10 A 50 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, CQC, DNV-GL, BV pending
- rated voltage according to UL/CSA: 50 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +85 °C
- fully shielded connector module for data transmission, Megabit Ethernet Category 5e (5 in the code), Class D, frequencies up to 100 MHz, data rate up to 100 Mbit/s
- shield electrically separed from the PE circuit MIXO frame
- made of self-extinguishing thermoplastic resin UL 94V-0
- shield made by zinc-alloy
- mechanical life: ≥ 10.000 cycles
- contact resistance: ≤ 3 mΩ
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 10A contacts CDF, CDM series, pages 708 - 741 of CN.19 catalogue).
  For 10A contacts CDF, CDM series, see also the new pneumatic crimping tool CCPZP RN (see page 145).

RX 08 D5F, RX 08 D5M



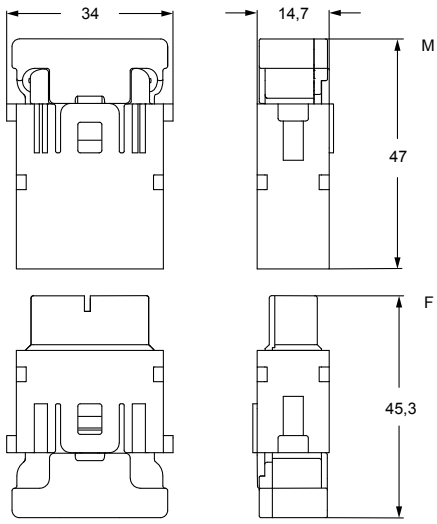
contacts side (front view)

side with reference arrow ▲



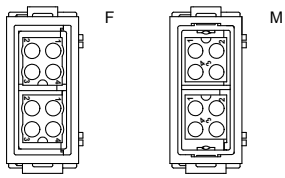
- 1 frame slot

RX 08 D5F2, RX 08 D5M2



contacts side (front view)

side with reference arrow ▲



- 1 frame slot

cable clamp

RD 2D (10 A) crimp contacts gold plated

description	part No.	part No.
cable clamp for 5-7 mm cable diameter	**CX 5/7 CA**	
cable clamp for 7-10 mm cable diameter	**CX 7/10 CA**	
cable clamp for 10-12 mm cable diameter	**CX 10/12 CA**	
cable clamp for 11-14 mm cable diameter *	**CX 11/14 CA**	
10 A female contacts		
0,14-0,37 mm² AWG 26-22 identification No. 1		**RDF2D 0.3**
0,5 mm² AWG 20 identification No. 2		**RDF2D 0.5**
0,75 mm² AWG 18 identification No. ②		**RDF2D 0.7**
1 mm² AWG 18 identification No. 3		**RDF2D 1.0**
1,5 mm² AWG 16 identification No. 4		**RDF2D 1.5**
2,5 mm² AWG 14 identification No. 5		**RDF2D 2.5**
10 A male contacts		
0,14-0,37 mm² AWG 26-22 identification No. 1		**RDM2D 0.3**
0,5 mm² AWG 20 identification No. 2		**RDM2D 0.5**
0,75 mm² AWG 18 identification No. ②		**RDM2D 0.7**
1 mm² AWG 18 identification No. 3		**RDM2D 1.0**
1,5 mm² AWG 16 identification No. 4		**RDM2D 1.5**
2,5 mm² AWG 14 identification No. 5		**RDM2D 2.5**

gold plated

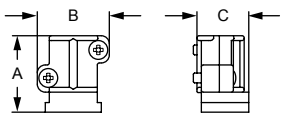
*** only for single cable entry modules**

Upon request we can supply crimp flange and crimp sleeves of different diameters that must be chosen according to the specific cable shield and insulation diameter, please contact ILME Commercial Offices.

crimp flange

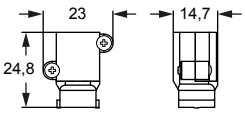
crimp sleeves

CX 5/7 CA, CX 7/10 CA, CX 10/12 CA

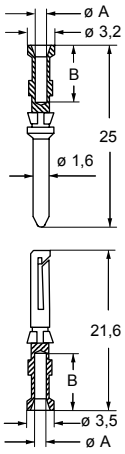


part No.	A	B	C
CX 5/7 CA	19,1	18	12,95
CX 7/10 CA	19,1	18	12,95
CX 10/12 CA	19,1	20,8	12,95

CX 11/14 CA



RDF2D and **RDM2D**



RDF2D and RDM2D contacts

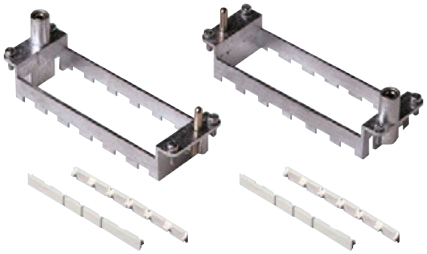
conductor section mm²	conductor slot ø A (mm)	conductors stripping length B (mm)
0,14-0,37	0,9	8
0,5	1,1	8
0,75	1,3	8
1,0	1,45	8
1,5	1,8	8
2,5	2,2	6

RX 02 TM/TF, RX 03 TM/TF, RX 04 TM/TF, RX 06 TM/TF HNM (High Number of Matings)

enclosures size:		pages:
"44.27"	HNM	592 - 593
	C-TYPE IP65/IP66, single lever	387 - 392
	V-TYPE IP65/IP66, single lever	444 - 447
	E-Xtreme® corrosion proof	530-531, 542, 550-551
"57.27"	HNM	594 - 595
	C-TYPE IP65/IP66, single lever	393 - 401
	V-TYPE IP65/IP66, single lever	448 - 453
	E-Xtreme® corrosion proof	532-533, 543, 552-553
"77.27"	HNM	596 - 597
	C-TYPE IP65/IP66, single lever	402 - 411
	V-TYPE IP65/IP66, single lever	454 - 458
	E-Xtreme® corrosion proof	534-535, 544, 554-555
"104.27"	HNM	598 - 599
	C-TYPE IP65/IP66, single lever	412 - 423
	V-TYPE IP65/IP66, single lever	459 - 463
	E-Xtreme® corrosion proof	536-537, 545, 556-557
"77.62"	C-TYPE IP65/IP66, single lever	424 - 429
	E-Xtreme® corrosion proof	546
"104.62"	C-TYPE IP65/IP66, single lever	430
	E-Xtreme® corrosion proof	547

refer to CN.19 pages

frames for modular units with lock-in tab (included)



10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES

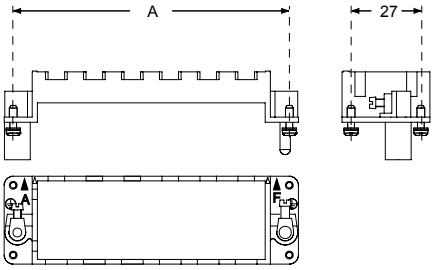
5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

description	part No.	part No.
frames for modular units with lock-in tab included	type for hoods	type for housings
for 2 modular units - for housing size 44.27	**RX 02 TM**	**RX 02 TF**
for 3 modular units - for housing size 57.27	**RX 03 TM**	**RX 03 TF**
for 4 modular units - for housing size 77.27 and 77.62	**RX 04 TM**	**RX 04 TF**
for 6 modular units - for housing size 104.27 and 104.62	**RX 06 TM**	**RX 06 TF**

C-TYPE and V-TYPE 2-lever versions cannot be used to reach 5.000 matings.

- die-cast zinc alloy frames
- protective earth (PE)
- possibility of mounting female and male modular units on the same frame
- frames supplied with lock-in tab to attach units
- polarisation on frames
- coding pins **CR..CX**
- for spare lock-in tab **CX CFM** see SPARE SPARTS catalogue

RX TM / TF



part No.	A (mm)	for housings size
RX 02 TM / TF	44	44.27
RX 03 TM / TF	57	57.27
RX 04 TM / TF	77,5	77.27 and 77.62
RX 06 TM / TF	104	104.27 and 104.62

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

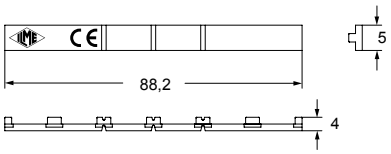
In order to accomodate larger PE conductor cross-sectional area, use CGT PE adapters, see page 319 CN.19 catalogue.

position of modules (contact side view)

side with reference arrow ▲

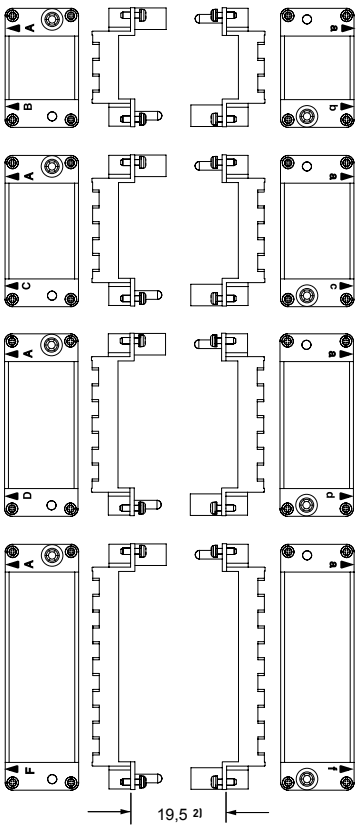
side with reference arrow ▲

CX CFM (lock-in tab)



Polarisation of frames with relative identification letters and couplings

frame for hoods [1] **frames for housings** [1]

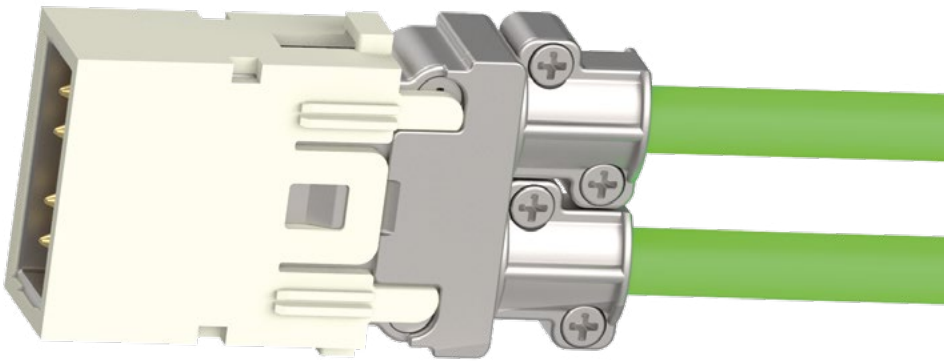


[1] **Warning:**
The module support frames are marked:
- FOR HOODS: **upper-case A-B, A-C, A-D and A-F**
- FOR HOUSINGS: **lower-case a-b, a-c, a-d and a-f**

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

[2] Distance for:
- electric and fibre optic contacts: max 21 mm
- pneumatic contacts: max 20,5 mm

MIXO MEGABIT - CX 08 D5F2 /M2

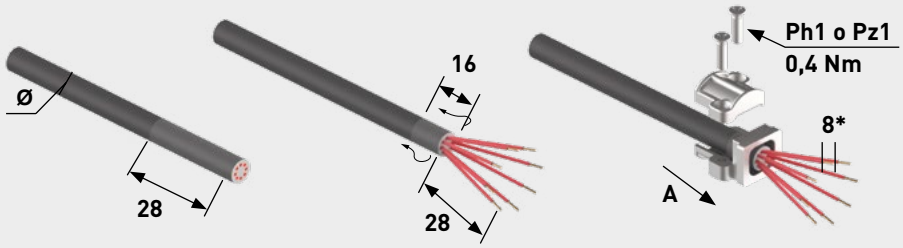


Megabit 8 poles + shield 10 A - 50 V

ASSEMBLY INSTRUCTIONS

MIXO MEGABIT CX 08 D5F

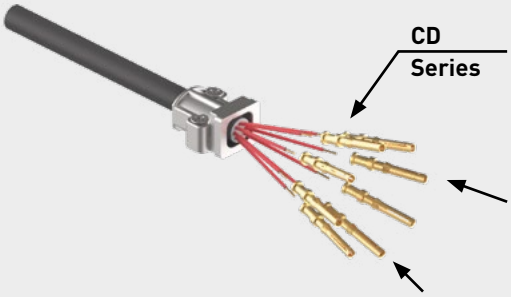
Watch our online tutorial



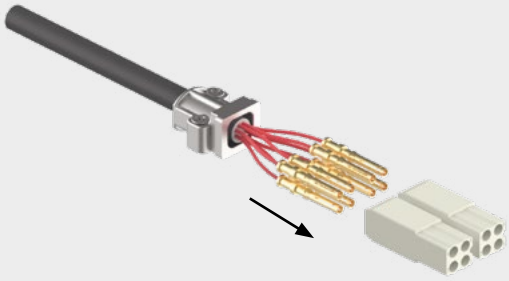
* 6 mm for CD...2.5

Cable clamp part No.	∅ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1
CX 11/14 CA	11-14	M 2,5	0,4	Pz1

1



2



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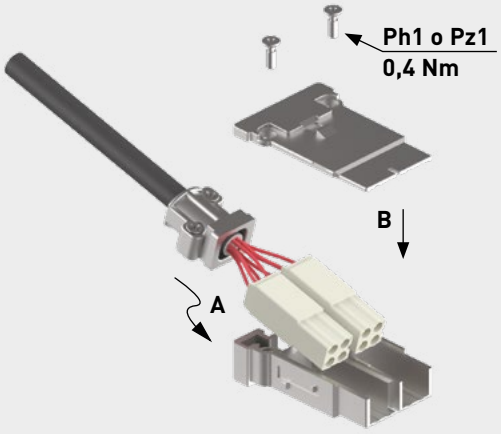
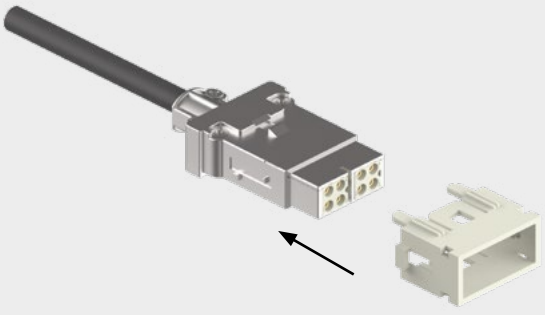
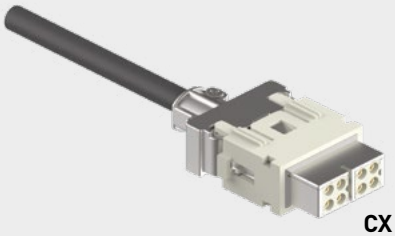


4



5



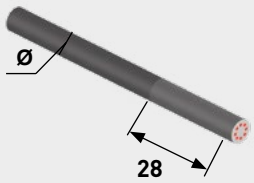
CX 08 D5F

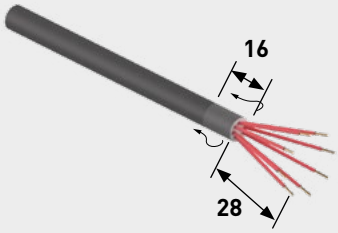
Megabit 8 poles + shield 10 A - 50 V

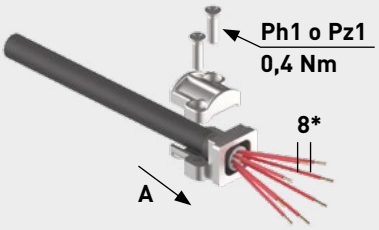
ASSEMBLY INSTRUCTIONS

Watch our online tutorial

MIXO MEGABIT CX 08 D5M



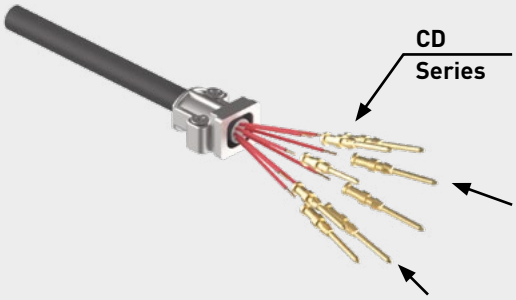




* 6 mm for CD...2.5

Cable clamp part No.	∅ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1
CX 11/14 CA	11-14	M 2,5	0,4	Pz1

1



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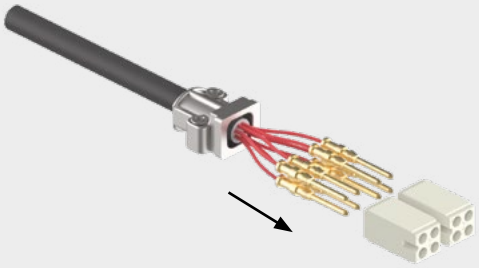

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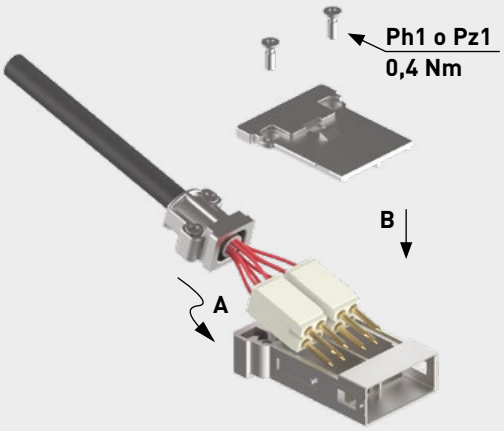

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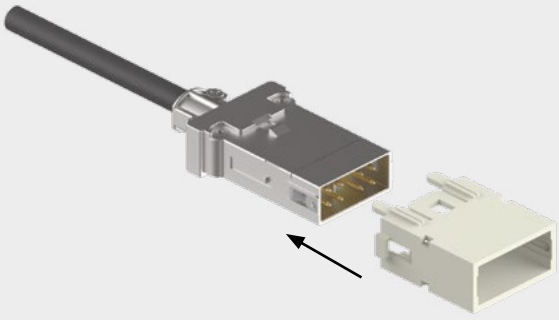

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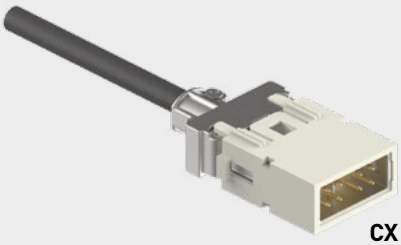


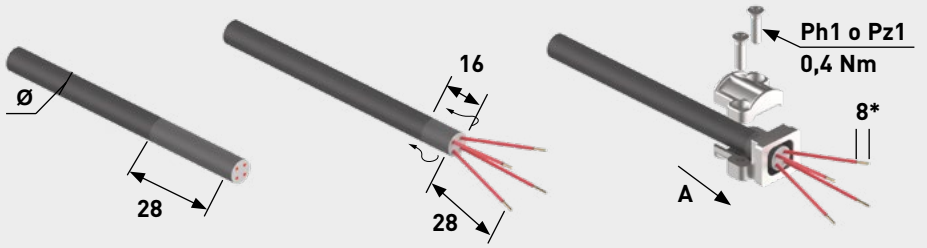
CX 08 D5M

Megabit 8 poles + shield 10 A - 50 V

ASSEMBLY INSTRUCTIONS

MIXO MEGABIT CX 08 D5F2

Watch our online tutorial

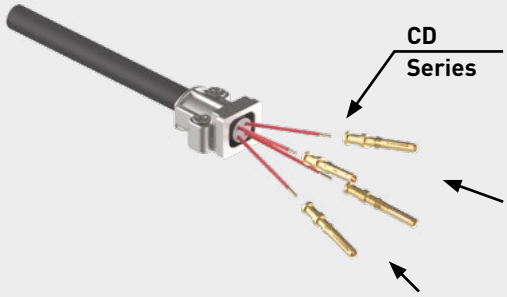


2x

* 6 mm for CD..2.5

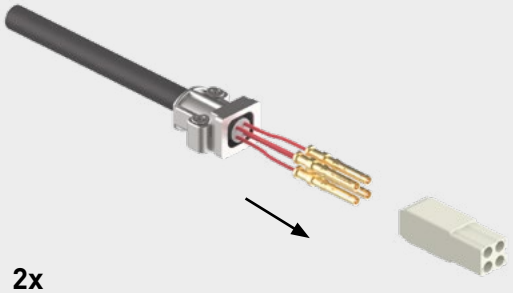
Cable clamp part No.	∅ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1

1



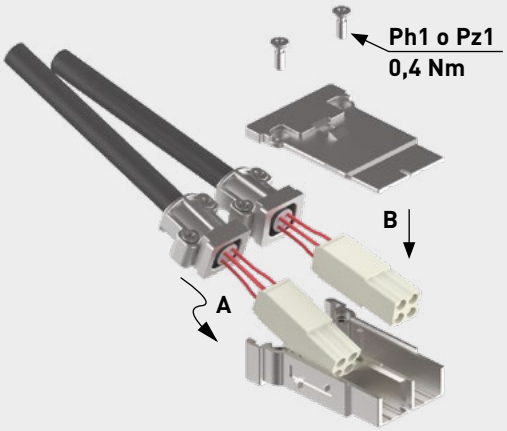
2x

2



2x

3



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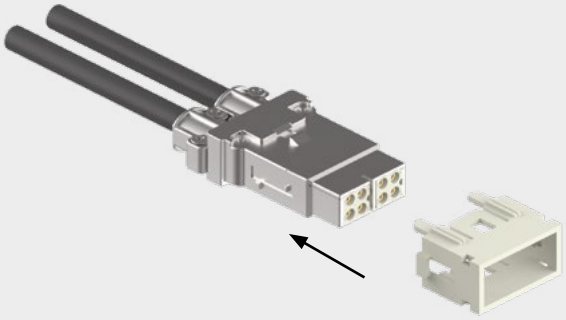

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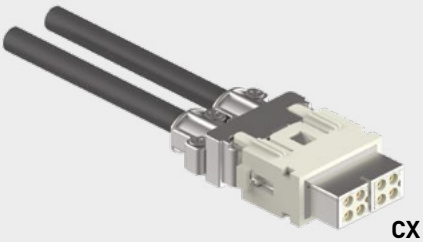


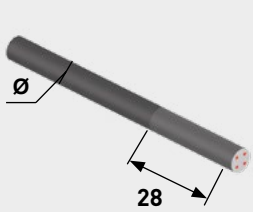
CX 08 D5F2

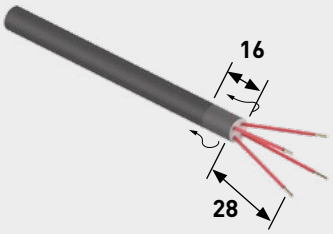
Megabit 8 poles + shield 10 A - 50 V

ASSEMBLY INSTRUCTIONS

MIXO MEGABIT CX 08 D5M2

Watch our online tutorial





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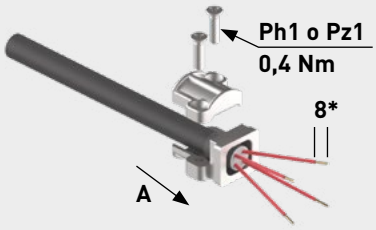
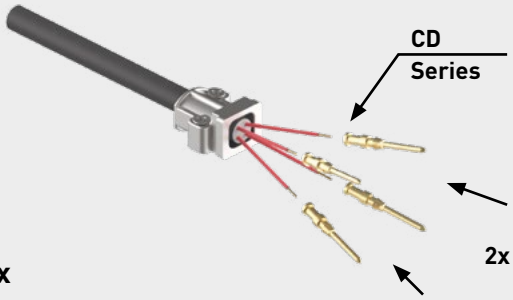


* 6 mm for CD..2.5

Cable clamp part No.	∅ mm	Screw size	Tightening torque (Nm)	Recommended size of screwdriver
CX 5/7 CA	5-7	M 2,5	0,4	Ph1
CX 7/10 CA	7-10	M 2,5	0,4	Ph1
CX 10/12 CA	10-12	M 2,5	0,4	Ph1

1



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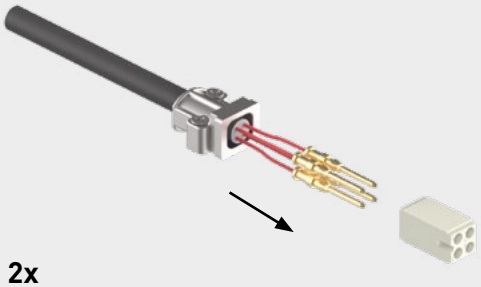
2



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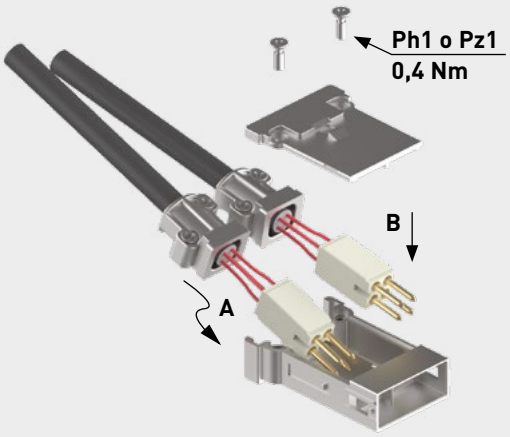

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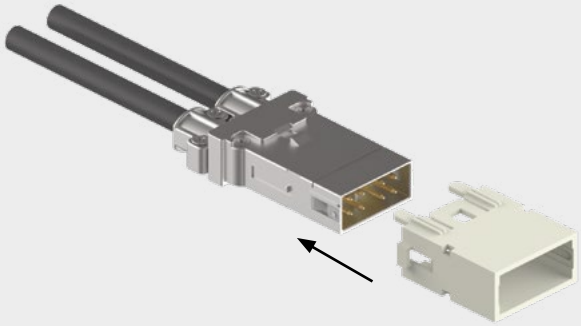

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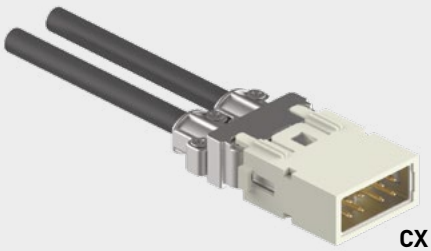


CX 08 D5M2

Gigabit 8 poles 5 A - 50 V HNM (High Number of Matings)

The modular inserts must be installed in suitable frames which are then mounted in HNM enclosures.

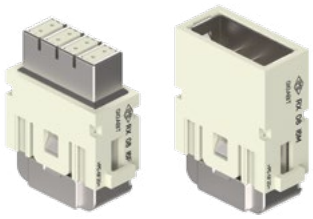
page:

frames for modular units* **55**

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

- we recommend the use of CRF / CRM code pins together with relevant MIXO frame

modular units,
crimp connections

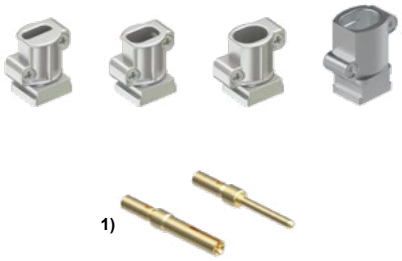


Q **10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES**

Q **5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER**

FROM NOVEMBER 2020

cable clamp
RI (5 A) crimp contacts, gold plated



1)

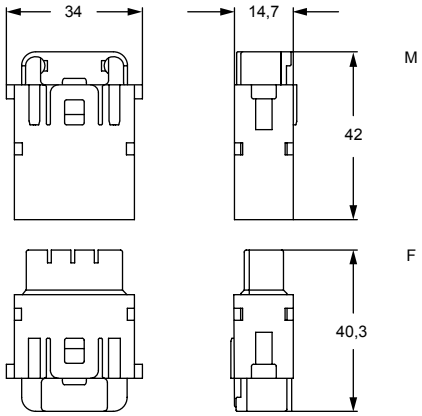
FROM MAY 2020 1)

description	part No.	part No.
without contacts (to be ordered separately)		
female insert for female contacts	**RX 08 I6F**	
male insert for male contacts	**RX 08 I6M**	
cable clamp for 5-7 mm cable diameter		**CX 5/7 CA**
cable clamp for 7-10 mm cable diameter		**CX 7/10 CA**
cable clamp for 10-12 mm cable diameter		**CX 10/12 CA**
cable clamp for 11-14 mm cable diameter		**CX 11/14 CA**
RI (5 A) female crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIFD 0.2**
0,13-0,33 mm² AWG 26-22		**RIFD 0.3**
0,33-0,52 mm² AWG 22-20		**RIFD 0.5**
RI (5 A) male crimp contacts		
0,08-0,21 mm² AWG 28-24		**RIMD 0.2**
0,13-0,33 mm² AWG 26-22		**RIMD 0.3**
0,33-0,52 mm² AWG 22-20		**RIMD 0.5**

gold plated

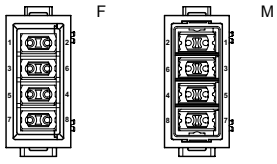
- characteristics according to EN/IEC 61984 ratings:
  5 A 50 V 0,8 kV 3
- UL, CSA, CQC, DNV-GL, BV pending
- rated voltage according to UL/CSA: 50 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +85 °C
- suitable for bus signals, in particular for Ethernet Cat. 6A (Gigabit)
- shield electrically separated from the PE of the housings
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 10.000 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts RI series use:
  CIPZ D crimping tool
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  CIES insertion / removal tool for contacts 0,2 - 0,5 mm² (see pages 716 - 719 of CN.19 catalogue)

RX 08 I6F, RX 08 I6M



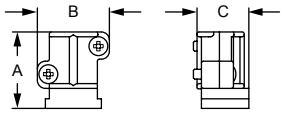
contacts side (front view)

side with reference arrow ▲

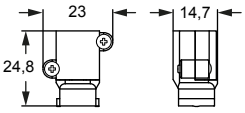


- 1 frame slot

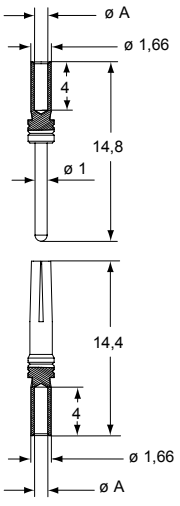
CX 5/7 CA, CX 7/10 CA, CX 10/12 CA



part No.	A	B	C
CX 5/7 CA	19,1	18	12,95
CX 7/10 CA	19,1	18	12,95
CX 10/12 CA	19,1	20,8	12,95



RIF and **RIM**



RIF and RIM contacts

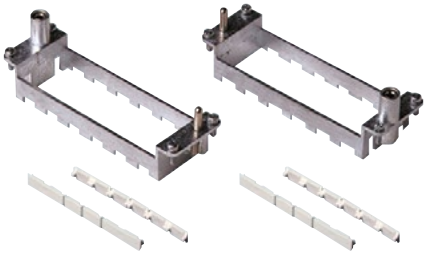
conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

RX 02 TM/TF, RX 03 TM/TF, RX 04 TM/TF, RX 06 TM/TF HNM (High Number of Matings)

enclosures size:		pages:
"44.27"	HNM	592 - 593
	C-TYPE IP65/IP66, single lever	387 - 392
	V-TYPE IP65/IP66, single lever	444 - 447
	E-Xtreme® corrosion proof	530-531, 542, 550-551
"57.27"	HNM	594 - 595
	C-TYPE IP65/IP66, single lever	393 - 401
	V-TYPE IP65/IP66, single lever	448 - 453
	E-Xtreme® corrosion proof	532-533, 543, 552-553
"77.27"	HNM	596 - 597
	C-TYPE IP65/IP66, single lever	402 - 411
	V-TYPE IP65/IP66, single lever	454 - 458
	E-Xtreme® corrosion proof	534-535, 544, 554-555
"104.27"	HNM	598 - 599
	C-TYPE IP65/IP66, single lever	412 - 423
	V-TYPE IP65/IP66, single lever	459 - 463
	E-Xtreme® corrosion proof	536-537, 545, 556-557
"77.62"	C-TYPE IP65/IP66, single lever	424 - 429
	E-Xtreme® corrosion proof	546
"104.62"	C-TYPE IP65/IP66, single lever	430
	E-Xtreme® corrosion proof	547

refer to CN.19 pages

frames for modular units with lock-in tab (included)



10.000 MATINGS WITH HNM FRAMES AND HNM ENCLOSURES

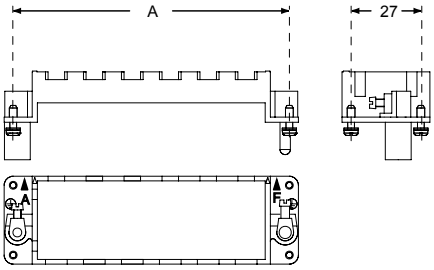
5.000 MATINGS WITH HNM FRAMES AND STANDARD ENCLOSURES, SINGLE LEVER

description	part No.	part No.
frames for modular units with lock-in tab included	type for hoods	type for housings
for 2 modular units - for housing size 44.27	**RX 02 TM**	**RX 02 TF**
for 3 modular units - for housing size 57.27	**RX 03 TM**	**RX 03 TF**
for 4 modular units - for housing size 77.27 and 77.62	**RX 04 TM**	**RX 04 TF**
for 6 modular units - for housing size 104.27 and 104.62	**RX 06 TM**	**RX 06 TF**

C-TYPE and V-TYPE 2-lever versions cannot be used to reach 5.000 matings.

- die-cast zinc alloy frames
- protective earth (PE)
- possibility of mounting female and male modular units on the same frame
- frames supplied with lock-in tab to attach units
- polarisation on frames
- coding pins **CR..CX**
- for spare lock-in tab **CX CFM** see SPARE SPARTS catalogue

RX TM / TF



part No.	A (mm)	for housings size
RX 02 TM / TF	44	44.27
RX 03 TM / TF	57	57.27
RX 04 TM / TF	77,5	77.27 and 77.62
RX 06 TM / TF	104	104.27 and 104.62

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

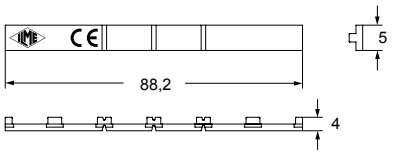
In order to accomodate larger PE conductor cross-sectional area, use CGT PE adapters, see page 319 CN.19 catalogue.

position of modules (contact side view)

side with reference arrow ▲

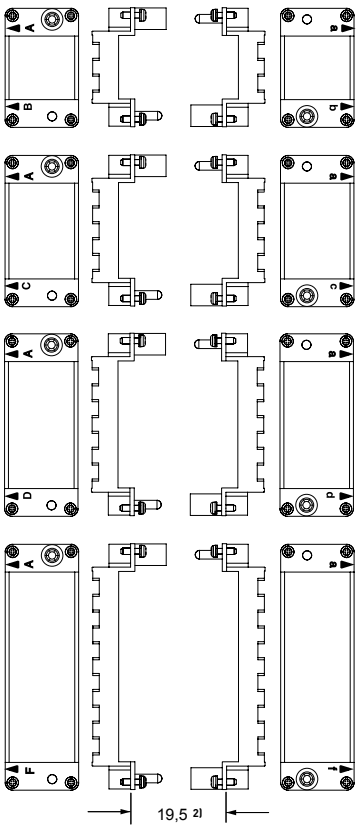
side with reference arrow ▲

CX CFM (lock-in tab)



Polarisation of frames with relative identification letters and couplings

frame for hoods [1] **frames for housings** [1]



[1] **Warning:**
The module support frames are marked:
- FOR HOODS: **upper-case A-B, A-C, A-D and A-F**
- FOR HOUSINGS: **lower-case a-b, a-c, a-d and a-f**

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

[2] Distance for:
- electric and fibre optic contacts: max 21 mm
- pneumatic contacts: max 20,5 mm

MIXO HDMI MODULE
CX 01 MIF /MIM
CW 2 MIAM PATCH CORD

MIXO HDMI module
for high quality video signal transmission
EN/IEC 61984 ratings: 0,5 A 40 V 0,8 kV 3
CW 2 MIAM HDMI Type A patch cord (2 m)

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX 01 MIF /MIM - CW 2 MIAM PATCH CORD (2 m length) *

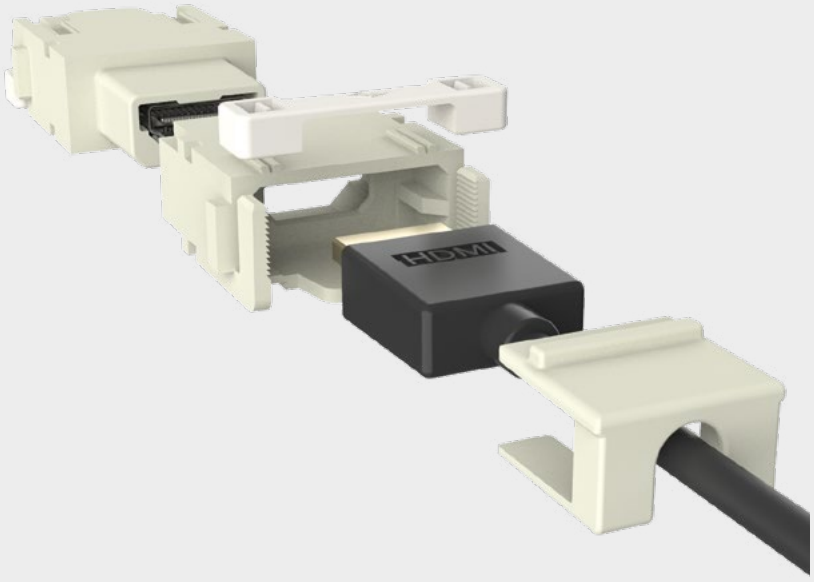
* NOTE – **CW 5 MIAM patch cord, 5 m length** available upon request.

- **For high quality video signal transmission**, with **HDMI Type A** connectors (19-pole + shield).
- Supports HDMI 1.4 and 2.0 standards (HDMI = High Definition Multimedia Interface), full Ultra HD 4k@60 Hz, 4096x2160p resolution.
- **Supports Ethernet** up to and including 18Gb/s.
- Supports ARC (Audio Return Channel).
- EN/IEC 61984 ratings: **0,5 A 40 V 0,8 kV 3**

  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +85 °C.

  NOTE – The limitation to the ULT is set upon the usual temperature rating of the data cables.
- Female HDMI module **CX 01 MIF** hosts a female/female PCB assembly with female HDMI Type A connector on both sides, to act as a coupler between two male terminated patch cords (one on the rear of this female module, one hosted in the male module adapter on the counterpart connector).
- Male HDMI module **CX 01 MIM** is an adapter able to host a patch cord terminated with HDMI Type A plugs of compact size, providing a latch to anchor the cable.
- It is recommended to use the male adapter **CX 01 MIM** with **CW 2 MIAM** patch cord (**CW 5 MIAM** available upon request), provided with slim sized HDMI Type A male plug at both ends.
- Connection through pre-assembled (overmoulded) patch cords (2 m and 5 m length) terminated with slim sized HDMI Type A plug connectors.

  NOTE – CW 5 MIAM, 5 m long patch cord is available only upon request.



locking of the HDMI male plugs through a dedicated adapter

CX 01 MIF /MIM HDMI Type A connector

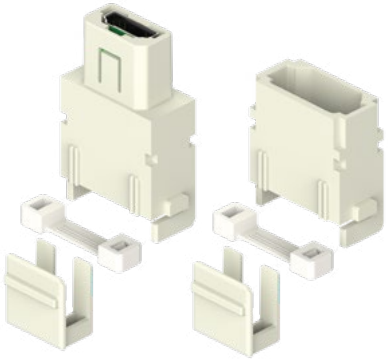
The modular inserts must be installed in suitable frames which are then mounted in traditional housings or in COB panel support. Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

	pages:
frames for modular units	**316 - 317**
MIXO ONE enclosures	**369**

- we recommend the use of CRF / CRM coding pins together with relevant MIXO frame

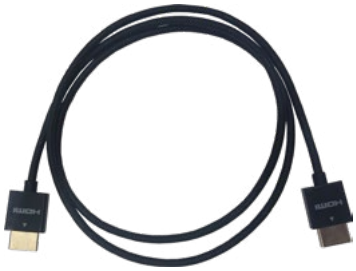
refer to CN.19 pages

HDMI Type A modular units, female-female connector adapter module for male connector



FROM OCTOBER 2020

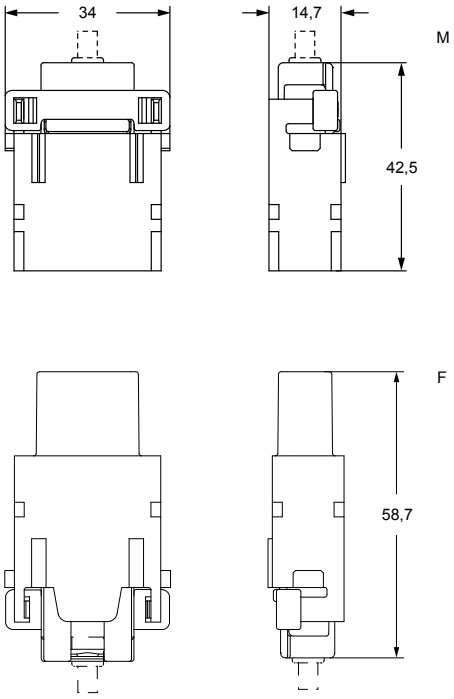
HDMI Type A patch cord



FROM OCTOBER 2020

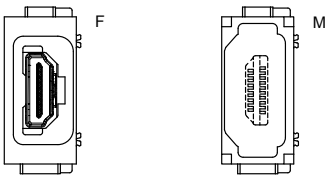
description	part No.	part No.
HDMI Type A female/female connector	**CX 01 MIF**	
Adapter module for male connector	**CX 01 MIM**	
2 m length patch cord terminated with slim sized HDMI Type A plug connectors		**CW 2 MIAM**

- characteristics according to EN/IEC 61984 ratings:
  0,5 A 40 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- temperature range: from -40 °C to +85 °C
- for high quality video signal transmission, with HDMI Type A connectors (19-pole + shield)
- supports HDMI 1.4 and 2.0 standards (HDMI = High Definition Multimedia Interface), full Ultra HD 4k@60 Hz, 4096x2160p resolution
- supports Ethernet up to and including 18Gb/s
- supports ARC (Audio Return Channel)

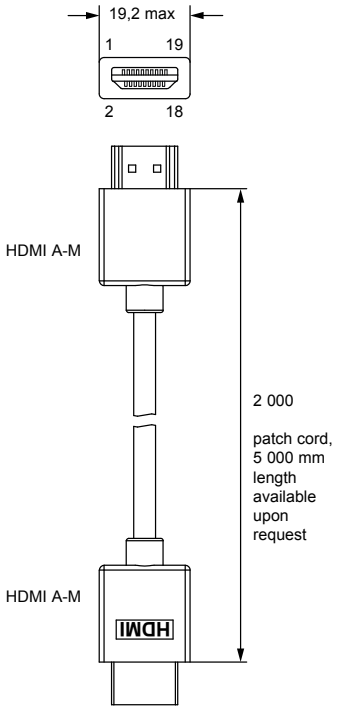


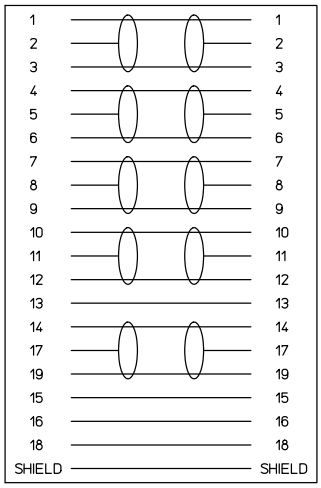
contacts side (front view)

side with reference arrow ▲



- 1 frame slot



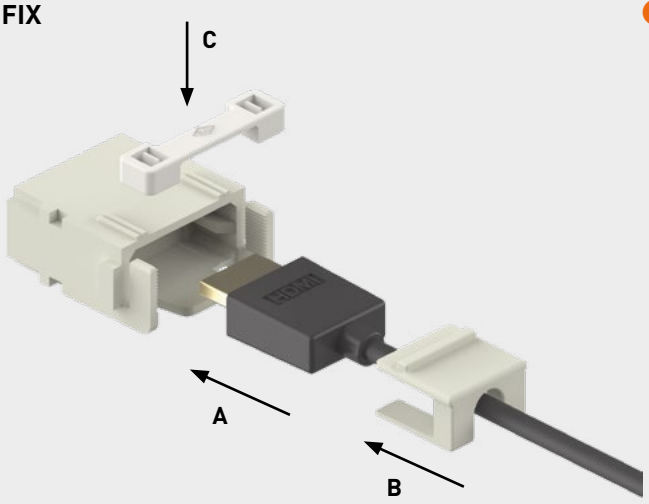


CX 01 MIF /MIM HDMI Type A connector

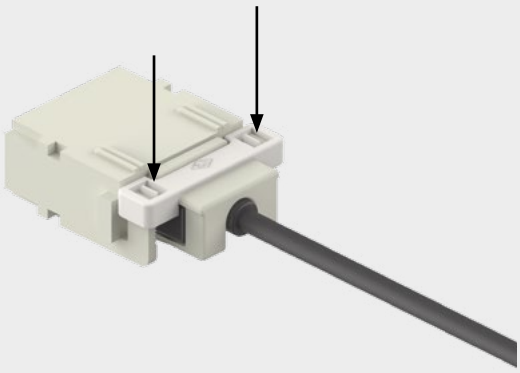
ASSEMBLY INSTRUCTIONS

CX 01 MIF /MIM - HDMI TYPE A CONNECTOR

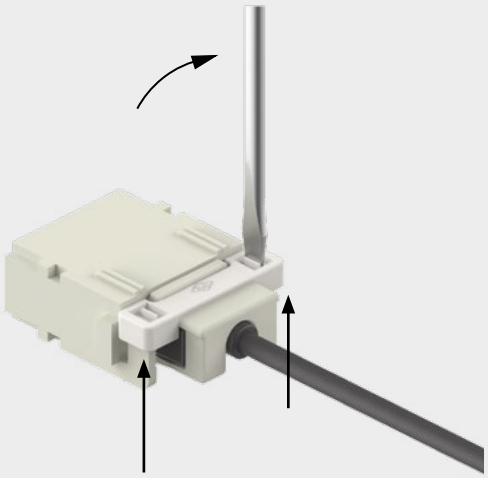
1 TO FIX



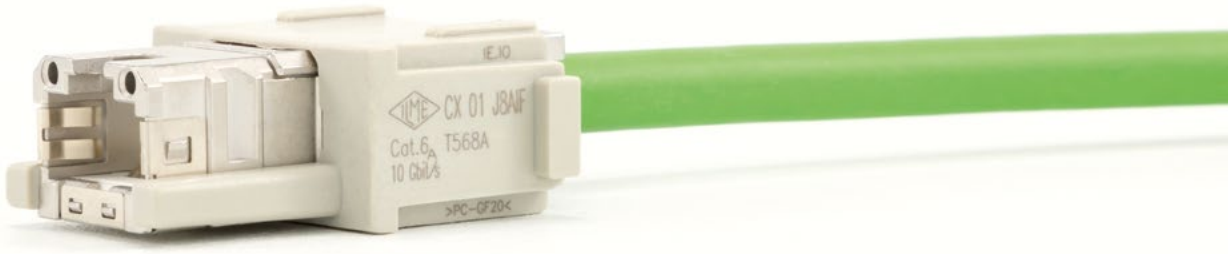
2



3 TO REMOVE



MIXO RJ45 CAT. 6_A
FEMALE MODULE WITH IDC TERMINATIONS
CX 01 J8AIF /J8BIF /J8PIF



MIXO RJ45

8-way shielded jack (female connector)

with IDC terminations for 4-pair data connector Cat. 6_A Class E_A

EN/IEC 61984 ratings: 1 A 50 V 0,8 kV 3

TECHNICAL FEATURES
CX 01 J8AIF /J8BIF /J8PIF

- RJ45, 8-way shielded jack (female connector) in a MIXO single module format, **with IDC terminations,** 4-pair data connector Cat. 6_A Class E_A, for transmission rates up to 10 Gbit/s (IEEE 802.3an), for solderless field wiring.

- It widens the portfolio of ILME RJ45 modular connectors, as an alternative to use the female/female RJ-45 coupler module **CX 01 J8F** rear coupled to a plug of an RJ45 patch cord.

- EN/IEC 61984 ratings: **1 A 50 V 0,8 kV 3**

  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.

- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +85 °C

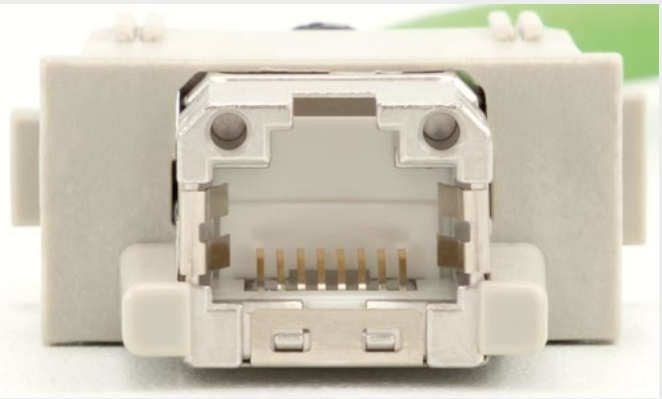
  NOTE – The limitation to the ULT is set upon the usual temperature rating of the telecommunication cables (2x2-pair or 1x4-pair).

- Can be coupled to the existing MIXO plug module **CX 01 J8IM** or to the **CX 8 J6IM** RJ45 modular connector with IDC terminations, or to the **CX 01 J8M** module with **CX 8 J6M** crimp connector (or to suitable patch cords with RJ45 plug).

- Available for three different pin assignments:
  - CX 01 J8**A**IF for **TIA 568A** wiring,
  - CX 01 J8**B**IF for **TIA 568B** wiring (pairs 2 and 3 swapped),
  - CX 01 J8**P**IF for **PROFINET** wiring.

- Suitable also for MIXO ONE enclosures.

3 different pin assignments:
-A for TIA 568A wiring
-B for TIA 568B wiring (pairs 2 and 3 swapped)
-P for PROFINET wiring



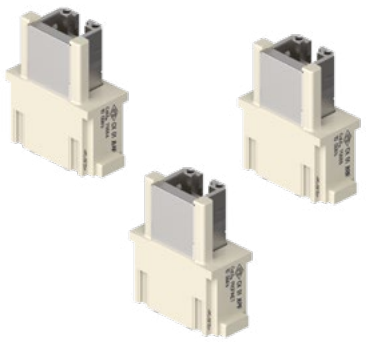
CX 01 J8AIF /J8BIF /J8PIF RJ45, 8-way shielded jack

The modular inserts must be installed in suitable frames which are then mounted in traditional housings or in COB panel support. Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

	pages:
frames for modular units	**316 - 317**
MIXO ONE enclosures	**369**

refer to CN.19 pages

RJ45 8-way female connectors



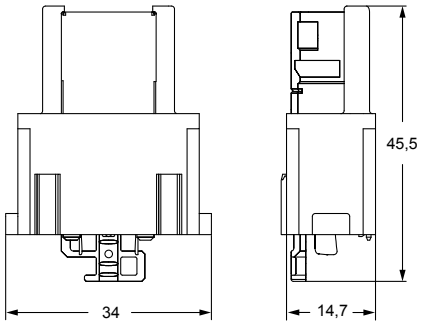
FROM MAY 2020

description	part No.
female insert with one RJ45 female IDC connector; contact coding according to: - TIA 568A - TIA 568B - PROFINET	 **CX 01 J8AIF** **CX 01 J8BIF** **CX 01 J8PIF**

- characteristics according to EN/IEC 61984 ratings:
  1 A 50 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- rated voltage according to UL/CSA: 50 V
- made of self-extinguishing thermoplastic resin UL 94V-0
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- we recommend to fix the cable with cable tie

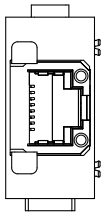
CX 01 J8AIF /J8BIF /J8CIF technical data:
- RJ45 female IDC connector Cat. 6_A Class E_A
- adequate for Power over Ethernet+ (PoE+) according to IEEE 802.3at
- connector: IEC 60603-7-51
- adequate for 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems:
  PROFINET Installation Guideline
- generic cabling systems:
  ANSI/TIA/EIA-568-C.2
  ISO/IEC 11801
  EN 50173-1
  ISO/IEC 24702
  EN 61918
- custom-designed cabling systems:
  according to PROFINET Installation Guideline
- Class E_A (channel): ISO/IEC 11801, EN 50173-1
- Category 6_A (component): ISO/IEC 11801; DIN EN 50173-1
- Category 6A: ANSI/TIA/EIA-568-C.2
- shielding housing: zinc die cast
- housing finish: CuSnZn
- current carrying capacity at 50 °C: 1A
- durability (mating cycles): ≥750
- Cu-conductor diameter:
  solid: 0,40 – 0,64 mm (AWG 26/1 – 22/1)
  stranded: 0,48 – 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter (cores): 0,85 – 1,6 mm (0.034 in – 0.063 in)
- cable diameter: 5,5 mm – 9 mm
- IDC: CuNi2Si
- IDC finish: 3-6 µm Sn

CX J8AIF/J8BIF/J8PIF



contacts side (front view)

side with reference arrow ▲



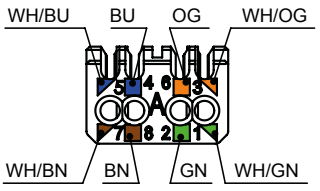
- 1 frame slot

Watch our online tutorial

PIN ASSIGNMENT

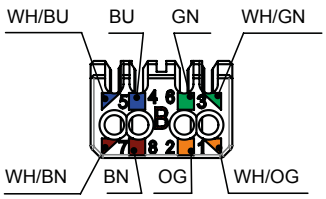
CX 01 J8AIF

PIN assignment T568A according to TIA/EIA 568-C.2



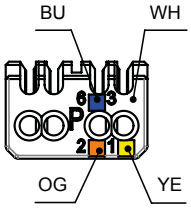
CX 01 J8BIF

PIN assignment T568B according to TIA/EIA 568-C.2

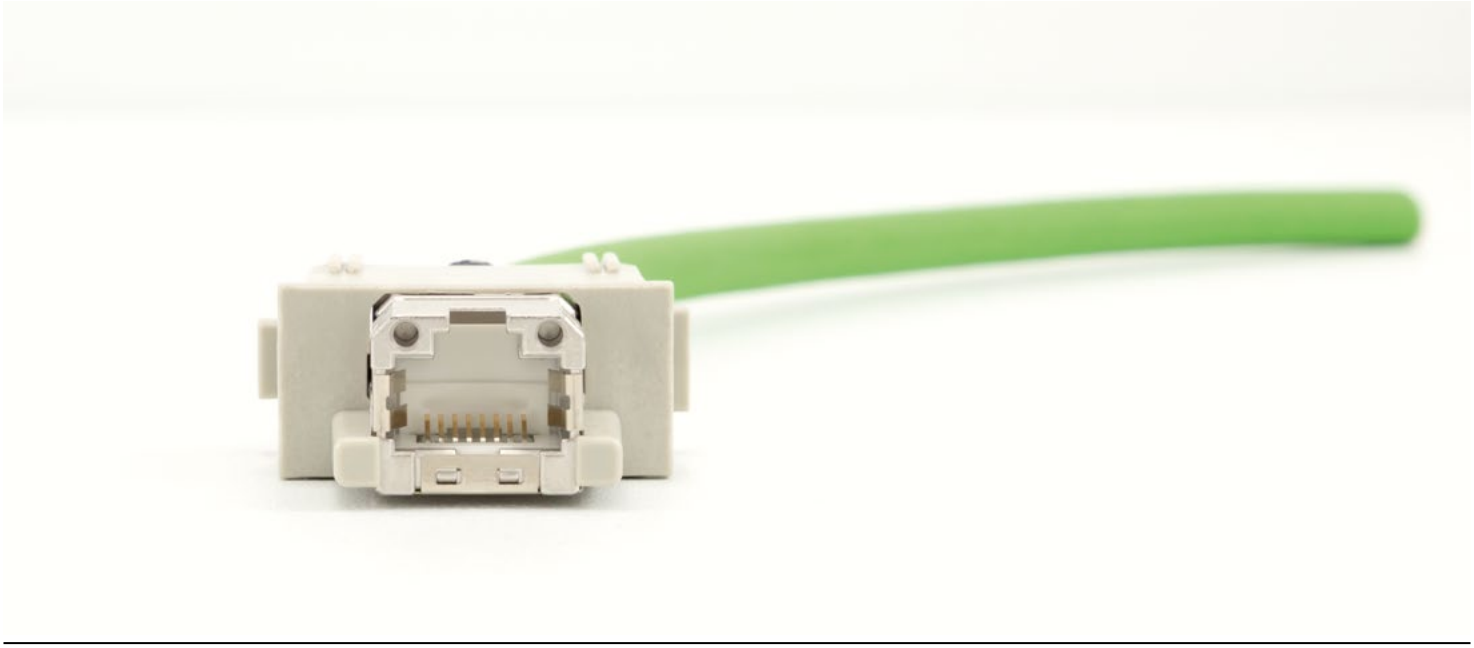


CX 01 J8PIF

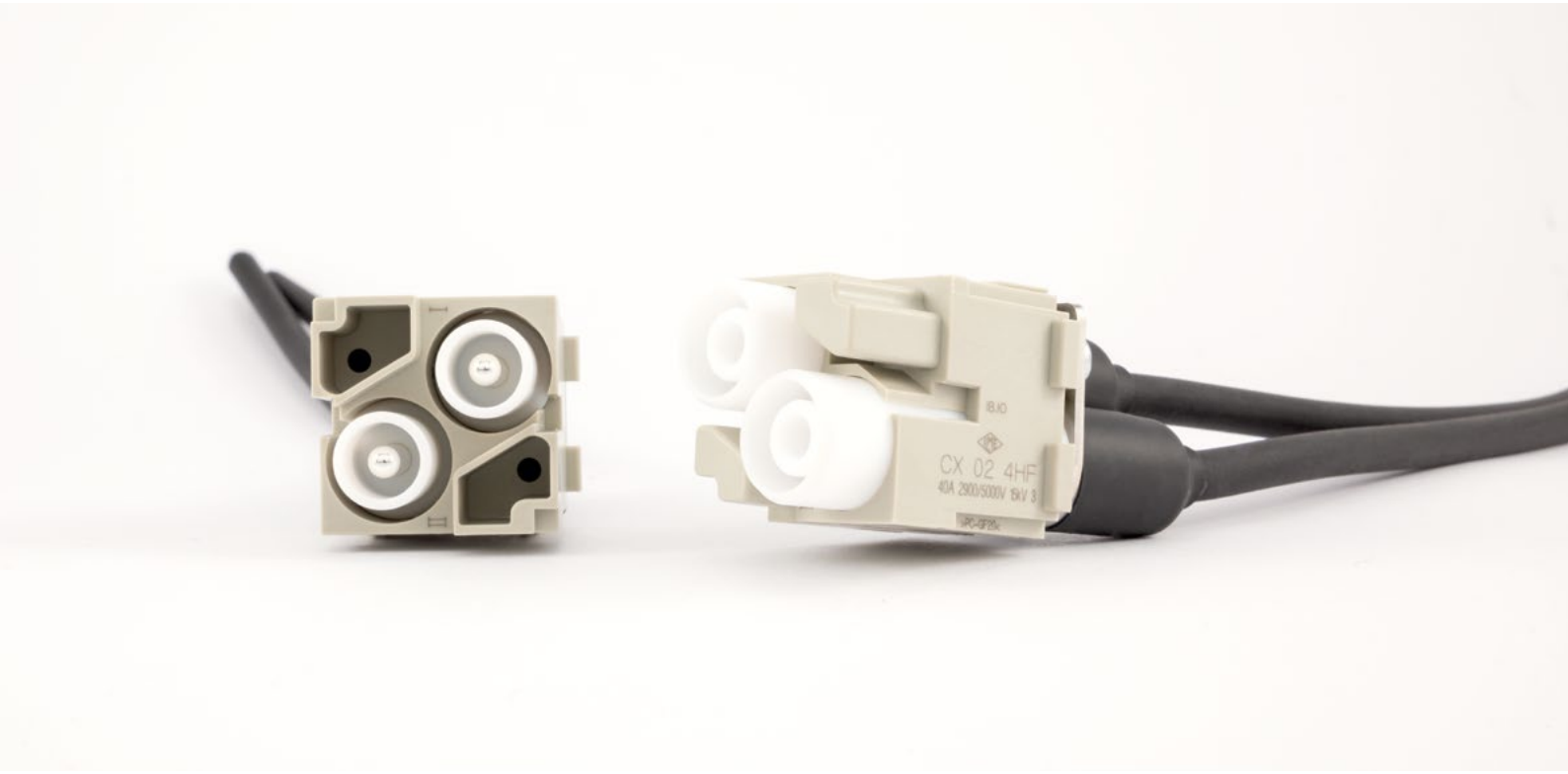
PIN assignment Profinet / Industrial



MIXO RJ45 CAT. 6_A - FEMALE MODULE WITH IDC TERMINATIONS
CX 01 J8AIF /J8BIF /J8PIF



MIXO HT MODULE 40A 2 POLES
CX 02 4HF /4HM



2-pole MIXO double-sized module
for high tension and higher current needs
EN/IEC 61984 ratings:
2 P 40 A 2900/5000 V 15 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX 02 4HF /4HM

- 2-pole MIXO double-sized module for **high tension** and **higher current needs**, respectively up to 2 900/5 000 V and up to 40 A per pole.

- It widens the portfolio of series **MIXO HT** (high tension) connector modules, adding to the 16 A HT modules **CX 02 HF/HM** (double-sized module) and **CX 02 CHF/CHM** (single-sized module).

- It hosts 2 crimp contacts series **CX** (40 A), separately available, sizes 1.5 through 10 (1,5 mm^2 / 16 AWG through 10 mm^2 / 8 AWG).

- Allowed sheathing Ø of high tension wire: **9,0 mm max**

- EN/IEC 61984 ratings*:
  2 P 40 A 2900/5000 V 15 kV 3

  NOTE – As a connector with high voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.

  * EN/IEC 61984 used as a guide

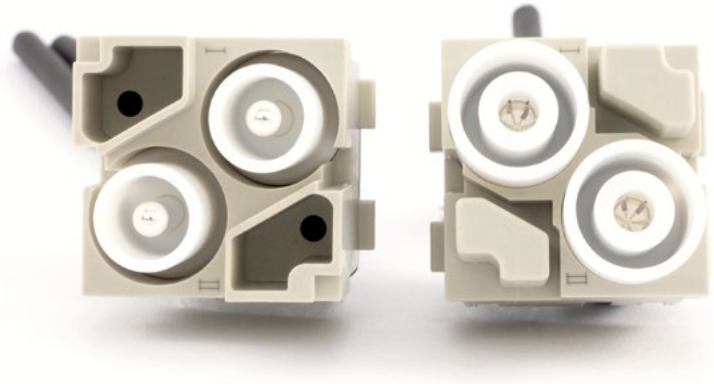
- Lower and Upper Limiting Temperatures (LLT … ULT):
  -40 °C … +125 °C

- Insulator sleeves made by high voltage resistant PTFE, connector body made by polycarbonate, both materials UL 94V-0 self-extinguishing.

- 2 heat shrinking tubes provided to ensure correct insulation on the rear of the insulator sleeves holding the wired contacts.

- Possible combination with all other MIXO modules (low-voltage power, signal, pneumatic, fibre optics).

insulator sleeves made by high voltage resistant PTFE, connector body made by polycarbonate, both materials UL 94V-0 self-extinguishing



CX 02 4HF/4NM HT 2 poles 40 A - 2900/5000 V

The modular inserts must be installed in suitable frames, which are then mounted in traditional enclosures* or in COB panel supports.

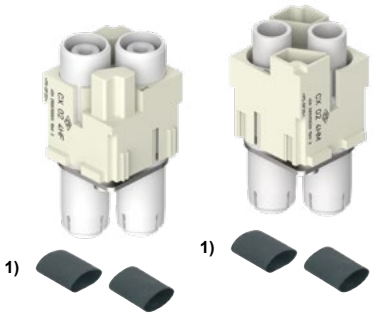
high voltage modular units, crimp connections
contact holder removal tool

40 A silver plated crimp contacts

page:

frames for modular units* **316**

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



refer to CN.19 pages

FROM JUNE 2020

description	part No.	part No.
without contacts (to be ordered separately)		
high voltage female inserts for female contacts	**CX 02 4HF**	
high voltage male inserts for male contacts	**CX 02 4HM**	
contact holder removal tool 2)	**CHES**	
40A female crimp contacts		
1,5 mm² AWG 16		**CXFA 1.5**
2,5 mm² AWG 14		**CXFA 2.5**
4 mm² AWG 12		**CXFA 4.0**
6 mm² AWG 10		**CXFA 6.0**
10 mm² AWG 8		**CXFA 10**
40A male crimp contacts		
1,5 mm² AWG 16		**CXMA 1.5**
2,5 mm² AWG 14		**CXMA 2.5**
4 mm² AWG 12		**CXMA 4.0**
6 mm² AWG 10		**CXMA 6.0**
10 mm² AWG 8		**CXMA 10**

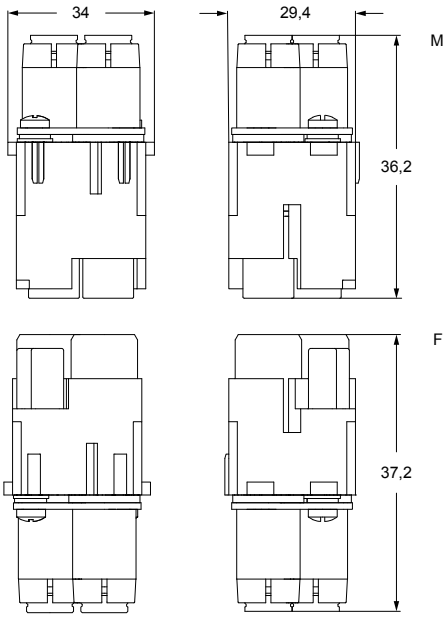
silver plated

1) supplied with heat shrink insulating tubes for the rear of the contacts

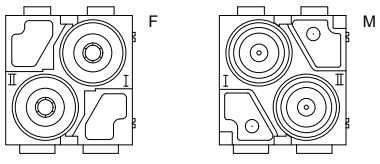
- characteristics according to EN/IEC 61984 ratings: 3):
  40 A 2900/5000 V 15 kV 3
  3) used for guidance as applicable
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- insulation resistance: ≥ 10 GΩ
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ
- **it is recommended to crimp the contacts with crimping tools homologated by ILME** (please see the crimping tool section 40 A contacts, CXF and CXM series) on pages 708 - 741 of CN.19 catalogue). For 40 A contacts see also new pneumatic crimping tool CCPZP RN (see page 145)
- contact holder removal tool: **CHES** 2)

CHES

CX 02 4HF, CX 02 4HM

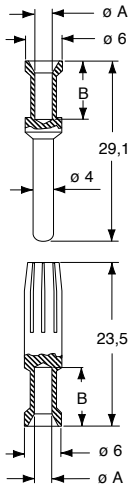


contacts side (front view)
side with reference arrow ▲



- 2 frame slots

CXF and **CXM**



CXF and CXM contacts

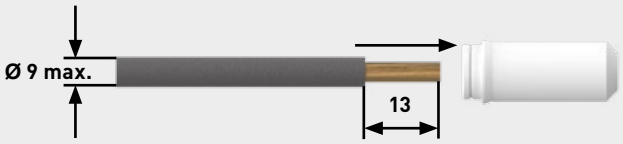
conductor section (mm²)	conductor slot ø A (mm)	conductor stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6
10	4,3	15

CX 02 4HF/4NM HT 2 poles 40 A - 2900/5000 V

ASSEMBLY INSTRUCTIONS

CX 02 4HF/4HM

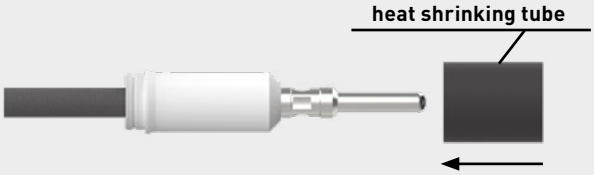
1



2

3

4



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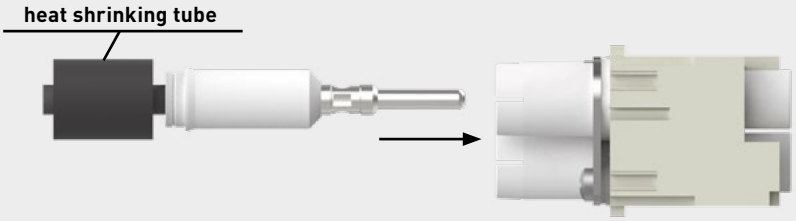

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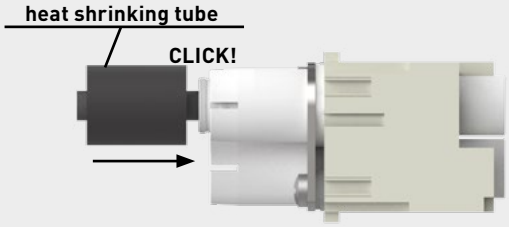

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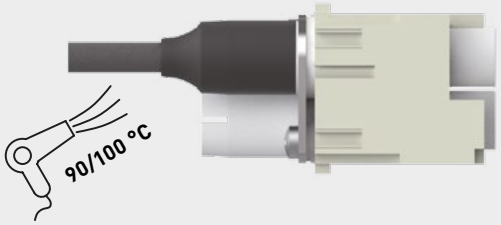
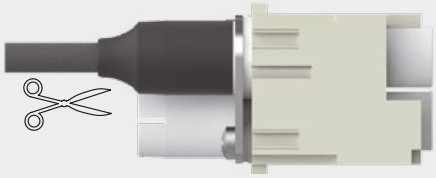


CX 02 4HF/4HM - CONTACT HOLDER REMOVAL

1



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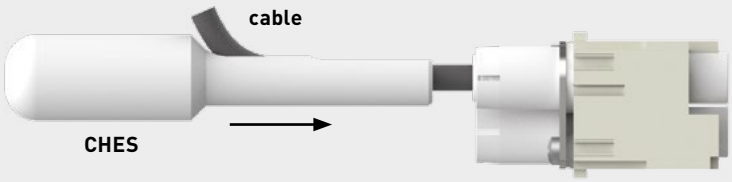

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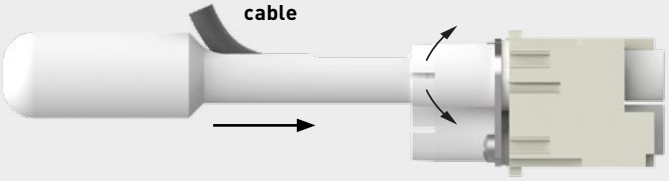

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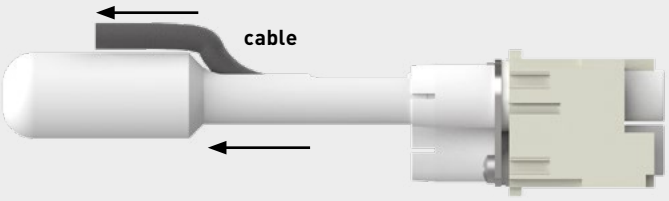


MIXO 9-POLE SHIELDED
D-SUB MODULE FOR 2 CABLES
CX 01 9VF2 /9VM2

MIXO 9-pole D-Sub
shielded connector module for 2 cables
EN/IEC 61984 ratings:
5 A 50 V 0,8 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX 01 9VF2 /9VM2

- Allows the connection of the 9-pole D-Sub shielded connector **using two separate cables** (thanks to a double cable clamp on the shield).

- **Clamp for 2 cables** max Ø 6,0 mm.

- Adds to the currently available **CX 01 9VF /9VM** shielded 9-pole D-Sub module for single cable.

- 9-pole D-Sub connector for turned removable crimp contacts series **CI** or the new **SI** series stamped crimped contacts up to size 0.5.

- Shield separated from the PE circuit (MIXO frame).

- EN/IEC 61984 ratings: **5 A 50 V 0,8 kV 3**

  NOTE – As a connector with extra-low voltage rating, it is out of the scope of the EU Low Voltage Directive 2014/35/EU and of the Russian equivalent Technical Regulation TR CU 004/2011, hence neither the CE marking nor the EAC mark are applicable.

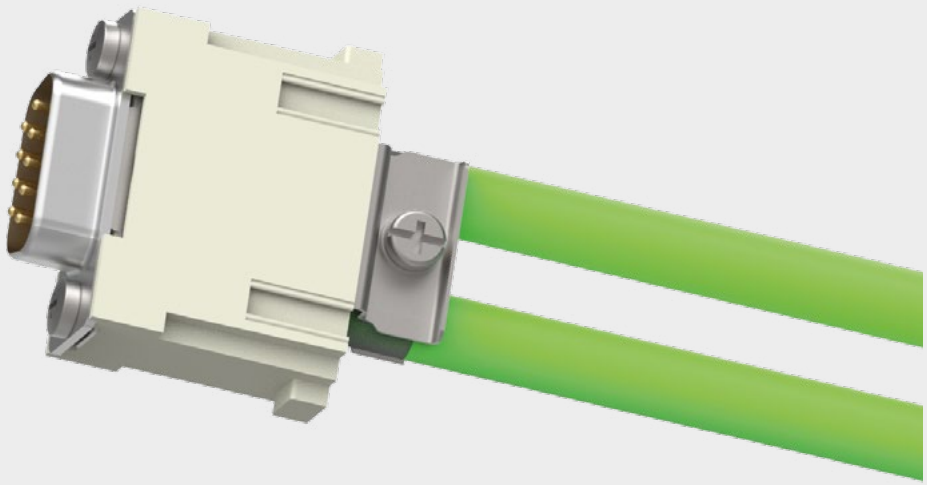
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C … +85 °C

  NOTE - The limitation to the ULT is set upon the usual temperature rating of the data cables, the insulating materials of the inserts and the metal shield might withstand up to 125 °C.

- Fixing screws Ph1, coupling torque 1 Nm.

- Suitable also for MIXO ONE enclosures.

the double cable clamp on the shield allows the connection of the 9-pole D-Sub shielded connector using two separate cables



CX 01 9VF2 /9VM2 9-pole crimp D-SUB shielded connector

The modular inserts must be installed in suitable frames which are then mounted in traditional enclosures* or in COB panel support.
Single-sized modular units may be directly mounted inside MIXO ONE enclosures.

pages:

frames for modular units* **316 - 317**

MIXO ONE enclosures **369**

* enclosures:
housings or high construction hoods

refer to CN.19 pages

module adapter with 1 D-SUB connector double cable entry

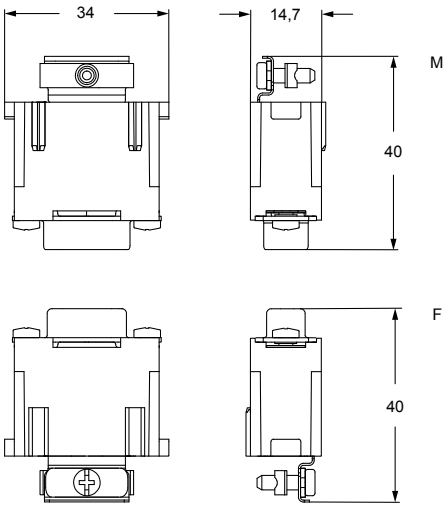
FROM MARCH 2020

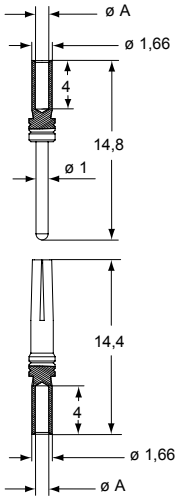
CI (5 A) crimp contacts for D-SUB gold plated

description	part No.	part No.
seat for 1 D-SUB crimp contacts connector and shield (included)		
female insert with connector	**CX 01 9VF2**	
male insert with connector	**CX 01 9VM2**	
CI (5 A) female crimp contacts		
0,08-0,21 mm² AWG 28-24		**CIFD 0.2**
0,13-0,33 mm² AWG 26-22		**CIFD 0.3**
0,33-0,52 mm² AWG 22-20		**CIFD 0.5**
CI (5 A) male crimp contacts		
0,08-0,21 mm² AWG 28-24		**CIMD 0.2**
0,13-0,33 mm² AWG 26-22		**CIMD 0.3**
0,33-0,52 mm² AWG 22-20		**CIMD 0.5**

gold plated+

- characteristics according to EN/IEC 61984 ratings:
  5 A 50 V 0,8 kV 3
- cUL (UL for USA and Canada), CSA, DNV-GL, BV pending
- Lower and Upper Limiting Temperatures (LLT … ULT): -40 °C ... +85 °C
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 4 mΩ
- for crimp contacts CI series use:
  CIPZ D crimping tool
  CIPZP D pneumatic crimping tool (see page 144)
  CITP D turret head
  CIVES insertion / removal tool for contacts 0,2 - 0,5 mm² (see pages 716 - 719 of CN.19 catalogue)



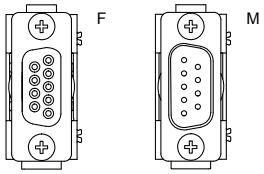


Warnings:
We recommend the use of coding pins **CRF CX** / **CRM CX** (see pages 685 - 686 of CN.19 catalogue).

CRF CX
CRM CX

contacts side (front view)

side with reference arrow ▲



- 1 frame slot

CIF and CIM contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4

+ for basic or high thickness gold plating, please refer to page 74

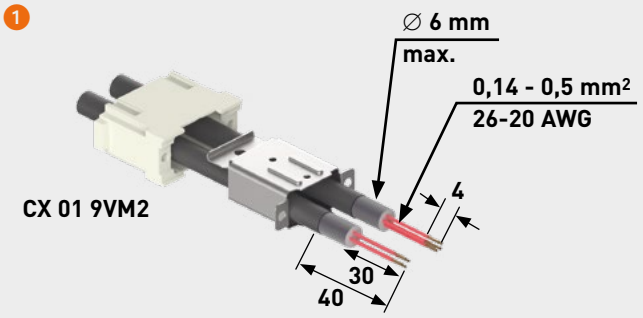
CX 01 9VF2 /9VM2 9-pole crimp D-SUB shielded connector

ASSEMBLY INSTRUCTIONS

Watch our online tutorial

MIXO 9-POLE SHIELDED D-SUB MODULE FOR 2 CABLES - CX 01 9VF2 /9VM2

1



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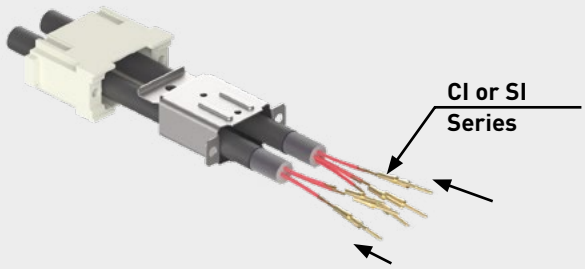

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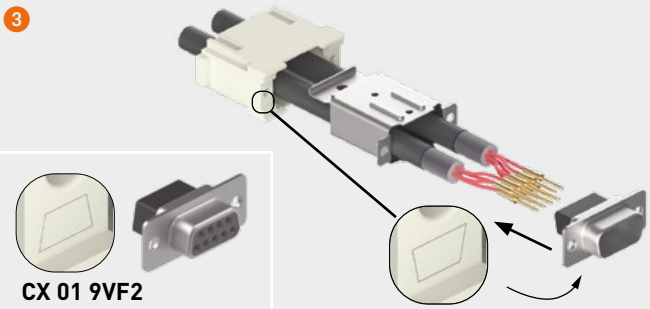
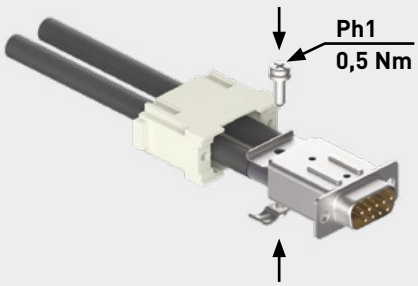
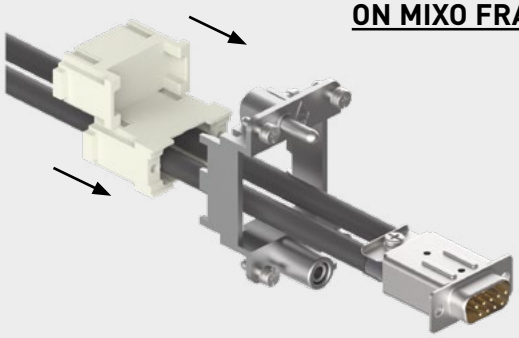


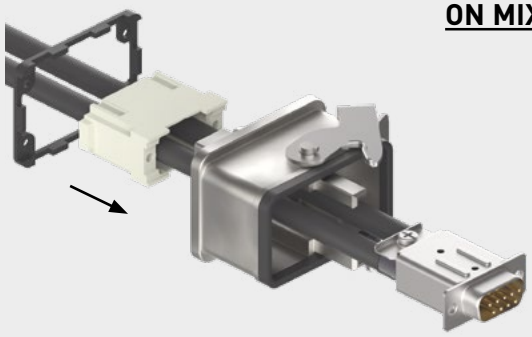
4



5 ON MIXO FRAMES



5 ON MIXO ONE



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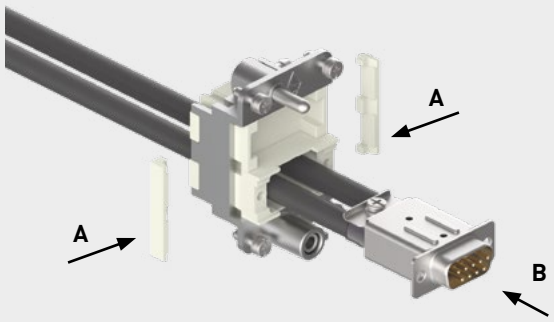

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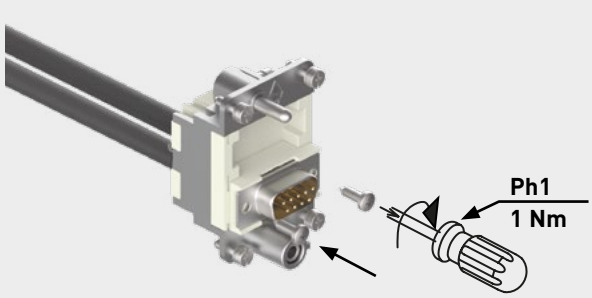
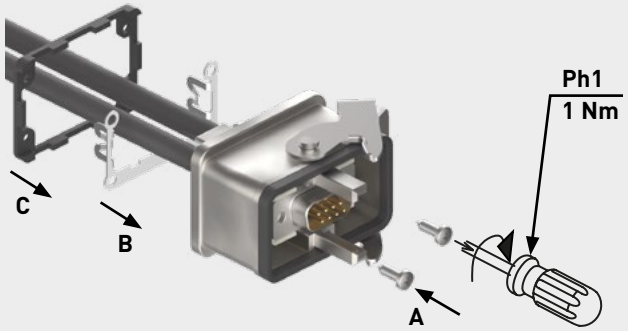


7



CI SERIES CRIMP CONTACTS (5 A)
BASIC GOLD PLATING
HIGH THICKNESS GOLD PLATING

5 A crimp contacts
with basic gold plating,
with high thickness gold plating

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CIF2D /CIM2D 0.2/0.3/0.5/0.7 - CIFJD /CIMJD 0.2/0.3/0.5/0.7

Contacts gold plating in electrical connectors is particularly indicated for noiseless transmission of sensitive signals, thanks to the low contact resistance and the reduced galvanic potential that this plating provides.

To complete the offer of turned crimp contacts of series **CI** (5 A) pairing it to that already available for series **CD** (10 A) and **CC** (16 A) (see CN.19 pages 674-675), also **series CI** (5 A) is now **available with two additional gold platings:**

- a **basic gold plated** version, provided with a low thickness gold plating over a high thickness substrate of nickel-phosphorus, identified by "**JD**" in the first portion of their part no. (**CIFJD/CIMJD**);

- a **high thickness gold plated** version, provided with a 2µm gold plating over a substrate of nickel, identified by "**2D**" in the first portion of their part number (**CIF2D/ CIM2D**).

Both series are already approved with the c UL us mark in files ECBT2.E115072 and ECBT8.E115072.

All versions of series **CI** – like the equivalent versions already available for series **CD** (10 A) and series **CC** (16 A) turned crimp contacts – comply with the RoHS 2 EU Directive with exemption 6c (lead as alloying element in copper alloys).

The **basic gold plated** version (version "**JD**") is an economical alternative to the "**D**" standard gold plated version of series **CI** (**CIFD/CIMD**) that, by employing a special nickel-phosphorus hard and durable plating substrate, maintains the corrosion resistance (tested according EN 60068), the mechanical life (≥500 mating cycles) and the full compliance to the connectors' safety standard **EN 61984**:2009, that uses test methods of series **IEC 60512,** and to the crimped connection standard **EN 60352-2**:1994 (Ed.1.0 more demanding for turned contacts in terms of pull-out force) at the same level of the standard gold plated version **CIFD/CIMD**.

The second, **high thickness gold plated** version (version "**2D**") expands the performance of the "**D**" standard gold plated version of series **CI** (**CIFD/CIMD**) by using a high thickness gold plating over the usual migration barrier nickel plating substrate, for those harsher applications that demand the lowest porosity of the gold plating even after sustained number of mating cycles (up to 500 and more) in corrosive environments.

CIF2D /CIM2D - CIFJD /CIMJD 5 A

inserts		pages:
CQ 21	21 poles	**190**
CX 08 B (MIXO BUS)	8 poles + shield	**293**
CX 08 I6 (MIXO DATA)	8 poles	**286**
CX 25 IB (MIXO)	25 poles	**284**
CX 36 I (MIXO)	36 poles	**30 ***
CX 20S I (MIXO)	20 poles + shield	**36 ***
CX 01 9V (MIXO DATA)	9 poles + shield	**296**
CX 01 9V 2 (MIXO DATA)	9 poles + shield	**70 ***

refer to CN.19 pages
*** refer to NEWS 2020 pages**

5 A crimp contacts
high thickness gold plated

FROM MAY 2020

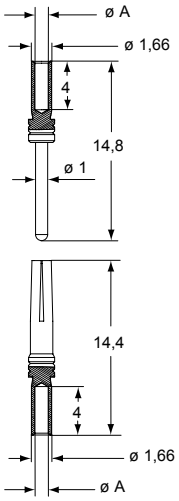
5 A crimp contacts
basic gold plated

FROM MAY 2020

description	part No.	part No.
CI (5 A) female crimp contacts		
0,08-0,21 mm² AWG 28-24	**CIF2D 0.2**	**CIFJD 0.2**
0,13-0,33 mm² AWG 26-22	**CIF2D 0.3**	**CIFJD 0.3**
0,33-0,52 mm² AWG 22-20	**CIF2D 0.5**	**CIFJD 0.5**
0,52-0,75 mm² AWG 20-18	**CIF2D 0.7**	**CIFJD 0.7**
CI (5 A) male crimp contacts		
0,08-0,21 mm² AWG 28-24	**CIM2D 0.2**	**CIMJD 0.2**
0,13-0,33 mm² AWG 26-22	**CIM2D 0.3**	**CIMJD 0.3**
0,33-0,52 mm² AWG 22-20	**CIM2D 0.5**	**CIMJD 0.5**
0,52-0,75 mm² AWG 20-18	**CIM2D 0.7**	**CIMJD 0.7**
	gold plated	**gold plated**

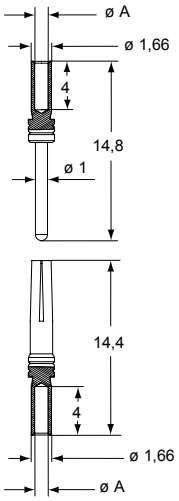
The gold plated contacts provide:
- corrosion resistance (according to EN 60068)
- mechanical life: ≥ 500 coupling cycles
- in compliance with EN 61984:2009, IEC 60512, EN 60352-2: 1994
- compliant to directive RoHS2
- contact resistance: ≤ 4 mΩ
- for crimp contacts CI series use, on page 716 - 719 of CN.19 catalogue
  CIPZ D crimping tool
  CIPZP D pmeumatic crimping tool (see page 144)
  CITP D turret head
  CIES insertion / removal tool for contacts 0,2 - 0,5 mm²
  CIES B insertion / removal tool for contacts 0,75 mm²
- certifications: cULus (UL for USA and Canada), SP

NOTE:
The current rating depends on the contact size and on the connector in which they are installed. See derating diagrams of each connector.



CIF2D and CIM2D contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4
0,52-0,75	1,12	4



CIFJD and CIMJD contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4
0,52-0,75	1,12	4

CI SERIES CRIMP CONTACTS (5 A) - BASIC GOLD PLATED - HIGH THICKNESS GOLD PLATED
CIF2D /CIM2D 0.2/0.3/0.5/0.7 - CIFJD /CIMJD 0.2/0.3/0.5/0.7

SI SERIES STAMPED CRIMP CONTACTS (5 A)
SIF..D /SIM..D

Contacts for wires with
conductor cross-sectional area:
28-24 AWG (0,08 – 0,21 mm²) and
24-20 AWG (0,21 – 0,52 mm²)

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

SIF..D /SIM..D

- Alternative (but not equivalent) to the turned crimp contacts series **CI**, for less demanding applications e.g. reduced current-carrying capacity, not relevant for signal applications (widely used in the D-Sub connector field).

- Available with different **selective gold plating** thickness (over nickel) according to three required performance levels: **1D – 2D – 3D**, respectively for **500, 250** and **50** mating cycles.

- **Open crimp barrel** contacts **with insulation grip**, providing tensile strength (pull out force) compliant with EN/IEC 60352 Ed. 2, lower than corresponding turned, closed crimp barrel contacts series CI (EN/IEC 60352-2 Ed.1.0 had two different curves A and B, later consolidated in the lower demanding curve B, whereas ILME CI turned contacts still claim conformity to curve A).

- Compatible with inserts **CQ 21**, and MIXO modules **CX 25 IB, CX 36 I, CX 08 B** (MIXO BUS 8P), **CX 01 9V** (9-pin shielded D-SUB for 1 cable), **CX 01 9V2** (9-pin shielded D-SUB for 2 cables).

  CAUTION – Only selected inserts are suitable for stamped contacts! Respect the indications provided in the additional catalogue pages (under construction) in combination with these new **SI** stamped contacts.

- Derating diagrams of above inserts / modules are under construction: expected to show ca. 10% less current-carrying capacity than when inserts employ corresponding turned contacts series CI.

  NOTE: Not suitable for MIXO Shielded CX 20S IF /IM.

- Available in **2 sizes**:
  - **0.2** for wires with conductor cross-sectional area 28-24 AWG (0,08 – 0,21 mm^2);
  - **0.5** for wires with conductor cross-sectional area 24-20 AWG (0,21 – 0,52 mm^2).

- Available in **3 possible packaging** depending on volumes used and associated crimp tooling:
  - as loose parts (no suffix), in 200 pcs per box package, for use with manual crimp tool **SIPZ W;**
  - as coil package (suffix **C**), 500 pcs in a compact-sized coil, for use with manual crimp tools able to host the coil, **SIPZC W;**
  - as reel (bandolier) package (suffix **R**), 10 000 pcs in a large-sized reel, for use with semi-automatic crimping machine.

- Possible performance levels (mating cycles):

PL1 (≥500 cycles)	**PL2*** (≥250 cycles)	**PL3** (≥50 cycles)	mm^2	AWG
SIF1D 0.2	**SIF2D 0.2**	SIF3D 0.2	0,08 – 0,21	28 – 24
SIF1D 0.5	**SIF2D 0.5**	SIF3D 0.5	0,21 – 0,52	24 – 20
SIM1D 0.2	**SIM2D 0.2**	SIM3D 0.2	0,08 – 0,21	28 – 24
SIM1D 0.5	**SIM2D 0.5**	SIM3D 0.5	0,21 – 0,52	24 – 20

* NOTE – **PL2 available on stock**, PL1 and PL3 available upon request.

- Stripping length: **3 mm**

Environmental conformities:

- RoHS 2: conform without exemptions
- China RoHS: conform without exemption – EFUP 50 (years – no marking required)
- REACH SVHC substance: none

SIF /SIM..D 5 A stamped size 0.2

inserts		pages:
CQ 21	21 poles	**190**
CX 08 B (MIXO BUS)	8 poles + shield	**293**
CX 25 IB (MIXO)	25 poles	**284**
CX 36 I (MIXO)	36 poles	**30 ***
CX 01 9V (MIXO DATA)	9 poles + shield	**296**
CX 01 9V 2 (MIXO DATA)	9 poles + shield	**70 ***

SI..D (5 A) crimp contacts

STAMPED CONTACTS

FROM FEBRUARY 2020

refer to CN.19 pages

*** refer to NEWS 2020 pages**

description	part No.	pcs. (1 packaging unit)
SIF..D … (5 A) female stamped crimp contacts (loose parts)		200
0,08-0,21 mm² AWG 28-24	SIF1D 0.2	
0,08-0,21 mm² AWG 28-24	**SIF2D 0.2**	
0,08-0,21 mm² AWG 28-24	SIF3D 0.2	
SIM..D … (5 A) male stamped crimp contacts (loose parts)		200
0,08-0,21 mm² AWG 28-24	SIM1D 0.2	
0,08-0,21 mm² AWG 28-24	**SIM2D 0.2**	
0,08-0,21 mm² AWG 28-24	SIM3D 0.2	
SIF..D … C (5 A) female stamped crimp contacts (coil package)		500
0,08-0,21 mm² AWG 28-24	SIF1D 0.2C	
0,08-0,21 mm² AWG 28-24	**SIF2D 0.2C**	
0,08-0,21 mm² AWG 28-24	SIF3D 0.2C	
SIM..D … C (5 A) male stamped crimp contacts (coil package)		500
0,08-0,21 mm² AWG 28-24	SIM1D 0.2C	
0,08-0,21 mm² AWG 28-24	**SIM2D 0.2C**	
0,08-0,21 mm² AWG 28-24	SIM3D 0.2C	
SIF..D ... R (5 A) female stamped crimp contacts (reel package)		10 000
0,08-0,21 mm² AWG 28-24	SIF1D 0.2R	
0,08-0,21 mm² AWG 28-24	**SIF2D 0.2R**	
0,08-0,21 mm² AWG 28-24	SIF3D 0.2R	
SIM..D … R (5 A) male stamped crimp contacts (reel package)		10 000
0,08-0,21 mm² AWG 28-24	SIM1D 0.2R	
0,08-0,21 mm² AWG 28-24	**SIM2D 0.2R**	
0,08-0,21 mm² AWG 28-24	SIM3D 0.2R	

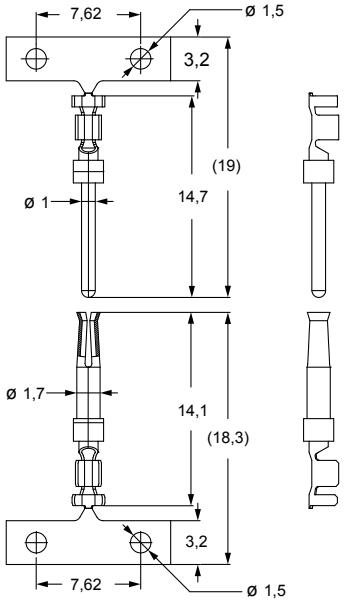
- cUL (UL for USA and Canada), CSA pending

NOTE:
The SIF1D/SIM1D and SIF3D/SIM3D crimp contacts are available only upon request.

- contact resistance (all PL) ≤ 10 mΩ

Recommended crimping tools
loose parts: **SIPZ W** (see page 142)
coil package: **SIPZC W** (see page 143)
reel package: suitable for stripping / crimping automated machines to be used with 10 000 pieces reels, please contact ILME S.p.A.

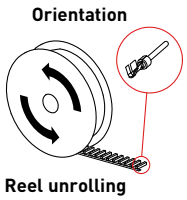
The current rating depends on the contact size and on the connector in which they are installed. See derating diagrams of each connector.



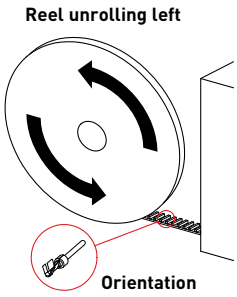
SIF..D and SIM..D contacts

conductor section (mm²)	conductors stripping length (mm)	max insulation Ø (mm)
0,08-0,21	3	1
0,21-0,52	3	1,5

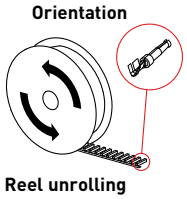
SIM..D C



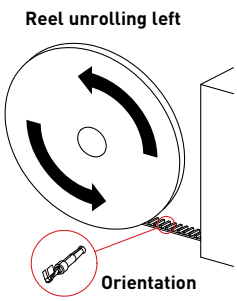
SIM..D R



SIF..D C



SIF..D R



SIF /SIM..D 5 A stamped size 0.5

inserts		pages:
CQ 21	21 poles	**190**
CX 08 B (MIXO BUS)	8 poles + shield	**293**
CX 25 IB (MIXO)	25 poles	**284**
CX 36 I (MIXO)	36 poles	**30 ***
CX 01 9V (MIXO DATA)	9 poles + shield	**296**
CX 01 9V 2 (MIXO DATA)	9 poles + shield	**70 ***

refer to CN.19 pages

*** refer to NEWS 2020 pages**

SI..D (5 A) crimp contacts

STAMPED CONTACTS

FROM FEBRUARY 2020

description	part No.	pcs. (1 packaging unit)
SIF..D ... (5 A) female stamped crimp contacts (loose parts)		200
0,21-0,52 mm² AWG 24-20	SIF1D 0.5	
0,21-0,52 mm² AWG 24-20	**SIF2D 0.5**	
0,21-0,52 mm² AWG 24-20	SIF3D 0.5	
SIM..D ... (5 A) male stamped crimp contacts (loose parts)		200
0,21-0,52 mm² AWG 24-20	SIM1D 0.5	
0,21-0,52 mm² AWG 24-20	**SIM2D 0.5**	
0,21-0,52 mm² AWG 24-20	SIM3D 0.5	
SIF..D ... C (5 A) female stamped crimp contacts (coil package)		500
0,21-0,52 mm² AWG 24-20	SIF1D 0.5C	
0,21-0,52 mm² AWG 24-20	**SIF2D 0.5C**	
0,21-0,52 mm² AWG 24-20	SIF3D 0.5C	
SIM..D ... C (5 A) male stamped crimp contacts (coil package)		500
0,21-0,52 mm² AWG 24-20	SIM1D 0.5C	
0,21-0,52 mm² AWG 24-20	**SIM2D 0.5C**	
0,21-0,52 mm² AWG 24-20	SIM3D 0.5C	
SIF..D ... R (5 A) female stamped crimp contacts (reel package)		10 000
0,21-0,52 mm² AWG 24-20	SIF1D 0.5R	
0,21-0,52 mm² AWG 24-20	**SIF2D 0.5R**	
0,21-0,52 mm² AWG 24-20	SIF3D 0.5R	
SIM..D ... R (5 A) male stamped crimp contacts (reel package)		10 000
0,21-0,52 mm² AWG 24-20	SIM1D 0.5R	
0,21-0,52 mm² AWG 24-20	**SIM2D 0.5R**	
0,21-0,52 mm² AWG 24-20	SIM3D 0.5R	

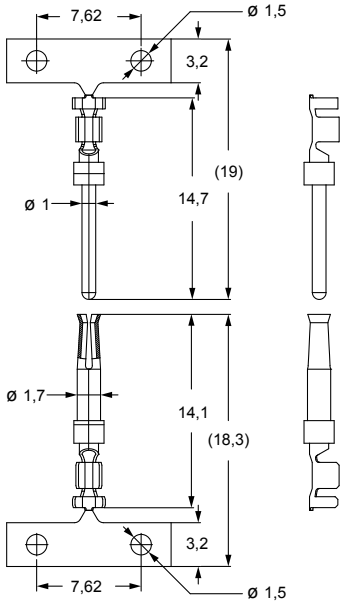
- cUL (UL for USA and Canada), CSA pending

NOTE:
The SIF1D/SIM1D and SIF3D/SIM3D crimp contacts are available only upon request.

- contact resistance (all PL) ≤ 10 mΩ

Recommended crimping tools
loose parts: **SIPZ W** (see page 142)
coil package: **SIPZC W** (see page 143)
reel package: suitable for stripping / crimping automated machines to be used with 10 000 pieces reels, please contact ILME S.p.A.

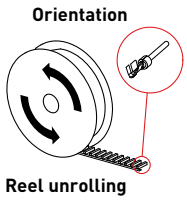
The current rating depends on the contact size and on the connector in which they are installed. See derating diagrams of each connector.



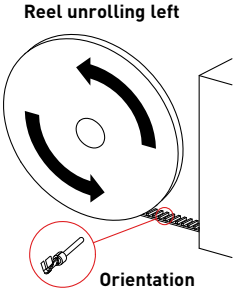
SIF..D and SIM..D contacts

conductor section (mm²)	conductors stripping length (mm)	max insulation Ø (mm)
0,08-0,21	3	1
0,21-0,52	3	1,5

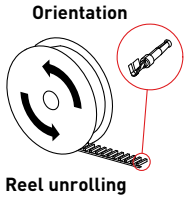
SIM..D C



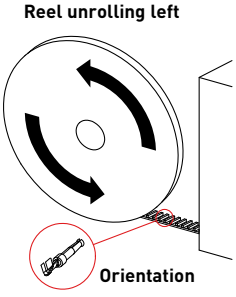
SIM..D R



SIF..D C



SIF..D R



RI SERIES HNM CRIMP CONTACTS (5 A)
RIFD /MD

Turned crimp contacts designed
to meet high number of matings (HNM)
and high durability needs

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

RIFD /MD

Especially high thickness gold plated/lubricated contacts series **RI** enable **HNM** feature on suitable MIXO connectors that when mounted on dedicated MIXO HNM frames part nos. **RX 02 /03 /04 /06 TF /TM** also employing especially gold plated PE contacts, allow the creation of HNM MIXO modular inserts, useful when connectors are foreseen for frequent operation, providing up to 10 000 matings compared to the 500 matings provided by series **CI** turned crimp contacts.

Part no.	Conductor sections	
RIFD /MD 0.2	0,08 – 0,21 mm²	AWG 28-24
RIFD /MD 0.3	0,13 – 0,33 mm²	AWG 26-22
RIFD /MD 0.5	0,33 – 0,52 mm²	AWG 22-20
RIFD /MD 0.7	0,52 – 0,75 mm²	AWG 20-18

Available in **four sizes**, 0.2 through 0.7, to cover the conductor cross-sectional area range 0,08 mm² through 0,75 mm² (AWG 28 through AWG 18).

NOTE – The largest size 0.7 contacts are suitable only for CX 25 IBF /IBM inserts.

Stripping length: **4 mm** (same as per series CI)

Series **RI** HNM crimp contacts use the same tools (crimping tools, insertion and removal tools) recommended for series **CI** turned crimp contacts.

Series **RI** HNM crimp contacts provide the same current ratings of series CI turned contacts.

The connector modules of series MIXO that by using HNM 5A contacts series **RI** together with MIXO HNM frames **RX 02...06 TF/TM** can create MIXO HNM modular connector inserts are:

- MIXO **CX 25 IBF /IBM**
- MIXO **CX 36 IF /IM**

Series **RI** HNM crimp contacts must be used in special (new, see page 54) HNM variants of MIXO Gigabit module and (new, see page 38) MIXO Shielded module:

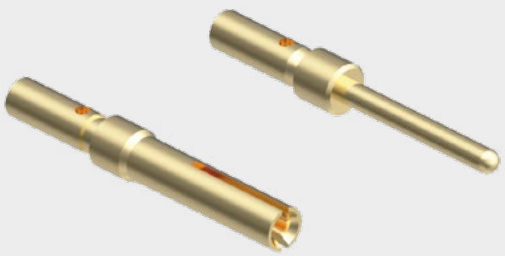
- HNM MIXO Gigabit **RX 08 I6F /I6M**
- HNM MIXO Shielded **RX 20S IF /IM**

NOTE – CQ 21 is not suitable for HNM applications due to lack of HNM hoods and housings size “21.21”. RI contacts are also not suitable for D-Sub 9-pin modules CX 01 9VF /9VM and the new two cable outlet version CX 01 9VF2 /9VM2, not foreseen for HNM applications.

Environmental conformities:

- RoHS 2: conform with exemption 6(c) (lead in copper alloys)
- China RoHS: conform with exemption – EFUP 50 (years – no marking required)
- REACH SVHC substance: lead

widening of the ILME portfolio of HNM inserts: 10, 16, 40 and now 5 A



RI..D 5 A HNM (High Number of Matings)

inserts		pages:
CX 25 IB (MIXO)	25 poles	**284**
CX 36 I (MIXO)	36 poles	**30 ***
RX 08 D5 (MEGABIT)	8 poles + shield	**46 ***
RX 08 D5 2 (MEGABIT)	8 poles + shield	**46 ***

refer to CN.19 pages
*** refer to NEWS 2020 pages**

RI (5 A) crimp contacts
gold plated

FROM MAY 2020

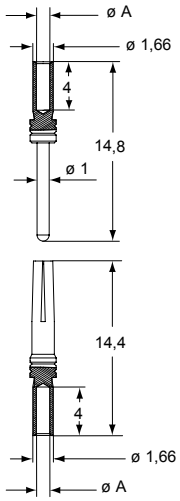
description	part No.
RI (5 A) female crimp contacts	
0,08-0,21 mm² AWG 28-24	**RIFD 0.2**
0,13-0,33 mm² AWG 26-22	**RIFD 0.3**
0,33-0,52 mm² AWG 22-20	**RIFD 0.5**
0,52-0,75 mm² AWG 20-18 *	**RIFD 0.7**
RI (5 A) male crimp contacts	
0,08-0,21 mm² AWG 28-24	**RIMD 0.2**
0,13-0,33 mm² AWG 26-22	**RIMD 0.3**
0,33-0,52 mm² AWG 22-20	**RIMD 0.5**
0,52-0,75 mm² AWG 20-18 *	**RIMD 0.7**

gold plated

* suitable only for CX 25 IBF/IBM

- contact resistance: ≤ 4 mΩ
- for crimp contacts RI series use:
  CIPZ D crimping tool
  CIPZP D pmeumatic crimping tool (see page 144)
  CITP D turret head
  CIES insertion / removal tool for contacts 0,2 - 0,5 mm²
  CIES B insertion / removal tool for contacts 0,75 mm²
- cUL (UL for USA and Canada), CSA pending

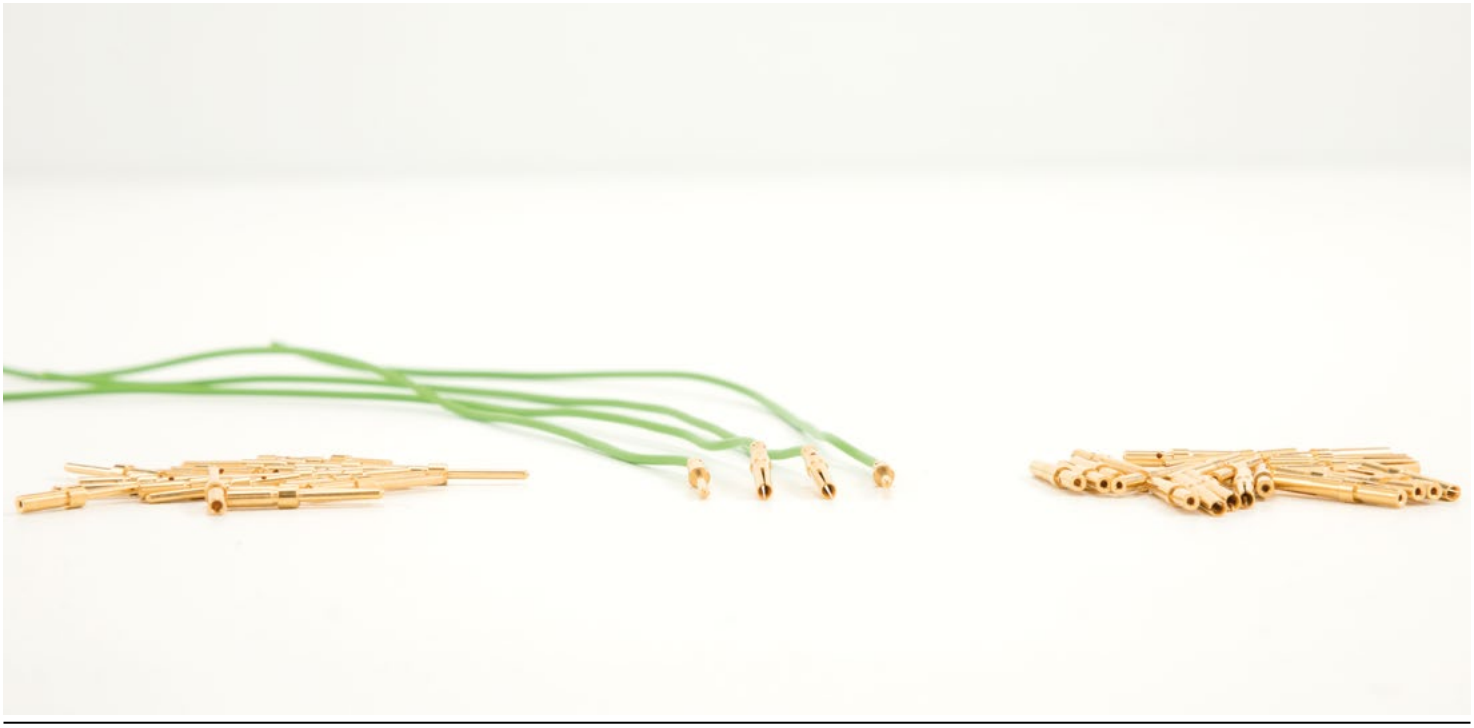
NOTE:
The current rating depends on the contact size and on the connector in which they are installed. See derating diagrams of each connector.



RIF and RIM contacts

conductor section (mm²)	conductor slot ø A (mm)	conductors stripping length (mm)
0,08-0,21	0,64	4
0,13-0,33	0,90	4
0,33-0,52	1,12	4
0,52-0,75	1,12	4

RI SERIES HNM CRIMP CONTACTS (5 A) - RIFD /MD



CX7 SERIES SIZE 6.0
CRIMP CONTACTS (6 mm² / 10 AWG)

70 A crimp contacts
suitable for 6 mm² wires

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CX7FA /MA 6.0

This new size **6.0** adds to the existing sizes **10 – 16 – 25** of series **CX7** removable crimp contacts, to allow lower wire size 6 mm^2 / 10 AWG (stranded copper conductors only), expanding this series to cover conductor cross-sectional area range 6 mm^2 through 25 mm^2 (10 AWG through 4 AWG).

Environmental conformities:

- RoHS 2: conform with exemption 6(c) (lead in copper alloys)

- China RoHS: conform with exemption – EFUP 50 (years – no marking required)

- REACH SVHC substance: lead

- Suitable for use in MIXO module **CX 02 7F /7M**

- Crimping with **CPPZ C** (CEMBRE HT 45) manual crimp tool, crimping dies **CGD 10 C** for CX7 contacts with 6 mm^2 / 10 AWG cross-sectional area, and locator **CX7PZ LOC**. With these tools they provide crimped connections in compliance with EN/IEC 60352-2. Their tensile strength still in conformity with the values of former curve A (closed crimp barrel) of Ed.1.0 of that standard.

increases the range of wire cross sections that can ben used in ILME 70A MIXO modules

CX7..6.0 70 A

inserts		page:
CX 02 7F /M (MIXO)	2 poles	**266**

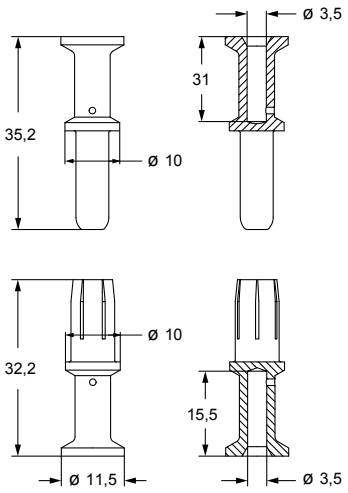
refer to CN.19 pages

70 A silver plated crimp contacts

FROM MAY 2020

description	part No.	
70 A female crimp contacts 6 mm² AWG 10	**CX7FA 6.0**	silver plated
70 A male crimp contacts 6 mm² AWG 10	**CX7MA 6.0**	

- cUL (UL for USA and Canada) pending
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,5 mΩ
- **it is recommended to crimp the contacts with crimping tools homologated by ILME.**
  Crimping with CPPZ C (CEMBRE HT 45) manual crimp tool, crimping dies CGD 10 C for CX7 contacts with 6 mm² / 10 AWG cross-sectional area, and locator CX7PZ LOC



CX CRIMP CONTACTS 70 A 6 mm²

PCB INTERFACE ADAPTER FOR CQ 12 CIF INSERTS
SPECIAL CQ 12 INSERTS FOR PCB ADAPTERS

CIF Q12 2.4 (with 12+⏚ gold plated contacts)

Number of contacts: 12 + ⏚

CQF /M 12 CIF (with ⏚ contact with rear Ø 1 mm pin)

EN/IEC 61984 ratings: 7,5 A 250 V 4 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CIF Q12 2.4 - CQF 12 CIF /CQM 12 CIF

CIF Q12 2.4 (with 12+ ⏚ gold plated contacts)

NOTE – CIF Q12 2.4A (with 12 + ⏚ silver plated contacts) available upon request.

Special CQ 12 inserts for PCB adapter:

- **CQF 12 CIF**
- **CQM 12 CIF**

with PE contact equipped with rear Ø 1 mm pin for mating with the PE contact of the PCB adapter.

CIF interface contacts for CQF /M 12 CIF:

- **CDFA 6A28** (female contact, silver plated, with rear Ø 1 mm pin for mating with the PCB adapter)
- **CDMA 6A** (male contact, silver plated, with rear Ø 1 mm pin for mating with the PCB adapter)

NOTE – Gold plated variants of the interface contacts CDFD 6A28 and CDMD 6A available upon request.

The new PCB adapter **CIF Q12 2.4** (gold plated contacts, available on request **CIF Q12 2.4** with silver plated contacts) allows cable-to-PCB connection with CQ 12 – 12P+ ⏚ industrial heavy-duty connector inserts for power electronics and/or signal applications, to reduce wiring costs (where "large numbers" justify the development of a PCB design).

Due to the contact pitch and the layout pattern on the PCB, a reduction of rated voltage for CQ 12 is required from 400/690V to 250V.

The **CIF Q12 2.4** PCB interface adapter is suitable for printed circuit board application by soldering to PCBs with thickness up to 2,4 mm.

The special variants of **CQ 12** inserts that mate on this adapter:

- CQF 12 CIF
- CQM 12 CIF

feature the PE contact with Ø 1 mm pin instead of the usual screw terminal, for mating with the PCB adapter. This PE contact provides protective earth connection to a metal housing. These inserts are therefore suitable for any kind of bulkhead mounting "21.21" enclosure (insulating, metal).

In such special inserts it is necessary to use special interface contacts:

- for female CQF 12 CIF: **CDFA 6A28** female, silver plated, with rear Ø 1 mm pin for mating with **CIF Q12 2.4** PCB interface adapter;
- for male CQM 12 CIF: **CDMA 6A** male, silver plated, with rear Ø 1 mm pin for mating with **CIF Q12 2.4** PCB interface adapter.

The above special contacts are available on request with standard gold plating as **CDFD 6A28** and **CDMD 6A**.

Each of the above special inserts, to be mated respectively by a corresponding standard insert of opposite gender (**CQM 12** or **CQF 12,** see Assembly Instructions on page 91), can be equipped, together with their mating counterpart, with 2 **coding pins CR Q12,** allowing up to 16 different codings (see page 689 of CN.19 catalogue), to avoid unintended mating in case of multiple of these connectors installed nearby on the same PCB.

Connectorization allows minimisation of downtime in factory automation due to easy replacement of modular PCB circuitry (easier and faster maintenance).

NOTE: In cable-to-PCB connection applications, safety does not depend only on the designs of the adapter and of the corresponding connector, it depends also on the design of the PCB and of the equipment – e.g. its enclosure and relevant spacings if metallic – where the PCB circuit and the cable to board are employed; hence, no CE marking (nor the conceptually equivalent Eurasian Conformity mark EAC) can be applied on the PCB adapters, even if by rated voltage they fall under the scope of the Low Voltage Directive 2014/35/EU.

Technical characteristics

Number of contacts: 12 + ⏚

EN/IEC 61984 ratings: **7,5 A 250 V 4 kV 3**

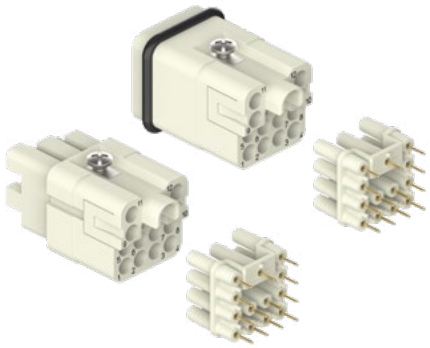
Lower and Upper Limiting Temperatures (LLT, ULT):
-40 °C … +125 °C

NOTE – The adapter insulating material is able to withstand wave soldering of the PCB.

CIF Q12 2.4 PCB interface adapters for CQ 12 CIF inserts 7,5 A 250 V

inserts		page:
CQ CIF	12 poles + ⏚	90

PCB interface adapter for CQ 12 inserts, special CQ 12 inserts for PCB adapter



FROM JULY 2020

7,5 A interface contacts for special CQ 12 inserts, silver plated

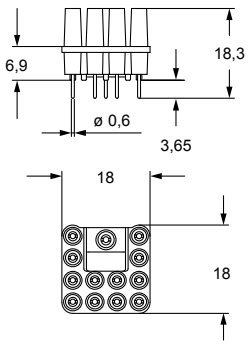
description	part No.	part No.
PCB interface adapter with contacts for up to 2,4 mm thick PCB	**CIF Q12 2.4**	
female special insert for female interface contacts male special insert for male interface contacts	**CQF 12 CIF** **CQM 12 CIF**	
7,5 A female interface contacts for female special insert 7,5 A male interface contacts for male special insert		**CDFA 6A28** **CDMA 6A** **silver plated**

- characteristics according to EN/IEC 61984 ratings:
  7,5 A 250 V 4 kV 3
- Lower and Upper Limiting Temperatures (LLT, ULT):
  -40 °C ... +125 °C
  ✎ The adapter insulating material is able to withstand wave soldering of the PCB.
- number of contacts: 12 + ⏚

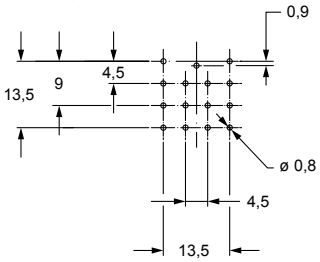
✎ **NOTE: CQ 12 inserts are already fit with the special PE interface contact. To fully populate the inserts, twelve interface contacts, respectively male or female, are required.**

The adapter is soldered on the printed circuit on which the multipole connector (female or male) equipped with interface contacts will then be inserted.

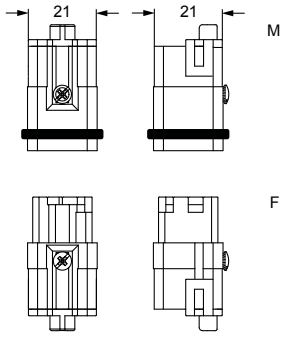
CIF Q12 2.4



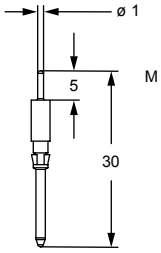
PCB-Layout



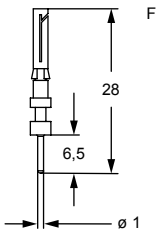
CQ CIF



CDMA 6A



CDFA 6A28



☑ The **CR Q12** coding pins **(to be ordered separately),** allow the user to create 16 different combinations, according to the diagram shown on **page 689 of CN.19 catalogue.**

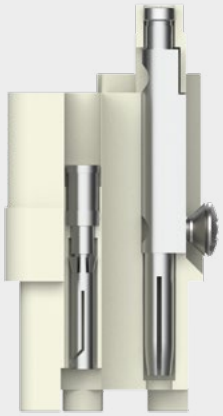
CIF Q12 2.4 PCB interface adapters for CQ 12 CIF inserts 7,5 A 250 V

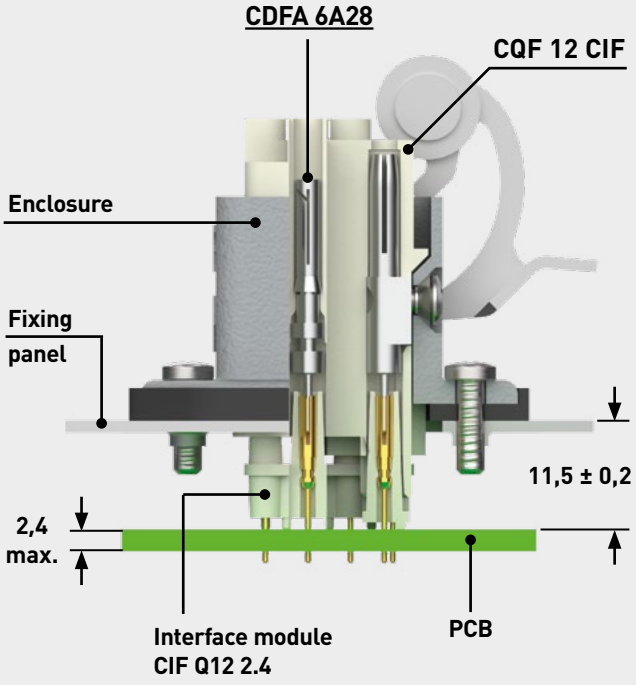
ASSEMBLY INSTRUCTIONS

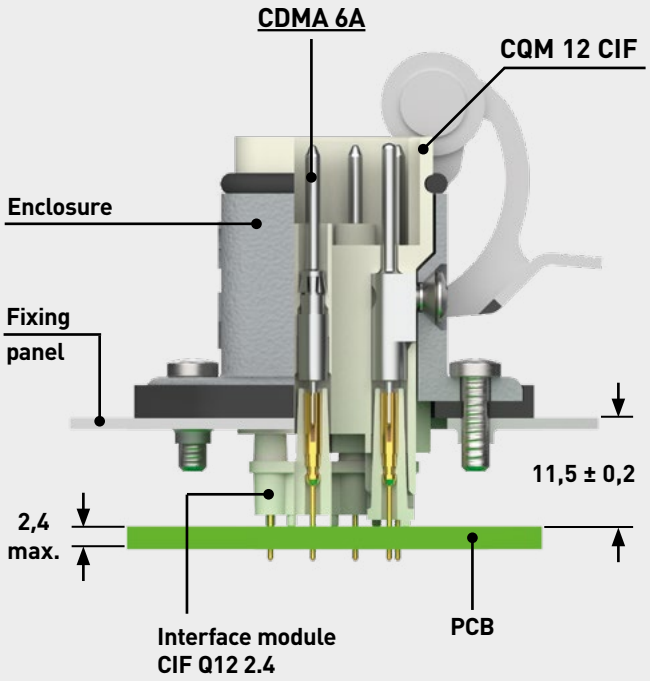
CIF Q12 2.4 - PCB INTERFACE ADAPTERS FOR CQ 12 INSERTS

CQM 12

CQF 12







PCB INTERFACE ADAPTER FOR CQ 07 INSERTS

CIF Q07 2.4

CIF Q07 2.4
(with gold plated contacts)
Number of contacts: 7
EN/IEC 61984 ratings: 7,5 A 250 V 4 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CIF Q07 2.4

CIF Q07 2.4 (with gold plated contacts)

NOTE – CIF Q07 2.4A (with silver plated contacts) available upon request

CIF interface contacts:

- **CDFA 6A28** (female contact, silver plated, with rear Ø 1 mm pin for mating with the PCB adapter)
- **CDMA 6A** (male contact, silver plated, with rear Ø 1 mm pin for mating with the PCB adapter)

NOTE – Gold plated variants of the interface contacts CDFD 6A28 and CDMD 6A available upon request.

This new **CIF Q07 2.4** adapter (with gold plated contacts, available upon request with silver plated contacts **CIF Q07 2.4A**) allows cable-to-PCB connection with CQ 07 7P+⏚ industrial heavy-duty connector inserts for power electronics and/or signal applications, to reduce wiring costs (where "large numbers" justify the development of a PCB design).

The **CIF Q07 2.4** PCB interface adapter is suitable for printed circuit board application by soldering to PCBs with thickness up to 2,4 mm.

Due to the contact pitch and the layout pattern on the PCB, a reduction of rated voltage for CQ 07 is required from 400V to 250V.

For the connection to the PCB adapter of **CQ 07** inserts it is necessary to equip these standard inserts with **special interface contacts** (except the PE contact, embedded in the insert, and screw-type):

- for female CQF 07: **CDFA 6A28** female, silver plated, with rear Ø 1 mm pin for mating with **CIF Q07 2.4** PCB interface adapter;
- for male CQM 07: **CDMA 6A** male, silver plated, with rear Ø 1 mm pin for mating with **CIF Q07 2.4** PCB interface adapter.

Connectorization allows minimisation of downtime in factory automation due to easy replacement of modular PCB circuitry (easier and faster maintenance).

NOTE: In cable-to-PCB connection applications, safety does not depend only on the designs of the adapter and of the corresponding connector, it depends also on the design of the PCB and of the equipment – e.g. its enclosure and relevant spacings if metallic – where the PCB circuit and the cable to board are employed; hence, no CE marking (nor the conceptually equivalent Eurasian Conformity mark EAC) can be applied on the PCB adapters, even if by rated voltage they fall under the scope of the Low Voltage Directive 2014/35/EU.

Technical characteristics

Number of contacts: 7

EN/IEC 61984 ratings: **7,5 A 250 V 4 kV 3**

Lower and Upper Limiting Temperatures (LLT, ULT):
-40 °C … +125 °C

NOTE – The adapter insulating material is able to withstand wave soldering of the PCB.

CAUTION – The layout of the PCB for this adapter must foresee a suitable pass-through hole for the PE wiring coming from the screw-type PE terminal of CQF /M 07 connector. This adapter does not foresee a PE connection. It is important to fulfil the continuity of PE connection of the CQF /M 07 connector, also for the possibility to use a metal housing.

CIF Q07 2.4 PCB interface adapters for CQ 07 inserts 7,5 A 250 V

inserts		page:
CQ	7 poles + ⏚	187

refer to CN.19 pages

PCB interface adapter for CQ 07 inserts

FROM JULY 2020

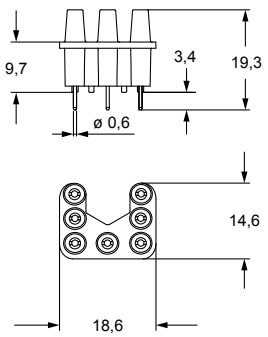
7,5 A interface contacts for CQ 07 inserts, silver plated

description	part No.	part No.
PCB interface adapter with contacts for up to 2,4 mm thick PCB	**CIF Q07 2.4**	
7,5 A female interface contacts for female insert 7,5 A male interface contacts for male insert		**CDFA 6A28** **CDMA 6A** **silver plated**

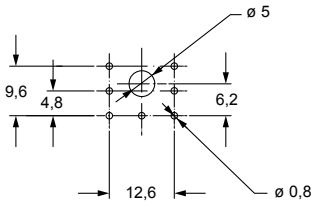
- characteristics according to EN/IEC 61984 ratings:
  7,5 A 250 V 4 kV 3
- Lower and Upper Limiting Temperatures (LLT, ULT):
  -40 °C ... +125 °C
  The adapter insulating material is able to withstand wave soldering of the PCB.
- number of contacts: 7

The adapter is soldered on the printed circuit on which the multipole connector (female or male) equipped with interface contacts will then be inserted.

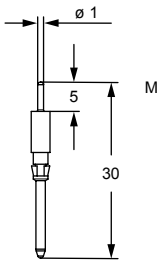
CIF Q07 2.4



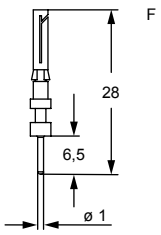
PCB-Layout



CDMA 6A



CDFA 6A28



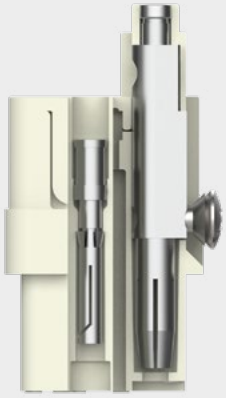
CIF Q07 2.4 PCB interface adapters for CQ 07 inserts 7,5 A 250 V

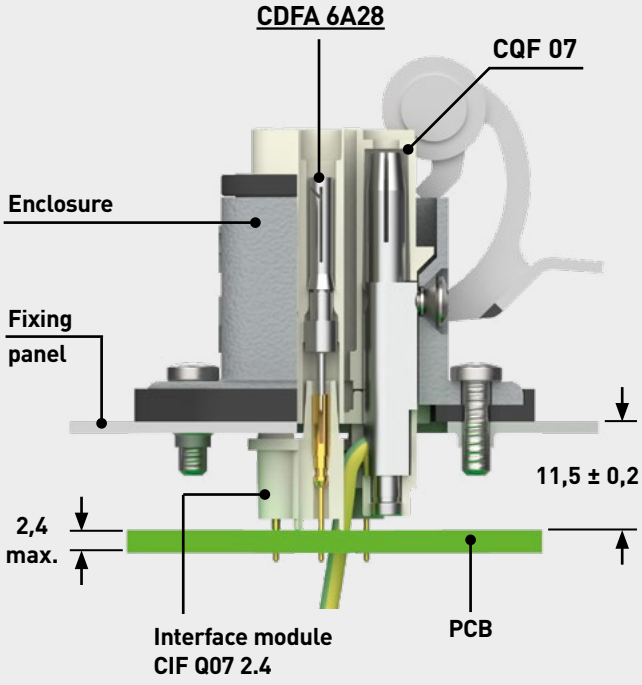
ASSEMBLY INSTRUCTIONS

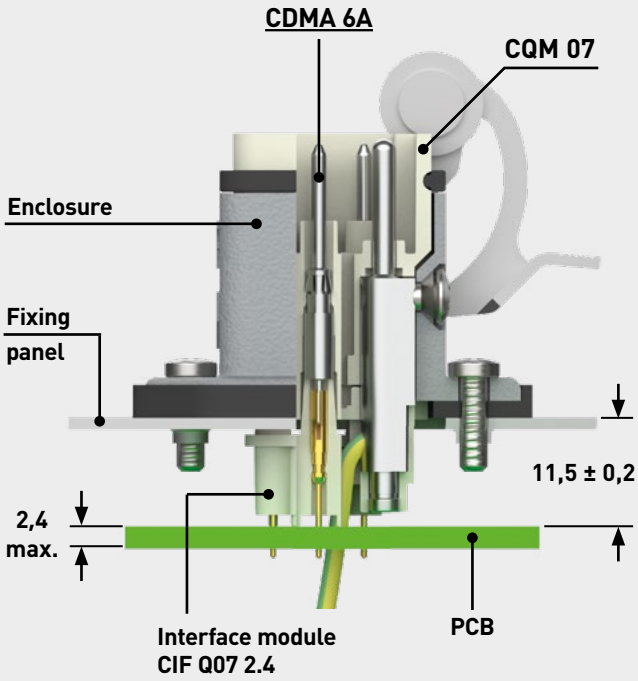
CIF Q07 2.4 - PCB INTERFACE ADAPTERS FOR CQ 07 INSERTS

CQM 07

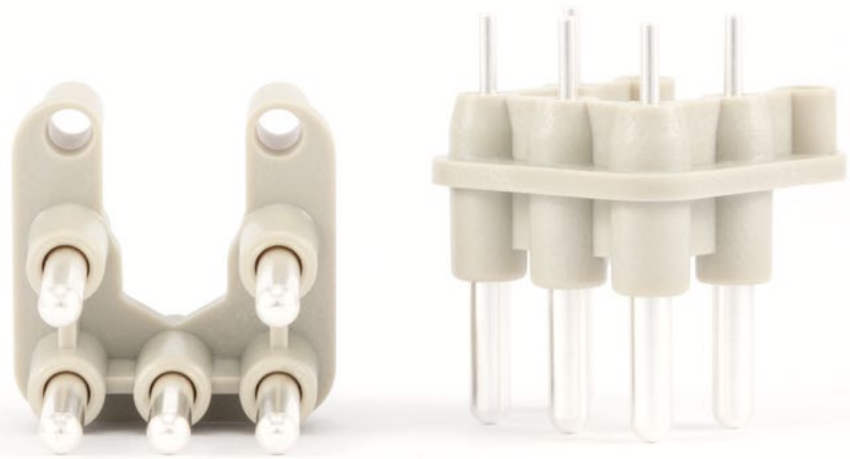
CQF 07







PCB INTERFACE ADAPTER FOR CQ 05 INSERTS
CIF Q05 2.4



CIF Q05 2.4
(with silver plated contacts)
Number of contacts: 5
EN/IEC 61984 ratings: 10 A 250 V 4 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CIF Q05 2.4

CIF Q05 2.4 (with silver plated contacts)

NOTE – CIF Q05 2.4D (with gold plated contacts) available upon request

CIF interface contacts:

- **CCFFA** (female/female contact)
- **CCMFA** (male/female contact)

NOTE – CCFFD and CCMFD interface contacts available with standard gold plating upon request.

This new **CIF Q05 2.4** PCB adapter (silver plated contacts, available upon request with standard gold plated contacts **CIF Q05 2.4D**) allows cable to printed circuit board connection with CQ 05 5P+⏚ industrial heavy-duty connector inserts for power electronics and/or signal applications, to reduce wiring costs (where “large numbers” justify the development of a PCB design).

The **CIF Q05 2.4** PCB interface adapter is suitable for printed circuit board application by soldering to PCBs with thickness up to 2,4 mm.

For the connection to the PCB adapter of CQ 05 inserts it is necessary to equip these inserts with **special interface contacts** (except the PE contact, embedded in the insert, and screw-type):

- for female CQF 05: **CCFFA** female, silver plated, with rear □1 mm post for soldering on the PCB passing through the CIF Q05 2.4 PCB interface adapter;

- for male CQM 05: **CCMFA** male, silver plated, with rear □1 mm post for soldering on the PCB passing through the CIF Q05 2.4 PCB interface adapter.

Connectorization allows minimisation of downtime in factory automation due to easy replacement of modular PCB circuitry (easier and faster maintenance).

NOTE: In cable-to-PCB connection applications, safety does not depend only on the designs of the adapter and of the corresponding connector, it depends also on the design of the PCB and of the equipment – e.g. its enclosure and relevant spacings if metallic – where the PCB circuit and the cable to board are employed; hence, no CE marking (nor the conceptually equivalent Eurasian Conformity mark EAC) can be applied on the PCB adapters, even if by rated voltage they fall under the scope of the Low Voltage Directive 2014/35/EU.

Technical characteristics

Number of contacts: 5

EN/IEC 61984 ratings: **10 A 250 V 4 kV 3**

Lower and Upper Limiting Temperatures (LLT, ULT):
-40 °C … +125 °C

NOTE – The adapter insulating material is able to withstand wave soldering of the PCB.

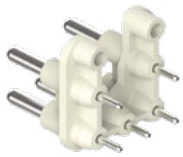
CAUTION – The layout of the PCB for this adapter must foresee a suitable pass-through hole for the PE wiring coming from the screw-type PE terminal of CQF /M 05 connector. This adapter does not foresee a PE connection. It is important to fulfil the continuity of PE connection of the CQF /M 05 connector, also for the possibility to use a metal housing that must be connected to the PE circuit.

CIF Q05 2.4 PCB interface adapter for CQ 05 inserts 10 A 250 V

inserts		page:
CQ	5 poles + ⏚	186

refer to CN.19 pages

PCB interface adapter for CQ 05 inserts



FROM JULY 2020

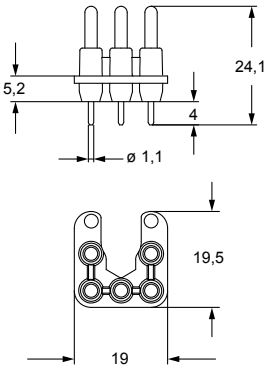
16 A interface contacts for CQ 05 inserts, silver plated

description	part No.	part No.
PCB interface adapter with silver plated contacts for up to 2,4 mm thick PCB	**CIF Q05 2.4**	
16 A female interface contacts for female insert 16 A male interface contacts for male insert		**CCFFA** **CCMFA** **silver plated**

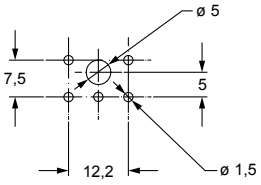
- characteristics according to EN/IEC 61984 ratings:
  10 A 250 V 4 kV 3
- Lower and Upper Limiting Temperatures (LLT, ULT):
  -40 °C ... +125 °C
  The adapter insulating material is able to withstand wave soldering of the PCB.
- number of contacts: 5

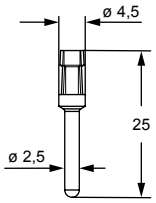
The adapter is soldered on the printed circuit on which the multipole connector (female or male) equipped with interface contacts will then be inserted.

CIF Q05 2.4

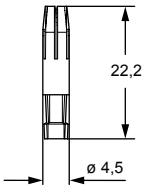


PCB-Layout





CCMFA (M)



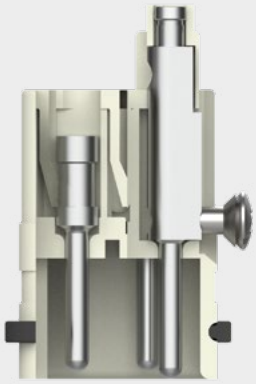
CCFFA (F)

CIF Q05 2.4 PCB interface adapter for CQ 05 inserts 10 A 250 V

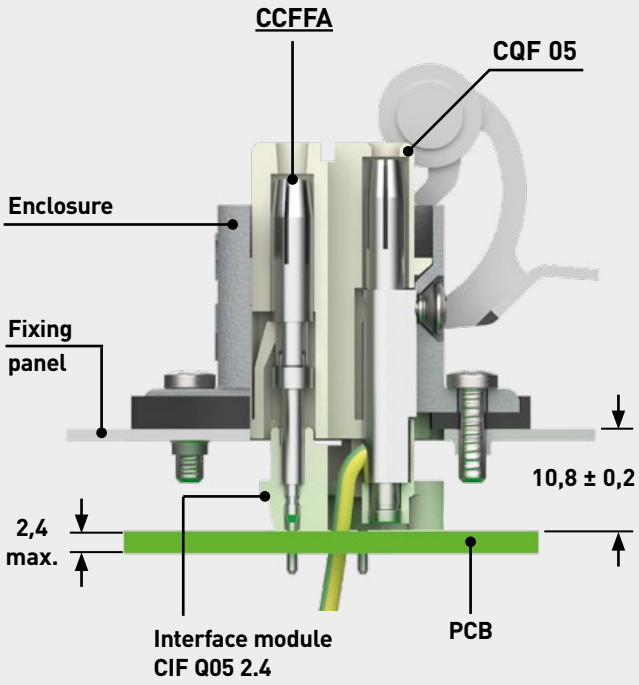
ASSEMBLY INSTRUCTIONS

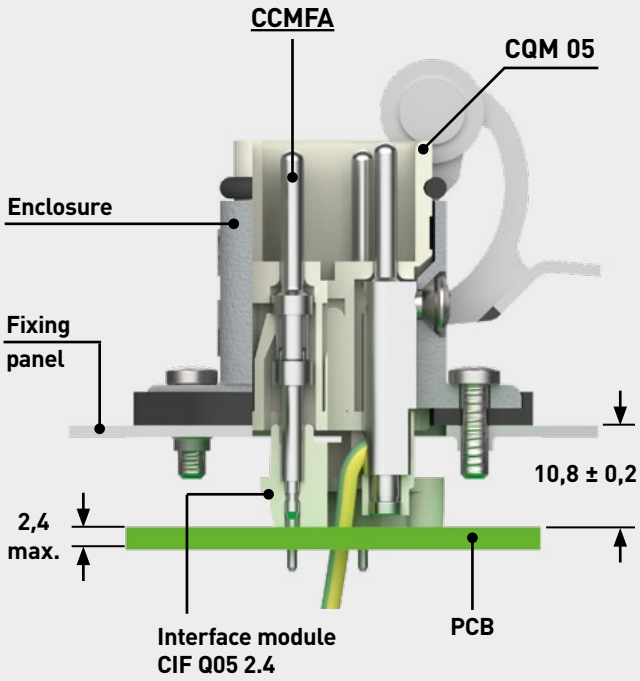
CIF Q05 2.4 - PCB INTERFACE ADAPTERS FOR CQ 05 INSERTS

CQM 05

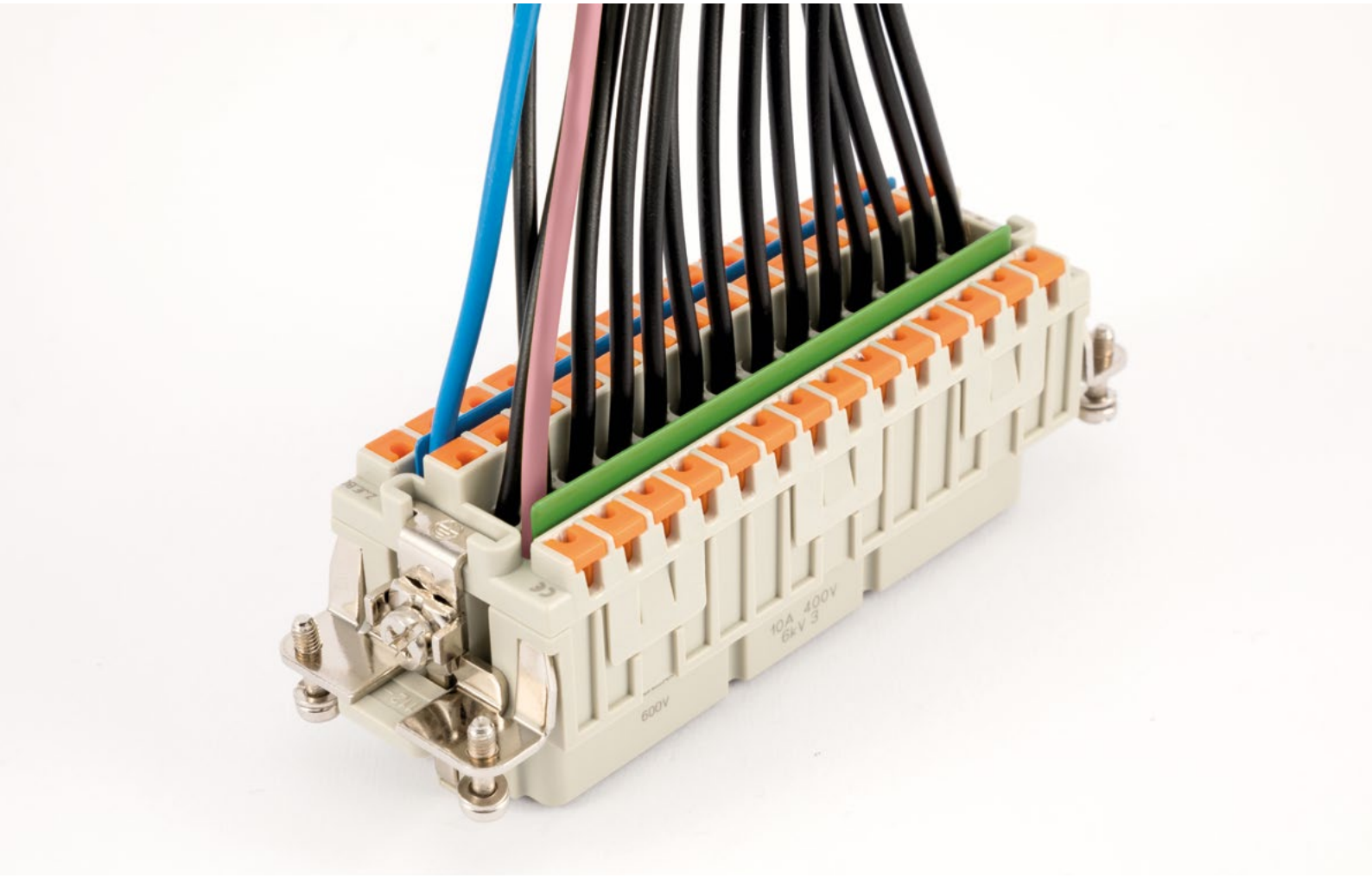


CQF 05





PARALLEL BRIDGES CR BDSH
FOR CDSH-SQUICH® CONNECTOR INSERTS



Parallel bridges

for CDSH SQUICH® 3-, 6-, 9-, 14- pin

2 colours available: light blue and green

EN/IEC 61984 ratings: 10 A 50 V 0,8 kV 3

Find more information on our products at www.ilme.com

TECHNICAL FEATURES
CR BDSH

CR BDSH parallel bridges are made available in order to quickly and economically put electrically in parallel multiple circuits on the same connector.

This quick connection solution reduces the number of connections inside a control panel to feed multiple sensors/ actuators.

Suitable for series **CDSH-SQUICH®** connector inserts, that due to their **original and proprietary design** with a 3-row pattern configuration, allow to assign each "slice" of connector to an actuator/sensor that typically requires a 3-lead wiring.

Use of parallel bridges for the "common" references (e.g.: the neutral return and the +24 V feed or the common earth (ground) reference) dramatically cuts the need for individual wiring of each sensor/actuator: only one wire is needed for these common functions, all the others are shunted together by **CR BDSH** parallel bridges.

2 colours available: **light blue** and **green**.

Series **CDSH** (SQUICH® 10 A) representing the compact evolution of the SQUICH® technology comes particularly at hand for field wiring of multiple sensors. These elements require usually a 3-lead wiring and CDSH connectors are the only connectors on the market able to offer 3 SQUICH® fast wiring terminals in-line: CDSH 09 covers the wiring of 3 sensors, CDSH 18 allows 6 sensors to be wired, CDSH 27 allows 9 sensors to be wired and CDSH 42 allows up to 14 sensors to be wired.

A full wiring would require 3 wires per each sensor, but all sensors have two circuits that share the potential. If it would be possible to put in parallel on the connector such circuits, a lot of wiring time and a lot of wire could be spared.

By employing the new **CR BDSH** parallel bridges, available in 4 sizes (3-pin, 6-pin, 9-pin and 14-pin) and in two colours – **light blue** and **green**, identified in their part nos. respectively by suffix **A** (azure, i.e. light blue) or **G** (green) – it is now possible to feed just one circuit in a line of 3, 6, 9, or 14 (depending on the connector chosen) and all the other circuits i.e. sensors will be simultaneously provided with the same potential.

Usually the required potential for such sensors are a 0 V reference (earth/ground potential) and a feeding voltage e.g. 24 V. The third wire is deemed to carry the feedback signal from the field. Use of a **CDSH** connector in synergy with a couple of **CR BDSH** parallel bridges, one for the FE circuit, the other for the common return for potential (neutral) allows sparing a lot of wiring time and a large quantity of wire.

Due to the inherently low voltage of these applications (both neutral and FE are at 0 V potential) there is no need to provide such **CR BDSH** bridges with additional costly insulation: they are provided with an insulating enamel coating, which is able to provide a **10 A 50 V 0,8 kV 3 rating**.

Connector insert series CDSH (1)	Parallel bridge – **light blue** colour	Parallel bridge – **green** colour
CDSH 09, CDSH 18, CDSH 27, CDSH 42	CR BDSH3A	CR BDSH3G
	CR BDSH6A	CR BDSH6G
	CR BDSH9A	CR BDSH9G
	CR BDSH14A	CR BDSH14G

(1) Parallel bridges fit only on inserts of series CDSH of larger or equal number of "columns": 3-pin bridges fit on all inserts, 6-pin bridges fit on all but CDSH 09, 9-pin bridges fit on CDSH 27 and CDSH 42, 14-pin bridges fit only on CDSH 42.

CAUTION – **CR BDSH** parallel bridges shall be used only with unprepared conductors up to 1,5 mm² / 16 AWG. The rated current applies to the conductor used to feed the **CR BDSH** parallel bridge, it applies to the above indicated maximum wire size and is distributed to all pins in parallel in a manner inversely proportional to the impedance of the served branch circuit. When all branches are with identical impedance, the current is equally divided by the number of served branches in parallel.

EN/IEC 61984 ratings: **10 A 50 V 0,8 kV 3**

Lower and Upper Limiting Temperatures (LLT, ULT): -40 °C + 125 °C

NOTE – These CR BDSH parallel bridges are accessories for the CDSH connector inserts only and are not electrical components able to provide a definite electrical function by themselves, for this reason even if they would have a voltage rating within the scope of the Low Voltage Directive 2014/35/EU (which they do not) they would not bear the CE marking, nor be subject to the similar EAC TR CU 004/2011 regulation. Moreover, their voltage rating is in the extra-low voltage range, i.e. inherently safe provided they are used within such ratings and out of scope of the above regulations. So, for two reasons neither the CE marking nor the EAC mark are applicable.

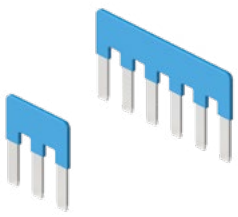
CR BDSH A parallel bridges for CDSH-SQUICH® 10 A 50 V

inserts **pages:**

CDSH-SQUICH®	9 poles + ⏚	**86**
CDSH-SQUICH®	18 poles + ⏚	**87**
CDSH-SQUICH®	27 poles + ⏚	**88**
CDSH-SQUICH®	42 poles + ⏚	**89**

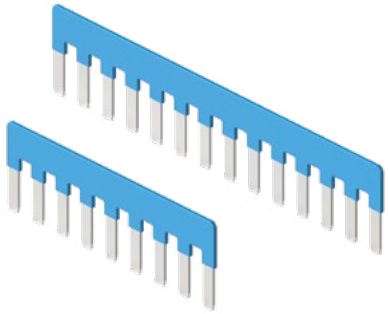
refer to CN.19 pages

parallel bridges



FROM APRIL 2020

parallel bridges



FROM APRIL 2020

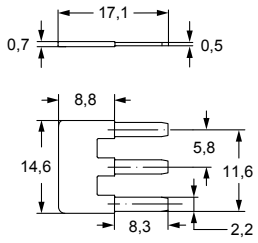
description	part No.	part No.
parallel bridge, 3-pin light blue colour	**CR BDSH3A**	
parallel bridge, 6-pin light blue colour	**CR BDSH6A**	
parallel bridge, 9-pin light blue colour		**CR BDSH9A**
parallel bridge, 14-pin light blue colour		**CR BDSH14A**

- characteristics according to EN/IEC 61984 ratings:
  10 A 50 V 0,8 kV 3
- Lower and Upper Limiting Temperatures (LLT, ULT):
  -40 °C ... +125 °C

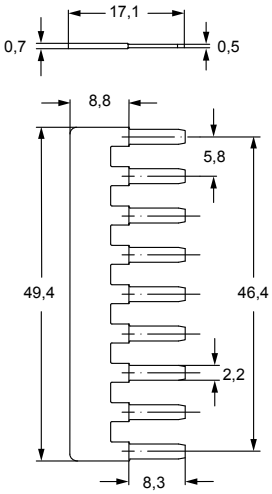
CAUTION – CR BDSH parallel bridges shall be used only with unprepared conductors up to 1,5 mm² / 16 AWG.

The rated current applies to the conductor used to feed the **CR BDSH** parallel bridge, it applies to the above indicated maximum wire size and is distributed to all pins in parallel in a manner inversely proportional to the impedance of the served branch circuit. When all branches are with identical impedance, the current is equally divided by the number of served branches in parallel.

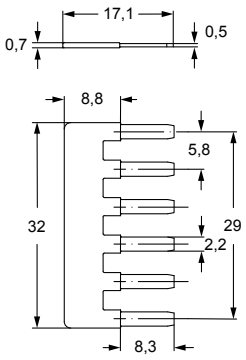
CR BDSH3A



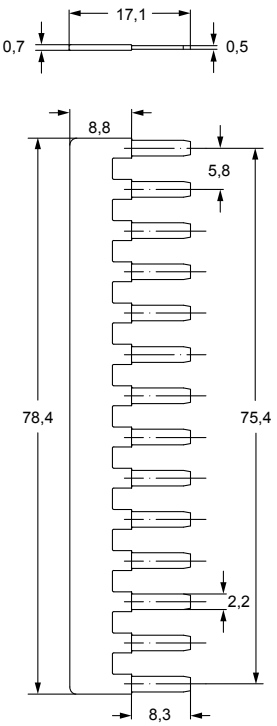
CR BDSH9A



CR BDSH6A



CR BDSH14A



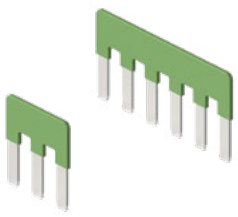
CR BDSH G parallel bridges for CDSH-SQUICH® 10 A 50 V

inserts **pages:**

CDSH-SQUICH®	9 poles + ⏚	**86**
CDSH-SQUICH®	18 poles + ⏚	**87**
CDSH-SQUICH®	27 poles + ⏚	**88**
CDSH-SQUICH®	42 poles + ⏚	**89**

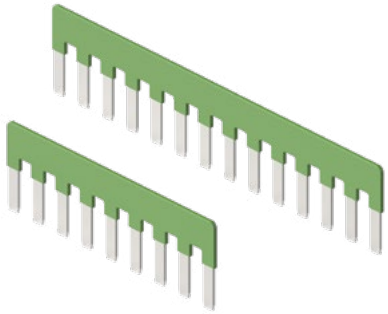
refer to CN.19 pages

parallel bridges



FROM APRIL 2020

parallel bridges



FROM APRIL 2020

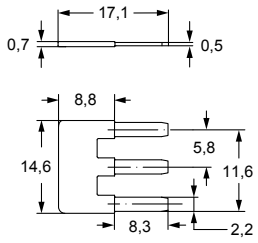
description	part No.	part No.
parallel bridge, 3-pin green colour	**CR BDSH3G**	
parallel bridge, 6-pin green colour	**CR BDSH6G**	
parallel bridge, 9-pin green colour		**CR BDSH9G**
parallel bridge, 14-pin green colour		**CR BDSH14G**

- characteristics according to EN/IEC 61984 ratings:
  10 A 50 V 0,8 kV 3
- Lower and Upper Limiting Temperatures (LLT, ULT):
  -40 °C ... +125 °C

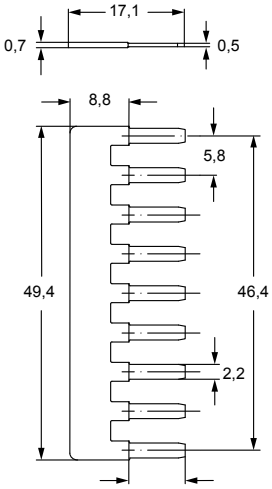
CAUTION – CR BDSH parallel bridges shall be used only with unprepared conductors up to 1,5 mm² / 16 AWG.

The rated current applies to the conductor used to feed the **CR BDSH** parallel bridge, it applies to the above indicated maximum wire size and is distributed to all pins in parallel in a manner inversely proportional to the impedance of the served branch circuit. When all branches are with identical impedance, the current is equally divided by the number of served branches in parallel.

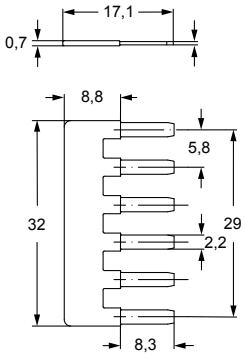
CR BDSH3G



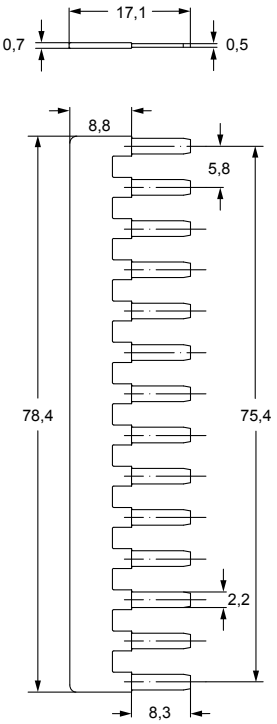
CR BDSH9G



CR BDSH6G



CR BDSH14G



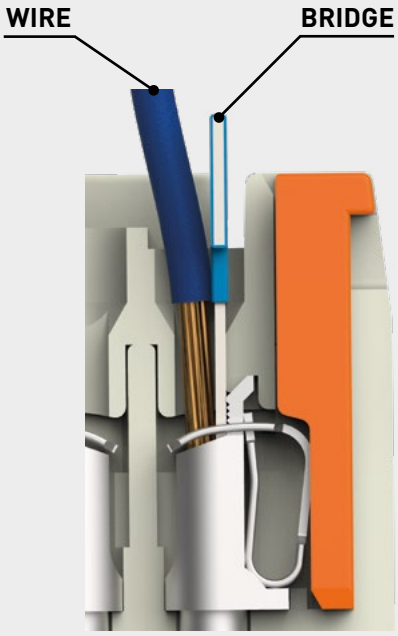
CR BDSH parallel bridges for CDSH-SQUICH® 10 A 50 V

WIRING INSTRUCTIONS

Watch our online tutorial

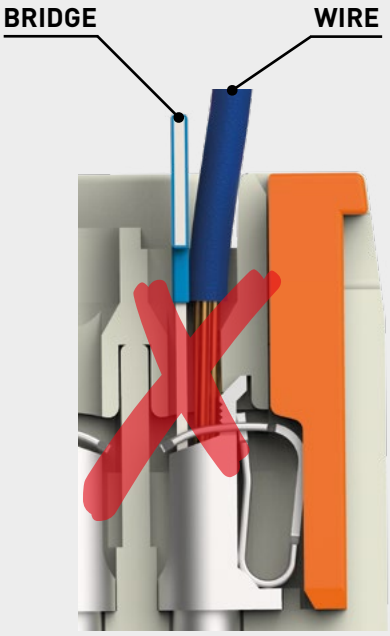
PARALLEL BRIDGES CR BDSH FOR CDSH CONNECTOR INSERTS

A



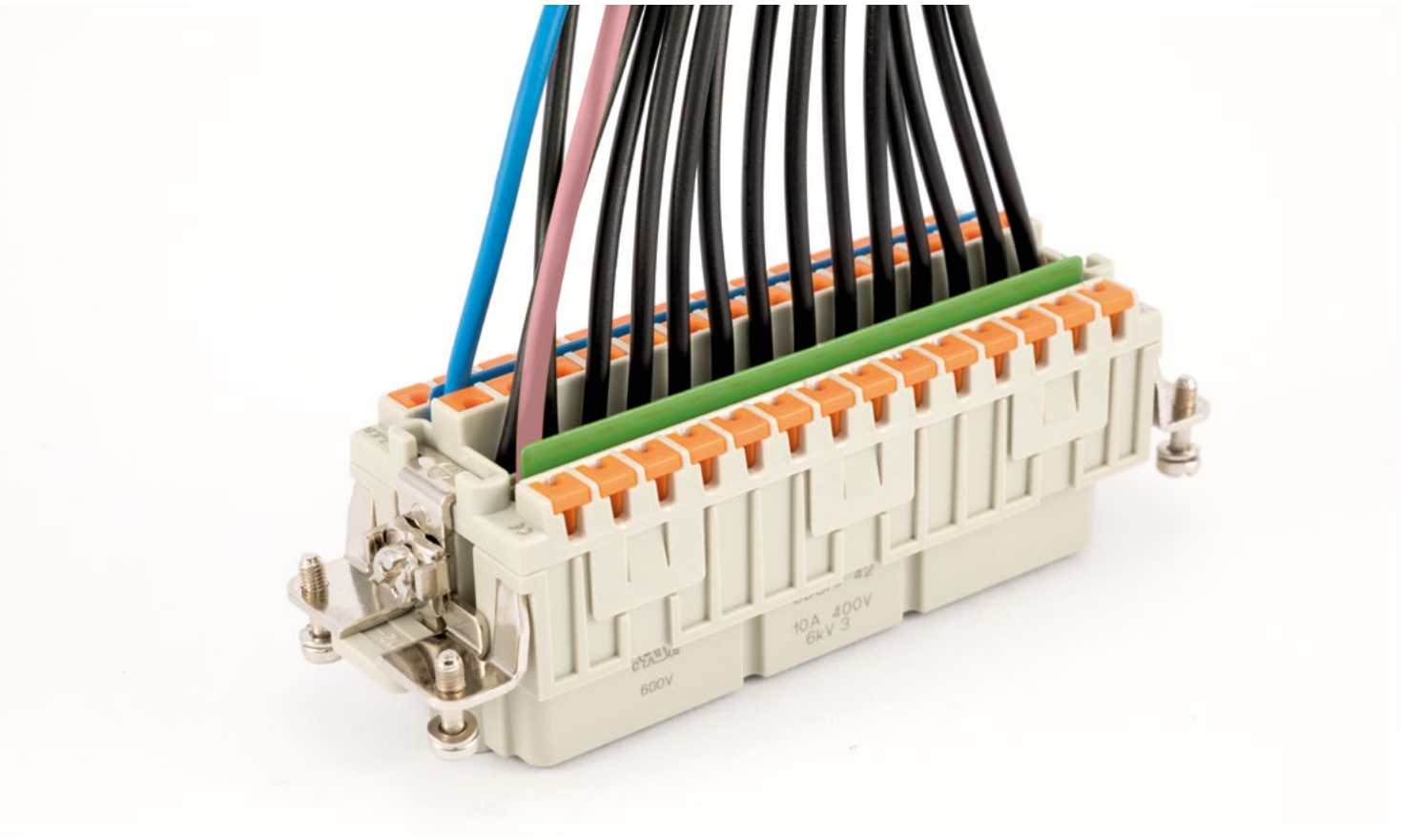
CORRECT WIRING

B

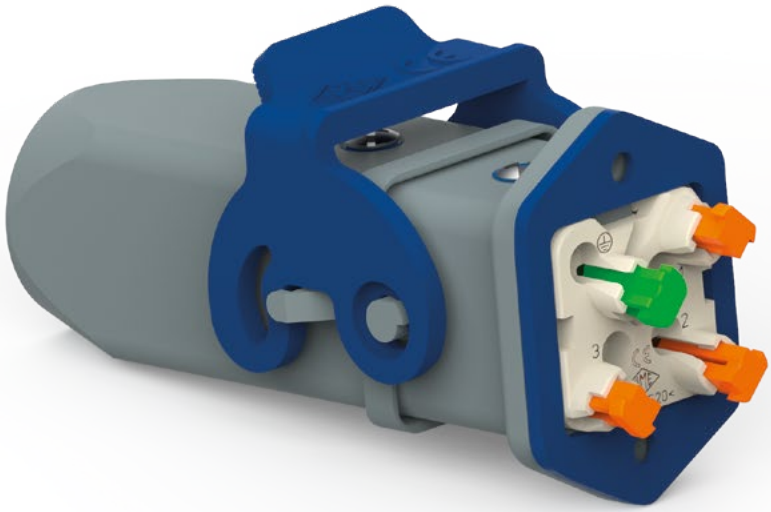


WRONG WIRING

CR BDSH PARALLEL BRIDGES FOR CDSH CONNECTOR INSERTS



CKH - MKH HYGIENIC ENCLOSURES
SIZE “21.21”



Made by thermoplastic insulating materials suitable for splash area, qualified for resistance to cleaning agents by ECOLAB and in compliance with EHEDG Guideline no. 32

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CKH - MKH HYGIENIC ENCLOSURES

The new series **CKH – MKH Hygienic** size "21.21" enclosures, completes the offer of hygienic connector enclosures of series T-Type Hygienic, by adding enclosures for the growing family of size "21.21" connector inserts, currently comprising the models listed in **Table 1** below (power, signal and data connectors, including fibre optics).

Table 1 – "21.21" connector inserts suitable for CKH-MKH Hygienic enclosures

CKF /M 03 /04 ●
CKSHF /M 03 /04 ●
CDF /M 07 ●
CDF /M 08 ●
CQF /M 05 ●
CQF /M 07 ●
CQF /M 12 ●
CQF /M 21 ●
CQ4F /M 03 ●
CQ4F /M 02 ●
CQ4F /M 02 H ●
CQ4F /M 03/2 ●
CX 1/2 BDF /M ○
CXL SF /SM, CXL 2/4 SF /SM, CXL 2/4 PF /PM, CXL 2/4 PFH /PMH, CXL PF /PM ○
CLK 04 SCF /SCF-H /SCM ○
CUK 2FT, CUK 3FT○
CJ KF /KM ○
CKJ 8M ○
CJK 8FT /8MT ○
CJK 8IFT, CJK 8BIFT, CJK 8PIFT, CJK 8 IMT ○
● The male insert of these models are provided with a standard sealing gasket. For hygienic applications with CKH – MKH hygienic enclosures this gasket must be replaced with the special hygienic gasket **CR 21.21 GMH** to be purchased separately.
○ The male inserts of these models are not provided with that sealing gasket on the male insert, hence for hygienic applications they are deemed to be used only in hygienic enclosures with glued hygienic gasket (identified by letter G in the first portion of their part no.).
All inserts (male and female) need replacement of the standard screw or screw with gasket (according to models) with the corresponding hygienic screw with gasket kit **CKRH 65** or **CKRH 65 D** (only inserts CD 07 and CD 08).

The available models of CKH – MKH Hygienic enclosures are described in the following Table 2.

Table 2 – CKH – MKH Hygienic enclosures size "21.21"

Part no.	Description
CKH 03 I	bulkhead mounting housing
CKH 03 IA	angled bulkhead mounting housing
MKH IAP20	angled bulkhead mounting housing with M20 cable entry
MKH V20	hood with pegs, top entry M20
MKH V25	hood with pegs, top entry M25
MKH VA20	hood with pegs, side entry M20
MKH VG20	hood with lever, top entry M20
MKH VG25	hood with lever, top entry M25
CKH 03 C	cover with pegs and gasket, for female inserts (eyelet cord)
CKH 03 CS	cover with pegs and gasket, for female inserts (loop cord)
CKH 03 CA	cover with pegs, for male inserts (eyelet cord)
CKH 03 CAS	cover with pegs, for male inserts (loop cord)
CKH 03 CX	cover with lever and gasket, for female inserts (eyelet cord)
CKH 03 CXA	cover with lever, for male inserts (loop cord)
MKGH V20	hood with pegs and glued gasket, top entry M20
MKGH V25	hood with pegs and glued gasket, top entry M25
MKGH VA20	hood with pegs and glued gasket, angled entry M20

This new series offers three **bulkhead mounting housings** (the straight model and two angled models, one closed, the other with M20 side cable entry), five **hoods** differing by the size of cable entry (M20, M25) and either presence or absence of locking pegs or lever, e.g. for cable-to-cable joints, and the same **models with glued gasket** (letter G in the first portion of their part no.), for those inserts that by design do not include the sealing gasket on the male insert (models marked by ○ in the above table). The series is completed with all range of covers (6 models) matching the various applications.

All inserts need to be provided with the kit **CKRH 65 or CKRH 65 D** (for CD 07 and CD 08 inserts), to be purchased separately: screw with food grade gasket (blue coloured). This kit must replace either the standard screw or screw with gasket provided with the insert.

The sealing gasket of those male inserts that include it (see Table 1, items marked with ●) has to be replaced with the special hygienic sealing gasket **CR 21.21 GMH,** blue coloured, for easier detection in case of loss in the food path, to be purchased separately.

- Series **CKH-MKH Hygienic** made (like T-Type Hygienic) by thermoplastic insulating materials compatible with the temperature range of standard hygienic applications and qualified for resistance to a wide set of cleaning agents by ECOLAB, and in compliance with the EHEDG Guideline no. 32. Same for the material of the locking lever and that of the sealing gaskets (flange, interface and under the head of fixing screw).
- Moving parts (locking lever) or parts that might be lost (sealing gaskets) blue coloured to be easily detectable by remote image detection systems.
- Locking lever detectable by metal detectors in case of accidental loss and fall inside the conveyor belt (food path).
- IP degree of protection: **IP66/IP67/IP69**.
- Upper and Lower Limiting Temperature (ULT – LLT): -40 °C … +70 °C.

CKH - MKH production lines HYGIENIC SERIES

inserts — **pages:**

CK	3 and 4 poles + ⏚	**58**
CKS	3 and 4 poles + ⏚	**-**
CKSH	3 and 4 poles + ⏚	**63**
CD	7 poles + ⏚	**66**
CD	8 poles	**67**
CQ4	2 poles + ⏚	**182**
CQ4 H	2 poles + ⏚	**183**
CQ4	3 poles + ⏚	**184**
CQ4	3+2 (aux) poles + ⏚	**16 ***
CQ	5 poles + ⏚	**186**
CQ	7 poles + ⏚	**187**
CQ	12 poles + ⏚	**189**
CQ	21 poles	**190**

only for I (straight) housings
(if the counterpart has glued gasket):

CJ KF	**223**
CJK 8FT	**226**
CJK 8IFT	**228**
CUK 2FT, CUK 3FT	**236**
CLK 04 SC	**239**
CX 1/2 BD	**243**
CXL 2/4 SF, CXL 2/4 SM	**250**
CXL SF, CXL SM	**250**

refer to CN.19 pages
*** refer to NEWS 2020 pages**

bulkhead mounting housings

FROM OCTOBER 2020

angled bulkhead mounting housings

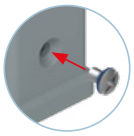
FROM OCTOBER 2020

description	part No.	part No.	part No. (entry M20)
with lever	**CKH 03 I**		
without cable entry, with lever [1]		**CKH 03 IA**	
with cable entry and lever [1]			**MKH IAP20**
gasket and screw kit for IP66/IP67/IP69 [2]	**CKRH 65**	**CKRH 65**	
gasket and screw kit for IP66/IP67/IP69 [2] specific for CD 07/08 inserts	**CKRH 65 D**	**CKRH 65 D**	

[1] **Not suitable for inserts**:
- **CQ4** 2 poles + ⏚
- **CQ4 H** 2 poles + ⏚
- **CQ4** 3 poles + ⏚
- **CQ4** 3+2 (aux) poles + ⏚

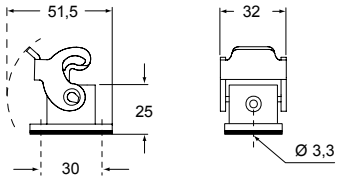
[2] To obtain the required IP66/IP67/IP69 degree of protection, a kit with insert fixing screw and gasket **must be purchased** separately to replaces the screw already provided with the inserts (even when it is already a fixing screw and gasket).

NOTE: Housing type may vary upon specific part No.

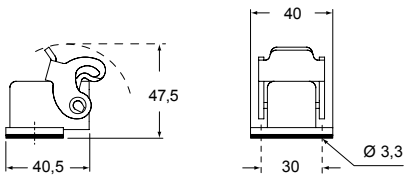


CR 21.21 GMH HYGIENIC gasket for male inserts “21.21” size
(page 114)

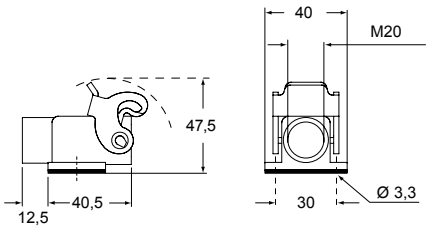
CKH I



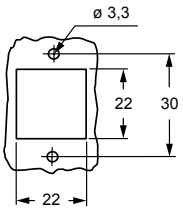
CKH IA



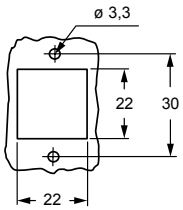
MKH IAP



panel cut-out for enclosures



panel cut-out for enclosures



cURus
Type 12
Type 4/4X only
with CKRH 65 (D) pending

IP66/IP67/IP69 with CKRH 65 (D) [1]

CKH - MKH production lines HYGIENIC SERIES

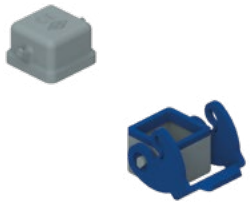
inserts		pages:
CK	3 poles + ⏚	**58**
CK	4 poles + ⏚	**58**
CKS	3 poles + ⏚	**-**
CKS	4 poles + ⏚	**-**
CKSH	3 poles + ⏚	**63**
CKSH	4 poles + ⏚	**63**
CD	7 poles + ⏚	**66**
CD	8 poles	**67**
CQ4M	2 poles + ⏚	**182**
CQ4M H	2 poles + ⏚	**183**
CQ4M	3 poles + ⏚	**184**
CQ4M	3+2 (aux) poles + ⏚	**16 ***
CQ	5 poles + ⏚	**186**
CQ	7 poles + ⏚	**187**
CQ	12 poles + ⏚	**189**
CQ	21 poles	**190**

refer to CN.19 pages

hoods

FROM OCTOBER 2020

covers



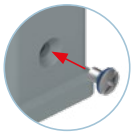
FROM OCTOBER 2020

description	part No. (entry M20)	part No. (with eyelet)	part No. (with loop)
with pegs, top entry [1]	**MKH V20**		
with pegs, side entry [1]	**MKH VA20**		
with lever, top entry [1]	**MKH VG20**		
with pegs and gasket, for female inserts with pegs, for male inserts		**CKH 03 C** **CKH 03 CA**	**CKH 03 CS** **CKH 03 CAS**
with lever and gasket, for female inserts with lever, for male inserts			**CKH 03 CX** **CKH 03 CXA**
gasket and screw kit for IP66/IP67/IP69 [2]	**CKRH 65**		
gasket and screw kit for IP66/IP67/IP69 [2] specific for CD 07/08 inserts	**CKRH 65 D**		

[1] **Not suitable for inserts**:
- **CQ4** 2 poles + ⏚
- **CQ4 H** 2 poles + ⏚
- **CQ4** 3 poles + ⏚
- **CQ4** 3+2 (aux) poles + ⏚

[2] To obtain the required IP66/IP67/IP69 degree of protection, a kit with insert fixing screw and gasket **must be purchased** separately to replaces the screw already provided with the inserts (even when it is already a fixing screw and gasket).

NOTE: Housing type may vary upon specific part No.

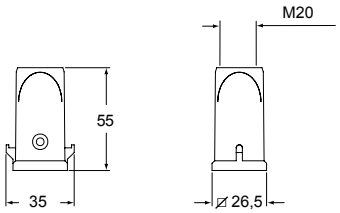


CR 21.21 GMH HYGIENIC gasket for male inserts “21.21” size (page 114)

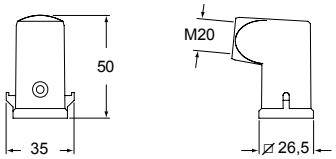
cURus
Type 12
Type 4/4X only
with CKRH 65 (D) pending

IP66/IP67/IP69 with CKRH 65 (D) [1]

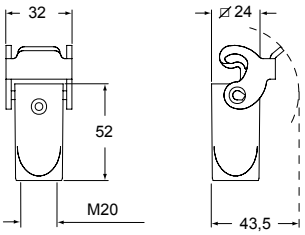
MKH V



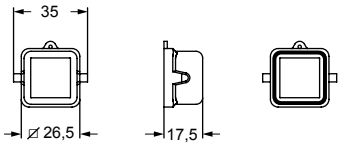
MKH VA



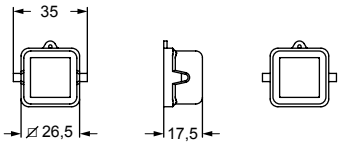
MKH VG



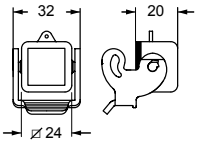
CKH C - CKH CS



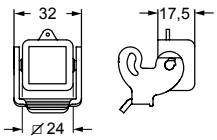
CKH CA - CKH CAS



CKH CX

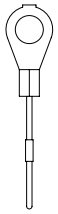


CKH CXA



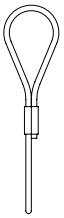
For fixing on housings

eyelet



For fixing on hoods

loop



MKH production lines HYGIENIC SERIES

inserts		pages:
CK	3 and 4 poles + ⏚	**58**
CKS	3 and 4 poles + ⏚	**-**
CKSH	3 and 4 poles + ⏚	**63**
CD	7 poles + ⏚	**66**
CD	8 poles	**67**
CQ4	2 poles + ⏚	**182**
CQ4 H	2 poles + ⏚	**183**
CQ4	3 poles + ⏚	**184**
CQ4	3+2 (aux) poles + ⏚	**16 ***
CQ	5 poles + ⏚	**186**
CQ	7 poles + ⏚	**187**
CQ	12 poles + ⏚	**189**
CQ	21 poles	**190**

refer to CN.19 pages
*** refer to NEWS 2020 pages**

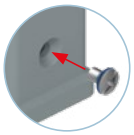
hood

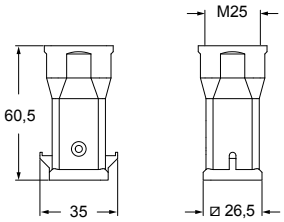
FROM OCTOBER 2020

description	part No. (entry M25)
with pegs, top entry	**MKH V25**
gasket and screw kit for IP66/IP67/IP69 [1]	**CKRH 65**
gasket and screw kit for IP66/IP67/IP69 [1] specific for CD 07/08 inserts	**CKRH 65 D**

[1] To obtain the required IP66/IP67/IP69 degree of protection, a kit with insert fixing screw and gasket **must be purchased** separately to replaces the screw already provided with the inserts (even when it is already a fixing screw and gasket).

NOTE: Housing type may vary upon specific part No.





CR 21.21 GMH HYGIENIC gasket for male inserts “21.21” size (page 114)

cURus
Type 12
Type 4/4X only
with CKRH 65 (D) pending

IP66/IP67/IP69 with CKRH 65 (D) [1]

MKH production lines HYGIENIC SERIES

inserts		pages:
CK	3 and 4 poles + ⏚	**58**
CKS	3 and 4 poles + ⏚	**-**
CKSH	3 and 4 poles + ⏚	**63**
CD	7 poles + ⏚	**66**
CD	8 poles	**67**
CQ4	2 poles + ⏚	**182**
CQ4 H	2 poles + ⏚	**183**
CQ4	3 poles + ⏚	**184**
CQ4	3+2 (aux) poles + ⏚	**16 ***
CQ	5 poles + ⏚	**186**
CQ	7 poles + ⏚	**187**
CQ	12 poles + ⏚	**189**
CQ	21 poles	**190**
CLK 04 SC		**239**
CX 1/2 BD		**243**
CXL 2/4 PF, CXL 2/4 PFH		**251**
CXL 2/4 PM, CXL 2/4 PMH		**251**
CXL PF, CXL PM		**251**

refer to CN.19 pages
*** refer to NEWS 2020 pages**

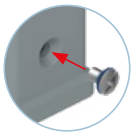
hood

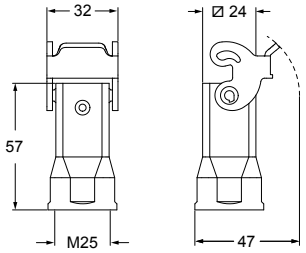
FROM OCTOBER 2020

description	part No. (entry M25)
with lever, top entry	**MKH VG25**
gasket and screw kit for IP66/IP67/IP69 [1]	**CKRH 65**
gasket and screw kit for IP66/IP67/IP69 [1] specific for CD 07/08 inserts	**CKRH 65 D**

[1] To obtain the required IP66/IP67/IP69 degree of protection, a kit with insert fixing screw and gasket **must be purchased** separately to replaces the screw already provided with the inserts (even when it is already a fixing screw and gasket).

NOTE: Housing type may vary upon specific part No.





CR 21.21 GMH HYGIENIC gasket for male inserts “21.21” size (page 114)

cURus
Type 12
Type 4/4X only
with CKRH 65 (D) pending

IP66/IP67/IP69 with CKRH 65 (D) [1]

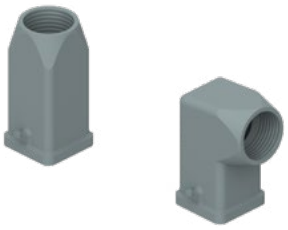
MKGH production lines HYGIENIC SERIES DESINA® ▲

inserts	pages:
CJ KM	223
CJK 8MT	226
CJK 8IMT *	226, 228
CUK 2FT	236
CUK 3FT	236
CLK 04 SC *	239
CX 1/2 BD	243
CXL 2/4 PF	251
CXL 2/4 PFH	251
CXL 2/4 PM	251
CXL 2/4 PMH	251
CXL PF	251
CXL PM	251

* cannot be used with angled enclosures (part No. MKGH VA20)

refer to CN.19 pages

hood
with glued gasket

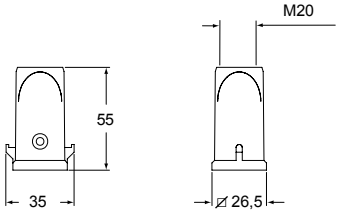


FROM OCTOBER 2020

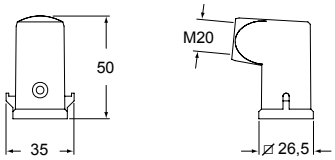
description	part No. (entry M20)
with pegs and glued gasket, top entry	**MKGH V20**
with pegs and glued gasket, side entry	**MKGH VA20**

▲ **Suitable for DESINA® CXL inserts and male inserts without gasket.**

MKGH V



MKGH VA



cURus
Type 4/4X/12
pending

IP66 IP67 IP69 EN 60529 IEC 60529

MKGH production lines HYGIENIC SERIES DESINA® ▲

inserts		pages:
CQ4M	2 poles + ⏚	**182**
CQ4M H	2 poles + ⏚	**183**
CQ4M	3 poles + ⏚	**184**
CQ4M	3+2 (aux) poles + ⏚	**16 ***
CJ KM		**223**
CJK 8MT		**226**
CJK 8IMT		**226, 228**
CJK 8M		**233**
CUK 2FT, CUK 3FT		**236**
CLK 04 SC		**239**
CX 1/2 BD		**243**
CXL 2/4 PF, CXL 2/4 PFH		**251**
CXL 2/4 PM, CXL 2/4 PMH		**251**
CXL PF, CXL PM		**251**

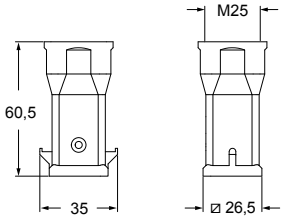
refer to CN.19 pages
*** refer to NEWS 2020 pages**

hood
with glued gasket

FROM OCTOBER 2020

description	part No. (entry M25)
with pegs, top entry	**MKGH V25**

▲ Suitable for DESINA® CXL inserts and male inserts without gasket.



cURus
Type 4/4X/12
pending

EN 60529 IP66 IP67 IP69 IEC 60529

CR 21.21 GMH production lines HYGIENIC SERIES gasket for “21.21” male inserts

inserts		pages:
CKM	3 and 4 poles + ⏚	**58**
CKSM	3 and 4 poles + ⏚	**-**
CKSHM	3 and 4 poles + ⏚	**63**
CDM	7 poles + ⏚	**66**
CDM	8 poles	**67**
CQ4M	2 poles + ⏚	**182**
CQ4M H	2 poles + ⏚	**183**
CQ4M	3 poles + ⏚	**184**
CQ4M	3+2 (aux) poles + ⏚	**16 ***
CQM	5 poles + ⏚	**186**
CQM	7 poles + ⏚	**187**
CQM	12 poles + ⏚	**189**
CQM	21 poles	**190**

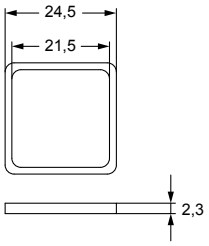
refer to CN.19 pages
*** refer to NEWS 2020 pages**

HYGIENIC gasket for “21.21 male inserts

FROM OCTOBER 2020

description	part No.
HYGIENIC gasket for male inserts “21.21” size	**CR 21.21 GMH**

! CAUTION:
This gasket must replace the standard gasket on the male insert, that foresees a gasket.



CKH - MKH HYGIENIC ENCLOSURES

T-TYPE ENCLOSURES
WITH INTEGRATED PROTECTIVE EARTH JUMPERS

Special version of the T-TYPE enclosures
with pre-installed protective earth jumpers
to put remedy to undetected incorrect PE wiring

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

T-TYPE ENCLOSURES WITH INTEGRATED PE JUMPERS

- Available **upon request** (product not managed on stock) for all version of T-TYPE enclosures (covers not included): **Standard, T-TYPE /W, Hygienic /H and Hygienic /C** with pre-installed PE jumpers (also known as “bridges” hence the suffix B to identify such variants).
- Relieves the duty to install the optional CR 06 /10 /16 /24 BPE protective earth jumpers into the T-TYPE insulating enclosures.
- In case the wiring of the connectors is done by unskilled persons, the PE jumpers grants the continuity of the protective earth path between male and female connectors even in case of PE wiring mistake and omitted test for continuity of PE (which is nonetheless a legally obligatory test on wired devices and equipment prior to their put into service).
- Already covered by c UL us approval with Type 1, 2, 12 ratings.

Series T-TYPE enclosures with optional protective earth jumpers CR...BPE preassembled

Enclosures with protective earth jumpers CR...BPE preassembled are available upon request from June 2020, with Part no. of base model plus **letter B** at the end.

			T-TYPE Standard	T-TYPE W	T-TYPE Hygienic	T-TYPE Hygienic Cold
Size	**Cable outlet**	**Locking lever**	**Part no.**	**Part no.**	**Part no.**	**Part no.**
44.27	-	single	TCHI 06 LB	THIW 06 LB	THIH 06 LB	THIC 06 LB
57.27	-	double	TCHI 10 B	THIW 10 B	THIH 10 B	THIC 10 B
77.27	-	double	TCHI 16 B	THIW 16 B	THIH 16 B	THIC 16 B
104.27	-	double	TCHI 24 B	THIW 24 B	THIH 24 B	THIC 24 B
44.27	M25	single	TMAP 06L25B	TAPW 06L25B	TAPH 06L25B	TAPC 06L25B
44.27	M32	single	TMAP 06L32B	TAPW 06L32B	TAPH 06L32B	TAPC 06L32B
44.27	**2xM25***	single	TMAP06L225B	TAPW06L225B	TAPH06L225B	TAPC06L225B
44.27	**2xM32***	single	TMAP06L232B	TAPW06L232B	TAPH06L232B	TAPC06L232B
57.27	M25	double	TMAP 10.25B	TAPW 10.25B	TAPH 10.25B	TAPC 10.25B
57.27	M32	double	TMAP 10.32B	TAPW 10.32B	TAPH 10.32B	TAPC 10.32B
57.27	**2xM25***	double	TMAP10.225B	TAPW10.225B	TAPH10.225B	TAPC10.225B
57.27	**2xM32***	double	TMAP10.232B	TAPW10.232B	TAPH10.232B	TAPC10.232B
77.27	M32	double	TMAP 16.32B	TAPW 16.32B	TAPH 16.32B	TAPC 16.32B
77.27	M40	double	TMAP 16.40B	TAPW 16.40B	TAPH 16.40B	TAPC 16.40B
77.27	**2xM32***	double	TMAP16.232B	TAPW16.232B	TAPH16.232B	TAPC16.232B
77.27	**2xM40***	double	TMAP16.240B	TAPW16.240B	TAPH16.240B	TAPC16.240B
104.27	M32	double	TMAP 24.32B	TAPW 24.32B	TAPH 24.32B	TAPC 24.32B
104.27	M40	double	TMAP 24.40B	TAPW 24.40B	TAPH 24.40B	TAPC 24.40B
104.27	**2xM32***	double	TMAP24.232B	TAPW24.232B	TAPH24.232B	TAPC24.232B
104.27	**2xM40***	double	TMAP24.240B	TAPW24.240B	TAPH24.240B	TAPC24.240B
44.27	M25	-	TMAO 06L25B	-	-	-
44.27	M32	-	TMAO 06L32B	-	-	-
57.27	M25	-	TMAO 10.25B	-	-	-
57.27	M32	-	TMAO 10.32B	-	-	-
77.27	M32	-	TMAO 16.32B	-	-	-
77.27	M40	-	TMAO 16.40B	-	-	-
104.27	M32	-	TMAO 24.32B	-	-	-
104.27	M40	-	TMAO 24.40B	-	-	-
44.27	M25	-	TMAV 06L25B	-	-	-
44.27	M32	-	TMAV 06L32B	-	-	-
57.27	M25	-	TMAV 10.25B	-	-	-
57.27	M32	-	TMAV 10.32B	-	-	-
77.27	M32	-	TMAV 16.32B	-	-	-
77.27	M40	-	TMAV 16.40B	-	-	-
104.27	M32	-	TMAV 24.32B	-	-	-
104.27	M40	-	TMAV 24.40B	-	-	-
44.27	M25	single	TMAV06LG25B	TAVW06LG25B	TAVH06LG25B	TAVC06LG25B
44.27	M32	single	TMAV06LG32B	TAVW06LG32B	TAVH06LG32B	TAVC06LG32B
57.27	M25	double	TMAV 10G25B	TAVW 10G25B	TAVH 10G25B	TAVC 10G25B
57.27	M32	double	TMAV 10G32B	TAVW 10G32B	TAVH 10G32B	TAVC 10G32B
77.27	M32	double	TMAV 16G32B	TAVW 16G32B	TAVH 16G32B	TAVC 16G32B
77.27	M40	double	TMAV 16G40B	TAVW 16G40B	TAVH 16G40B	TAVC 16G40B
104.27	M32	double	TMAV 24G32B	TAVW 24G32B	TAVH 24G32B	TAVC 24G32B
104.27	M40	double	TMAV 24G40B	TAVW 24G40B	TAVH 24G40B	TAVC 24G40B

*** New versions with two cable entries opened are available upon request from June 2020 also in standard version without PE jumpers.**

BIG HOODS WITH INTEGRATED SPECIAL SELF-CENTRING FLOATING FRAME

Size “104.27” BIG hoods
available in 2x M40 top cable entries
and 1x M40 top cable entry
with integrated special self-centring
floating frame

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

MBV 24.240D, MBV 24.240DG, MBV 24.40D, MBV 24.40DG

- These **special variants of the series BIG connector enclosures** (a series which is **proprietary ILME design**), available in the largest size “104.27”, consist of two hoods, one with edge gasket, the other without, both equipped with dedicated variant of robust stainless steel special self-centring floating frame.

- They are designed to allow electrical (power and signal) connection between two pieces of equipment (both fixed, one foreseen for frequent swap), guided by a dedicated special self-centring floating frame allowing **up to ±1,5 mm off axis in both directions on a plane**, to create an internal protected space for the wiring on both sides of the connection. This is particularly handy e.g. for the rapid change of the moulds on a moulding press machine.

- Thanks to the integrated *“key and keyway”* system (two sets of facing robust pin and contact tubes, one on each short side, mounted on custom-tailored robust stainless steel plates integrated in the mating face of the size “104.27” mating hoods) the connector inserts housed inside the hoods avoid mechanical damages during mating and take advantage of the protective large wiring space of the BIG enclosures.

- Thanks to the sealing gasket on the coupling, provided sufficient tight closure is ensured by the assembly on the machine (not possible to integrate any locking), the IP degree of protection up to IP66/IP67/IP69 may be achieved.

- Generously dimensioned stainless steel parts provide suitable mechanical robustness and resistance to corrosion.

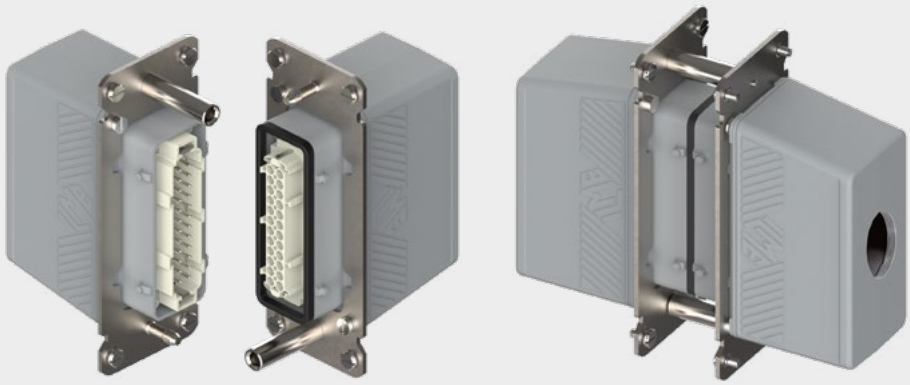
- Available parts:
  - **MBV 24.240D** size “104.27” hood series BIG with **2x M40** top cable entries and integrated special self-centring floating frame, to be exclusively mated with:
  - **MBV 24.240DG** size “104.27” hood with gasket, series BIG, with **2x M40** top cable entries and integrated special self-centring floating frame;
  - **MBV 24.40D** size “104.27” hood series BIG with **1x M40** top cable entry and integrated special self-centring floating frame, to be exclusively mated with:
  - **MBV 24.40DG** size “104.27” hood with gasket, series BIG, with **1x M40** top cable entry and integrated special self-centring floating frame.

- These BIG special hoods are deemed to be used only in combination among themselves: one part without gasket, the mating part with gasket.

- Up to 10 000 matings are achievable once used with HNM inserts with HNM series R crimp contacts as applicable and MIXO HNM frames as applicable, up to 500 matings guaranteed using standard components within these special BIG enclosures.

- Tolerance for off-axis displacement (allowed by the integral self-centring floating frame): x ± 1,5 mm, y ± 1,5 mm.

BIG special hoods with integrated special self-centring floating frame allow guided, frequent swops avoiding damages and ingress of contaminants



MBV BIG hoods with integrated special self-centring floating frame

inserts		pages:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
CSS	24 poles + ⏚	**151**
CT, CTSE (16A)	24 poles + ⏚	**163**
CQE	46 poles + ⏚	**171**
CQEE	64 poles + ⏚	**177**
CX	4/8 and 6/6 poles + ⏚	**204, 206**
MIXO	6 modules	**262 - 317**

refer to CN.19 pages

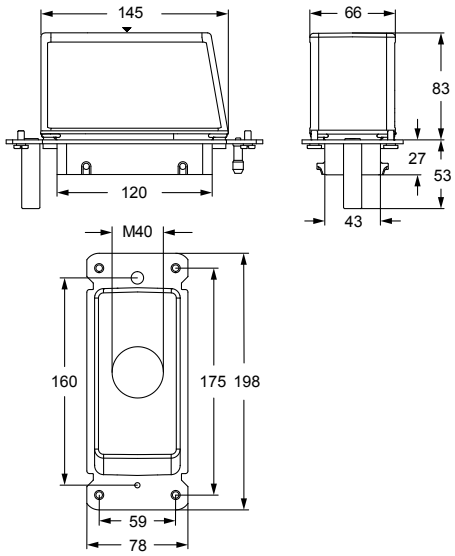
hoods with integrated special self-centring floating frame

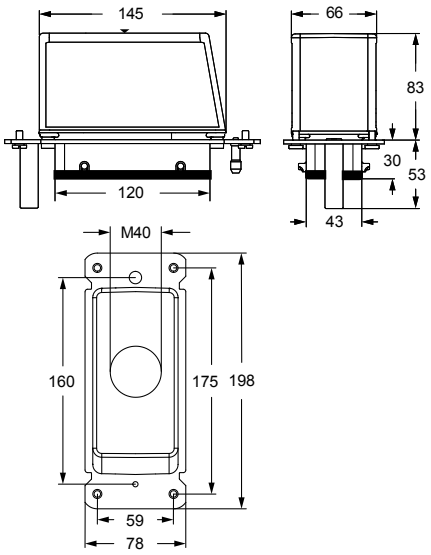
FROM MAY 2020

hoods with integrated special self-centring floating frame and gasket

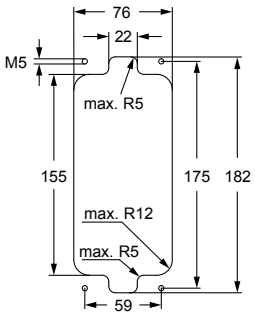
FROM MAY 2020

description	part No.	entry M	part No.	entry M
1x M40 top entry	**MBV 24.40D**	40 x 1		
1x M40 top entry, with gasket			**MBV 24.40DG**	40 x 1

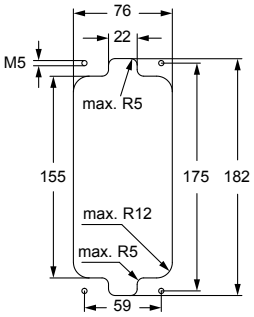




panel cut-out for enclosures



panel cut-out for enclosures



EN 60529 IP66 IP67 IP69 IEC 60529

! CAUTION: Due to the absence of locking means, the IP66/IP67/IP69 achievable degree of protection is demanded to the end-use application:

1) Suitable pressure, in order to uniformly compress the sealing gasket and keep the connector coupling tight is required: this condition is satisfied when the self-centring guide pins and contact tubes reach their end-of-run and are kept constantly in this position;
2) Suitably rated cable entry devices (e.g. cable glands) are required to maintain the desired IP degree of protection.

Protection against undue opening under load (connectors without breaking capacity) and closing under voltage is demanded to the end-use application, e.g. by suitable detection of such conditions.

MBV BIG hoods with integrated special self-centring floating frame

inserts		pages:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
CSS	24 poles + ⏚	**151**
CT, CTSE (16A)	24 poles + ⏚	**163**
CQE	46 poles + ⏚	**171**
CQEE	64 poles + ⏚	**177**
CX	4/8 and 6/6 poles + ⏚	**204, 206**
MIXO	6 modules	**262 - 317**

refer to CN.19 pages

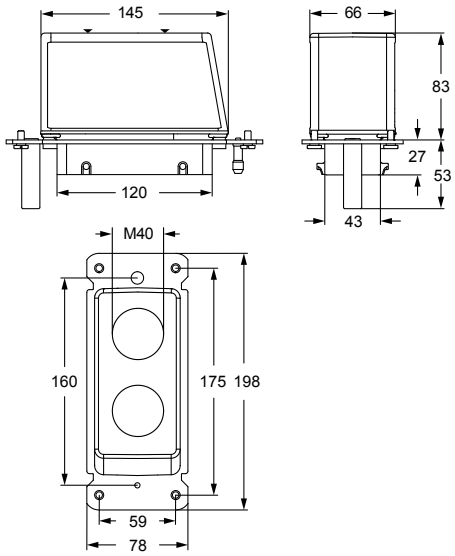
hoods with integrated special self-centring floating frame

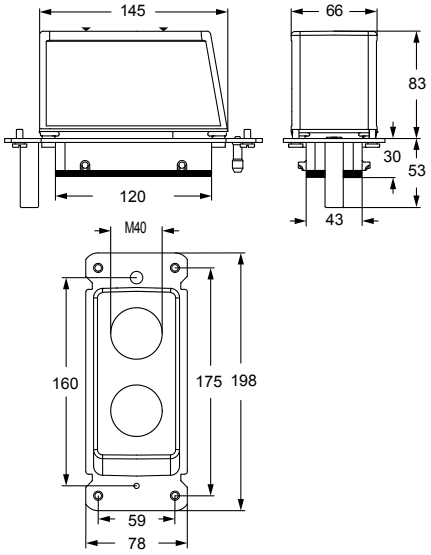
FROM MAY 2020

hoods with integrated special self-centring floating frame and gasket

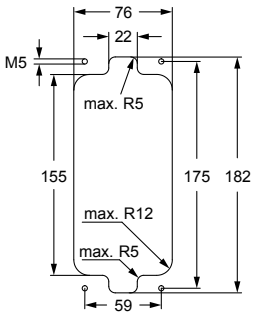
FROM MAY 2020

description	part No.	entry M	part No.	entry M
2x M40 top entries	**MBV 24.240D**	40 x 2		
2x M40 top entries, with gasket			**MBV 24.240DG**	40 x 2

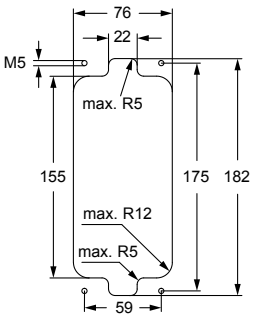




panel cut-out for enclosures



panel cut-out for enclosures



EN 60529 IP66 IP67 IP69 IEC 60529

! CAUTION: Due to the absence of locking means, the IP66/IP67/IP69 achievable degree of protection is demanded to the end-use application:

1) Suitable pressure, in order to uniformly compress the sealing gasket and keep the connector coupling tight is required: this condition is satisfied when the self-centring guide pins and contact tubes reach their end-of-run and are kept constantly in this position;
2) Suitably rated cable entry devices (e.g. cable glands) are required to maintain the desired IP degree of protection.

Protection against undue opening under load (connectors without breaking capacity) and closing under voltage is demanded to the end-use application, e.g. by suitable detection of such conditions.

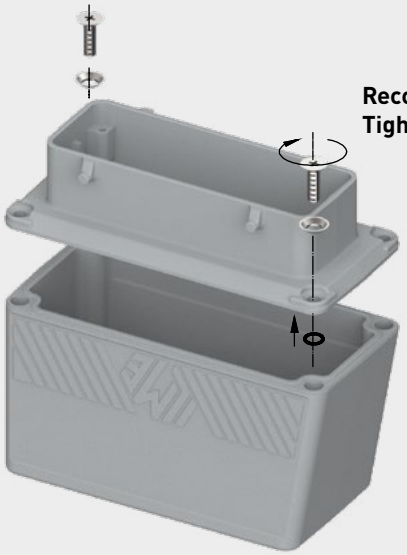
MBV BIG hoods with integrated special self-centring floating frame

ASSEMBLY INSTRUCTIONS

BIG HOODS WITH INTEGRATED SPECIAL SELF-CENTRING FLOATING FRAME

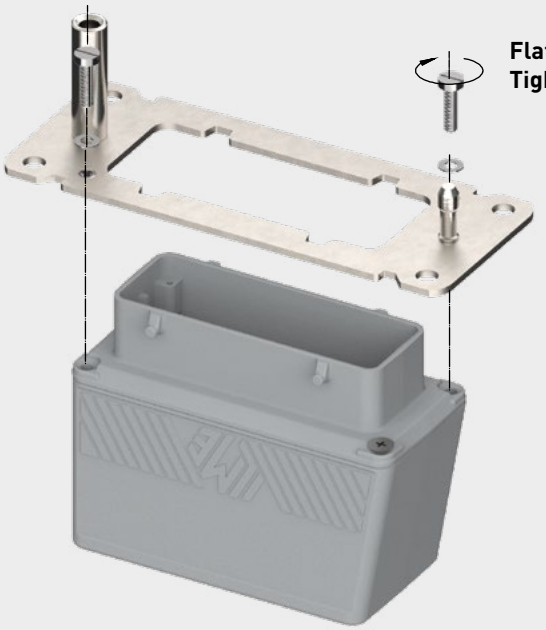
Watch our online tutorial

1 HOOD CLOSING



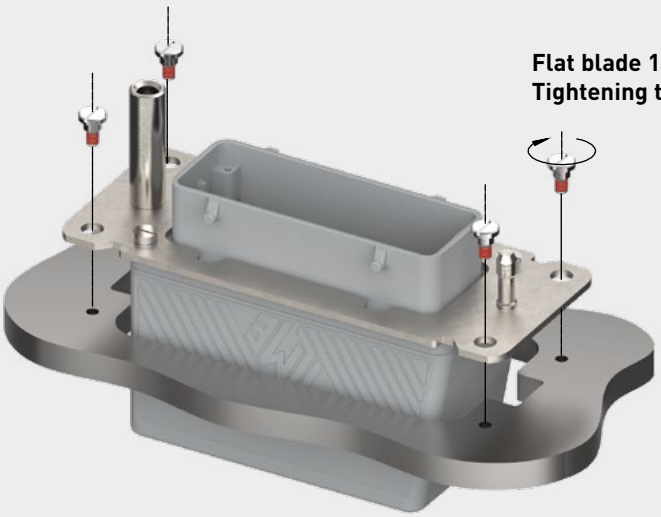
Reccommended size of screwdriver: Ph2
Tightening torque: 1,6 Nm

2 SPECIAL SELF-CENTRING FLOATING FRAME ASSEMBLY



Flat screw driver 10,0 x 1,2 mm
Tightening torque: 1,8 Nm

3 INSTALLATION ON THE PANEL

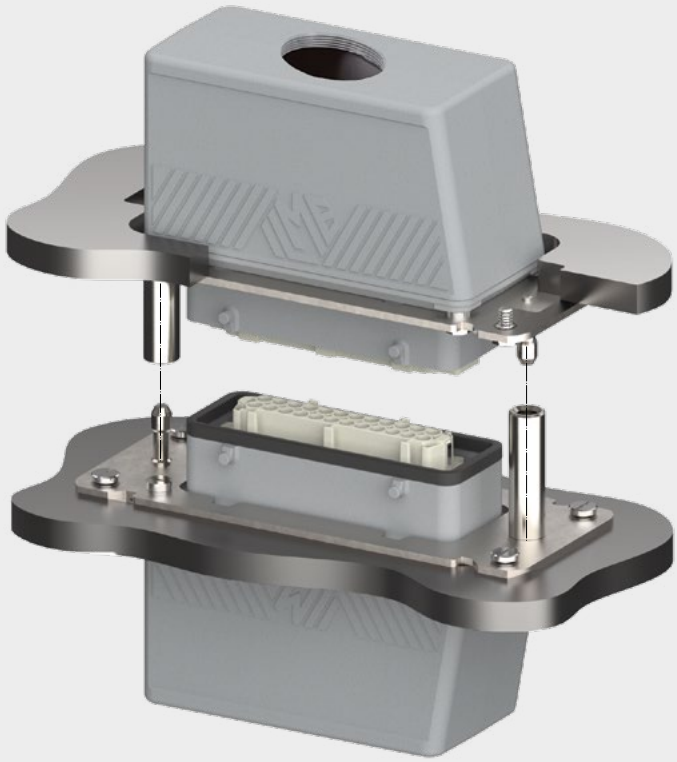


Flat blade 10,0 x 1,2 mm
Tightening torque: 2,5 Nm

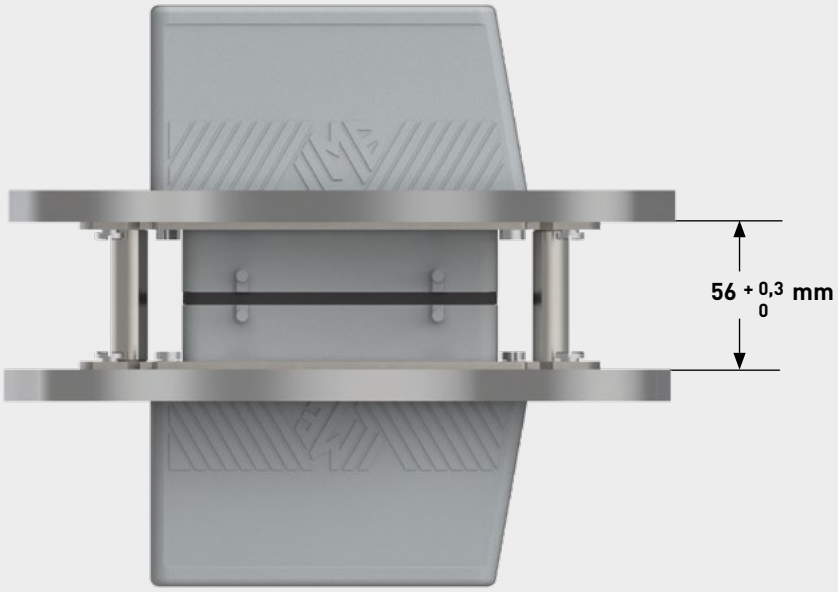
MBV BIG hoods with integrated special self-centring floating frame

Watch our online tutorial

4 INSTALLATION ON THE PANELS



5 CLOSING DISTANCE BETWEEN PANELS TO ACHIEVE IP DEGREE OF PROTECTION



SIZE “66.40” ENCLOSURES
WITH FULL METAL LOCKING LEVERS

Variants of existing size “66.40”
standard hoods, housings and covers
with a full metal stainless steel resilient lever

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CHIX, CHPX, CHOX, CAOX, CAVX, MFOX, MFVX

CHIXW, CHPXW

- Variants of existing size “66.40” standard hoods, housings and covers (with 2 “Class” locking levers, with plastic handle) with a full metal **stainless steel resilient lever** (that one used in 180 °C high temperature enclosures size “44.27”, same dimension) replacing the standard “Class” levers.

- Levers fitted with stainless steel rolls that reduce the wearing of corresponding pegs on the hood.

- Better fits the need for higher chemical resistance and higher mechanical resistance to impacts at very low temperature.

full metal stainless steel levers with stainless steel rolls to reduce wearing of the hood pegs

CHIX - CHPX and MHPX C-TYPE standard version full metal locking levers

inserts **pages:**

CD	50 poles + ⏚	**71**
CDD	76 poles + ⏚	**80**
CDA	32 poles + ⏚	**102**
CSAH	32 poles + ⏚	**103**
CDC	32 poles + ⏚	**106**

insert dimensions:
2 x (66 x 16) mm

refer to CN.19 pages

bulkhead mounting housings with 2 levers

FROM APRIL 2020

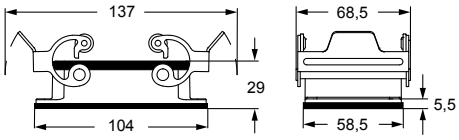
surface mounting housings with 2 levers

FROM APRIL 2020

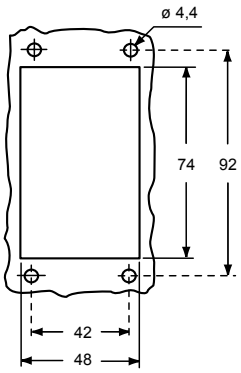
description	part No.	part No.	entry Pg	part No.	entry M
with full metal locking levers	**CHIX 50**				
with full metal locking levers		**CHPX 50.21**	21	**MHPX 50.32**	32
with full metal locking levers		**CHPX 50.29**	29		

The enclosures ensure IP66/IP69 degree of protection (or IP65 for cover versions) when mated and locked with the closing levers.

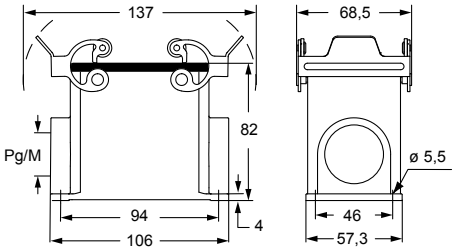
CHIX



panel cut-out for bulkhead mounting housings



CHPX and **MHPX**



cURus
Type 4/4X/12
pending

CH X - CA X and MH X - MA X - MF X C-TYPE standard version full metal locking levers

inserts **pages:**

CD	50 poles + ⏚	**71**
CDD	76 poles + ⏚	**80**
CDA	32 poles + ⏚	**102**
CSAH	32 poles + ⏚	**103**
CDC	32 poles + ⏚	**106**

insert dimensions:
2 x (66 x 16) mm

refer to CN.19 pages

hoods with 2 levers

FROM APRIL 2020

hoods with 2 levers

FROM APRIL 2020

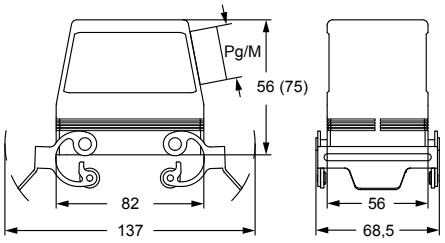
description	part No.	entry Pg	part No	entry M	part No.	entry Pg	part No.	entry M
with full metal locking levers, side entry [1] with full metal locking levers, side entry, high construction [1]	**CHOX 50 X** **CAOX 50 X29**	21 29	**MHOX 50 X32** **MAOX 50 X32**	32 32				
with full metal locking levers, top entry, high construction [1]					**CAVX 50 X29**	29	**MAVX 50 X32**	32
with full metal locking levers and gasket, top entry, high construction [1]					**CAVX 50 G29**	29	**MAVX 50 G32**	32
with full metal locking levers, side entry, high construction without adapter [1] [2]			**MFOX 50 X32**	32				
with full metal locking levers, top entry, high construction without adapter [1] [2]							**MFVX 50 X32**	32

[1] May be combined with enclosures:
CHI 50 CS, CHP 50 CS and MHP 50 CS.

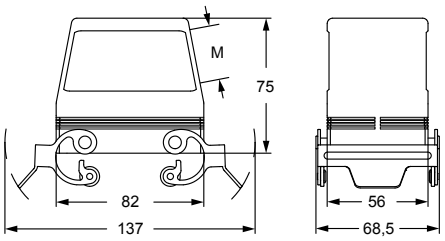
[2] Enclosure without adapter, threaded on the body, to be used only with a complete cable gland.

The enclosures ensure IP66/IP69 degree of protection (or IP65 for cover versions) when mated and locked with the closing levers.

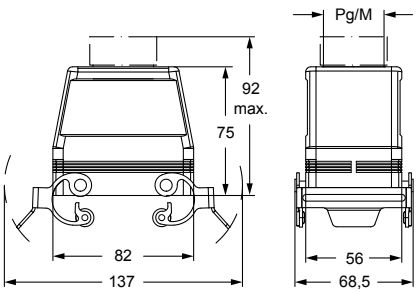
CHOX X (CAOX X) and **MHOX X (MAOX X)**



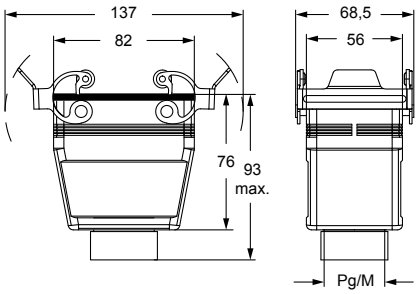
MFOX X



CAVX X and **MAVX X - MFVX X**



CAVX G and **MAVX G**



cURus
Type 4/4X/12
pending

EN 60529 IP66 IP69 IEC 60529

CHCX C-TYPE standard version full metal locking levers

inserts **pages:**

CD	50 poles + ⏚	**71**
CDD	76 poles + ⏚	**80**
CDA	32 poles + ⏚	**102**
CSAH	32 poles + ⏚	**103**
CDC	32 poles + ⏚	**106**

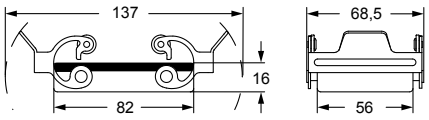
insert dimensions:
2 x (66 x 16) mm

refer to CN.19 pages

covers

FROM APRIL 2020

description	part No.
with 2 full metal locking levers and gasket (for hoods with 4 pegs)	**CHCX 50 G**



cURus
Type 4/4X/12
pending

SIZE “66.40” ENCLOSURES WITH FULL METAL LOCKING LEVERS

CHIXW - CHPXW and MHPXW W-TYPE aggressive environments full metal locking levers

inserts **pages:**

CD	50 poles + ⏚	**71**
CDD	76 poles + ⏚	**80**
CDA	32 poles + ⏚	**102**
CSAH	32 poles + ⏚	**103**
CDC	32 poles + ⏚	**106**

insert dimensions:
2 x (66 x 16) mm

refer to CN.19 pages

bulkhead mounting housings with 2 levers

FROM APRIL 2020

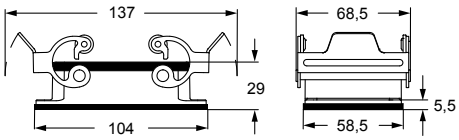
surface mounting housings with 2 levers

FROM APRIL 2020

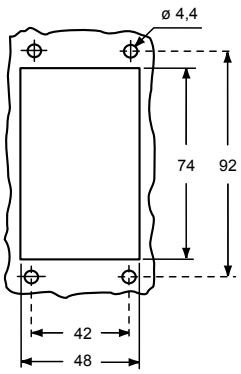
description	part No.	part No.	entry Pg	part No.	entry M
with full metal locking levers	**CHIXW 50**				
with full metal locking levers		**CHPXW 50.21**	21	**MHPXW 50.32**	32

The enclosures ensure IP66/IP69 degree of protection (or IP65 for cover versions) when mated and locked with the closing levers.

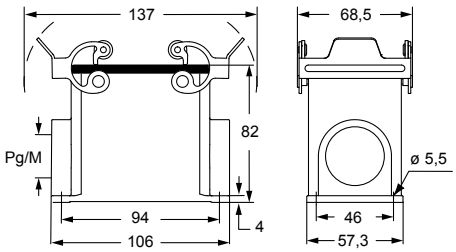
CHIXW



panel cut-out for bulkhead mounting housings



CHPXW and **MHPXW**



cURus
Type 4/4X/12
pending

IP65 insulating cable gland or fittings without gasket

IP66 IP69 cable gland with O-Ring gasket

CHCXW W-TYPE aggressive environments full metal locking levers

inserts **pages:**

CD	50 poles + ⏚	**71**
CDD	76 poles + ⏚	**80**
CDA	32 poles + ⏚	**102**
CSAH	32 poles + ⏚	**103**
CDC	32 poles + ⏚	**106**

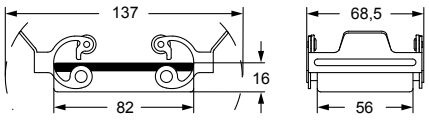
insert dimensions:
2 x (66 x 16) mm

refer to CN.19 pages

covers

FROM APRIL 2020

description	part No.
with 2 full metal locking levers and gasket (for hoods with 4 pegs)	**CHCXW 50 G**



cURus
Type 4/4X/12
pending

IP65 EN 60529 IEC 60529 — insulating cable gland or fittings without gasket

IP66 IP69 EN 60529 IEC 60529 — cable gland with O-Ring gasket

COB SUPPORT FOR “21.21” INSERTS FOR DIN RAIL MOUNT

Special COB support suitable to be fixed on DIN rail to host up to 3 “21.21” inserts

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

COB 03/3 BC

The **COB** system of **panel supports** for multipole connectors that allows their installation and use within electric panels without the traditional metallic enclosures, covered until now only those inserts of classic sizes “44.27” through “104.27” and, on a “77.27” COB support completed by the special adapter plates **CR 15/16** and **CR 25/16,** those inserts of compact sizes “49.16” (CD 15, CDA 10, CDC 10, CSAH 10) and “66.16” (CD 25, CDD 38, CDA 16, CDC 16, CSAH 16).

The new **COB 03/3 BC** extends now the same reliable support for use inside control panels to the growing family of inserts sized “21.21”: series **CD** (CD 07, CD 08), **CK** (CK 03 /04) and **CKSH** Squich® (CKSH 03 /04), **CQ** (CQ 05, CQ 07, CQ 12, CQ 21) **CQ4** (CQ4 02, CQ4 03) and all the “21.21” adapter inserts for data connectors and/or fibre optic connectors (CJ K, CJZ, CJZA, CJK 8FT /8MT /8IMT /8IFT /8B IFT /8P IFT, CJK 8M, CUK 2FT /3FT, CLK 04 SCF /SCF-H /SCM, CX 1/2 BD, CXL 2/4 …).

In the “104.27” size of a COB 24 BC, the new hinged pivoting insulating support **COB 03/3 BC,** completed with relevant bulkhead mounting housing CK 03 I (insulating) or CKA(X)(X) 03 I (metal) (to be chosen with the locking lever of preference) and the corresponding hood, provides support to up to three connector inserts size “21.21” with possibility of fixing this new COB 03/3 BC support on a standard DIN EN 60715 rail.

The system discloses new practical applications, introducing the use of connectorized wiring with a vast choice pf “21.21” sized connectors in replacement of terminal blocks, in a considerably reduced space when snapped on crossways on the DIN EN 60715 rail in the cabinet (multiple supports may fit side by side on the rail), with possibility to independently disconnect subsets of connections inside the cabinet (e.g. for faster maintenance, reducing downtime of the control panel).

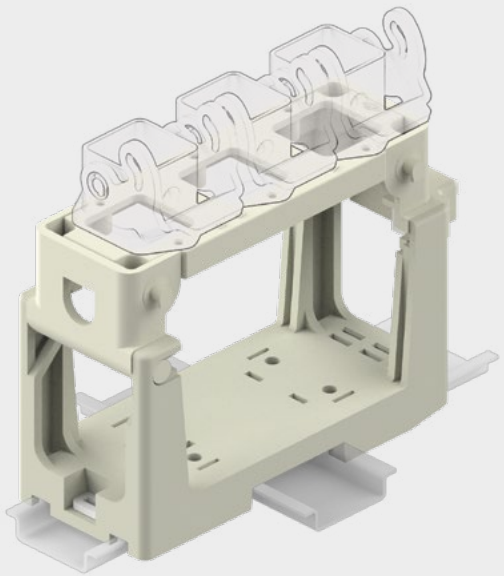
Product details:

- **COB 03/3 BC** panel support in self-extinguishing thermoplastic insulating material, sturdy block support structure, with broad passage of outgoing conductor cables from up to 3 “21.21” sized connector inserts installed in relevant housings (to be chosen and purchased separately, either insulating type CK or metal type CKA with the preferred choice of locking lever).
- Holes for fixed installation through fastening screws (when no DIN EN 60715 rail is employed).
- Snap fastening on DIN EN 60715 rails, both lengthways and crossways to the support.
- Seats for bulkhead mounting housings (up to 3) fixing screws (self-tapping screws provided).

cRUus pending (no Type rating assigned as for all series COB already c UL us approved under ECBT2.E115072 and ECBT8. E115082).

Lower and Upper Limiting Temperatures (LLT, ULT):
-40 °C +125 °C

compatible with “21.21” size CK 03 I and CKA (X) (XX) 03 I enclosures (not included)



COB 03/3 BC panel supports for multipole connectors

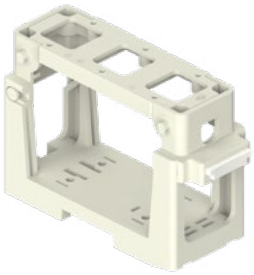
inserts		pages:
CK	3 and 4 poles + ⏚	58
CKS	3 and 4 poles + ⏚	-
CKSH	3 and 4 poles + ⏚	63
CD	7 poles + ⏚	66
CD	8 poles	67
CQ4	2 poles + ⏚	182
CQ4	3 poles + ⏚	184
CQ	5 poles + ⏚	186
CQ	7 poles + ⏚	187
CQ	12 poles + ⏚	189
CQ	21 poles	190

only for I (straight) housings
(if the counterpart has glued gasket):

CJ K	223
CJZ	224
CJZA	224
CJK 8FT, CJK 8MT	226
CJK 8IFT	228
CJK 8IMT	226, 228
CJK 8B IFT, CJK 8P IFT	228
CJK 8M	233
CUK 2FT, CUK 3FT	236
CLK 04 SC	239
CX 1/2 BD	243
CXL 2/4 SF, CXL 2/4 SM	250

refer to CN.19 pages

connector carrier baseplate for mounting on DIN EN 60715 rail or fixed mounting using screws

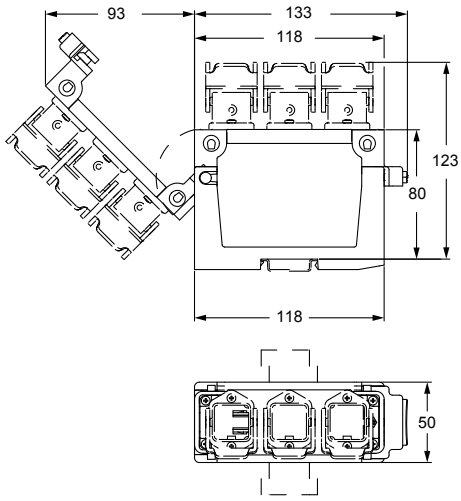


FROM APRIL 2020

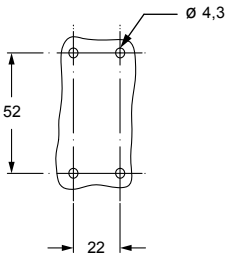
description	part No.
kit comprising frame and mobile blocks, for insert coupling: with screw fixing centre distance of 21 x 21 mm	**COB 03/3 BC**

It is the responsibility of the installer to verify the continuity of the PE protective earth circuit ⏚ between the two halves of the connector.

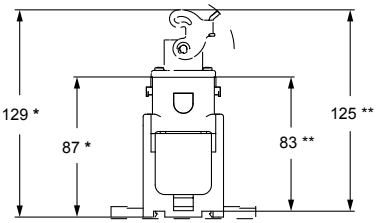
overall dimensions with longitudinal DIN rails



panel cut-out for COB 03/3, for direct fixed mounting without DIN 60715 rails



* overall dimensions with transverse DIN rails
** overall dimensions without transverse DIN rails



cURus pending

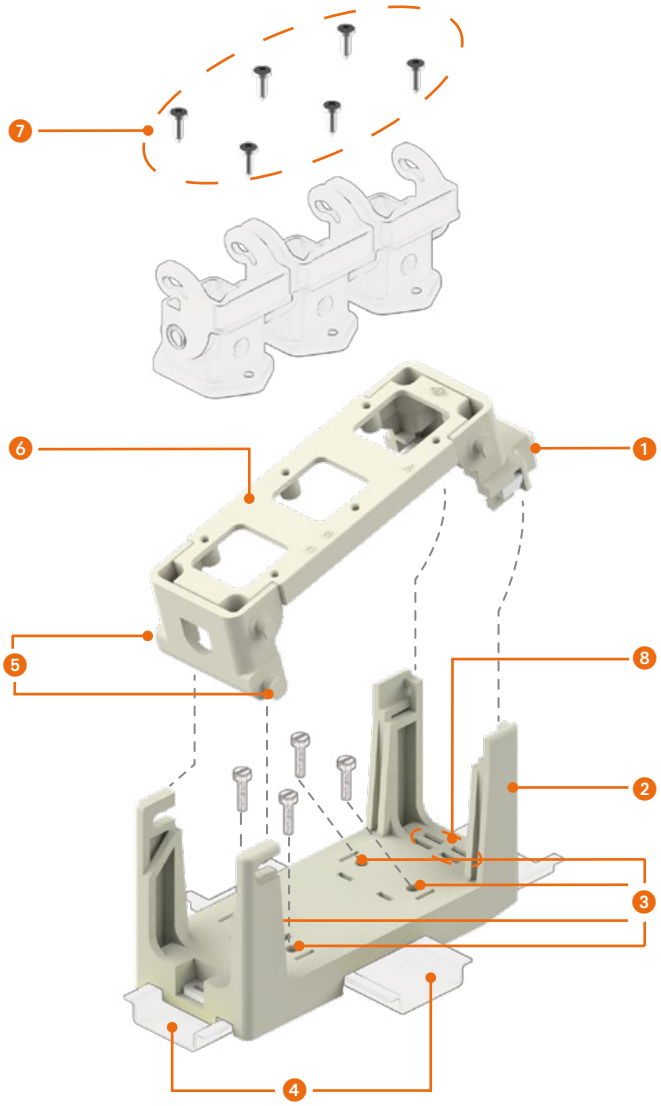
COB 03/3 BC panel supports for multipole connectors

PRODUCT DETAILS

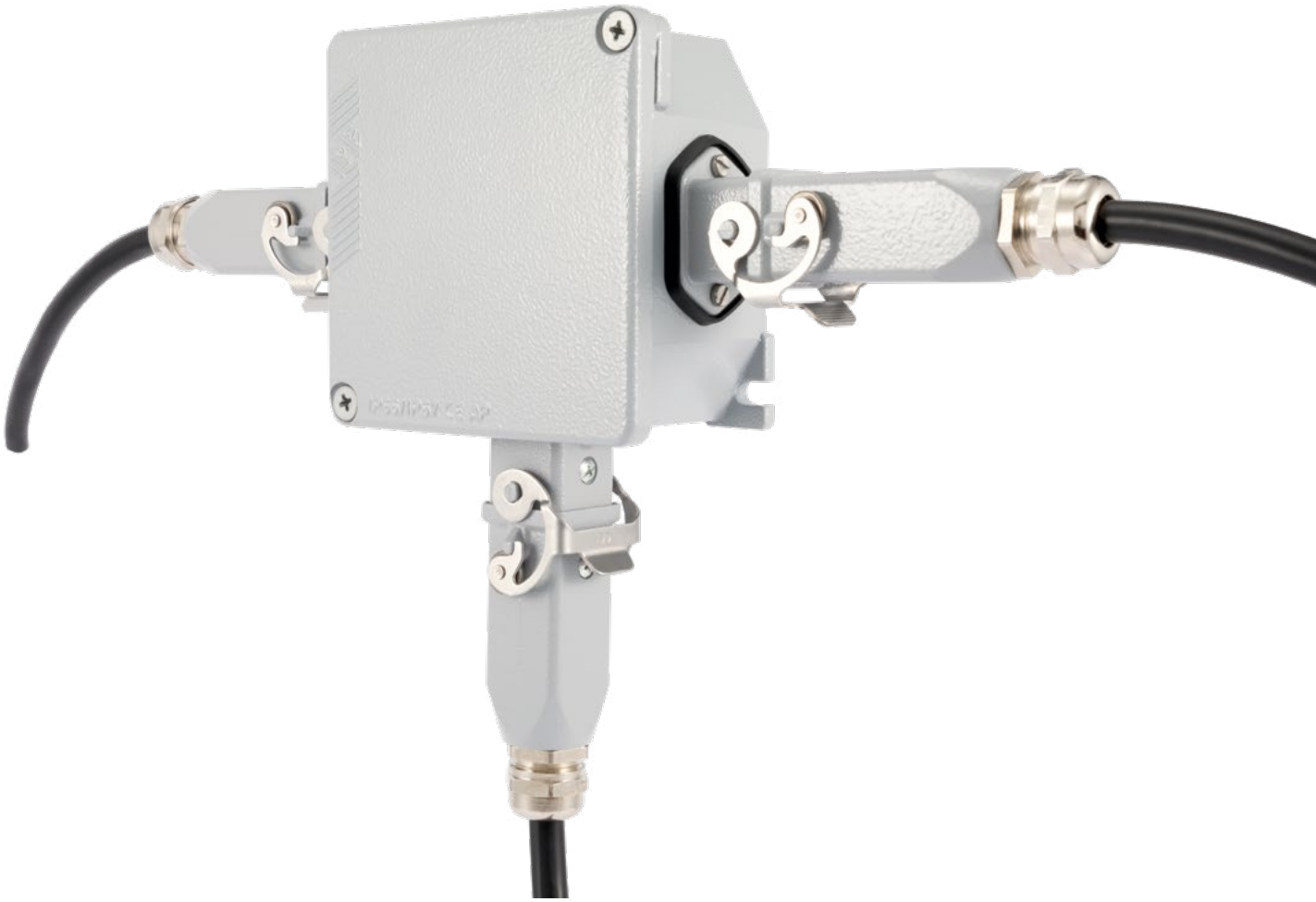
For the whole COB Series product details,
please refer to pages 650 - 651 of CN.19 catalogue.

COB 03/3 BC

1. Releasable locking of the hinged frame (in **COB...BC** kit) in self-extinguishing thermoplastic material, with quick release device for insert replacement, wiring operations, check and maintenance.
2. **COB...BC** hinged panel support for DIN EN 60715 rail mounting (rail not provided) or direct wall fastening with screws (not provided), in self-extinguishing thermoplastic material, sturdy block support structure, with broad passage for housing of conductor cables.
3. Holes for direct wall fastening with screws without DIN EN 60715 rails.
4. Snap fastening on DIN EN 60715 rails, both lengthways and crossways to the support.
5. Releasable rollover hinging pins.
6. Adapter plate for up to 3 bulkhead mounting enclosures size “21.21” (not provided), for “21.21” connector inserts.
7. Kit of 6 self-tapping screws for plastics, for mounting of up to 3 “21.21” enclosures (not provided) on the adapter plate.
8. Locations for insertion of identification tags (size 9 x 20 mm).



T-BOX
T-JUNCTION BOX FOR “21.21” INSERTS



T-junction box for the assembly of daisy-chain power and control distribution, using the small-sized “21.21” connectors

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

CYG 9KAXI3

This new **T-BOX** part no. **CYG 9KAXI3** special junction box provides a connectorized, compact T-junction for the assembly of typical daisy-chain power and control distribution, using the popular small-sized “21.21” connectors.

This new **T-BOX** special junction box is provided with three pre-assembled bulkhead mounting enclosures **CKAX 03 I**, with stainless steel “Class” locking levers with rolls, mounted over three suitably prepared sides of an **APV 9** IP66/IP67 junction box. Two facing connector enclosures serve the “IN-OUT” passing “bus” line (for power and/or signal) whereas the 90° connector enclosure serves the derivation line to the load.

This new **T-BOX** can house terminal blocks or twist-on wire connectors or cap terminals for easier wiring to the corresponding connectors.

Robust aluminium box and cover with formed-in-place PUR sealing gasket and epoxy-polyester coating.

Pre-assembled connector housings: 3x CKAX 03 I made by zinc alloy, with “Class” stainless steel locking lever.

Pass-through fixing screws and nuts on the flanges of the bulkhead mounting housings CKAX 03 I sealed to preserve the IP66/IP67 of the T-BOX CYG enclosure.

Zinc flake galvanized steel screws (two), M5x16, Ph2 for closing the cover, coupling torque 1 Nm (8,8 lb.in).

O-rings to make the cover screws captive, included.

Suitably sized diagonal DIN 60715 rail with fixing screws and inserts available as separate accessory (part no. **APD 9**).

PE connection terminals provided inside the box and under the metal cover; supplied with 2 brass inserts, 2 screws, 2 lugs and 2 washers for 6 mm^2 PE (protective earth) terminals.

The cover must always be connected to the PE (protective earth).

Two external wall fixing points (6 mm space for e.g. M5 screws) provided, diagonally placed on the box bottom.

Additional cover fastening wire, to anchor the cover to the box (temperature range: -40 °C ÷ +110 °C) available as separate accessory, part no. **APR F**.

Optional M4x8 threaded brass insert for simplifying the fitting of equipment and PCBs on the bottom of the box, part no. **APR 04** separately available.

Variants W-Type for aggressive environments (**CYGW 9KAXI3**) or S-Type “EMC” (**CYGS 9KAXI3**) available upon request.

IP66/IP67 degree of protection when inserts are equipped with CKR 65(D) kit of screwed gasket and coupled with suitably rated hoods.

robust aluminium box and cover with formed-in-place PUR sealing gasket and epoxy-polyester coating

CYG box with T-junction for 21.21 inserts

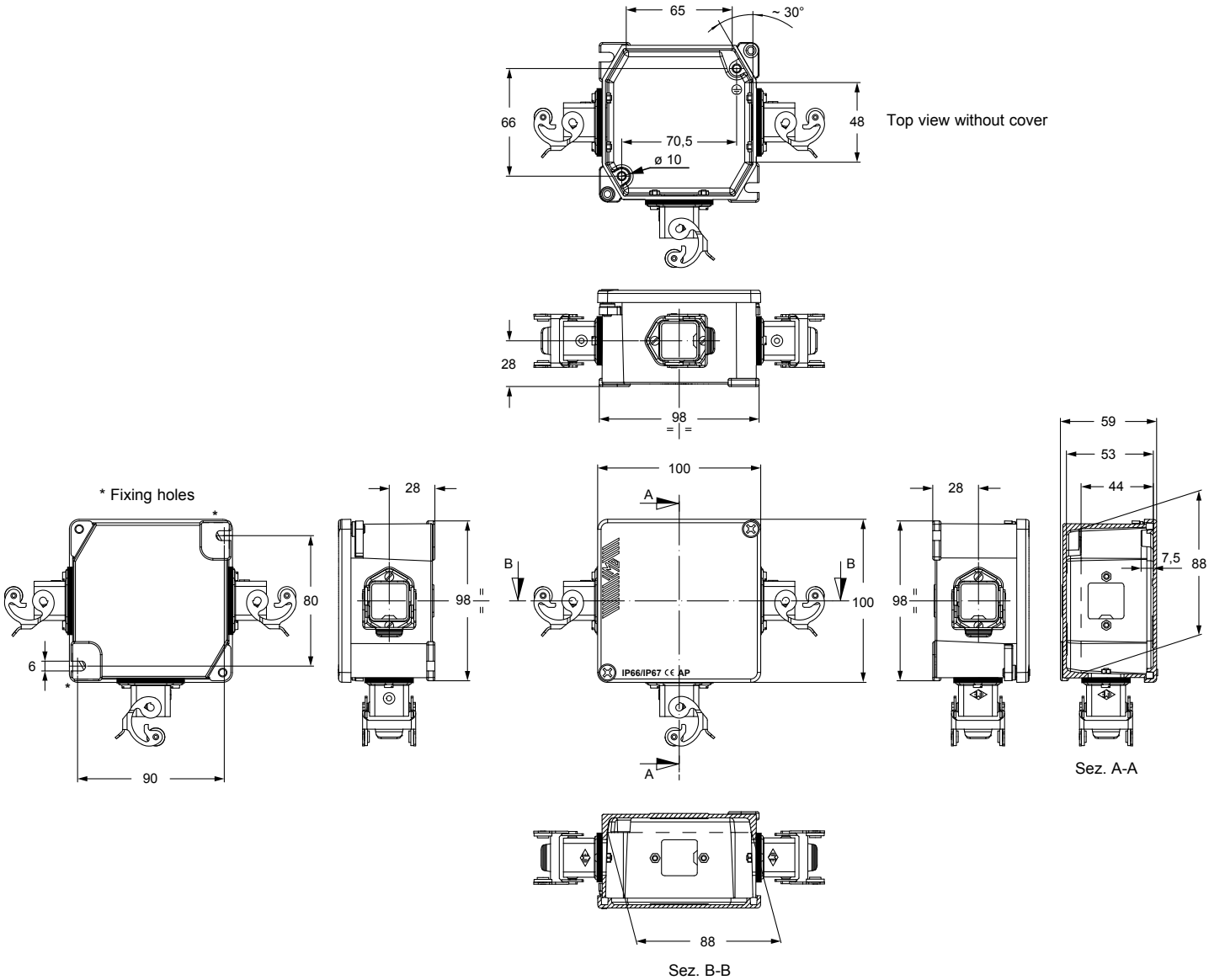
inserts

Compatible with all power/signal "21.21" size inserts

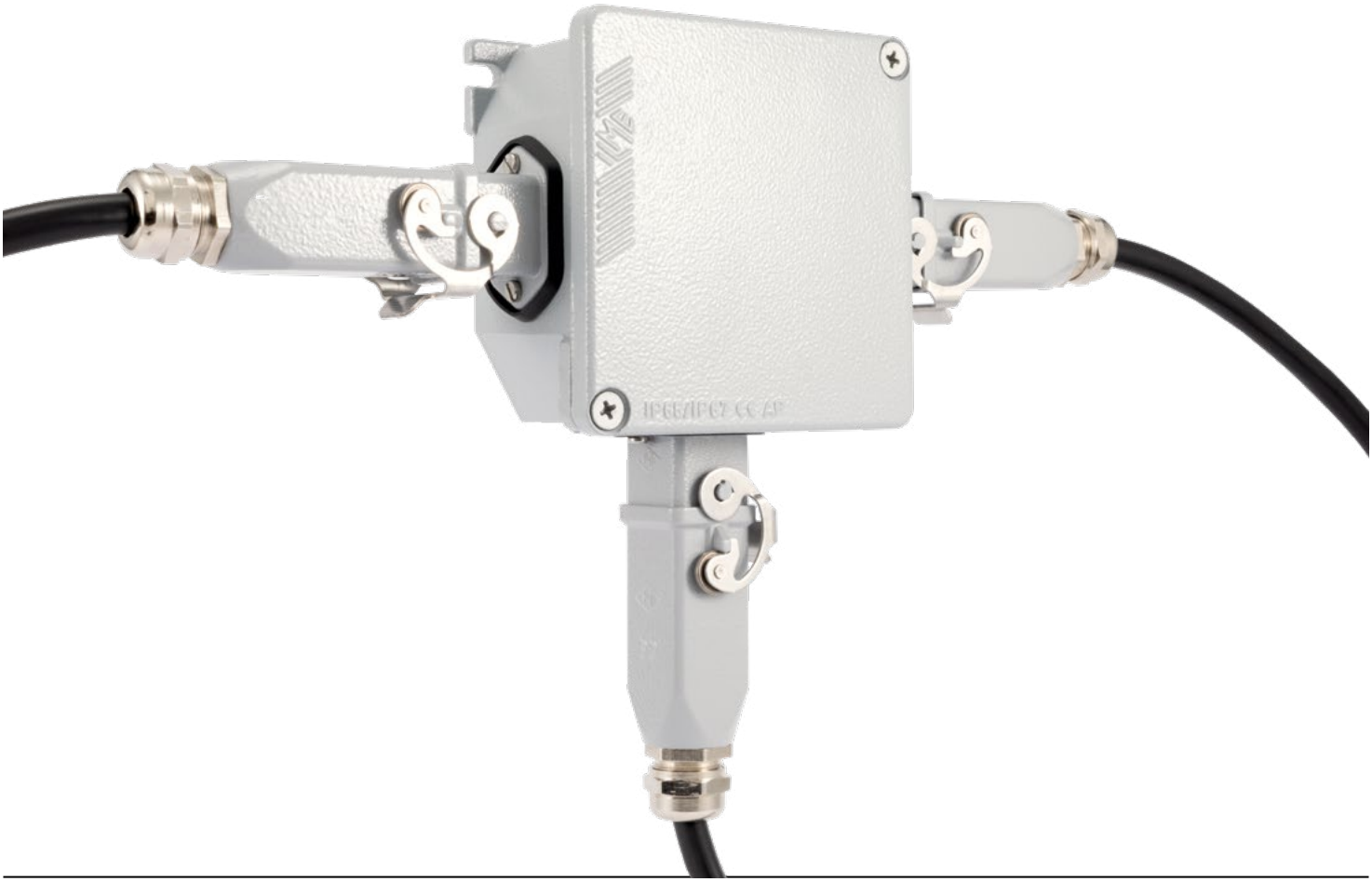
T-junction box

FROM SEPTEMBER 2020

description	part No.
T-BOX with 3 CKAX 03 I housings pre-assembled	**CYG 9KAXI3**



T-JUNCTION BOX - EXAMPLE OF APPLICATION




IME
SIPZ W
Made in Germany

CRIMPING TOOLS

Professional crimping hand tool SIPZ W, SIPZC W for SI stamped contact Series

Easy handling tools designed both for loose and coils version of 5 A stamped crimp contacts. Application range from 0,08 mm^2 to 0,52 mm^2 (AWG 28-20). Contacts positioning with insulation stop.

CIPZP D Pneumatic crimping tool

Pneumatic version of the CIPZ D tool for 5 A turned contacts. Crimping range from 0,08 mm^2 to 0,75 mm^2 (AWG 28-18) with CITP D locator for CI and RI contacts Series.

CCPZP RN Pneumatic crimping machine

4/8 indent crimping unit with locator and digital readout display for CD, CC and CX contact Series. The machine is operated by a pneumatic foot valve according to the same crimping adjustment of CCPZ RN manual tool (crimping depth and positioner seat).

Find more information on our products at www.ilme.com

Tools and accessories for crimp contacts

for 5 A SI stamped contacts of inserts series

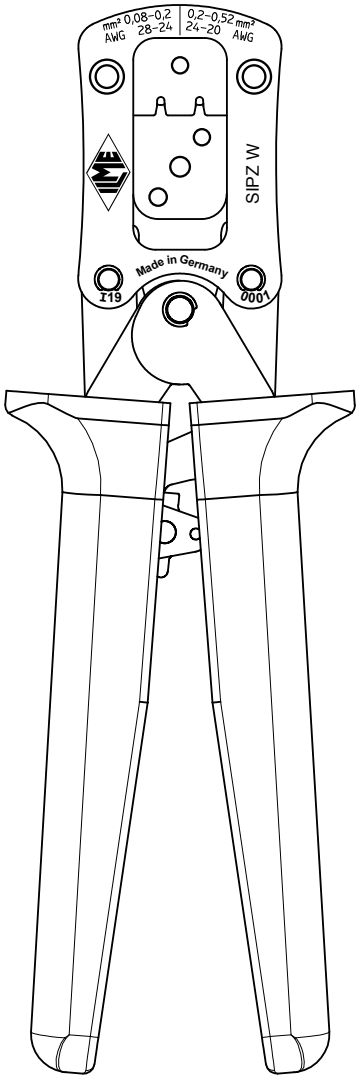
CQ (21 poles)
MIXO (25, 36 poles)
MIXO BUS (8 poles)
MIXO D-SUB (9 poles)

manual crimping tool

insertion / removal tool

description	part No.	part No.
manual crimping tool for **SI** contacts (for loose pcs.) WEZAG CS 10-D model	**SIPZ W**	
extraction tool: for the insertion and removal of the contacts into the inserts - for **SI** contacts 0,08 - 0,52 mm² (SIF..D / SIM..D Series)		**CIES**

SIPZ W
Front view



Dimensions
- Length: approx.195 mm
- Width: approx.63 mm
- Weight: approx. 290 g

Application range

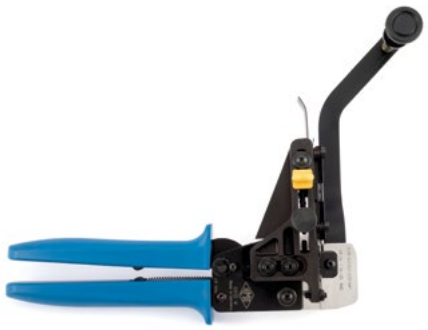
Cross section range mm² / AWG	Crimp height ± 0,05	Crimp width ± 0,05	Contact Type
0,08-0,2 / 28-24	0,70	1,15	SI stamped
0,2-0,52 / 24-20	0,75	1,45	

Tools and accessories for crimp contacts

for 5 A SI stamped contacts of inserts series

CQ (21 poles)
MIXO (25, 36 poles)
MIXO BUS (8 poles)
MIXO D-SUB (9 poles)

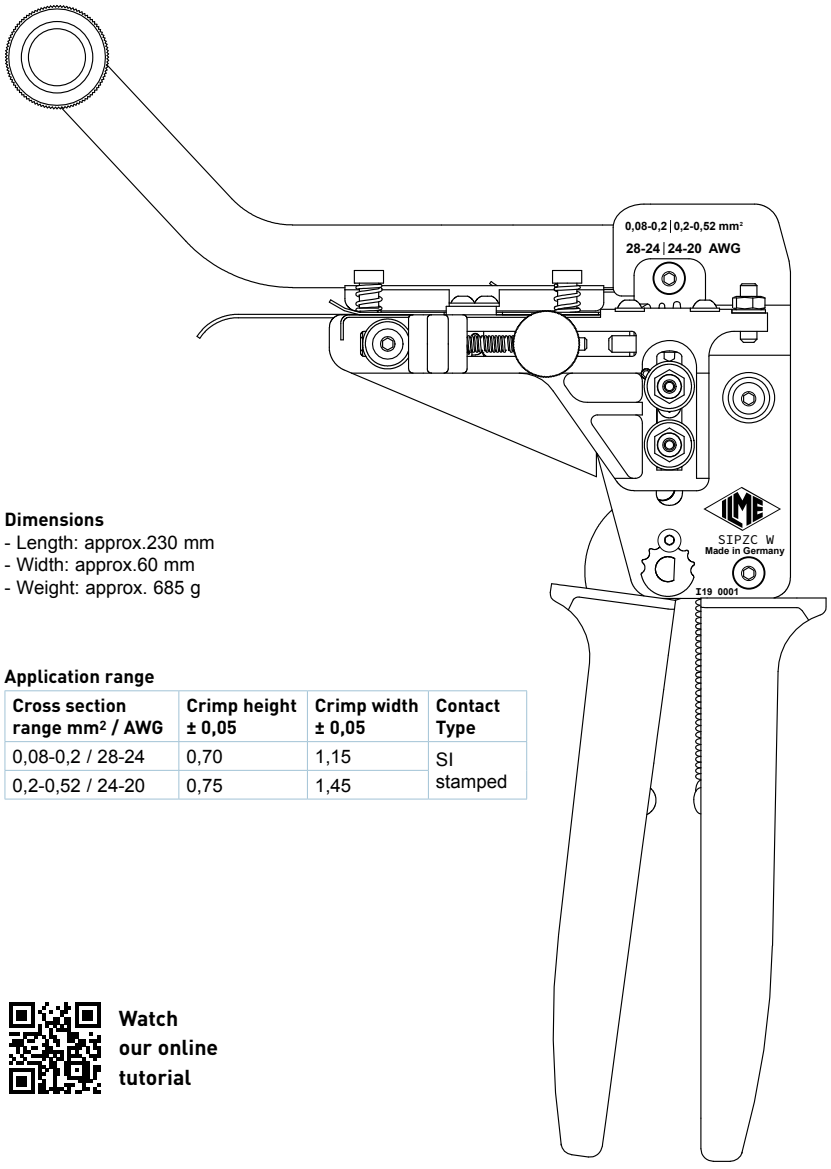
manual crimping tool



insertion / removal tool

description	part No.	part No.
manual crimping tool for **SI** contacts (for coils) WEZAG CS 20 KTVR-D model	**SIPZC W**	
extraction tool: for the insertion and removal of the contacts into the inserts - for **SI** contacts 0,08 - 0,52 mm² (SIF..D / SIM..D Series)		**CIES**

SIPZC W
Front view



Dimensions
- Length: approx.230 mm
- Width: approx.60 mm
- Weight: approx. 685 g

Application range

Cross section range mm² / AWG	Crimp height ± 0,05	Crimp width ± 0,05	Contact Type
0,08-0,2 / 28-24	0,70	1,15	SI stamped
0,2-0,52 / 24-20	0,75	1,45	

Watch our online tutorial

Tools and accessories for crimp contacts

for 5 A CI and RI turned contacts of inserts series

CQ (21 poles)
MIXO (25, 36 poles)
MIXO BUS (8 poles)
MIXO D-SUB (9 poles)
GIGABIT (8 poles)
SHIELDED (20 poles)

pneumatic crimping tool positioner - gauge

CCSPZP **CCVPP**

insertion tool - removal tools

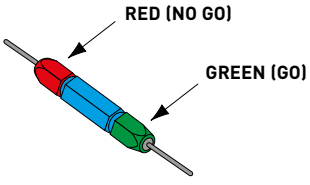
description	part No.	part No.
pneumatic crimping tool for turned **5 A** contacts model DANIELS WA22 equivalent to CIPZ D (turret excluded)	**CIPZP D**	
positioner (DANIELS K1450I) for **5 A** contacts (CIMA - CIFA - CIFD - CIMD Series)	**CITP D**	
bench support for CIPZP D pneumatic crimping tool (DANIELS BM-2A)	**CCSPZP**	
pneumatic foot valve (DANIELS WA10A)	**CCVPP**	
"go / no go" control gauge to verify indenter closure (See notes below)	**CCPNP**	
insertion and extraction tool: for the insertion and removal of the contacts into the inserts - for **CI** and **RI** contacts 0,2 - 0,5 mm² (CIMA - CIFA - CIFD - CIMD Series)		**CIES**
- for **CI** and **RI** contacts 0,75 mm² (CIMA - CIFA - CIFD - CIMD Series)		**CIES B**

Notes:

Positioner
conforms to international standard MIL-C-22520/1
- An interchangeable and indispensable accessory of the CIPZP D crimping tool, it precisely positions the contact where crimping is performed.

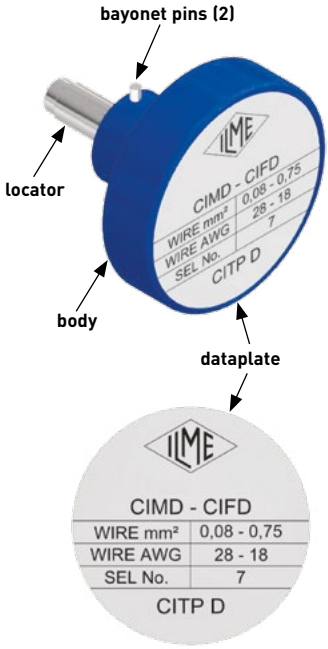
"go / no go" control gauge
conforms with international standard MIL-C-22520/3
- A tool used to periodically check that the crimping tool meets standard requirements.

CCPNP



Gauge	tool selector pos. No.	Ø A ± 0,00254 mm (GO) green	Ø B ± 0,00254 mm (NO GO) red
CCPNP	**8**	0,991 (mm)	1,118 (mm)
		0,0390 (in)	0,0440 (in)

CITP D positioner



Tools and accessories for crimp contacts

for 10 A, 16 A and 40 A of inserts series — **pages:**

CD	(10A)	**66 - 74**
CDD	(10A)	**76 - 83**
CDC	(16A)	**104 - 106**
CCE	(16A)	**130 - 135**
CQE	(16A)	**168 - 173**
CQEE	(16A)	**176 - 177**
CMCE	(16A)	**137 - 145**
CQ	(10A/16A)	**186 - 193**
CX 8/24	(16A/10A)	**194**
CX 6/36	(40A/10A)	**198**
CX 12/2	(40A/10A)	**199**
CX 6/6 **	(16A)	**206**
CX 9/42	(40A/10A)	**20 ***
MIXO	(40A/16A/10A)	**267 - 306**

** the underlined polarities indicate those contacts that require the tools shown in this page

refer to CN.19 pages
*** refer to NEWS 2020 pages**

pneumatic crimping tool

insertion tool - removal tools replacement tip

CCPR RN

description	part No.	part No.
pneumatic crimping tool for **10 A, 16 A and 40 A** contacts RENNSTEIG CM 25-3 model. Locator and pedal footswitch included.	**CCPZP RN**	
insertion tool for insertion of the contacts into the inserts for crimped contacts up to 0,75 mm²		**CCINA**
removal tools for the extraction of contacts from the inserts for **10A** (CD) contacts [1] for **16A** (CC) contacts [2] for **40A** (CX) contacts [3] and cables Ø < 5 mm for **40A** (CX) contacts [4] and cables Ø < 7,5 mm		**CCES** **CQES** **CXES** **CXES-10**
replacement tip for CCES removal tool		**CCPR RN**

[1] for CQ, CD, CDD, CX inserts (10A auxiliary contacts) and MIXO module (10A)
[2] for CQ, CQE, CQEE, CCE, CMCE inserts (excluded 16+2), MIXO module (16A), CX6/6 (16A) and CDC. For CMCE (16+2), CX inserts (contacts 16A insert CX 8/24) using a flat 3 mm screwdriver.
[3] for CX inserts (40A contacts) and MIXO module (40A)
[4] for MIXO module CX 03 4B and contacts 10 mm².

Tool technical information
- Crimping force 25 kN
- Operating pressure 6 bar
- Air requirement 0.75 l per working stroke
- Size (l x h x w): 325 x 500 x 280
- Weight: 30,5 kg

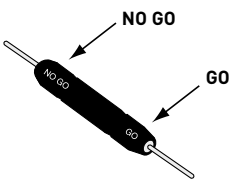
Indenter technical information
- For crimping turned male and female contacts according to MIL/SAE AS22520
- Indent settings in 0.01 mm increments, with digital setting and readout
- Electronic wear monitoring with warning function
- Setting functions in mm and inch

Digital indenter with incorporated positioner

"go / no go" control gauge

- A tool used to periodically check that the crimping tool meets standard requirements.

CCPNP RN



Gauge	tool selector pos. No.	Ø A GO	Ø B NO GO
CCPNP RN	**2,00 (mm)**	1,94 (mm)	2,06 (mm)

Tool adjustment
The reference matrix on the crimping tool indicates the correct seat of the positioner (POS M1, F2, M3, F4, M5, F6) to select, and the crimping depth (SET) to adjust for the contact to be crimped.

Positioner seat = M1 (male) - F2 (female)

CDMA/D (male) CDFA/D (female)	Section (mm²)	Crimp depth (mm)
0,3	0,14 0,25 0,37	1,3
0,5	0,5	1,55
0,7	0,75	1,55
1,0	1,0	1,55
1,5	1,5	1,55
2,5	2,5	1,55

Positioner seat = M3 (male) - F4 (female)

CCMA/D (male) CCFA/D (female)	Section (mm²)	Crimp depth (mm)
0,3	0,14	1,2
0,3	0,25-0,37	1,3
0,5	0,5	1,55
0,7	0,75	1,55
1,0	1,0	1,55
1,5	1,5	1,8
2,5	2,5	1,8
3,0	3,0	1,9
4,0	4,0	2,0

Positioner seat = M5 (male) - F6 (female)

CXMA/D (male) CXFA/D (female)	Section (mm²)	Crimp depth (mm)
1,5	1,5	1,55
2,5	2,5	1,8
4,0	4,0	2,0
6,0	6,0	2,5
10,0	10,0	2,3

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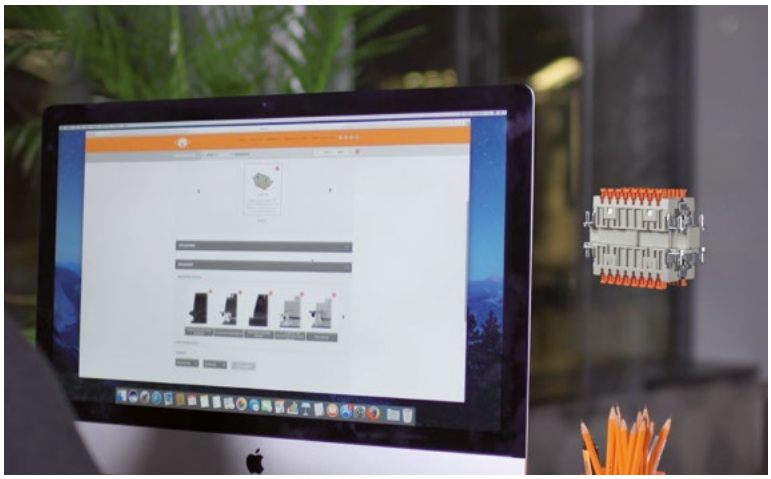

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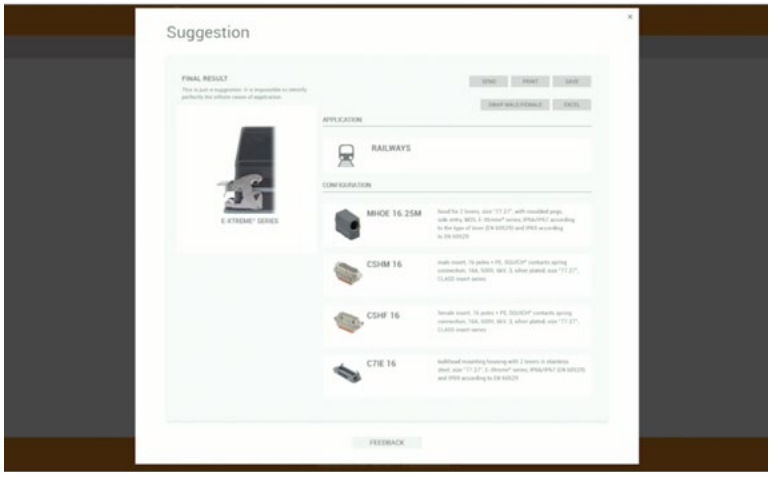

Easy selection
of individual parts
for key applications
and recommendations
for custom
environmental
conditions.

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Smart suggestion
to get the most suitable
configuration.

C

CAOX 50 X29 127
CAVX 50 G29 127
CAVX 50 X29 127
CCES 145
CCFFA 98
CCINA 145
CCMFA 98
CCPNP 144
CCPR RN 145
CCPZP RN 145
CCSPZP 144
CCVPP 144
CDFA 0.3 ..... 16*
CDFA 0.5 ..... 16*
CDFA 0.7 ..... 16*
CDFA 1.0 ..... 16*
CDFA 1.5 ..... 16*
CDFA 2.5 ..... 16*
CDFA 6A28 ..... 90*
CDFD 0.3 ..... 20*
CDFD 0.5 ..... 20*
CDFD 0.7 ..... 20*
CDFD 1.0 ..... 20*
CDFD 1.5 ..... 20*
CDFD 2.5 ..... 20*
CDMA 0.3 ..... 16*
CDMA 0.5 ..... 16*
CDMA 0.7 ..... 16*
CDMA 1.0 ..... 16*
CDMA 1.5 ..... 16*
CDMA 2.5 ..... 16*
CDMA 6A 90*
CDMD 0.3 ..... 20*
CDMD 0.5 ..... 20*
CDMD 0.7 ..... 20*
CDMD 1.0 ..... 20*
CDMD 1.5 ..... 20*
CDMD 2.5 ..... 20*
CHCX 50 G 128
CHCXW 50 G 131
CHES 66
CHIX 50 126
CHIXW 50 130
CHOX 50 X 127
CHPX 50.21 126
CHPX 50.29 126
CHPXW 50.21 130
CIES 142*
CIES B 144
CIF2D 0.2 74
CIF2D 0.3 74
CIF2D 0.5 74
CIF2D 0.7 74
CIFA 0.2 30
CIFA 0.3 30
CIFA 0.5 30
CIFD 0.2 ..... 30*
CIFD 0.3 ..... 30*
CIFD 0.5 ..... 30*
CIFJD 0.2 74
CIFJD 0.3 74
CIFJD 0.5 74
CIFJD 0.7 74
CIF Q05 2.4 98
CIF Q07 2.4 94
CIF Q12 2.4 90
CIM2D 0.2 74
CIM2D 0.3 74
CIM2D 0.5 74
CIM2D 0.7 74
CIMA 0.2 30
CIMA 0.3 30
CIMA 0.5 30
CIMD 0.2 ..... 30*
CIMD 0.3 ..... 30*
CIMD 0.5 ..... 30*
CIMJD 0.2 74
CIMJD 0.3 74
CIMJD 0.5 74
CIMJD 0.7 74
CIPZP D 144
CITP D 144
CKH 03 C 109
CKH 03 CA 109
CKH 03 CAS 109
CKH 03 CS 109
CKH 03 CX 109
CKH 03 CXA 109
CKH 03 I 108
CKH 03 IA 108
CKRH 65 ..... 108*
CKRH 65 D 108*
COB 03/3 BC 134
CQ4F 03/2 16
CQ4M 03/2 16
CQES 145
CQF 12 CIF 90
CQM 12 CIF 90
CR 21.21 GMH 114
CR BDSH3A 102
CR BDSH3G 103
CR BDSH6A 102
CR BDSH6G 103
CR BDSH9A 102
CR BDSH9G 103
CR BDSH14A 102
CR BDSH14G 103
CR Q03/2 17
CW 2 MIAM 58
CX 01 9VF2 70
CX 01 9VM2 70
CX 01 J8AIF 62
CX 01 J8BIF 62
CX 01 J8PIF 62
CX 01 MIF 58
CX 01 MIM 58
CX 02 4HF 66
CX 02 4HM 66
CX 5/7 CA 36*
CX 7/10 CA 36*
CX7FA 6.0 86
CX7MA 6.0 86
CX 08 D5F 44
CX 08 D5F2 44
CX 08 D5M 44
CX 08 D5M2 44
CX 10/12 CA 36*
CX 11/14 CA 36*
CX 20S IF 36
CX 20S IM 36
CX 36 IF 30*
CX 36 IM 30*
CXES 145
CXES-10 145
CXF 9/42 20
CXFA 1.5 ..... 16*
CXFA 2.5 ..... 16*
CXFA 4.0 ..... 16*
CXFA 6.0 ..... 16*
CXFA 10 66
CXM 9/42 20
CXMA 1.5 ..... 16*
CXMA 2.5 ..... 16*
CXMA 4.0 ..... 16*
CXMA 6.0 ..... 16*
CXMA 10 66
CYG 9KAXI3 138

* These items are also shown in various sections throughout the catalogue

M

MAOX 50 X32 127
MAVX 50 G32..... 127
MAVX 50 X32..... 127
MBV 24.40D..... 120
MBV 24.40DG 120
MBV 24.240D..... 121
MBV 24.240DG 121
MFOX 50 X32..... 127
MFVX 50 X32 127
MHOX 50 X32 127
MHPX 50.32 126
MHPXW 50.32..... 130
MKGH V20 112
MKGH V25 113
MKGH VA20..... 112
MKH IAP20 108
MKH V20..... 109
MKH V25..... 110
MKH VA20..... 109
MKH VG20 109
MKH VG25 111

R

RDF2D 0.3..... 47
RDF2D 0.5..... 47
RDF2D 0.7..... 47
RDF2D 1.0..... 47
RDF2D 1.5..... 47
RDF2D 2.5..... 47
RDM2D 0.3..... 47
RDM2D 0.5..... 47
RDM2D 0.7..... 47
RDM2D 1.0..... 47
RDM2D 1.5..... 47
RDM2D 2.5..... 47
RIFD 0.2 ..... 32*
RIFD 0.3 ..... 32*
RIFD 0.5 ..... 32*
RIFD 0.7 82
RIMD 0.2 ..... 32*
RIMD 0.3 ..... 32*
RIMD 0.5 ..... 32*
RIMD 0.7 82
RX 02 TF 33*
RX 02 TM 33*
RX 03 TF 33*
RX 03 TM 33*
RX 04 TF 33*
RX 04 TM 33*
RX 06 TF 33*
RX 06 TM 33*
RX 08 D5F..... 46
RX 08 D5F2..... 46
RX 08 D5M..... 46
RX 08 D5M2..... 46
RX 08 I6F 54
RX 08 I6M..... 54
RX 20S IF..... 38
RX 20S IM 38

S

SIF1D 0.2 78
SIF1D 0.2C..... 78
SIF1D 0.2R..... 78
SIF1D 0.5 79
SIF1D 0.5C..... 79
SIF1D 0.5R..... 79
SIF2D 0.2 78
SIF2D 0.2C..... 78
SIF2D 0.2R..... 78
SIF2D 0.5 79
SIF2D 0.5C..... 79
SIF2D 0.5R..... 79
SIF3D 0.2 78
SIF3D 0.2C..... 78
SIF3D 0.2R..... 78
SIF3D 0.5 79
SIF3D 0.5C..... 79
SIF3D 0.5R..... 79
SIM1D 0.2..... 78
SIM1D 0.2C..... 78
SIM1D 0.2R..... 78
SIM1D 0.5..... 79
SIM1D 0.5C..... 79
SIM1D 0.5R..... 79
SIM2D 0.2..... 78
SIM2D 0.2C..... 78
SIM2D 0.2R..... 78
SIM2D 0.5..... 79
SIM2D 0.5C..... 79
SIM2D 0.5R..... 79
SIM3D 0.2..... 78
SIM3D 0.2C..... 78
SIM3D 0.2R..... 78
SIM3D 0.5..... 79
SIM3D 0.5C..... 79
SIM3D 0.5R..... 79
SIPZC W..... 143
SIPZ W 142

* These items are also shown in various sections throughout the catalogue

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