



### **DISCLAIMER**

The information provided in this Catalogue is valid at the date of publication. Updated information may be available online at https://www.ilme.com:

- **Q** checking the relevant section of ILME website for latest release of this Catalogue;
- **Q** consulting the specific online product data sheet;
- Q checking the latest Certifications available for download.



# 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: original solutions 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.



## **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 2014/35/EU 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.
- 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-MG, CGK-MGK 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) and **AXYR**° inserts (push-in spring terminals with actuator button) that do not require any tool to operate the terminal.



## **CE MARKING**

As from 1<sup>st</sup> 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.

A 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.



# Visit ilme.com website to discover all the main features:





**Technical datasheets** to get all the information about our products.





**Application pages** to focus on installation locations, field requirements and technical details.





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# Get into our **Configurator** to easily find the right solution that fits your needs



# **Q** search



Over 50 million connector combinations.

# choose



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

# **★** download



Smart suggestion to get the most suitable configuration.

# **HIGH-DENSITY FAST & TOOL-LESS CONNECTIONS**

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# **STAINLESS** STEEL CORE

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**AXYR® CQY 08E inserts**  36

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**IL-BRID LOCKING LEVERS** FOR STANDARD SIZE ENCLOSURES CM / ML

CQYF 08E CQYM 08E



**Technical features** 

42-49

Crimp CQ 08E inserts



CQF 08E CQM 08E

CQA/MQA 08 **SIZE "32.13"** 

**CQA 08 I** MQA 08 O25 **MQA 08 V25** 







# THE ULTIMATE HYGIENIC EVOLUTION

50



T-TYPE HYGIENIC SERIES T-TYPE/H ENCLOSURES

**Technical features** 

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**Technical features** 

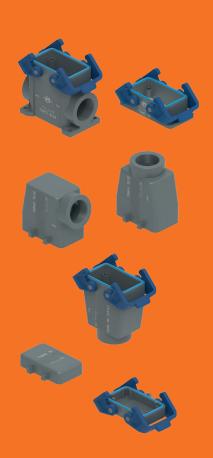
60-67











# **HNM** RANGE WIDENING

68





**RXC Series Combined crimp connectors** 68 **RXCF 4/2 RXCM 4/2 72 RXCF 4/8 RXCM 4/8** 

70,74 80 A HNM Crimp contacts, gold plated RX7..2D.. 71, 75 16 A HNM Crimp contacts, gold plated RC..2D..

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# **ACCESSORIES**

86

T-TYPE Enclosures Series

Dust protection cover size "44.27"

**TCP 06** 



RX7 Series Fingerproof male crimp contacts

 $\underline{\mathbf{HNM}}$  Version with insulating cap

RX7M2D..P



86

88

# **AXYR®**

# **HIGH-DENSITY, FAST & TOOL-LESS CONNECTIONS**

#### PRODUCT RANGE FOR 16 A CONNECTIONS

The research of new termination technologies aims to develop a reliable and qualitatively stable connection between conductor and contact, meeting any possible application requirement in terms of current carrying-capacity and available number of poles, as much as possible independently from the skill of the operator.

Crimped connection, with its typical irreversible process, achieves the best performance and the highest possible connection density, but requires specific wiring procedures and special tools, while being also non-rewirable.



- Q ILME AXYR® technology offers an extremely compact spring push-in termination, which equals the crimp connectors in high density, but requires no special crimping tool, yet granting an optimal electrical performance. An easy, tool-less and operator skill independent connection, resistant to mechanical stress and vibrations, suitable for any installation requirement.
- AXYR® features a harmonic steel spring and a tiny, yet stiff, properly designed actuator button working together to allow a simple push-in action guaranteeing a safe wiring.
- Thanks to a boxed terminal, the wire contact pressure does not rely upon surronding insulating parts, likely to possibly relax under heating when the connector is under current load.

- Solid and ferruled flexible wires, when sufficiently stiff, can be directly inserted into the connection terminal\*; unprepared stranded wires require instead the initial opening of the spring by means of a simple flat-blade screwdriver, thanks to the actuator button.
- AXYR® technology makes the user free to choose the connector that best suits his needs, naturally reusable and independent of the required wire cross-section, compatible with the crimp connectors of the ILME product portfolio: one size fits the whole range of cross-sectional areas (compared to competing solution with radial spring that require two sizes).

<sup>\*</sup> Cross-sectional area ≥ 0,75 mm² / 18 AWG



# **AXYR® FROM INSIDE**

# **THE WIRING**









1 **Deeply insert** the solid or ferruled wire into the contact hole



Push down the actuator button by a flat-blade screwdriver 0,5 × 3,5 mm max.



1

insert the stranded wire into the contact hole



2

The wire is safely secured by the spring clamp



(2]

The wire is safely secured by the spring clamp

\*CSA = Cross-Sectional Area

#### Re-opening





Push down the actuator button by a flat-blade  $0.5 \times 3.5$  mm max. screwdriver to remove the wire

# **AXYR® TECHNOLOGY**

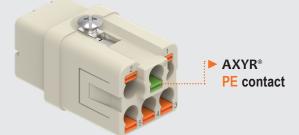
# **ZOOM-IN AND BENEFITS**

► AXYR® connection equals the density of the crimp connection, without need for any crimping tool

Wire release with a simple flat-blade screwdriver.



► AXYR® trademark on the product



- ► Mateable with the corresponding crimp versions
- ► Machined brass contacts
- ► One size fits the whole range of cross-sectional areas
- ➤ Suitable for rigid or ferruleprepared stranded wires as well as for unprepared stranded wires



► Patented technology





# **AXYR® PRODUCT RANGE**

# **FOR 16 A CONNECTIONS**



Inserts		EN 61984 Rating	Poles	Series Size	
CX 06 CYF	CX 06 CYM	16 A 500 V 6 kV 3	6	MIXO	1 module
CX 08 CYF	CX 08 CYM	16 A 400 V 6 kV 3	8	MIXO	1 module
CQYF 05	CQYM 05	16 A 230/400 V 4 kV 3	5 + 🖶	CQY	"21.21"
CQYF 08E	CQYM 08E	16 A 500 V 6 kV 3	8 + 🖶	CQY	"32.13"





AXYR® 16 A inserts and modules

# **AXYR®**

# **Product range for 16 A connections**

# CQY 05 / CQY 08E inserts MIXO CX 06 CY / CX 08 CY modules



### **CQY 05 inserts**

**5 P + (a):** 16 A 230/400 V 4 kV 3

### **CQY 08E inserts**

**8 P +** ⊕: 16 A 500 V 6 kV 3

16 A 400/690 V 8 kV 2

## MIXO CX 06 CY and CX 08 CY modules

**6 P:** 16 A 500 V 6 kV 3 **8 P:** 16 A 400 V 6 kV 3



## CQYF /M 05 5 poles + (9) 16 A - 230/400 V



enclosures:

size "21.21" page:

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

page:

HYGIENIC CKH-MKH 108 - 114 COB 03/3 BC 134

refer to CN.19 pages

refer to News 2020 pages

inserts. AXYR® terminal connections





Q SIZE "21.21"

#### description

spring/AXYR\* push-in connection female inserts with female contacts male inserts with male contacts

- characteristics according to EN 61984:

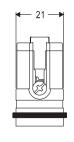
16 A 230/400 V 4 kV 3

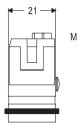
- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V

- insulation resistance: ≥ 10 GΩ ambient temperature limit: -40 °C ... +125 °C made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- for max. current load see the connector inserts derating diagram under construction; for more information **see page 28** of CN.19 catalogue

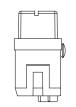
#### CQYF 05 CQYM 05

part No.







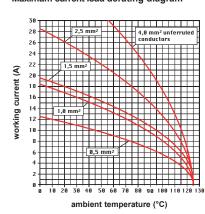


contacts side (front view)





#### CQY 5 poles connector inserts Maximum current load derating diagram



- inserts for conductors with the following cross-sectional areas:
- unferruled

(AWG 24-12)

0,25 mm<sup>2</sup> - 4 mm<sup>2</sup> - ferruled

0,25 mm<sup>2</sup> - 2,5 mm<sup>2</sup>

(AWG 24-14)

- conductors stripping length: 9...11 mm

## **CQYF /M 08E** 8 poles + ⊕ 16 A - 500 V

enclosures: size "32.13"

ze "32.13" page:

metallic 38

insulating type ■ 365 - 367 EMC (insulating) ■ 573 - 574

> ISO 23570-3 standard and DESINA, specification compliant



inserts, AXYR® terminal connections



### **Q SILVER PLATED CONTACTS**

### refer to CN.19 pages

description

part No.

spring/AXYR\* push-in connection female insert with female contacts male insert with male contacts

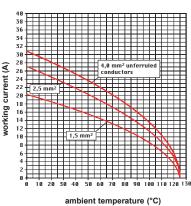
- characteristics according to EN 61984:

16 A 500 V 6 kV 3 16 A 400/690 V 8 kV 2

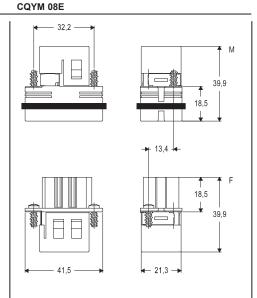
- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- coded for use with "32.13" metallic enclosures (and insulating enclosures)
- for max. current load see the connector inserts derating diagram under construction; for more information see page 28 of CN.19 catalogue

# Q Please refer to page 34 for the CO 08 NEW METAL CONCEPT solution

#### CQY..E 8 poles connector inserts Maximum current load derating diagram



## CQYF 08E



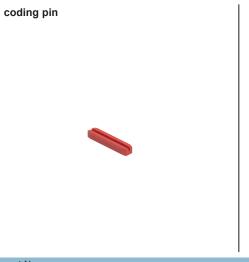
contacts side (front view)





- inserts for conductors with the following cross-sectional areas:
- unferruled
- 0,25 mm<sup>2</sup> 4 mm<sup>2</sup> (AWG 24-12)
- ferruled
- 0,25 mm<sup>2</sup> 2,5 mm<sup>2</sup> (AWG 24-14)
- conductors stripping length: 9...11 mm



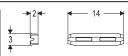


description part No.

Q It is possible to achieve up to <u>6 different codings</u> thanks to the use of the optional CR Q08E coding pin: 4 coding pins are required for each connector coupling.

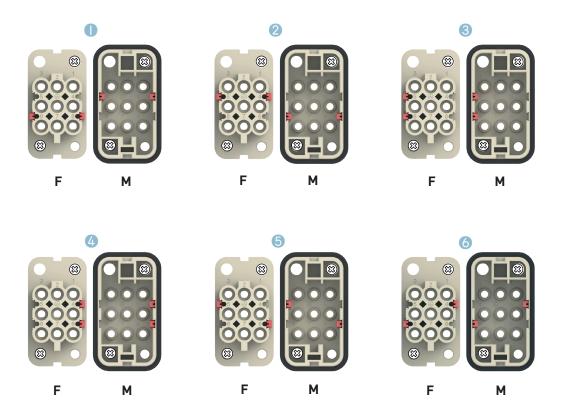
plastic coding pin

Q It is necessary to install two coding pins on each connector part.



CR Q08E

#### **CR Q08E CODING OPTIONS**



## MIXO CX 06 CYF / CYM 6 poles 16 A - 500 V

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.

page:

frames for modular units 316 - 317

MIXO ONE enclosures 369

refer to CN.19 pages

#### description

spring/AXYR\* push-in connection female inserts with female contacts male inserts with male contacts

- characteristics according to EN 61984:

#### 16 A 500 V 6 kV 3

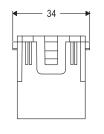
- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- for max. current load see the connector inserts derating diagram under construction; for more information see page 28 of CN.19 catalogue

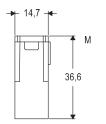
### CX 06 CYF CX 06 CYM

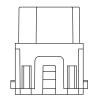
part No.

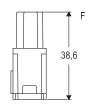
modular units.

AXYR® terminal connections



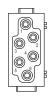






contacts side (front view)

side with reference arrow A





- inserts for conductors with the following cross-sectional areas:
  - unferruled

0,25 mm<sup>2</sup> - 4 mm<sup>2</sup> (AWG 24-12)

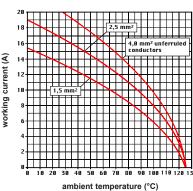
- ferruled

0,25 mm<sup>2</sup> - 2,5 mm<sup>2</sup> (AWG 24-14)

- conductors stripping length: 9...11 mm

1 frame slot

#### CX..CY 6 poles connector inserts Maximum current load derating diagram



## MIXO CX 08 CYF / CYM 8 poles 16 A - 400 V



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.

page:

frames for modular units 316 - 317

MIXO ONE enclosures 369 modular units. AXYR® terminal connections



refer to CN.19 pages

#### description

spring/AXYR\* push-in connection female inserts with female contacts male inserts with male contacts

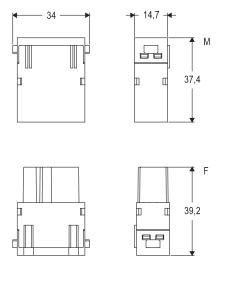
- characteristics according to EN 61984:

#### 16 A 400 V 6 kV 3

- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- for max. current load see the connector inserts derating diagram under construction; for more information see page 28 of CN.19 catalogue

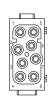
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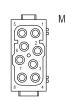
CX 08 CYF CX 08 CYM



contacts side (front view)

side with reference arrow A

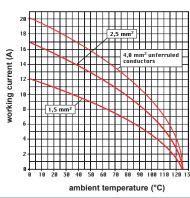




- inserts for conductors with the following cross-sectional areas:
- unferruled
- 0,25 mm<sup>2</sup> 4 mm<sup>2</sup> (AWG 24-12)
- ferruled
- 0,25 mm<sup>2</sup> 2,5 mm<sup>2</sup> (AWG 24-14)
- conductors stripping length: 9...11 mm

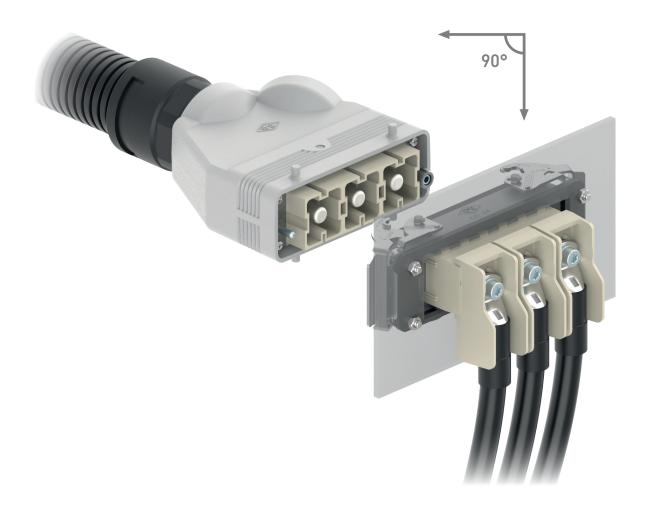
1 frame slot

#### CX..CY 8 poles connector inserts Maximum current load derating diagram



# MIXO MODULE CX 01 YAF /YAM

For 90°-angled screw terminal connection



MIXO 200 A

High current module

robust and space-saving

1 P: 200 A 1 000 V 8 kV 3





## **TECHNICAL FEATURES**



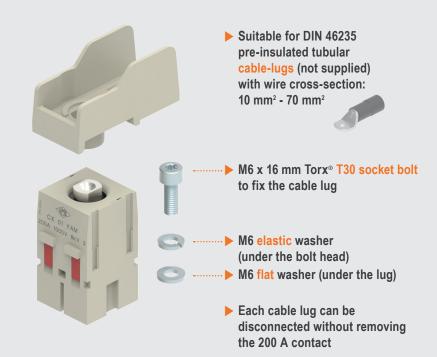
The ILME modular MIXO system offers incredible versatility and freedom of configuration: more than 66 modules are available to realize a connector fitting everyone's needs.

High-power modules in the 70 A - 200 A current range relate to conductors with large wire-cross-section, even up to 70 mm². Such wires are often difficult to handle, having reduced bending radius and requiring an adequate installation room, often not available.

The new MIXO CX 01 YA module is the solution introduced by ILME to widen the potential of the MIXO high-current series, a module with the same compatible electrical rating and mating interface of the 200 A crimp version but designed to minimize its space installation requirements.

- Q The male and female contacts for the angled 200 A module allow the connection of DIN 46235 pre-insulated crimp cable lugs (using M6 Torx<sup>®</sup> T30 screw), available on the market in the dimension for wire cross-sectional area of 10 mm², 16 mm², 25 mm², 35 mm², 50 mm² and 70 mm².
- To keep the proper electrical insulation, ILME designed a special insulating cover plate, avoiding accidental contact between cable lugs of adjacent modules and saving the nominal voltage rating of 1000 V planned for the 200 A modules.
- The 200 A angled module can be used inside the ILME bulkhead mounting housings as a natural extension of a busbar connection or for powering control cabinets, HVAC systems and batteries for energy storage backup applications.

- Original design
- Special insulating cover plate avoiding accidental contact between any conductive element (side by side installation)
- ► The insulating cover plate design permits the same voltage and impulse withstand voltage rating as the standard 200 A crimp version module, fulfilling the correct creepage and clearance distances requirements



## MIXO CX 01 YAF /YAM 1 pole 200 A - 1000 V

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

page:

frames for modular units\*

317

\* enclosures: bulkhead mounting housings only

modular units, screw terminal connection - 90° angled

refer to CN.19 pages

description

part No.

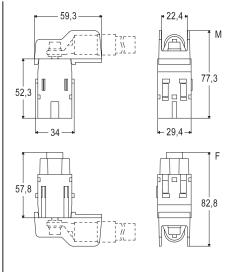
screw terminal connection - 90° angled female insert with female contact male insert with male contact

CX 01 YAF CX 01 YAM

- characteristics according to EN 61984:

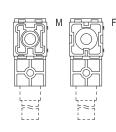
200 A 1000 V 8 kV 3

- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- for max. current load see the connector inserts derating diagram under construction; for more information see page 28 of CN.19 catalogue

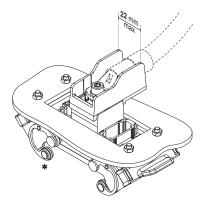


contacts side (front view)

side with reference arrow A

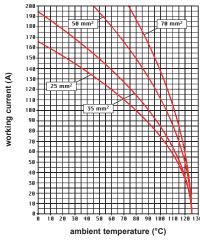


- Pre-insulated tubular cable lug overall width: 22 mm max.



\* Frame size, additional MIXO modules and housing levers may vary from those depicted.

CX 01 YA, 1 pole connector inserts (MIXO 200A) Maximum current load derating diagram

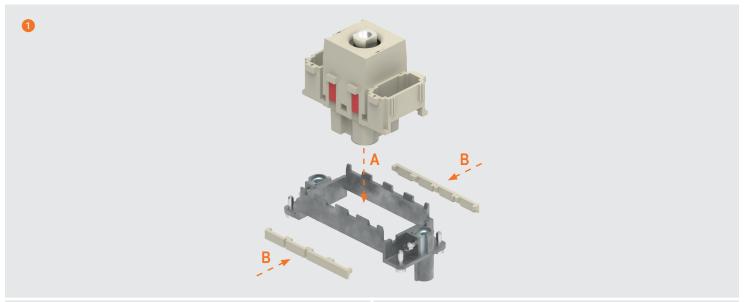


2 frame slots

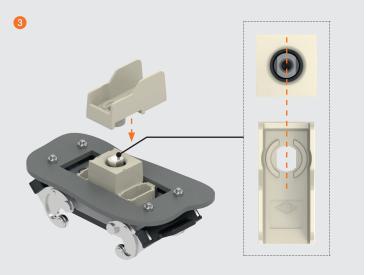


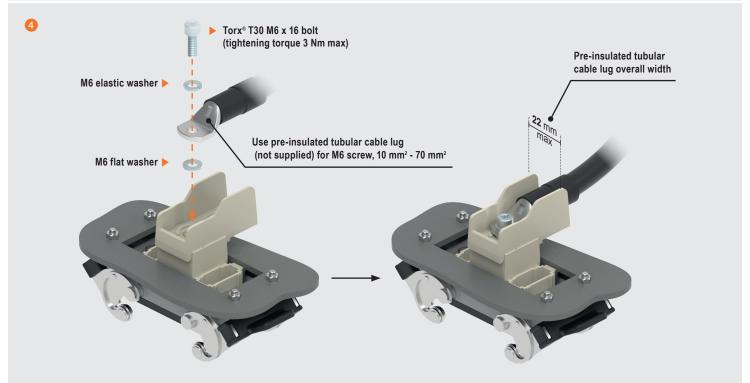
#### **ASSEMBLY INSTRUCTIONS**

#### CX 01 YAF /YAM - MIXO MODULE 200 A 90°-ANGLED SCREW TERMINATION









# **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 **3 new modules** (2 single-sized, 1 double-sized, all variants intermateable with existing ones), widening the MIXO portfolio to 66 modules, as follows:

•	CX 06 CYF /CYM new MIXO AXYR® 16 A module single-sized, 6 poles, 16 A (spring/AXYR®) rating: 500 V 6 kV 3	22
•	CX 08 CYF /CYM new MIXO AXYR® 16 A module single-sized, 8 poles + shield, 16 A (spring/AXYR®) rating: 400 V 6 kV 3	23
•	CX 01 YAF /YAM  new MIXO 200 A 90° angled module  double-sized, 1-pole, 200 A (90° angled, screw)  rating: 1 000 V 8 kV 3	26
	high-current connection for tubular cable lugs (not supplied) for 10 mm² through 70 mm² conductor cross-sectional area (6-2/0 AWG), for M6 lug terminals, max width 22 mm	





In addition to MIXO series advanges (page 33), each of the new modules adds the following **individual features:** 

- □ high-current, 90° angled screw connection for tubular cable lugs, at the rear of bulkhead-mounting housings, for tight 90° change of direction of suitably terminated power cables for rated voltages up to 1 000 V and rated currents up to 200 A per pole; mateable with standard counterpart MIXO power crimp modules CX 01 YF/ YM (CX 01 YAF/ YAM);
- □ fast, tool-less AXYR® push-in wiring of 6-pole or 8-pole connections for up to 16 A per pole at up to 500 V, mateable with standard counterpart MIXO crimp modules CX 06 CF/ CM and CX 08 CF/ CM (MIXO CX 06 CYF/ YM, CX 06 CYF/ CYM).

#### **MIXO SERIES AT A GLANCE**



# **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 66 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



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 TF/ TM	size "44.27"
CX 03 TF/ TM	size "57.27"
CX 04 TF/ TM	size "77.27"
CX 06 TF/ TM	size "104.27"
CX 04 TF/ TM (x 2)	size "77.62"
CX 06 TF/ TM (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 04 TF/ TM 4 modules



CX 03 TF/ TM 3 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  ${\bf COB}$  series panel supports.

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

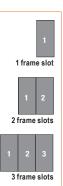
Frames	ames COB panel supports part No.			
CX 04 TF/ TM	fixed: COB 16 BC and COB TCQ			
	mobile: COB TSF, COB TSFS and COB 16 CMS			
CX 06 TF/ TM	fixed: COB 24 BC and COB TCQ			
	mobile: COB TSF. COB TSFS and COB 24 CMS			

# THE COMPLETE RANGE

**2022 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  ${\bf MIXO~ONE}$  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 YAF/M		main	electric	90° screw	200	1000	2
CX 01 GF/M		main	electric	crimp	100	830	1
CX 02 GF/M		main	electric	crimp	100	1000	
CX 02 7F/M		main	electric	crimp	70	1000	
CX 02 4AF/M		main	electric	axial screw	40	1000	
CX 02 4BF/M		main	electric	axial screw	40	1000	
CX 02 4F/M		main	electric	crimp	40	1000	
CX 03 4F/M		main	electric	crimp	40	400/690	
CX 03 4BF/BM		main	electric	crimp	40	500	
CX 3/4 XDF/M		main / auxiliary	electric	crimp	40/10	830	
CX 04 XF/M		main	electric	crimp	40	830	
CX 05 SF/M		main	electric	spring	16	400	
CX 05 SHF/M					16		
		main	electric	SQUICH®-spring		400	
CX 06 CF/M		main	electric	crimp	16	500	
CX 06P CF/M		main	electric	crimp	16	830	
CX 06 CYF/M		main	electric	AXYR® -spring	16	500	
CX 08 I6F/M		main + shield	electric	crimp	5	50	
CX 08 I6GF/I6GM		main + shield	electric	crimp	5	50	
RX 08 I6F/M	HNM	main + shield	electric	crimp	5	50	
RX 08 I6GF/I6GM	HNM	main + shield	electric	crimp	5	50	
CX 08 D5F/F2 M/M2		main + shield	electric	crimp	10	50	
CX 08 D5GF/F2 GM/GM2		main + shield	electric	crimp	10	50	
RX 08 D5F/F2 M/M2	HNM	main + shield	electric	crimp	10	50	
RX 08 D5GF/F2 GM/GM2	HNM	main + shield	electric	crimp	10	50	
CX 08 CYF/M		main	electric	AXYR® -spring	16	400	
CX 20 CF/M		main	electric	crimp	16	500	
CX 12 DF/M		main / auxiliary	electric	crimp	10	250	
CX 17 DF/M		main / auxiliary	electric	crimp	10	160	
CX 42 DF/M		main / auxiliary	electric	crimp	10	150	
CX 25 IBF/M		main / auxiliary	electric	crimp	4	50	-
CX 25 IF/M		main / auxiliary	electric		4	50	
		main / auxiliary + shield		crimp	4	32	
CX 20S IF/M		-	electric	crimp			
CX 20S IGF/IGM		main / auxiliary + shield	electric	crimp	4	32	
RX 20S IF/M	HNM	main / auxiliary + shield	electric	crimp	4	32	
RX 20S IGF/IGM	HNM	main / auxiliary + shield	electric	crimp	4	32	
CX 36 IF/M		main / auxiliary	electric	crimp	4	32	
CX 02 CHF/M		main	electric	crimp	16	2500	
CX 02 HF/M		main	electric	crimp	16	2900 / 5000	
CX 02 4HF/M		main	electric	crimp	40	2900 / 5000	
CX 02 BF/M		seat for two shielded connectors (refer to C		· · · · · · · · · · · · · · · · · · ·			
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 plastic Ø 1,6 - 3,0 - 4,0 mm	air	push-in			
CX 03 MP		pneumatic metal Ø 3,0 - 4,0 - 6,0 mm	air	push-in / quick-fitting	_	_	
CX 02 P		pneumatic plastic Ø 6,0 mm	air	push-in		_	
CX FM		none (dummy module)	_		_	_	
CX 01 J8F/M/IM		RJ45	electric	crimp / IDC		_	
CX 01 J8AIF/BIF/PIF		RJ45 + shield	electric	IDC	1	50	
CX 01 J8UM		RJ45	electric	IDC		_	
CX 01 JF/M		RJ45 + auxiliary	electric	crimp	10	250	
CX 02 JF/M		RJ45 + auxiliary	electric	crimp	10	250	
CX 01 UF/M		USB	electric	- CIIIIP	— 10 —	_	
CX 01 9VF/M		D-SUB	electric			50	
		D-SUB + shield		crimp		50	
CX 01 9VF2/M2			electric	crimp	5		
CX 01 9VTF		D-SUB	electric	screw	5	50	
CX 01 MIF/MIM		HDMI	electric			_	
CX 04 LF/M		POF / MOST	optic	crimp		_	
CX 04 RF/M		coaxial	electric	crimp		_	
CX 04 SCF/M		SC fibre optic	optic	crimp / glue		_	

<sup>▲</sup> Available upon request

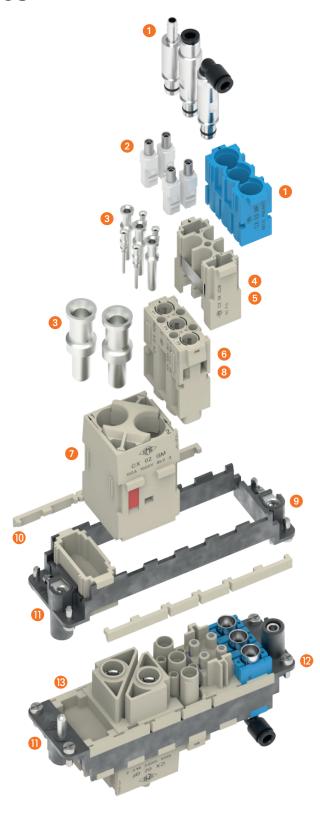


## TECHNICAL CHARACTERISTICS

- Pneumatic contacts in metal (or plastic) with hose barb or quick-fitting connection.
- Pibre optic contacts SC type.
- Electric contacts in silver-plated or gold-plated brass with connections to the conductors via crimping, spring clamp or axial screw.
- Modular inserts of identical size with insertion system for forming the complete module and frame lock tab.
- 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.
- Inserts in conformance with the requirements of the EN 61984 standard and certified and marked with the UL, CSA, CQC, DNV, BV, EAC marks.
- Inserts with patented "swallowtails" to prevent incorrect coupling.
- Osition of contacts identified with numbers or codes on both sides of every insert.
- Male/female module carrier frames with mandatory housings and polarity, in die-cast zinc alloy.
- 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.
- 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.
- Captive frame fastening screws, with spring washer.
- 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).





## **CQA/MQA 08 SIZE "32.13"**

Compact, metallic enclosures with stainless steel lever

## AXYR® CQYF /M 08E - CRIMP CQF /M 08E

New inserts in crimp and AXYR® technology



CQA 08 I, MQA 08 025 /V25 enclosures size "32.13" for new connectors with PE plate

CQ connectors 8 P +  $\oplus$  with PE plate





## **TECHNICAL FEATURES**



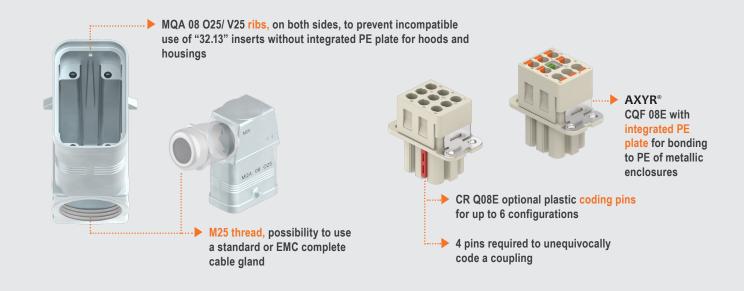
The new metallic enclosures CQA/MQA size "32.13" have been developed with utmost ease of assembly and simplicity in mind.

Being metallic, these new zinc alloy, zinc plated die cast enclosures, require <u>proper bonding to protective earth (PE), for safety reasons</u>. The existing solutions on the market, in order to fulfil this requirement and provide a safety-robust design in line with the mandatory CE marking statement for such devices, were unsatisfactory in this regard: such a compact design leaves no space for including a separate PE terminal inside the hoods/housings without implying the split of the hood/housing in two parts – thus adding at least two screws and one sealing gasket – and the presence of an additional arm and screw terminal inside the hood, likely to obstruct the wiring space, thus making the assembly utterly complex, expensive, and prone to additional troubles in keeping the high IP degree of protection provided by such enclosures.

On the other hand, insulating enclosures do not provide – although special insulating metallized EMC versions CQS 08 (CN.19 pages 573-575) exist – the necessary shielding of electromagnetic interference that the "32.13" connector inserts typically require for being used in conjunction with pulse width modulation (PWM) drives (inverters) for electric motors' speed/torque motion control, systems that are likely to produce significant harmonic pollution.

The new metallic enclosures, provided with a robust stainless steel locking lever, have their outer surface protected against corrosion by a conductive layer of galvanic zinc plating, thus they can easily serve as <a href="MC">EMC</a> enclosures, once provided with commercially available M25 EMC cable glands, and by replacing the standard rubber sealing gasket provided with the dedicated "32.13" male inserts with special conductive sealing gasket CR 08 EMC (see CN.19 page 575).

- New metallic enclosures CQA/MQA size "32.13" were therefore demanded to serve such applications. The solution envisaged is to let the "32.13" connector inserts provide such bonding to the surrounding metal hood/housing via a newly introduced PE plate reliably in contact with their PE male or female contact.
  - In order to dumb-proof avoid possibly hazardous mounting of any previously available connector inserts not provided with such PE plate (i.e.: CQF /M 08, CQF /M 04/2, CQF /M 17) into these **new series CQA/MQA metallic enclosures**, these ones have been provided by **internal keys** that match only with the corresponding **keyways** foreseen on the new inserts **CQYF /M 08E (AXYR\*) and CQF /M 08E (crimp)**, the only ones suitable for these enclosures.
- Q The new AXYR® CQYF /M 08E connector inserts have been developed already equipped with such additional PE plate, so as to be immediately available for installation either on the traditional insulating housings series CQ/MQ, or on the new size "32.13" series CQA/MQA metallic enclosures.
- The existing crimp equivalent inserts CQF /M 08 unsuitable for metallic hoods/housings needed to be complemented by a new variant, equipped with such additional PE plate; thus, the new crimp version CQF /M 08E (where the E after the polarity means presence of PE plate) is also suitable for use either inside traditional size "32.13" CQ/MQ insulating enclosures or inside the new size "32.13" series CQA/MQA metallic enclosures.



#### CQYF /M 08E 8 poles + 🕀 16 A - 500 V

enclosures: size "32.13"

page:

metallic

38

365 - 367

insulating type EMC (insulating)

573 - 574

ISO 23570-3 standard and DESINA  $_{\! \otimes}$ specification compliant



AXYR® terminal connections

**Q SILVER PLATED CONTACTS** 

### refer to CN.19 pages

description

spring/AXYR\* push-in connection female inserts with female contacts male inserts with male contacts

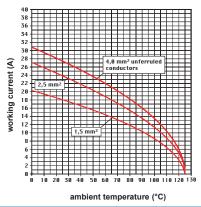
- characteristics according to EN 61984:

16 A 500 V 6 kV 3 16 A 400/690 V 8 kV 2

- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 3 mΩ
- each insert supplied with 2 fixing screws, self-tapping, zinc plated steel ø 2,9 x 9,5 mm, Ph1
- for max. current load see the connector inserts derating diagram under construction; for more information see page 28 of CN.19 catalogue

Q Please refer to page 18 to find out more about AXYR® technology and the full 16 A range

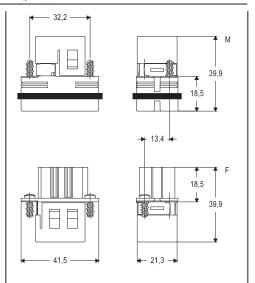
CQY..E 8 poles connector inserts Maximum current load derating diagram



part No.

inserts.

CQYF 08E CQYM 08E



contacts side (front view)





- inserts for conductors with the following cross-sectional areas:
- unferruled
- 0,25 mm<sup>2</sup> 4 mm<sup>2</sup> (AWG 24-12)
- ferruled 0,25 mm<sup>2</sup> - 2,5 mm<sup>2</sup> (AWG 24-14)
- conductors stripping length: 9...11 mm

Coding pin CR Q08E (refer to page 39)



### CQF /M 08E 8 poles + 🕀 16 A - 500 V

enclosures: size "32.13"

page:

metallic 38

insulating type EMC (insulating) 365 - 367 573 - 574

> ISO 23570-3 standard and DESINA  $_{\! \otimes}$ specification compliant



inserts. crimp connections



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



STANDARD



#### refer to CN.19 pages

description part No.

without contacts (to be ordered separately) female insert for female contacts

CQF 08E CQM 08E

male insert for male contacts

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

0,5 mm <sup>2</sup>	AWG 20	with no grooves
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1,5 mm <sup>2</sup>	AWG 16	two grooves
2,5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves
16 A male cri	mp contacts for a	advanced opening

16 A male cri	mp contacts for a	advanced opening
0,5 mm <sup>2</sup>	AWG 20	with no grooves
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1,5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

CCFA 0.5 CCFA 0.7 CCFA 1.0 CCFA 1.5 CCFA 2.5 CCFA 2.0 CCFA 4.0	silver plated
CCMA 0.3 CCMA 0.5 CCMA 0.7 CCMA 1.0 CCMA 1.5 CCMA 2.5 CCMA 3.0 CCMA 4.0	

CCFA 0.3 CCFA 0.5

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

CCFD 0.3

CCFD 0.5

CCFD 0.7

**CCFD 1.0 CCFD 1.5** CCFD 2.5 **CCFD 3.0 CCFD 4.0** 

CCMD 0.3 CCMD 0.5

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

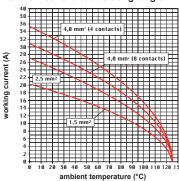
\* for basic or high thickness gold plating, please refer to CN.19 at page 675

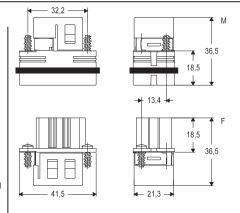
# characteristics according to EN 61984: 16 A 500 V 6 kV 3 16 A 400/690 V 8 kV 2

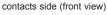
- DNV certified cURus, CQC, EAC, BV pending rated voltage according to UL/CSA: 600 V insulation resistance:  $\geq$  10 G $\Omega$  ambient temperature limit: -40 °C ... +125 °C made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant mechanical life:  $\geq$  500 cycles contact resistance:  $\leq$  1 m $\Omega$

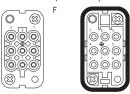
- mechanical life:  $\geq 500$  cycles contact resistance:  $\leq 1$  m $\Omega$  each insert supplied with 2 fixing screws, self-tapping, zinc plated steel Ø 2.9 x 9.5 mm, Ph1 it is recommended to crimp the contacts with crimping tools homologated by ILME (please refer to the crimping tool section 16 A contacts, CCF, CCM and CC...AN series on CN.19, pp 708-741) for max. current load see the connector inserts derating diagram below; for more information see page 28 of CN.19 catalogue

#### CQ..E 8 poles connector inserts Maximum current load derating diagram







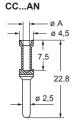


Coding pin CR Q08E (refer to page 39)



#### **CCF and CCM**





CCE CCM and CC AN contact

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

#### CQA - MQA **Metallic version**

inserts page: CQY 08E 8 poles + 🕀 36 **CQ 08E** 8 poles + @ 37

bulkhead mounting housings with single lever



#### hoods with 2 pegs



description	part No.	part No.	entry M
with lever and gasket	CQA 08 I		
with pegs, side entry with pegs, top entry		MQA 08 O25 MQA 08 V25	25 25

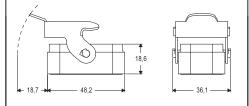
- DNV certified cURus (Type 12, 4, 4X), CQC, BV pending (EAC not applicable)
- ambient temperature limit: -40 °C ... +125 °C
- zinc die-cast, zinc plated
- stainless steel lever
- NBR flange gasket (interface gasket provided with male insert, where applicable)
   EMC (with suitable cable glands) and replacement of interface gasket on male insert with CR 08 EMC (refer
- to CN.19, page 575) top/side M25 cable entry

#### **☑** IMPORTANT NOTE:

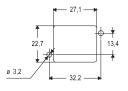
coded for use with "32.13" PE inserts only.



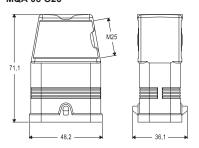
#### CQA 08 I



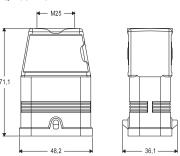
panel cut-out



#### MQA 08 O25



#### MQA 08 V25

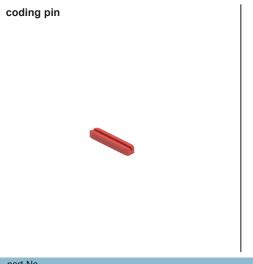


cURus Type 4/4X/12 pending



according to IEC/EN 60529



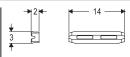


description part No.

Q It is possible to achieve up to <u>6 different codings</u> thanks to the use of the optional CR Q08E coding pin: 4 coding pins are required for each connector coupling.

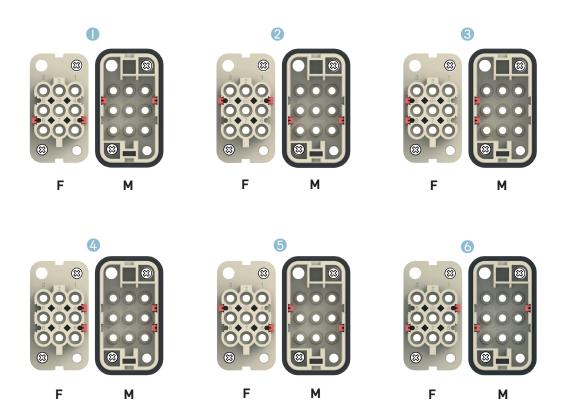
plastic coding pin

Q It is necessary to install two coding pins on each connector part.



CR Q08E

#### **CR Q08E CODING OPTIONS**



# **IL-BRID LOCKING LEVERS**

For standard size enclosures

CL - ML



Proprietary design
with embedded stainless steel core
to protect industrial multipole
connections





#### TECHNICAL FEATURES



Specific industrial applications demand the design of equally customized connection solutions capable of covering each distinct installation requirement.

Among the enclosures' locking systems introduced by ILME in its product offer, the IL-BRID mechanism, a lever in thermoplastic material with a stainless-steel core, combines the technical characteristics of both these materials for durable but significantly low-wear design.

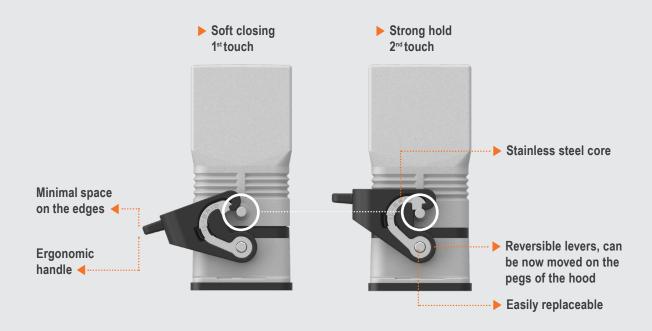
The **IL-BRID locking lever**, already introduced in the compact "CZ" and "MZ" size "49.16" and "66.16" enclosures series, is **now extended** to the whole ILME enclosures range for standard industrial applications, with the designation "CL" and "ML" in the bulkhead/surface mount housing or hood with lever versions, sizes "44.27", "57.27", "77.27" and "104.27".

The IL-BRID locking lever is **compatible** with the entire range of ILME enclosures with pegs (in single or double-lever configuration), offering an IP65 or IP66/IP69 degree of protection according to model.

The series, with standard metric M cable entries where forseen, is also available, upon request, with Pg or NPT cable entries (surface housing or hood with levers).

Main technical and functional characteristics:

- Q locking lever made of self-extinguishing thermoplastic material (UL approved) and stainless-steel core;
- Q improved closing mechanism with reduced wear on the pegs of the enclosure's counterpart;
- Q proprietary, ergonomic handles design for an easy opening and closing operation;
- Q IP65 or IP66/IP69 degree of protection according to EN 60529 (depending on model);
- Q reduced occupation of space on the outer edges thanks to a curved design;
- reversibility of the lever in the bulkhead housing versions (the locking levers can be mounted on the counterpart hood).



### CL - ML Standard version with IL-BRID levers

inserts		page:
CDD	24 poles + ⊕	76
CDS	9 poles +	-
CDSH	9 poles + 🕀	86
CDSH NC	6 poles + 🕀	95
CNE	6 poles +	110
CSE	6 poles +	-
CSH	6 poles + ⊕	110
CSH S	6 poles + 🕀	122
CCE	6 poles +	130
CSS	6 poles +	148
CT, CTSE (16A)*	6 poles + 🕀	160
CQE	10 poles + ⊕	168
MIXO	2 modules	262 - 317

<sup>\*</sup> can be used only in bulkhead mounting housings

# bulkhead mounting housings with single lever

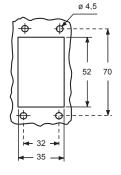




#### refer to CN.19 pages

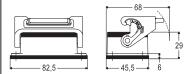
description	part No.	part No.	entry M
with lever	CLI 06 L		
with lever and cover	CLI 06 LS		
with lever		MLP 06 L20	20
with lever		MLP 06 L220	20 x 2
with lever, high construction		MLAP 06 L25	25
with lever, high construction		MLAP 06 L225	25 x 2
with lever, high construction		MLAP 06 L32	32
with lever, high construction		MLAP 06 L232	32 x 2
with lever, high construction		MLAP 06 L40	40
with lever, high construction		MLAP 06 L240	40 x 2
with lever and cover		MLP 06 LS20	20
with lever and cover		MLP 06 LS220	20 x 2
with lever and cover, high construction		MLAP 06 LS32	32
with lever and cover, high construction		MLAP 06LS232	32 x 2
with lever and cover, high construction		MLAP 06 LS40	40
with lever and cover, high construction		MLAP 06LS240	40 x 2

#### panel cut-out for bulkhead mounting housings

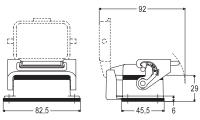


☑ IMPORTANT NOTE: The enclosures ensure IP66/IP69 degree of protection (or IP65 for hinged cover versions) when mated and locked with the closing levers.

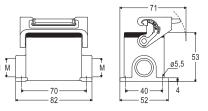
#### CLI 06 L



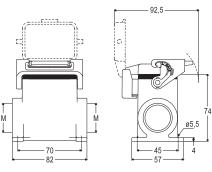
#### CLI 06 LS •



#### MLP 06 L



#### MLAP 06 LS



cURus Type 4/4X/12 pending (except enclosures with plastic cover)



insulating cable gland or fittings without gasket



cable gland with O-Ring gasket





inserts		page:
CDD	24 poles + (9)	76
CDS	9 poles + ⊕	-
CDSH	9 poles + ⊕	86
CDSH NC	6 poles + ⊕	95
CNE	6 poles + ⊕	110
CSE	6 poles + ⊕	-
CSH	6 poles + ⊕	110
CSH S	6 poles + ⊕	122
CCE	6 poles + ⊕	130
CSS	6 poles + ⊕	148
CQE	10 poles + ⊕	168
MIXO	2 modules	262 - 317



hoods with 1 lever M40 cable entry with 20 mm thread length

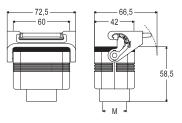


#### refer to CN.19 pages

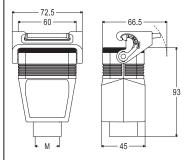
description	part No.	entry M	part No.	entry M	
with lever, top entry with lever, top entry, high construction with lever, top entry, high construction	MLV 06 LG25 MLAV 06 LG25 MLAV 06 LG32	25 25 32			
with lever, side entry, high construction, without adapter 1)			MLFO 06 LG40	40	
with lever, top entry, high construction, without adapter <sup>1)</sup> with lever, top entry, high construction, without adapter <sup>1)</sup> with lever, top entry, high construction, without adapter <sup>1)</sup>	MLFV 06 LG25 MLFV 06 LG32 MLFV 06 LG40	25 32 40			

<sup>&</sup>lt;sup>1)</sup> enclosure without adapter, threaded on the body, to be used only with a complete cable gland.

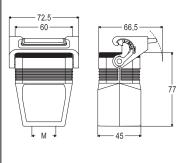




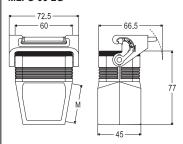
#### MLAV 06 LG



#### MLFV 06 LG



#### MLFO 06 LG



cURus Type 4/4X/12 pending



insulating cable gland or fittings without gasket



cable gland with O-Ring gasket

### CL - ML Standard version with IL-BRID levers

inserts		page:
CDD	42 poles + ⊕	78
CDS	18 poles + ⊕	-
CDSH	18 poles + ⊕	87
CNE	10 poles + ⊕	111
CSE	10 poles + ⊕	-
CSH	10 poles + ⊕	111
CSH S	10 poles + ⊕	123
CCE	10 poles + ⊕	131
CMSH	3+2 (aux) poles + (	136
CMCE	3+2 (aux) poles + (	137
CSS	10 poles + ⊕	149
CT, CTSE (16A)*	10 poles + ⊕	161
COE	18 poles + ⊕	169
CX	8/24 poles +	194
MIXO	3 modules	262 - 317

<sup>\*</sup> can be used only in bulkhead mounting housing

bulkhead mounting housings with 2 levers

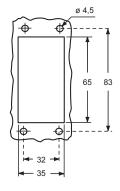




refer	to	CN.	19	pages

description	part No.	part No.	entry M
with levers	CLI 10		
with levers		MLP 10.20	20
with levers		MLP 10.220	20 x 2
with levers, high construction		MLAP 10.25	25
with levers, high construction		MLAP 10.225	25 x 2
with levers, high construction		MLAP 10.32	32
with levers, high construction		MLAP 10.232	32 x 2
with levers, high construction		MLAP 10.40	40
with levers, high construction		MLAP 10.240	40 x 2

panel cut-out for bulkhead mounting housings



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

cURus Type 4/4X/12 pending

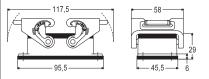


insulating cable gland or fittings without gasket

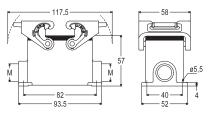


cable gland with O-Ring gasket

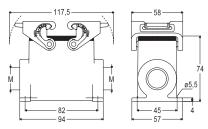
#### CLI 10 🔺

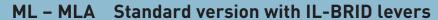


#### MLP 10.220

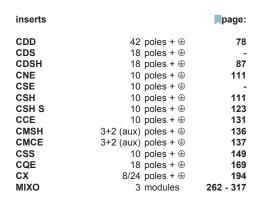


#### MLAP 10.225











hoods with 2 lever M40 cable entry with 20 mm thread length

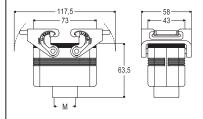


#### refer to CN.19 pages

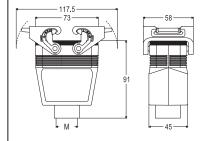
description	part No.	entry M	part No.	entry M
with levers, top entry with levers, top entry, high construction with levers, top entry, high construction with levers, top entry, high construction	MLV 10 G25 MLAV 10 G25 MLAV 10 G32 MLAV 10 G40	25 25 32 40		
with levers, side entry, high construction, without adapter 1)			MLFO 10 G40	40
with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup>	MLFV 10 G25 MLFV 10 G32 MLFV 10 G40	25 32 40		

<sup>&</sup>lt;sup>1)</sup> enclosure without adapter, threaded on the body, to be used only with a complete cable gland.

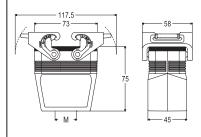
#### MLV 10 G



#### MLAV 10 G



#### MLFV 10 G



cURus Type 4/4X/12 pending

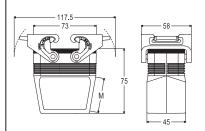


insulating cable gland or fittings without gasket



cable gland with O-Ring gasket

#### MLFO 10 G



### CL - ML Standard version with IL-BRID levers

bulkhead mounting housings with 2 levers



surface mounting housings with 2 levers

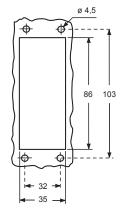


\* can be used only in bulkhead mounting housings

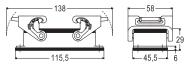
#### refer to CN.19 pages

description	part No.	part No.	entry M
with levers	CLI 16		
with levers		MLP 16.25	25
with levers		MLP 16.225	25 x 2
with levers, high construction		MLAP 16.25	25
with levers, high construction		MLAP 16.225	25 x 2
with levers, high construction		MLAP 16.32	32
with levers, high construction		MLAP 16.232	32 x 2
with levers, high construction		MLAP 16.40	40
with levers, high construction		MLAP 16.240	40 x 2

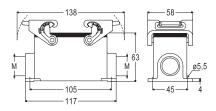
panel cut-out for bulkhead mounting housings



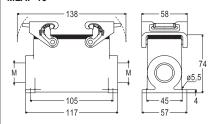
CLI 16 📥



MLP 16



MLAP 16



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

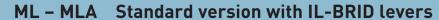
cURus Type 4/4X/12 pending



insulating cable gland or fittings without gasket



cable gland with O-Ring gasket





inserts				page:
CD			poles + ⊕	70
CDD			poles + 🕀	79
CDS		27	poles + 🕀	-
CDSH		27	poles +	88
CNE		16	poles +	112
CSE		16	poles +	-
CSH		16	poles +	112
CSH S		16	poles + 🕀	124
CCE		16	poles + 🕀	132
CMSH, C	MCE	6+2 (aux)	poles + ⊕	138 - 139
CSS		` 16	poles + 🕀	150
CQE		32	poles + ⊕	170
CQEE		40	poles +	176
CP		6	poles + 🕀	178
CX	6/12,	6/36 and 12/2	poles + 🕀	197 - 199
CX		4/0 and 4/2	poles +	200 - 201
MIXO			modules	262 - 317



hoods with 2 lever M40 cable entry with 20 mm thread length

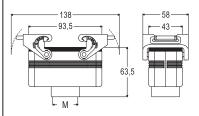


#### refer to CN.19 pages

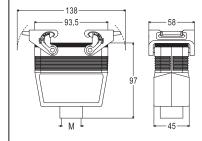
description	part No.	entry M	part No.	entry M
with levers, top entry with levers, top entry, high construction with levers, top entry, high construction with levers, top entry, high construction	MLV 16 G32 MLAV 16 G25 MLAV 16 G32 MLAV 16 G40	32 25 32 40		
with levers, side entry, high construction, without adapter 1)			MLFO 16 G40	40
with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup>	MLFV 16 G25 MLFV 16 G32 MLFV 16 G40	25 32 40		

<sup>&</sup>lt;sup>1)</sup> enclosure without adapter, threaded on the body, to be used only with a complete cable gland.

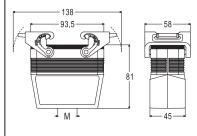
#### MLV 16 G



#### MLAV 16 G



#### MLFV 16 G



cURus Type 4/4X/12 pending

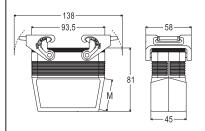


insulating cable gland or fittings without gasket



cable gland with O-Ring gasket

## MLFO 16 G



### CL - ML Standard version with IL-BRID levers

inserts		page:
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, CTS (10A)*	64 poles + ⊕	157
CT, CTSE (16A)*	24 poles +	163
CQE	46 poles +	171
CQEE	64 poles +	177
CX	4/8 and 6/6 poles + (9)	204 and 206
MIXO	6 modules	

\* can be used only in bulkhead mounting housings

refer to CN.19 pages

bulkhead mounting housings with 2 levers

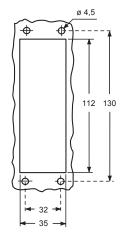


surface mounting housings with 2 levers



	I	I	
description	part No.	part No.	entry
			M
with levers	CLI 24		
with levers		MLP 24.25	25
with levers		MLP 24.225	25 x 2
with levers, high construction		MLAP 24.25	25
with levers, high construction		MLAP 24.225	25 x 2
with levers, high construction		MLAP 24.32	32
with levers, high construction		MLAP 24.232	32 x 2
with levers, high construction		MLAP 24.40	40
with levers, high construction		MLAP 24.240	40 x 2

panel cut-out for bulkhead mounting housings



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

cURus Type 4/4X/12 pending

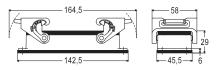


insulating cable gland or fittings without gasket

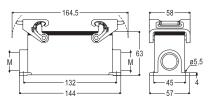


cable gland with O-Ring gasket

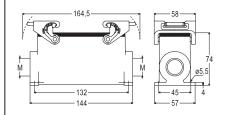
CLI 24 🔺



MLP 24

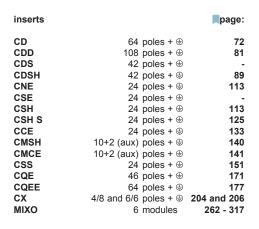


MLAP 24



# ML - MLA Standard version with IL-BRID levers







hoods with 2 lever M40 cable entry with 20 mm thread length

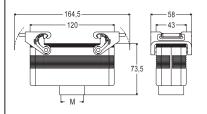


#### refer to CN.19 pages

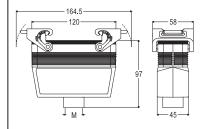
description	part No.	entry M	part No.	entry M
with levers, top entry with levers, top entry, high construction with levers, top entry, high construction with levers, top entry, high construction	MLV 24 G32 MLAV 24 G25 MLAV 24 G32 MLAV 24 G40	32 25 32 40		
with levers, side entry, high construction, without adapter 1)			MLFO 24 G40	40
with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup> with levers, top entry, high construction, without adapter <sup>1)</sup>	MLFV 24 G25 MLFV 24 G32 MLFV 24 G40	25 32 40		

<sup>&</sup>lt;sup>1)</sup> enclosure without adapter, threaded on the body, to be used only with a complete cable gland.

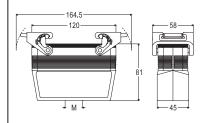
#### MLV 24 G



#### MLAV 24 G



#### MLFV 24 G



cURus Type 4/4X/12 pending

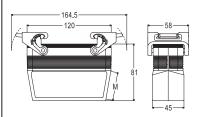


insulating cable gland or fittings without gasket



cable gland with O-Ring gasket

#### MLFO 24 G



## **T-TYPE HYGIENIC**

New, improved design for smoother locking levers and cleanproof logo



Safety, detectability and cleaning for food contamination prevention





## TECHNICAL FEATURES



The T-TYPE HYGIENIC series (T-TYPE /H and T-TYPE /C) enclosures have been improved in their design to enhance their cleanability, thus reducing the likeliness of providing seat for dirt.

This has been achieved by a overhaul design of their locking levers, keeping its sturdiness and impeccable locking function, still made with blue coloured thermoplastic insulating material qualified for contact with food and resistant to the most popular cleaning agents, now also metaldetectable, in the remote event - frankly quite unlikely - of loss of parts

The new design of the T-TYPE HYGIENIC locking levers is characterized by:

- Q a "family air" shared with the new IL-BRID locking levers for standard metallic connector enclosures (see previous pages);
- Q the **smoothening** of any recess;

of said levers in the food.

In addition to the models described in detail in the following pages, all surface mounting housings with both M cable entries opened and all hoods and housings with preassembled CR ... BPE protective earth jumpers are available. See Table below for all part Nos.

the remodelling of any part possibly retaining dirt;

Q the keeping of utmost ergonomics;

Q the achieving of significant reduction in footprint, during movement, particularly on the angles.

Additionally, the ILME-striped logo, signature trait of the T-TYPE series hoods, has become a smoothed, only slightly high relief and clean proof sign, guaranteeing an even more cleanable surface compared to the previous bas-relief version.

The ILME logo improvement regards all T-TYPE variants, including the standard type and the T-TYPE /W, all sharing the same hoods. Part numbers remain unchanged. Zip code will be announced by a dedicated Product Info (also for standard T-TYPE and T-TYPE /W).

Variants with preassembled CR ... BPE protective earth jumpers are available for all series T-TYPE hoods and housings, including also standard types and T-TYPE /W. Their part number is the same of base model plus letter B at the end, as shown - for T-TYPE HYGIENIC models only - in the table below.

			T-TYPE HYGIENIC	/Н	T-TYPE HYGIENIC	Cold /C
Size	Cable outlet	Locking lever	part No.	part No.*	part No.	part No.*
44.27	-	single	THIH 06 L	THIH 06 LB	THIC 06 L	THIC 06 LB
57.27	-		THIH 10	THIH 10 B	THIC 10	THIC 10 B
77.27	-	double	THIH 16	THIH 16 B	THIC 16	THIC 16 B
104.27	-		THIH 24	THIH 24 B	THIC 24	THIC 24 B
	M25		TAPH 06 L25	TAPH 06L25B	TAPC 06 L25	TAPC 06L25B
44.27	M32	single	TAPH 06 L32	TAPH 06L32B	TAPC 06 L32	TAPC 06L32B
44.27	2xM25	single	TAPH 06 L225	TAPH06L225B	TAPC 06 L225	TAPC06L225B
	2xM32		TAPH 06 L232	TAPH06L232B	TAPC 06 L232	TAPC06L232B
	M25		TAPH 10.25	TAPH 10.25B	TAPC 10.25	TAPC 10.25B
E7 07	M32		TAPH 10.32	TAPH 10.32B	TAPC 10.32	TAPC 10.32B
57.27	2xM25		TAPH 10.225	TAPH10.225B	TAPC 10.225	TAPC10.225B
	2xM32		TAPH 10.232	TAPH10.232B	TAPC 10.232	TAPC10.232B
	M32		TAPH 16.32	TAPH 16.32B	TAPC 16.32	TAPC 16.32B
77.07	M40		TAPH 16.40	TAPH 16.40B	TAPC 16.40	TAPC 16.40B
77.27	2xM32	double	TAPH 16.232	TAPH16.232B	TAPC 16.232	TAPC16.232B
	2xM40		TAPH 16.240	TAPH16.240B	TAPC 16.240	TAPC16.240B
	M32		TAPH 24.32	TAPH 24.32B	TAPC 24.32	TAPC 24.32B
404.07	M40		TAPH 24.40	TAPH 24.40B	TAPC 24.40	TAPC 24.40B
104.27	2xM32		TAPH 24.232	TAPH24.232B	TAPC 24.232	TAPC24.232B
	2xM40		TAPH 24.240	TAPH24.240B	TAPC 24.240	TAPC24.240B
44.07	M25	-11-	TAVH 06 LG25	TAVH06LG25B	TAVC 06 LG25	TAVC06LG25B
44.27	M32	single	TAVH 06 LG32	TAVH06LG32B	TAVC 06 LG32	TAVC06LG32B
F7 07	M25		TAVH 10 G25	TAVH 10G25B	TAVC 10 G25	TAVC 10G25B
57.27	M32		TAVH 10 G32	TAVH 10G32B	TAVC 10 G32	TAVC 10G32B
77.07	M32	daubla	TAVH 16 G32	TAVH 16G32B	TAVC 16 G32	TAVC 16G32B
77.27	M40	double	TAVH 16 G40	TAVH 16G40B	TAVC 16 G40	TAVC 16G40B
404.07	M32		TAVH 24 G32	TAVH 24G32B	TAVC 24 G32	TAVC 24G32B
104.27	M40		TAVH 24 G40	TAVH 24G40B	TAVC 24 G40	TAVC 24G40B

<sup>\*</sup> Enclosures with protective earth jumpers CR...BPE preassembled with part No. of base model plus letter B at the end.

			Covers for T-TYPE HYGIENIC	Covers for T-TYPE HYGIENIC Cold
Size	With loop	Locking lever	part No.	part No.
44.27		single	THCH 06 LG	THCC 06 LG
57.27			THCH 10 G	THCC 10 G
77.27		double	THCH 16 G	THCC 16 G
104.27			THCH 24 G	THCC 24 G

inserts		page:
CDD	24 poles +	76
CDS	9 poles +	-
CDSH	9 poles +	86
CDSH NC	6 poles + ⊕	95
CNE	6 poles + ⊕	110
CSE	6 poles + ⊕	-
CSH	6 poles + ⊕	110
CSH S	6 poles + ⊕	122
CCE	6 poles + ⊕	130
CSS	6 poles + ⊕	148
CT, CTSE (16 A)*	6 poles + ⊕	160
CQE	10 poles + ⊕	168
MIXO	2 modules	262 - 317

<sup>\*</sup> only for standard insulating version THIH

# housings with single lever HNBR gasket



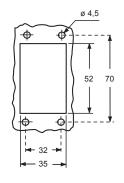
#### hoods with 2 pegs



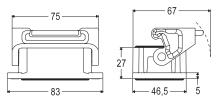
#### refer to CN.19 pages

description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic lever	THIH 06 L			
surface mounting housing with thermoplastic lever, high construction surface mounting housing with thermoplastic lever, high construction	TAPH 06 L25 TAPH 06 L32	25 32		
with pegs, side entry, high construction with pegs, side entry, high construction			TMAO 06 L25 TMAO 06 L32	25 32
with pegs, top entry, high construction with pegs, top entry, high construction			TMAV 06 L25 TMAV 06 L32	25 32

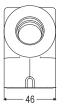
#### panel cut-out for bulkhead mounting housings

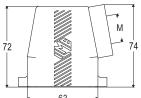


#### THIH L

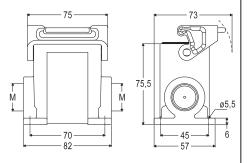


#### TMAO L





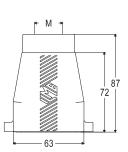
#### TAPH L



(\*) The surface mounting, high construction housings are supplied with an open threaded entry (\*) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

#### TMAV L





cURus Type 12 pending







inserts		page:
CDD	24 poles + ⊕	76
CDS	9 poles + 🕀	-
CDSH	9 poles +	86
CDSH NC	6 poles +	95
CNE	6 poles + ⊕	110
CSE	6 poles + ⊕	-
CSH	6 poles + ⊕	110
CSH S	6 poles + ⊕	122
CCE	6 poles +	130
CSS	6 poles + ⊕	148
CT, CTSE (16 A)*	6 poles +	160
CQE	10 poles + ⊕	168
MIXO	2 modules	262 - 317

<sup>\*</sup> only for standard insulating version TCHC

hoods with single lever top entry, HNBR gasket



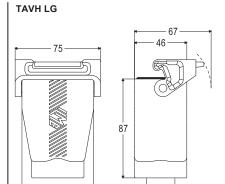
covers HNBR gasket



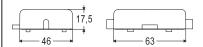


#### refer to CN.19 pages

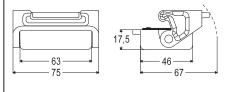
description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic lever and gasket, high construction with thermoplastic lever and gasket, high construction	TAVH 06 LG25 TAVH 06 LG32			
with pegs			TCHC 06 L	TCHC 06 SL
with thermoplastic lever and gasket				THCH 06 LG



#### TCHC L (SL)



#### THCH LG



For fixing on housings



For fixing on hoods

loop



cURus Type 12 pending



inserts		page:
CDD	42 poles + ⊕	78
CDS	18 poles + ⊕	-
CDSH	18 poles + ⊕	87
CNE	10 poles + ⊕	111
CSE	10 poles + ⊕	-
CSH	10 poles +	111
CSH S	10 poles + ⊕	123
CCE	10 poles +	131
CMSH	3+2 (aux) poles + (	136
CMCE	3+2 (aux) poles + (	137
CSS	10 poles + ⊕	149
CT, CTSE (16 A)*	10 poles + ⊕	161
CQE	18 poles + ⊕	169
СХ	8/24 poles + ⊕	194
MIXO	3 modules	262 - 317

<sup>\*</sup> only for standard insulating version THIH

#### refer to CN.19 pages

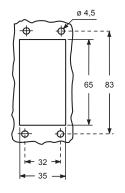


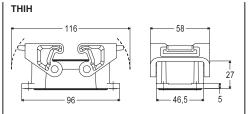


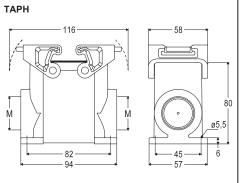
hoods with 4 pegs

	•		'	
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	THIH 10			
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPH 10.25 TAPH 10.32	25 32		
with pegs, side entry, high construction with pegs, side entry, high construction				25 32
with pegs, top entry, high construction with pegs, top entry, high construction				25 32

panel cut-out for bulkhead mounting housings



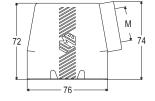




The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

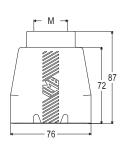
#### TMAO





#### TMAV





cURus Type 12 pending



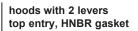




inserts		page:
CDD	42 poles + ⊕	78
CDS	18 poles +	-
CDSH	18 poles + @	87
CNE	10 poles + @	111
CSE	10 poles + @	-
CSH	10 poles +	111
CSH S	10 poles + ⊕	123
CCE	10 poles + ⊕	131
CMSH	3+2 (aux) poles + (	136
CMCE	3+2 (aux) poles + (#)	137
CSS	10 poles + ⊕	149
CT, CTSE (16 A)*	10 poles +	161
CQE	18 poles + ⊕	169
CX	8/24 poles + ⊕	194
MIXO	3 modules	262 - 317

<sup>\*</sup> only for standard insulating version TCHC

#### refer to CN.19 pages





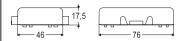
covers
<b>HNBR</b> gasket



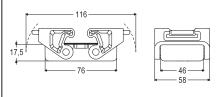
description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVH 10 G25 TAVH 10 G32	25 32		
with 4 pegs			TCHC 10	TCHC 10 S
with 2 thermoplastic levers and gasket				THCH 10 G

# TAVH G 116 58 87 M 76





#### THCH G



cURus Type 12 pending



ambient temperature limits -40 °C / +70 °C

For fixing on housings

For fixing on hoods

loop



inserts		page:
CD	40 poles + ⊕	70
CDD	72 poles +	79
CDS	27 poles +	-
CDSH	27 poles +	88
CNE	16 poles +	112
CSE	16 poles +	-
CSH	16 poles +	112
CSH S	16 poles +	124
CCE	16 poles + ⊕	132
CMSH. CMCE	6+2 (aux) poles +	138 - 139
CSS	16 poles +	150
CT, CTSE (16 A)*	16 poles + ⊕	162
CQE	32 poles +	170
CQEE	40 poles + ⊕	176
CP	6 poles + ⊕	178
CX 6/12.6/3	6 and 12/2 poles + (9)	197 - 199
,	4/0 and 4/2 poles + (9)	200 - 201
	z z po.co	

<sup>\*</sup> only for standard insulating version THIH

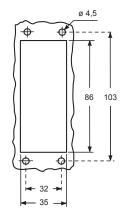
# ■ refer to CN.19 pages



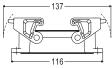


description	part No.	entry M	part No.	entry M	
bulkhead mounting housing with thermoplastic levers	THIH 16				
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPH 16.32 TAPH 16.40	32 40			
with pegs, side entry, high construction with pegs, side entry, high construction			TMAO 16.32 TMAO 16.40	32 40	
with pegs, top entry, high construction with pegs, top entry, high construction			TMAV 16.32 TMAV 16.40	32 40	

panel cut-out for bulkhead mounting housings







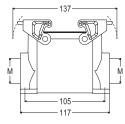


#### **TMAO**

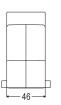




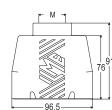
#### TAPH







TMAV



The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

cURus Type 12 pending







inserts		page:
CD	40 poles +	70
CDD	72 poles +	79
CDS	27 poles +	-
CDSH	27 poles +	88
CNE	16 poles + ⊕	112
CSE	16 poles + ⊕	-
CSH	16 poles +	112
CSH S	16 poles + ⊕	124
CCE	16 poles + ⊕	132
CMSH, CMCE	6+2 (aux) poles +	138 - 139
CSS	16 poles +	150
CT, CTSE (16 A)*	16 poles + 🕀	162
CQE	32 poles + 🕀	170
CQEE	40 poles + ⊕	176
CP	6 poles +	178
<b>CX</b> 6/12, 6/3	36 and 12/2 poles + ⊕	197 - 199
CX	4/0 and 4/2 poles +	200 - 201
* only for standard	insulating version TCHc	

hoods with 2 levers top entry, HNBR gasket



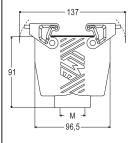
#### covers HNBR gasket

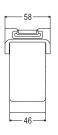


А	refer	to	CN.1	19	pages
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description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVH 16 G32 TAVH 16 G40	32 40		
with 4 pegs			TCHC 16	TCHC 16 S
with 2 thermoplastic levers and gasket				THCH 16 G



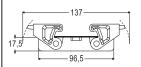




#### TCHC (S)



#### THCH G





cURus Type 12 pending



ambient temperature limits -40 °C / +70 °C

For fixing on housings



For fixing on hoods

loon



inserts			page:
CD	64	poles +	72
CDD		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 (16 A)*	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

<sup>\*</sup> only for standard insulating version THIH

# housings with 2 levers HNBR gasket

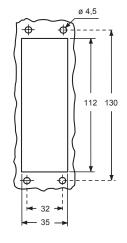


hoods with 4 pegs

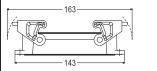
rofor	to	CN	19	pages
reiei	ιU	CIV.	13	Daues

description	part No.	entry M	ра	art No.	entry M
bulkhead mounting housing with thermoplastic levers	THIH 24				
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPH 24.32 TAPH 24.40	32 40			
with pegs, side entry, high construction with pegs, side entry, high construction					32 40
with pegs, top entry, high construction with pegs, top entry, high construction					32 40

panel cut-out for bulkhead mounting housings



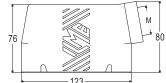




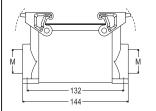


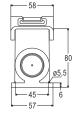
#### **TMAO**





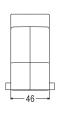
#### TAPH

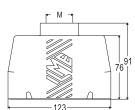




The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

#### TMAV





cURus Type 12 pending







inserts		page:
CD	64 poles + ⊕	72
CDD	108 poles +	81
CDS	42 poles + ⊕	-
CDSH	42 poles +	89
CNE	24 poles + (9)	113
CSE	24 poles + (9)	-
CSH	24 poles + (9)	113
CSH S	24 poles + (9)	125
CCE	24 poles + (9)	133
CMSH	10+2 (aux) poles + (9)	140
CMCE	10+2 (aux) poles + (9)	141
CSS	24 poles + (9)	151
CT, CTSE (16 A)*	24 poles + (9)	163
CQE	46 poles + @	171
CQEE	64 poles + @	177
CX	4/8 and 6/6 poles + @	204, 206
MIXO	6 modules	262 - 317

<sup>\*</sup> only for standard insulating version TCHC

refer to CN.19 pages

#### hoods with 2 levers top entry, HNBR gasket

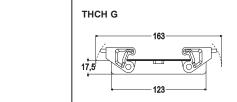






description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVH 24 G32 TAVH 24 G40	32 40		
with 4 pegs			TCHC 24	TCHC 24 S
with 2 thermoplastic levers and gasket				THCH 24 G

# THCH 24 G TAVH G TCHC (S) 163-



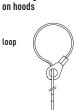


cURus Type 12 pending



ambient temperature limits -40 °C / +70 °C

For fixing on housings



For fixing

inserts		page:
CDD	24 poles + ⊕	76
CDS	9 poles + 🖶	-
CDSH	9 poles +	86
CDSH NC	6 poles +	95
CNE	6 poles + ⊕	110
CSE	6 poles +	-
CSH	6 poles +	110
CSH S	6 poles +	122
CCE	6 poles +	130
CSS	6 poles + ⊕	148
CT, CTSE (16 A)*	6 poles +	160
CQE	10 poles + ⊕	168
MIXO	2 modules	262 - 317

<sup>\*</sup> only for standard insulating version THIH

# housings with 2 levers SILICONE gasket

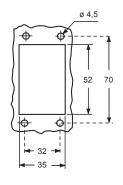
#### hoods with 4 pegs



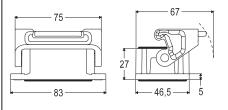
#### refer to CN.19 pages

	•		·		
description	part No.	entry	part No.	entry	
		M		M	
bulkhead mounting housing with thermoplastic lever	THIC 06 L				
surface mounting housing with thermoplastic lever, high construction	TAPC 06 L25	25			
surface mounting housing with thermoplastic lever, high construction	TAPC 06 L32	32			
with pegs, side entry, high construction			TMAO 06 L	<b>25</b> 25	
with pegs, side entry, high construction			TMAO 06 L	<b>32</b> 32	
with pegs, top entry, high construction			TMAV 06 L2	<b>25</b> 25	
with pegs, top entry, high construction			TMAV 06 L3	32 32	

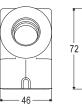
#### panel cut-out for bulkhead mounting housings

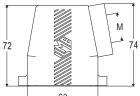


#### THIC L

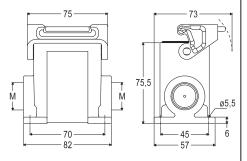


#### TMAO L





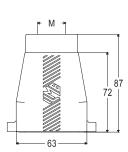
#### TAPC L



(\*) The surface mounting, high construction housings are supplied with an open threaded entry (\*) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

#### TMAV L





cURus Type 12 pending







inserts		page:
CDD CDS CDSH CDSH NC CNE CSE	24 poles + ⊕ 9 poles + ⊕ 9 poles + ⊕ 6 poles + ⊕	76 - 86 95 110
CSH S CCE CSS CT, CTSE (16 A)* CQE MIXO	6 poles + ⊕ 10 poles + ⊕ 2 modules	122 130 148 160 168 262 - 317

<sup>\*</sup> only for standard insulating version TCHC

# hoods with 2 levers, top entry SILICONE gasket



#### covers SILICONE gasket

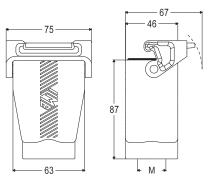




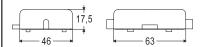
#### refer to CN.19 pages

description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic lever and gasket, high construction with thermoplastic lever and gasket, high construction	TAVC 06 LG25 TAVC 06 LG32			
with pegs			TCHC 06 L	TCHC 06 SL
with thermonlastic lever and gasket				THCC 06 LG

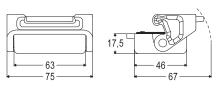




#### TCHC L (SL)



#### THCC LG



cURus Type 12 pending



ambient temperature limits -50 °C / +70 °C

For fixing on housings



For fixing on hoods

loop



inserts		page:
CDD	42 poles + ⊕	78
CDS	18 poles + ⊕	-
CDSH	18 poles + ⊕	87
CNE	10 poles + ⊕	111
CSE	10 poles +	-
CSH	10 poles +	111
CSH S	10 poles +	123
CCE	10 poles +	131
CMSH	3+2 (aux) poles +	136
CMCE	3+2 (aux) poles +	137
CSS	10 poles +	149
CT, CTSE (16 A)*	10 poles +	161
CQE	18 poles + ⊕	169
CX	8/24 poles +	194
MIXO	3 modules	262 - 317

<sup>\*</sup> only for standard insulating version THIH

#### refer to CN.19 pages

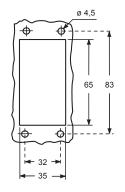


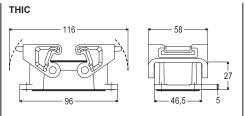


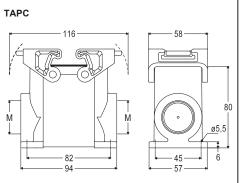
hoods with 4 pegs

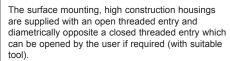
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	THIC 10			
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPC 10.25 TAPC 10.32	25 32		
with pegs, side entry, high construction with pegs, side entry, high construction			TMAO 10.25 TMAO 10.32	25 32
with pegs, top entry, high construction with pegs, top entry, high construction			TMAV 10.25 TMAV 10.32	25 32

panel cut-out for bulkhead mounting housings

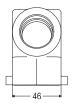


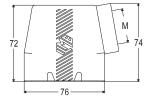




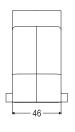


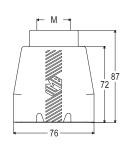
TMAO





TMAV





cURus Type 12 pending







inserts		page:
CDD	42 poles + ⊕	78
CDS	18 poles + 🕀	-
CDSH	18 poles + ⊕	87
CNE	10 poles + ⊕	111
CSE	10 poles + ⊕	-
CSH	10 poles + ⊕	111
CSH S	10 poles + ⊕	123
CCE	10 poles + ⊕	131
CMSH	3+2 (aux) poles +	136
CMCE	3+2 (aux) poles + (	137
CSS	10 poles + ⊕	149
CT, CTSE (16 A)*	10 poles + ⊕	161
CQE	18 poles + ⊕	169
СХ	8/24 poles + ⊕	194
MIXO	3 modules	262 - 317

hoods with 2 levers, top entry SILICONE gasket



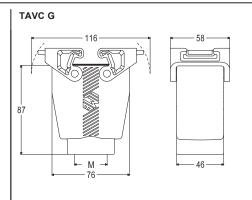
#### covers SILICONE gasket



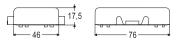
\* only for standard insulating version TCHC

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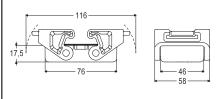
description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVC 10 G25 TAVC 10 G32	25 32		
with 4 pegs			TCHC 10	TCHC 10 S
with 2 thermoplastic levers and gasket				THCC 10 G



#### TCHC (S)



#### THCC G



cURus Type 12 pending



ambient temperature limits -50 °C / +70 °C

For fixing on housings

eyelet loop



inserts	page:
CD	40 poles + (a) 70
CDD CDS	72 poles + ⊕ <b>79</b> 27 poles + ⊕ -
CDSH	27 poles + (#) 88
CNE	16 poles + 🕀 112
CSE	16 poles + 🕀 -
CSH	16 poles + ⊕ <b>112</b>
CSH S	16 poles + ⊕ <b>124</b>
CCE	16 poles + ⊕ <b>132</b>
CMSH, CMCE	6+2 (aux) poles + (aux) 138 - 139
CSS	16 poles + ⊕ <b>150</b>
CT, CTSE (16 A)*	16 poles + ⊕ <b>162</b>
CQE	32 poles + ⊕ <b>170</b>
CQEE	40 poles + ⊕ 176
CP	6 poles + ⊕ 178
	6 and 12/2 poles + 🕀 197 - 199
CX	4/0 and 4/2 poles + (a) 200 - 201

<sup>\*</sup> only for standard insulating version THIH

# housings with 2 levers SILICONE gasket

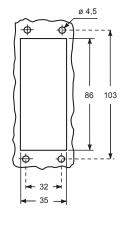
ACTION APPEA	
Transmission (	

hoods with 4 pegs

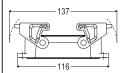
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reter	το	UN.	19	pages	

description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	THIC 16			
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPC 16.32 TAPC 16.40	32 40		
with pegs, side entry, high construction with pegs, side entry, high construction			TMAO 16.32 TMAO 16.40	32 40
with pegs, top entry, high construction with pegs, top entry, high construction			TMAV 16.32 TMAV 16.40	32 40

#### panel cut-out for bulkhead mounting housings







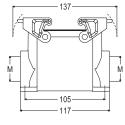


#### **TMAO**





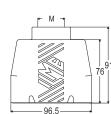
#### TAPC







TMAV



The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

cURus Type 12 pending







inserts		page:
CD	40 poles + ⊕	70
CDD	72 poles + ⊕	79
CDS	27 poles +	-
CDSH	27 poles +	88
CNE	16 poles + ⊕	112
CSE	16 poles + ⊕	-
CSH	16 poles + ⊕	112
CSH S	16 poles + ⊕	124
CCE	16 poles +	132
CMSH, CMCE	6+2 (aux) poles +	138 - 139
CSS	16 poles +	150
CT, CTSE (16 A)*	16 poles + ⊕	162
CQE	32 poles +	170
CQEE	40 poles +	176
CP	6 poles + ⊕	178
<b>CX</b> 6/12, 6/3	6 and 12/2 poles +	197 - 199
	4/0 and 4/2 poles +	200 - 201
	•	

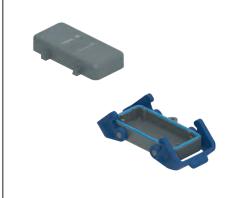
<sup>\*</sup> only for standard insulating version THCH

refer to CN.19 pages

# hoods with 2 levers, top entry SILICONE gasket







description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVC 16 G32 TAVC 16 G40	32 40		
with 4 pegs			TCHC 16	TCHC 16 S
with 2 thermoplastic levers and gasket				THCC 16 G

# THCC 16 G TAVC G TCHC (S) THCC G For fixing For fixing on housings on hoods loop

cURus Type 12 pending





inserts			page:
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)		140
CMCE	10+2 (aux)		141
CSS		poles + ⊕	151
CT, CTSE (16 A)*		poles + ⊕	163
CQE		poles +	171
CQEE		poles + ⊕	177
CX	4/8 and 6/6		204, 206
MIXO		modules	262 - 317

<sup>\*</sup> only for standard insulating version THIH

# housings with 2 levers SILICONE gasket

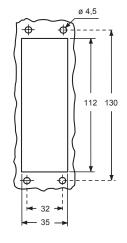
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ance step
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hoods with 4 pegs

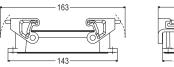
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description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	THIC 24			
surface mounting housing, thermoplastic levers, high construction surface mounting housing, thermoplastic levers, high construction	TAPC 24.32 TAPC 24.40	32 40		
with pegs, side entry, high construction with pegs, side entry, high construction			TMAO 24.32 TMAO 24.40	32 40
with pegs, top entry, high construction with pegs, top entry, high construction			TMAV 24.32 TMAV 24.40	32 40

panel cut-out for bulkhead mounting housings



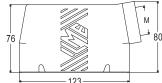




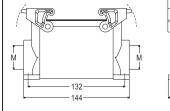


#### **TMAO**



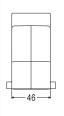


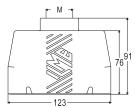
TAPC



The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

#### TMAV





cURus Type 12 pending







inserts			page:
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)		141
CSS		poles +	151
CT, CTSE (16 A)		poles +	163
COE		poles +	171
CQEE		poles + ⊕	177
CX	4/8 and 6/6		204, 206
MIXO		modules	262 - 317

<sup>\*</sup> only for standard insulating version TCHC

refer to CN.19 pages

# hoods with 2 levers, top entry SILICONE gasket

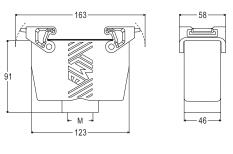


#### covers SILICONE gasket



description	part No.	entry M	part No. (with eyelet)	part No. (with loop)
with thermoplastic levers and gasket, high construction with thermoplastic levers and gasket, high construction	TAVC 24 G32 TAVC 24 G40	32 40		
with 4 pegs			TCHC 24	TCHC 24 S
with 2 thermoplastic levers and gasket				THCC 24 G

# THCC 24 G TAVC G TCHC (S) 163-



THCC G



cURus Type 12 pending

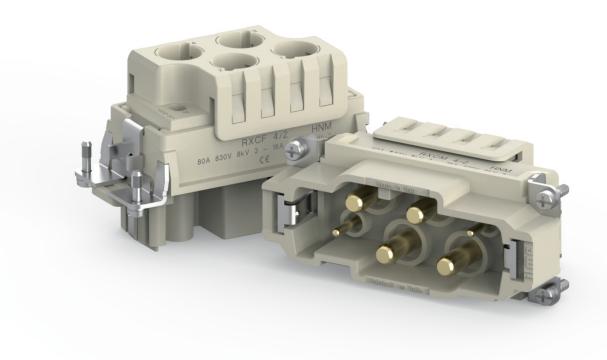




For fixing For fixing on housings on hoods loop

# RXC SERIES COMBINED CRIMP CONNECTOR

# **HNM** VERSION



# RXCF /M 4/2 Combined power/auxiliaries crimp connector

(<u>HNM</u> version of CXC)

**4 P +** ⊕: 80 A 830 V 8 kV 3

**2 P +** ⊕: 16 A 400 V 6 kV 3



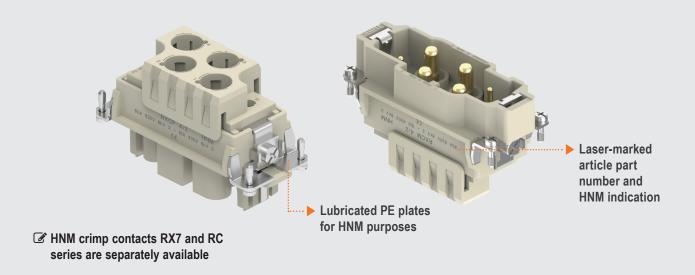


#### **TECHNICAL FEATURES**

The new combined connectors **RXC 4/2** are the **HNM version** of the recently introduced CXC 4/2 inserts with 4× 80 A power crimp contact seats and 2× 16 A auxiliary crimp contact seats.

- Thanks to the HNM treatment (PE plates lubrication and RX7..2D and RC..2D HNM series crimp contacts with special gold plating, rated current 80 A and 16 A respectively), the mechanical life, when used in combination with dedicated HNM enclosures, extends from 500 to 10 000 mating cycles ensuring optimal performance.
- The connectors are ideal for applications requiring frequent disconnection use: test benches, charging systems, and removable tooling equipment.

▶ To be used with HNM crimp contacts series RX7 (70 A / 80 A) and RC (16 A) in HNM enclosures, for up to 10 000 matings



## RXCF /M 4/2 4 poles (80 A - 830 V) + 2 poles (16 A - 400 V) + (16 HNM (High Number of Matings)

enclosures: size "77.27"

page:

HNM

596 - 597

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

**HNM** inserts, crimp connections



Q 10 000 MATINGS WITH HNM ENCLOSURES ☑ RATING 830V

80 A HNM crimp contacts gold plated



refer to CN.19 pages

description part No. part No.

without contacts (to be ordered separately) female insert for female contacts

RXCF 4/2 **RXCM 4/2** 

male insert for male contacts 80 A female crimp contacts

(Class 5) AWG 10 6 mm<sup>2</sup> 10 mm<sup>2</sup> (Class 5) AWG 8 - 7 (Class 5) AWG 6 - 5 16 mm<sup>2</sup> 16 mm<sup>2</sup> (Class 6) AWG 6 - 5 (Class 5) 25 mm<sup>2</sup> AWG 4 - 3

80 A male crimp contacts

(Class 5) AWG 10 6 mm<sup>2</sup> 10 mm<sup>2</sup> (Class 5) AWG 8 - 7 16 mm<sup>2</sup> (Class 5) AWG 6 - 5 16 mm<sup>2</sup> (Class 6) AWG 6 - 5 25 mm<sup>2</sup> (Class 5) AWG 4 - 3 RX7F2D 6.0 **RX7F2D 10 RX7F2D 16 RX7F2D 16 XF RX7F2D 25** 

RX7M2D 6.0 **RX7M2D 10** 

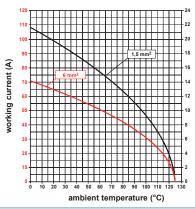
**RX7M2D 16 RX7M2D 16 XF RX7M2D 25** 

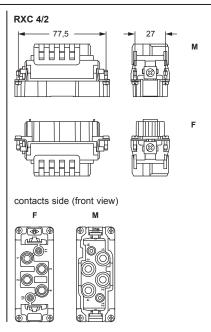
- characteristics according to EN/IEC 61984 ratings:

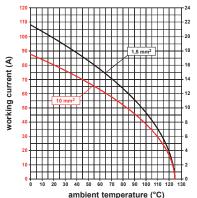
80 A 830 V 8 kV 3 16 A 400 V 6 kV 3

- DNV certified
- cURus, CQC, EAC, BV 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 by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 10 000 cycles
- contact resistance: ≤ 0,3 m $\Omega$  (4 power poles)  $\leq 1 \text{ m}\Omega \text{ (2 auxiliary poles)}$
- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 70 A contacts RX7F2D and RX7M2D series and 16 A contacts RCF2D, RCM2D series, on pages 708 - 741 of CN 19 catalogue)
- for max. current load see the connector inserts derating diagrams below; for more information see page 28 of CN.19 catalogue

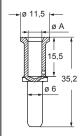
#### RXC 4/2 poles connector inserts Maximum current load derating diagram

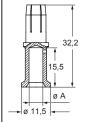




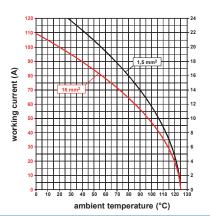


#### RX7F2D, RX7M2D and **RX7F2D 16 XF, RX7M2D 16 XF**





conductor	conductor	conductor
section	slot ø A	stripping length
(mm²)	(mm)	(mm)
6	3,5	15
10	4,3	15
16	5,5	15
16 (XF)	6,1	15
25	7,0	15



# RC..2D 16 A crimp contacts HNM (High Number of Matings)







#### removal tools



description part No. part No.

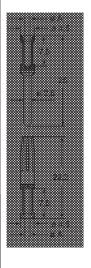
16 A female con	tacts, HNM gol	d plated		
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	RCF2D 0.3	
0,5 mm <sup>2</sup>	AWG 20	with no grooves	RCF2D 0.5	Pa
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	RCF2D 0.7	aold plated
1 mm <sup>2</sup>	AWG 18	one groove	RCF2D 1.0	Ę
1,5 mm <sup>2</sup>	AWG 16	two grooves	RCF2D 1.5	7
2,5 mm <sup>2</sup>	AWG 14	three grooves	RCF2D 2.5	Ŭ
3 mm <sup>2</sup>	AWG 12	one wide groove	RCF2D 3.0	
4 mm <sup>2</sup>	AWG 12	with no grooves	RCF2D 4.0	
16 A male conta		plated		
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	RCM2D 0.3	
0,5 mm <sup>2</sup>	AWG 20	with no grooves	RCM2D 0.5	
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	RCM2D 0.7	
1 mm <sup>2</sup>	AWG 18	one groove	RCM2D 1.0	
1,5 mm <sup>2</sup>	AWG 16	two grooves	RCM2D 1.5	
2,5 mm <sup>2</sup>	AWG 14	three grooves	RCM2D 2.5	
3 mm <sup>2</sup>	AWG 12	one wide groove	RCM2D 3.0	
4 mm <sup>2</sup>	AWG 12	with no grooves	RCM2D 4.0	

removal tools

for RX7F2D and RX7M2D series contacts for RCF2D and RCM2D series contacts

CX7ES CQES

#### RCF2D and RCM2D

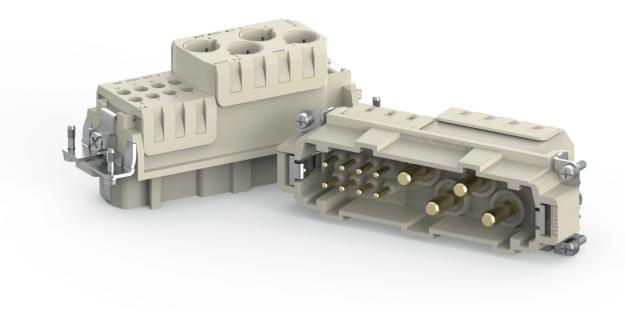


#### RCF2D and RCM2D contacts

conductor conductor		conductors		
section	slot	stripping length		
mm²	ø A (mm)	(mm)		
0,14-0,37	0,9	7,5		
0,5	1,1	7,5		
0,75	1,3	7,5		
1,0	1,45	7,5		
1,5	1,8	7,5		
2,5	2,2	7,5		
3	2,55	7,5		
4	2,85	7,5		

# RXC SERIES COMBINED CRIMP CONNECTOR

# **HNM** VERSION



RXCF /M 4/8 Combined power/auxiliaries crimp connector (HNM version of CXC)

**4 P + (a):** 80 A 400 V 6 kV 3

**8 P +** ⊕: 16 A 230/400 V 4 kV 3



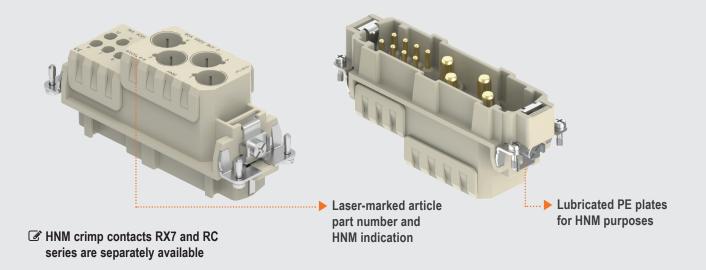


## **TECHNICAL FEATURES**

The new combined crimp connectors **RXC 4/8** are the **HNM version** of the recently introduced CXC 4/8 inserts with 4× 80 A power crimp contact seats and 8× 16 A auxiliary crimp contact seats.

- Thanks to the HNM treatment (PE plates lubrication and RX7..2D and RC..2D HNM series crimp contacts with special gold plating, rated current 80 A and 16 A respectively), the mechanical life, when used in combination with dedicated HNM enclosures, extends from 500 to 10 000 mating cycles ensuring optimal performance.
- The connectors are ideal for applications requiring frequent disconnection use: test benches, charging systems, and removable tooling equipment.

➤ To be used with HNM crimp contacts series RX7 (70 A / 80 A) and RC (16 A) in HNM enclosures, for up to 10 000 matings



## CXCF /M 4/8 4 poles (80 A - 400 V) + 8 poles (16 A - 230/400 V) + 🕀 HNM (High Number of Matings)

enclosures: size "104.27"

page:

HNM

598 - 599

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

**HNM** inserts, crimp connections



**Q 10 000 MATINGS** WITH HNM ENCLOSURES RATING 830V

80 A HNM crimp contacts gold plated



refer to CN.19 pages

description part No. part No.

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

**RXCF 4/8 RXCM 4/8** 

male inserts for male contacts

80 A female crimp contacts (Class 5) AWG 10

10 mm<sup>2</sup> (Class 5) AWG 8 - 7 16 mm<sup>2</sup> (Class 5) AWG 6 - 5

16 mm<sup>2</sup> (Class 6) AWG 6 - 5

25 mm<sup>2</sup> (Class 5) AWG 4 - 3

6 mm<sup>2</sup> 10 mm<sup>2</sup> (Class 5) 16 mm<sup>2</sup>

16 mm<sup>2</sup> (Class 6)

25 mm<sup>2</sup> (Class 5) AWG 4 - 3

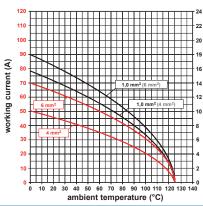
80 A male crimp contacts (Class 5) AWG 10 RX7M2D 6.0 AWG 8 - 7 **RX7M2D 10** (Class 5) AWG 6 - 5 **RX7M2D 16** AWG 6 - 5 **RX7M2D 16 XF RX7M2D 25** 

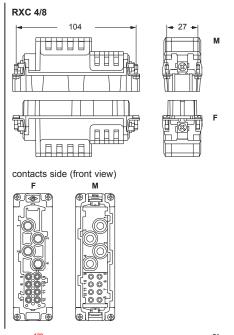
- characteristics according to EN/IEC 61984 ratings:

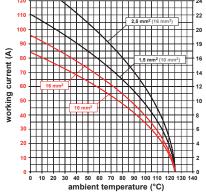
80 A 400 V 6 kV 3 16 A 230/400 V 4 kV 3

- DNV certified
- cURus, CQC, EAC, BV pending
- rated voltage according to UL/CSA: 600 V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made by UL 94V-0 glass reinforced polycarbonate, EN 45545-2:2015 compliant
- mechanical life: ≥ 10 000 cycles
- contact resistance: ≤ 0,3 mΩ (4 power poles) ≤ 1 m $\Omega$  (8 auxiliary poles)
- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 70 A contacts RX7F2D and RX7M2D series and 16 A contacts RCF2D, RCM2D series, on pages 708 - 741 of CN.19 catalogue)
- for max. current load see the connector inserts derating diagrams below; for more information see page 28 of CN.19 catalogue

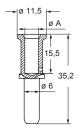
#### RXC 4/8 poles connector inserts Maximum current load derating diagram







#### RX7F2D, RX7M2D and **RX7F2D 16 XF, RX7M2D 16 XF**



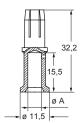
RX7F2D 6.0

**RX7F2D 10** 

**RX7F2D 16** 

**RX7F2D 25** 

**RX7F2D 16 XF** 



#### RX7F2D and RX7M2D contacts

NA/FZD al	KATEZD aliu KATWIZD COIItacts			
conductor	conductor slot	conductor		
section	ø A	stripping length		
(mm <sup>2</sup> )	(mm)	(mm)		
6	3,5	15		
10	4,3	15		
16	5,5	15		
16 (XF)	6,1	15		
25	7,0	15		

## RC..2D 16 A crimp contacts HNM (High Number of Matings)







#### removal tools



description part No. part No.

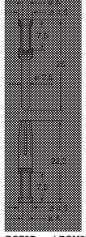
16 A female con	tacts, HNM gol	d plated		
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	RCF2D 0.3	
0,5 mm <sup>2</sup>	AWG 20	with no grooves	RCF2D 0.5	plated
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	RCF2D 0.7	E
1 mm <sup>2</sup>	AWG 18	one groove	RCF2D 1.0	
1,5 mm <sup>2</sup>	AWG 16	two grooves	RCF2D 1.5	gold
2,5 mm <sup>2</sup>	AWG 14	three grooves	RCF2D 2.5	٠,
3 mm <sup>2</sup>	AWG 12	one wide groove	RCF2D 3.0	
4 mm <sup>2</sup>	AWG 12	with no grooves	RCF2D 4.0	
16 A male conta	cts, HNM gold	plated		
0,14-0,37 mm <sup>2</sup>	AWG 26-22	one groove	RCM2D 0.3	
0,5 mm <sup>2</sup>	AWG 20	with no grooves	RCM2D 0.5	
0,75 mm <sup>2</sup>	AWG 18	one groove (back side)	RCM2D 0.7	
1 mm <sup>2</sup>	AWG 18	one groove	RCM2D 1.0	
1,5 mm <sup>2</sup>	AWG 16	two grooves	RCM2D 1.5	
2,5 mm <sup>2</sup>	AWG 14	three grooves	RCM2D 2.5	
3 mm <sup>2</sup>	AWG 12	one wide groove	RCM2D 3.0	
4 mm <sup>2</sup>	AWG 12	with no grooves	RCM2D 4.0	

removal tools

for RX7F2D and RX7M2D series contacts for RCF2D and RCM2D series contacts

CX7ES CQES

#### RCF2D and RCM2D



#### RCF2D and RCM2D contacts

conductor	conductor	conductors
section	slot	stripping length
mm²	ø A (mm)	(mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
0,75	1,3	7,5
1,0	1,45	7,5
1,5	1,8	7,5
2,5	2,2	7,5
3	2,55	7,5
4	2,85	7,5

# SIZE "21.21" ENCLOSURES HNM VERSION



Size "21.21" metallic housings (bulkhead and surface mounting) and hoods with CLASS lever, suitable for up to 5 000 mating cycles





## **TECHNICAL FEATURES**

Housings (bulkhead-mounting or surface mounting) size "21.21" equipped with CLASS single locking lever, made by stainless-steel with sintered stainless-steel rolls with special anti-friction treatment

Q to be mated to standard hoods "size 21.21".

This **HNM** series of connector housings has been developed to be used in combination with the **HNM** series of size "21.21" multipole connector inserts, equipped with the relevant **HNM** series of removable crimp contacts, to provide the same reliable protection of the standard series but for a consistently extended, **high number of matings**.

The CLASS locking lever has been chosen and treated so as to reduce wear due to friction at minimum.

Even mated on standard hoods, it is able to provide extremely reduced wear on the corresponding locking pegs, producing virtually no friction by the application of special lubrication on the hinged rolls.

The counterpart hoods are therefore standard metallic types, with fused pegs.

Currently (see next pages) the **suitable HNM inserts size** "21.21" for these new HNM housings are:

- Q CQF /M 21 inserts with 5 A HNM crimp contacts series RI
- Q CDF /M 08 inserts with 10 A HNM crimp contacts series RD
- Q New RQF /M 05 inserts, special HNM screw-type PE terminal, with 16 A HNM crimp contacts series RC
- Q CQ4F /M 03 with 40 A HNM crimp contacts series RX
- NOTE Series CKSH (SQUICH®), as well as all MIXO BUS multi-axial and coaxial inserts for use within the size "21.21" CX 1/2 BDF /BDM adapter are not foreseen in HNM version. For requests of other size "21.21" connector inserts in HNM version (e.g.: RK, RQ 12, RQ 07), please contact ILME Commercial Offices.

When the number of 500 mating cycles guaranteed life of standard connector hoods and housings is insufficient to provide a reasonably long lifespan in those connector applications that by inherent function are foreseen to be subject to very frequent connections and disconnections, it is necessary to opt for a solution able to increase that guaranteed lifetime.

The HNM size "21.21" series of connector enclosures achieves this goal, extending the guaranteed number of matings up to 5 000.

 Original design, ILME exclusive in the market for rectangular connectors







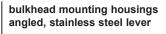
 Special gold plating and lubrication to reduce the wear of the contacts during frequently repeated mating/unmating operations

### RKAX 03

## **HNM (High Number of Matings)**

inserts		page:
CQ	21 poles	82
CD	8 poles	83
RQ	5 poles + ⊕	84
CQ4 03	3 poles + ⊕	85

bulkhead mounting housings straigh, stainless steel lever





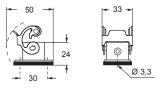


	· ·	•
description	part No.	part No.
with stainless steel lever	RKAX 03 I	
without cable entry <sup>1)</sup> without cable entry, fixing by 4 screws		RKAX 03 IA RKAX 03 IA4
gasket and screw kit for IP66 2)	CKR 65	CKR 65
gasket and screw kit for IP66 <sup>2)</sup> specific for CD 07/08 inserts	CKR 65 D	CKR 65 D

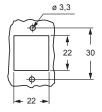
- 1) Not suitable for CQ4 series inserts
- <sup>2)</sup> To obtain the IP66 degree of protection it is necessary to replace the fixing screw supplied with the above listed inserts, with the one with gasket included in the kit (to be purchased separately).
- ☑ NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



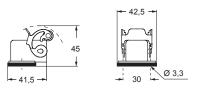
#### RKAX 03 I



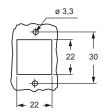
panel cut-out for enclosures



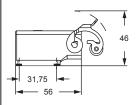
#### RKAX 03 IA



panel cut-out for enclosures

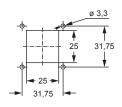


#### RKAX 03 IA4





panel cut-out for enclosures



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



## **RKAX VG**

## **HNM (High Number of Matings)**



inserts		page:
CQ	21 poles	82
CD	8 poles	83
RQ	5 poles + ⊕	84
CQ4 03	3 poles + ⊕	85

hoods stainless steel lever



hoods stainless steel lever

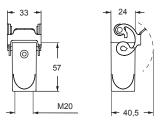


	I	I
description	part No. (entry M20)	part No. (entry M25)
top entry 1)	RKAX VG20	
ton entry		RKAX VG25
top entry		KKAA VG25
gasket and screw kit for IP66 20	CKR 65	CKR 65

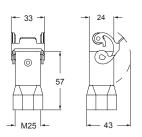
- 1) Not suitable for CQ4 series inserts
- <sup>2)</sup> To obtain the IP66 degree of protection it is necessary to replace the fixing screw supplied with the above listed inserts, with the one with gasket included in the kit (to be purchased separately).
  - ☑ NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



#### **RKAX VG20**



#### **RKAX VG25**



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



## **RKAX AP - IAP**

## **HNM (High Number of Matings)**

inserts		page:
CQ	21 poles	82
CD	8 poles	83
RQ	5 poles + ⊕	84
CQ4 03	3 poles + ⊕	85

bulkhead mounting housings straight and angled, stainless steel lever



angled surface mounting housings stainless steel lever



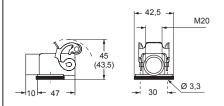
	1	1
description	part No. (entry M20)	part No. (entry M25)
with cable entry <sup>1)</sup> with cable entry, bulkhead hole closed, without gasket <sup>1)</sup>	RKAX IAP20 RKAX AP20	
with cable entry, fixing by 4 screws with cable entry, fixing by 4 screws, bulkhead hole closed, without gasket		RKAX IAP25 RKAX AP25
gasket and screw kit for IP66 <sup>2)</sup>	CKR 65	CKR 65
gasket and screw kit for IP66 <sup>2)</sup> specific for CD 07/08 inserts	CKR 65 D	CKR 65 D

- 1) Not suitable for CQ4 series inserts
- <sup>2)</sup> To obtain the IP66 degree of protection it is necessary to replace the fixing screw supplied with the above listed inserts, with the one with gasket included in the kit (to be purchased separately).

☑ NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.

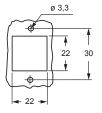


#### RKAX IAP20 (RKAX AP20\*)

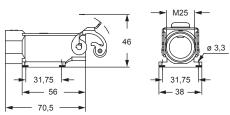


\*AP... without gasket

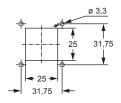
panel cut-out for enclosures



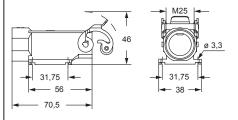
#### **RKAX IAP25**



panel cut-out for enclosures



#### **RKAX AP25**



panel cut-out for enclosures



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



## **RKAX IF - IAF**

## **HNM (High Number of Matings)**



inserts		page:
CQ	21 poles	82
CD	8 poles	83
RQ	5 poles + ⊕	84
CQ4 03	3 poles + ⊕	85

bulkhead mounting housings stainless steel lever



angled bulkhead mounting housings stainless steel lever



	I		I		
description	part No.	entry M	part No.	entry M	
with O-ring gasket 1) (·) with flange gasket 1)	RKAX IF RKAX IFC	32 32			
with O-ring gasket 1) 2) (·) with O-ring gasket 1) 2) (·)			RKAX IAF20 RKAX IAF25	20 25	
gasket and screw kit for IP66 2)	CKR 65		CKR 65		
gasket and screw kit for IP66 <sup>2)</sup> specific for CD 07/08 inserts	CKR 65 D		CKR 65 D		

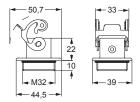
<sup>1)</sup> To obtain the IP66 degree of protection it is necessary to replace the fixing screw supplied with the above listed inserts, with the one with gasket included in the kit (to be purchased separately).

☑ NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page

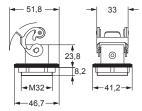


- 2) Not suitable for CQ4 series inserts
- Locknut supplied on request, see Cable glands catalogue (article AS M32N metallic).

#### **RKAX IF**



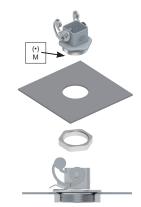
#### **RKAX IFC**



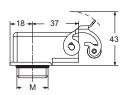
panel cut-out for enclosures



### USE OF THE LOCKNUT

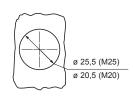


#### MKAX IAF





panel cut-out



#### **USE OF THE LOCKNUT**



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



## CQ 21 poles 6,5 A - 50 Vac / 120 Vdc

## **HNM (High Number of Matings)**

enclosures: size "21.21"

ize "21.21" page:

HNM 78 - 81

inserts, crimp connections



5 A HNM crimp contacts gold plated



description part No. part No.

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

ontacts CQF 21 cts CQM 21

5 A female crimp contacts 0,08-0,21 mm<sup>2</sup> AWG 28-24 0,13-0,33 mm<sup>2</sup> AWG 26-22 0,33-0,52 mm<sup>2</sup> AWG 22-20

5 A male crimp contacts 0,08-0,21 mm² AWG 28-24 0,13-0,33 mm² AWG 26-22 0,33-0,52 mm² AWG 22-20

- characteristics according to EN 61984: 6,5 A 50 Vac / 120 Vdc 0,8 kV 3

- c Us (UL for USA and Canada),



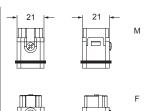
- rated voltage according to UL/CSA: 250V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 5 000 cycles
- contact resistance: ≤ 4 mΩ
- seat of contact #9 on both inserts set forward to obtain pre-leading contact (e.g. for FE functional earth)
- for crimp contacts RI series use, see pages 716 719 on CN.19 catalogue

CIPZ D crimping tool

CITP D turret head

CIES insertion / removal tool

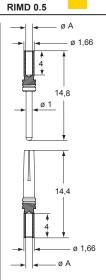
 for max. current load see the connector inserts derating diagram below; for more information see page 28 of CN.19 catalogue



contacts side (front view)







RIFD 0.2

RIFD 0.3

RIFD 0.5

RIMD 0.2

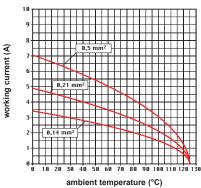
RIMD 0.3

plated

RIF and RIM contacts

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

#### CQ 21 poles connector inserts Maximum current load derating diagram





enclosures: size "21.21"

page: HNM 78 - 81 inserts, crimp connections



10 A HNM crimp contacts gold plated



description part No. part No.

without contacts (to be ordered separately) female insert for female contacts <sup>1)</sup>

**CDF 08 CDM 08** 

male insert for male contacts

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

10 A male	contacts
-----------	----------

10 A female contacts

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

**RDF2D 0.3 RDF2D 0.5 RDF2D 0.7 RDF2D 1.0 RDF2D 1.5 RDF2D 2.5** 

> **RDM2D 0.3 RDM2D 0.5 RDM2D 0.7 RDM2D 1.0** RDM2D 1.5 **RDM2D 2.5**

- 1) the female inserts can be mounted into the straight bulkhead housings CK I from the rear
- characteristics according to EN 61984:

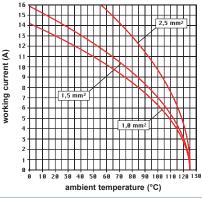
10A 50 Vac / 120 Vdc 0,8 kV\_3

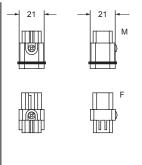
- c Nus (UL for USA and Canada), 🔐 🤕 VERITAS EM certified



- rated voltage according to UL/CSA: 50V ac / 120V dc
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 5 000 cycles
- contact resistance: ≤ 3 mΩ
- for applications requiring higher voltages, please see the special voltage application section refer to C.19 catalogue on page 65
- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 10 A contacts, CDF and CDM series see pages 708 - 741 on CN.19)
- for max. current load see the connector inserts derating diagram below; for more information see page 28 of CN.19 catalogue

#### CD 08 poles connector inserts Maximum current load derating diagram

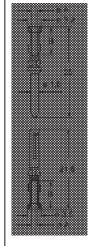




contacts side (front view)







#### DDE2D and DDM2D contacts

RDF2D and RDW2D contacts			
conductor	conductor	conductors	
section	slot	stripping length	
mm <sup>2</sup>	ø A (mm)	B (mm)	
0,14-0,37	0,9	8	
0,5	1,1	8	
0,75	1,3	8	
1,0	1,45	8	
1,5	1,8	8	
2,5	2,2	6	

CR CP coding pin with loss of one contact (refer to CN.19, page 689)



page:

enclosures: size "21.21"

HNM 78 - 81 **HNM** inserts, crimp connections



16 A HNM crimp contacts gold plated



description part No. part No.

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

RQF 05 **RQM 05** 

16 A female contacts AWG 26-22 0,14-0,37 mm<sup>2</sup> 0,5 mm<sup>2</sup> one groove AWG 20 with no grooves 0.75 mm<sup>2</sup> AWG 18 one groove (back side) 1 mm<sup>2</sup> AWG 18 one groove 1,5 mm<sup>2</sup> AWG 16 two grooves 2,5 mm<sup>2</sup> AWG 14 three grooves  $3 \text{ mm}^2$ **AWG 12** one wide groove 4 mm<sup>2</sup> **AWG 12** with no grooves

16 A male contacts

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

**RCF2D 0.3** RCF2D 0.5 **RCF2D 0.7 RCF2D 1.0 RCF2D 1.5** RCF2D 2.5 RCF2D 3.0 **RCF2D 4.0** 

gold plated

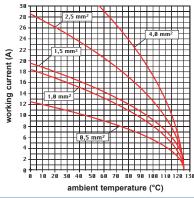
**RCM2D 0.3 RCM2D 0.5 RCM2D 0.7 RCM2D 1.0 RCM2D 1.5 RCM2D 2.5 RCM2D 3.0 RCM2D 4.0** 

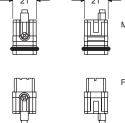
- characteristics according to EN 61984:

## 16 A 230/400 V 4 kV 16 A 320/500 V 4 kV

- DNV certified
- cURus, CQC, EAC, BV pending rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 5 000 cycles
- contact resistance: ≤ 1 mΩ
- it is recommended to crimp the contacts with  $\begin{tabular}{ll} \textbf{crimping tools homologated by ILME} \end{tabular} \label{total constraints} \end{tabular}$ the crimping tool section 16 A contacts, RC series see pages 708 - 741 on CN.19 catalogue)
- can also be used partially fitted with 4 mm<sup>2</sup> section contacts
- for max. current load see the connector inserts derating diagram below; for more information see page 28 of CN.19 catalogue

#### RQ 05 poles connector inserts Maximum current load derating diagram





contacts side (front view)

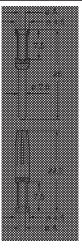




 ▼ NOTE: PE screw connection for unprepared wires only







RCF2D	and	RCM2D	contacts

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



enclosures: size "21.21"

page: HNM

78 - 81

**HNM** inserts, crimp connections



40 A HNM crimp contacts gold plated



description part No. part No.

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

CQ4F 03 CQ4M 03

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

**AWG 16** 

1,5 mm<sup>2</sup> 2.5 mm<sub>2</sub> **AWG 14 AWG 12** 4 mm<sup>2</sup> AWG 10 6 mm<sup>2</sup>

**RXF2D 1.5 RXF2D 2.5 RXF2D 4.0 RXF2D 6.0** 

gold plated

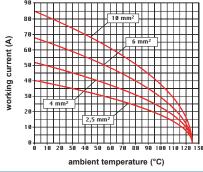
**RXM2D 1.5 RXM2D 2.5 RXM2D 4.0 RXM2D 6.0** 

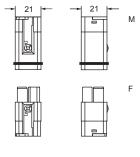
- \* wire diameter: up to 7,5 mm, contact section: up to 10 mm²
- The female insert CQ4F 03 is finger proof (IP2X or IPXXB) even if not coupled, while the male insert CQ4M 03 in this circumstance is protected from access with the back of the hand (IP1X or IPXXA)

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

- characteristics according to EN 61984:
- 40 A 400 V 6 kV 3
- c Nus (UL for USA and Canada), DNV VERITAS EHE certified
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94V-0
- mechanical life: ≥ 5 000 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 RX series, pages 708 - 741 on CN.19 catalogue)
- for max, current load see the connector inserts derating diagram below: for more information see page 28 of CN.19 catalogue

#### CQ4 03 poles connector inserts Maximum current load derating diagram

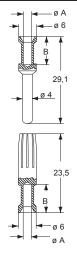




contacts side (front view)







#### RXF2D and RXM2D contacts

KAFZD allu KAMZ	RAFZD allu RAMZD CUITACTS			
conductor cross-sectional area mm <sup>2</sup>	conductor slot ø A (mm)	conductor stripping length B (mm)		
1,5 2,5 4	1,8 2,2 2,85 3,5	9 9 9,6 9.6		
0	5,5	9,0		

**Coding pins** CR Q03, 4 possible positions (refer to CN.19, page 692)



## T-TYPE ENCLOSURES SERIES

## **DUST PROTECTION COVER SIZE "44.27"**



The protection of connectors also includes accessories.

In order to protect wired T-TYPE hoods from dust and particles which may deposit during transportation, the new TCP 06 size "44.27" dust protection cover is now available.

This new disposable plastic cover joins the already existing, but more expensive, regular T-TYPE covers TCHC 06 L (eyelet cord) / SL (loop cord) and TCHC 06 LG (with lever and gasket).

- QThis cover serves both hoods and housings of the same size of series T-TYPE (any kind, including standard T-TYPE, T-TYPE /W, T-TYPE Hygienic, either /H or /C).
- Made by recyclable polypropylene (>PP< symbol on the piece), it fits with slight friction around the perimeter of the hood. Fixing around the hood is achievable by means of a plastic cable tie (not provided), for which suitable holding seats are provided centrally along long sides.



## T-TYPE DUST PROTECTION COVER SIZE "44.27"

page:

506



enclosures: size "44.27"

T-TYPE IP65 insulating 480 - 481
T-TYPE / W IP66/IP69 insulating 489
HYGIENIC T-TYPE / H IP66/IP69 501

HYGIENIC T-TYPE / C IP66/IP69, -50 °C

Dust protection cover size "44.27"



refer to CN.19 pages

description part No.

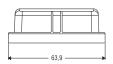
#### Plastic transparent dust protection cover

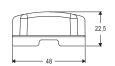
- disposable plastic cover to avoid dust deposits during transportation/idle time
- made of transparent >PP< (marked on the inside for recycling purposes
- cheaper than standard cover
- special ribs for fastening with cable tie (not provided)

**NOTE:** to be used with T-TYPE enclosures size "44.27" only.









## RX7 SERIES FINGERPROOF MALE CRIMP CONTACTS

## HNM VERSION WITH INSULATING CAP



MIXO module **CX 02 7M**, when mounted in dedicated HNM MIXO is used in combination with the **RX7 HNM** series of 70 A crimp contacts which is now expanded by adding a variant of **male contacts with insulating cap** on their tip, to determine the **fingerproof safety** (IPXXB or IP20) feature.

This feature is particularly advantageous in all applications where male connector inserts feed electric motors equipped with power drives, such drives being often equipped motor side with **capacitors** that may remain charged with hazardous voltage present on the pin contacts of the connector for a few times after switching off the motor and unplugging the connector.

- Tip made by polycarbonate (same as those of the inserts), light grey colour.
- QAll other features are in common with RX7 contacts (i.e., crimping tools, dimensions, materials, etc.).
- QRoHS: compliant with exemption 6(c).



## RX7M2D 6.0 P/ 10 P/ 16 P/ 16XFP /25 P 70 A FINGERPROOF HNM (High Number of Matings)

inserts:

MIXO (CX 02 7M)

page:

70 A HNM gold plated fingerproof male crimp contacts



removal tools



refer to CN.19 pages

description part No. part No.

RX7M2D 6.0 P RX7M2D 10 P RX7M2D 16 P RX7M2D 16XFP RX7M2D 25 P

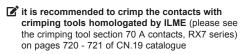
70 A HNM fingerproof male crimp contacts

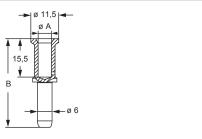
6 mm <sup>2</sup>	(Class 5)	AWG 10
10 mm <sup>2</sup>	(Class 5)	AWG 8 - 7
16 mm <sup>2</sup>	(Class 5)	AWG 6 - 5
16 mm <sup>2</sup>	(Class 6)	AWG 6 - 5
25 mm <sup>2</sup>	(Class 5)	ΔWG 4 - 3

gold plated

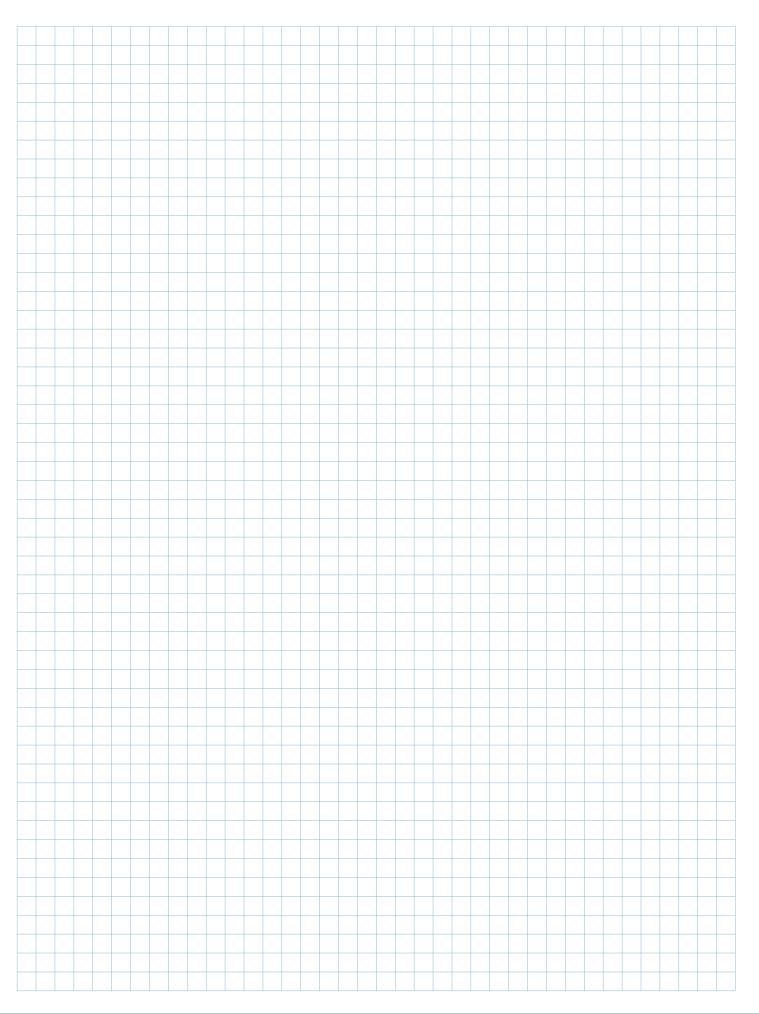
removal tools

for RC series contacts CX7ES

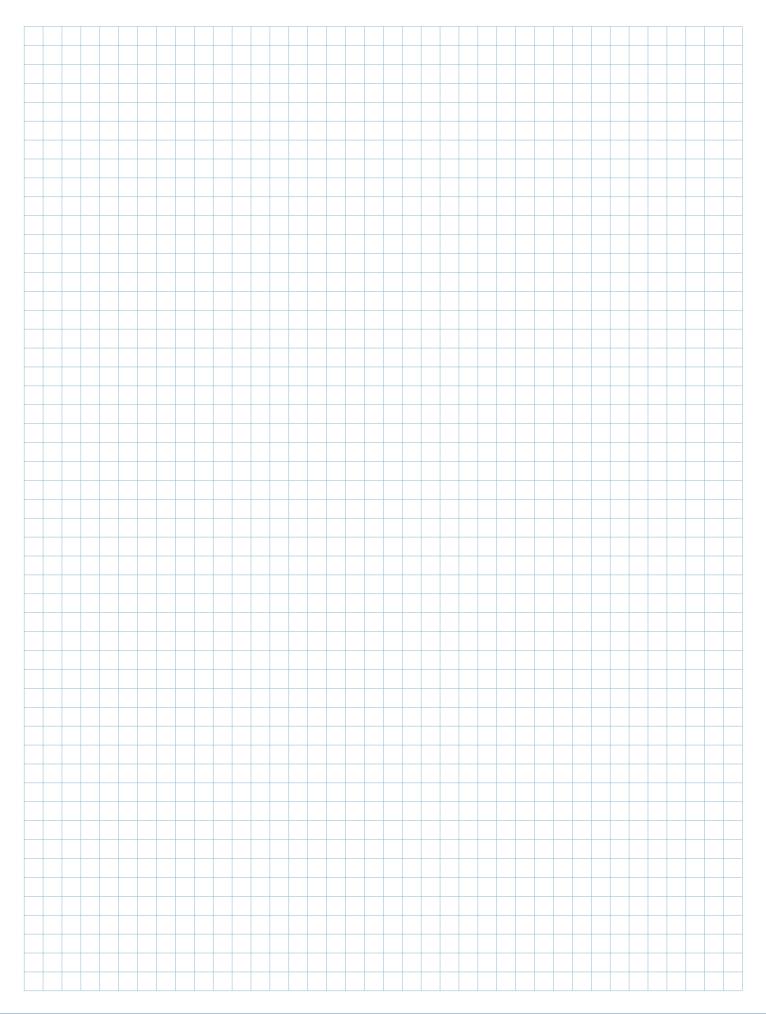




RX7M2DP contacts				
section	øΑ	В	stripping length	
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	
6	3,5	36,6	15	
10	4,3	35,8	15	
16	5,5	35,8	15	
16 (XF)	6,1	35,8	15	
25	7.0	35.8	15	







CCF 0.5 AN 37 CCF 08E 37 MLAV 10 G25 45 CC 0.5 AN 37 CCF 21 82 MLAV 10 G32 45 CC 0.7 AN 37 CCM 21 82 MLAV 10 G32 45 CC 1.0 AN 37 CCM 21 82 MLAV 16 G35 47 CC 1.5 AN 37 CCM 21 82 MLAV 16 G35 47 CC 1.5 AN 37 CCYF 08E 20, 36 MLAV 16 G32 47 CC 2.5 AN 37 CCYF 08E 20, 36 MLAV 16 G32 47 CC 2.5 AN 37 CCYF 08E 20, 36 MLAV 24 G32 49 CCFA 0.5 37 CCYM 08E 20, 36 MLAV 24 G32 49 CCFA 0.5 37 CCYM 08E 20, 38 MLAV 24 G32 49 CCFA 0.7 37 CC 008E 21, 39 MLAV 24 G32 49 CCFA 1.0 37 CC 008E 21, 39 MLAV 24 G32 49 CCFA 1.5 37 CC 008E 21, 39 MLAV 24 G32 49 CCFA 1.5 37 CC 007 YAF 26 MLFO 08 LC40 43 CCFA 1.5 37 CC 007 YAF 22 MLFO 16 G40 45 CCFA 2.5 37 CC 008 CYM 22 MLFO 16 G40 45 CCFA 2.5 37 CC 008 CYM 22 MLFO 24 G40 49 CCFA 4.0 37 CC 008 CYM 22 MLFO 24 G40 49 CCFA 4.0 37 CCFA 2.5 37 CC 008 CYM 22 MLFO 26 G40 49 CCFA 0 37 CCFA 2.5 37 CC 008 CYM 23 MLFV 06 LG25 43 CCFD 0.5 37 CC 008 CYM 23 MLFV 06 LG25 43 CCFD 0.5 37 CC 008 CYM 23 MLFV 06 LG40 43 CCFD 0.7 37 MLAP 06 L32 42 MLFV 16 G32 43 CCFD 0.5 37 MLAP 06 L32 42 MLFV 16 G30 47 CCFD 1.0 37 MLAP 06 L32 42 MLFV 16 G30 47 CCFD 2.5 37 MLAP 06 L32 42 MLFV 16 G30 47 CCFD 2.5 37 MLAP 06 L32 42 MLFV 16 G30 47 CCFD 2.5 37 MLAP 06 L32 42 MLFV 16 G32 47 CCMA 0.5 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0.5 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0 37 MLAP 06 L32 42 MLFV 24 G32 49 MLAP 06 L32 42 MLFV 24 G32 49 MLAP 06 L32 42 MLFV 24 G32 49 MLAP 06 L32 42 MLAP 06 L3	C		CQA 08 I38	MLAV 06 LG32	43
CC 0.7 AN 37 CCM 08E 37 MILAY 10 G40 45 CC 1.0 AN 37 CCM 08E 37 MILAY 10 G40 45 CC 1.0 AN 37 CCM 21 82 MILAY 16 G32 47 CC 1.5 AN 37 CCYF 08E 20, 36 MILAY 16 G32 47 CC 2.5 AN 37 CCYF 08E 20, 36 MILAY 16 G30 47 CCF 2.5 AN 37 CCYM 08E 20, 36 MILAY 24 G25 49 MILAY 16 G31 47 CCF 2.5 AN 37 CCYM 08E 20, 36 MILAY 24 G25 49 CCF 2.5 AN 37 CCYM 08E 20, 36 MILAY 24 G32 49 CCF 2.5 AN 37 CCYM 08E 20, 36 MILAY 24 G32 49 CCF 2.5 AN 37 CCYM 08E 21, 39 MILAY 24 G30 49 CCF 2.5 AN 37 CC 2.5 AN 3.7 CC 3.5 AN 3.7			CQF 08E37	MLAV 10 G25	45
CC 1.0 AN 37 COM 21 82 MLAV 16 G25 47 CC 1.5 AN 37 COYF 05 19 MLAV 16 G32 47 CC 1.5 AN 37 COYF 05 19 MLAV 16 G32 47 CCFA 0.3 37 COYF 08E 20, 38 MLAV 16 G40 47 CCFA 0.3 37 COYF 08E 20, 38 MLAV 26 G25 49 CCFA 0.5 37 COYM 05 19 MLAV 26 G32 49 CCFA 1.0 37 CC 08E 21, 39 MLAV 26 G32 49 CCFA 1.0 37 CC 08E 21, 39 MLAV 24 G32 49 CCFA 1.0 37 CC 08E 21, 39 MLFO 06 LG40 43 CCFA 1.5 37 CC 01 YAM 26 MLFO 10 G40 43 CCFA 1.5 37 CC 06 CYF 22 MLFO 16 G40 43 CCFA 1.0 37 CC 06 CYF 22 MLFO 16 G40 47 CCFA 2.0 37 CC 06 CYF 22 MLFO 16 G40 47 CCFA 2.0 37 CC 06 CYF 23 MLFV 06 LG25 43 CCFD 0.3 37 CC 08 CYF 23 MLFV 06 LG32 43 CCFD 0.5 37 CC 08 CYF 23 MLFV 06 LG32 43 CCFD 0.5 37 CC 08 CYF 23 MLFV 06 LG32 43 CCFD 0.1 37 CCFD 1.0 37 CCFD 1.0 37 CCFD 1.0 37  CCFD 1.0 37  MLAP 06 L25 42 MLFV 10 G32 45 CCFD 2.5 37  MLAP 06 L32 42 MLFV 16 G32 47 CCFD 3.0 37 MLAP 06 L32 42 MLFV 16 G32 47 CCFD 4.0 37 MLAP 06 L32 42 MLFV 16 G32 47 CCMA 0 37 MLAP 06 L32 42 MLFV 16 G32 47 CCMA 0 37 MLAP 06 L32 42 MLFV 16 G32 47 CCMA 0 37 MLAP 06 L32 42 MLFV 16 G32 47 CCMA 0 37 MLAP 06 L32 42 MLFV 16 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 16 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 1.0 37 MLAP 06 L32 42 MLP 06 L32 43 CCMD 0 37 MLAP 06 L32 44 MLAP 16.32 44 MLAP 16.32 44 MLAP 16.32 44 MLAP			CQF 2182	MLAV 10 G32	45
CC 1.5 AN 37 CQYF 05. 99 MLAV 16 632. 47 CC 2.5 AN 37 CQYF 08E 20, 36 MLAV 16 632. 47 CC 2.5 AN 37 CQYF 08E 20, 36 MLAV 16 640. 47 CCFA 0.3. 37 CQYM 08E 21, 39 MLAV 24 Q25. 49 CCFA 0.5. 37 CQYM 08E 21, 39 MLAV 24 Q32. 49 CCFA 1.0. 37 CX 01 YAM 26 MLFO 06 LQ40. 43 CCFA 1.5. 37 CX 01 YAM 26 MLFO 10 Q40. 45 CCFA 2.5. 37 CX 06 CYM. 22 MLFO 16 Q40. 49 CCFA 3.0. 37 CX 06 CYM. 22 MLFO 26 MLFO 26 Q40. 49 CCFA 4.0. 37 CX 06 CYM. 22 MLFO 26 Q40. 49 CCFA 4.0. 37 CX 06 CYM. 22 MLFO 26 Q40. 49 CCFA 4.0. 37 CX 08 CYF. 23 MLFV 06 LG32. 43 CCFD 0.3. 37 CX 08 CYF. 23 MLFV 06 LG32. 43 CCFD 0.5. 37 CX 08 CYM. 23 MLFV 06 LG32. 43 CCFD 0.5. 37 CX 08 CYM. 23 MLFV 10 G25. 45 CCFD 1.0. 37 MLFV 10 G32. 45 CCFD 1.0. 37 MLAP 06 L32. 42 MLFV 16 G32. 47 CCFD 3.0. 37 MLAP 06 L25. 42 MLFV 16 G32. 47 CCFD 3.0. 37 MLAP 06 L25. 42 MLFV 16 G32. 47 CCFD 3.0. 37 MLAP 06 L22 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLFV 24 G32. 49 CCMA 1.0. 37 MLAP 06 L32 42 MLAP 10.32 44 MLP 10.22 42 MLP 06 L32 45 CCMA 1.0. 37 MLAP 10.32 44 MLAP 10.32 44 MLAP 10.32 45 MLAP 10.32 45 MLAP 10.32 45 ML			CQM 08E37	MLAV 10 G40	45
CC 2.5 AN 37 CCYF 08E 20, 36 MLAV 16 040 47 CCFA 0.3 37 CCYM 05 19 MLAV 24 025 49 CCFA 0.5 37 CCYM 08E 21, 39 MLAV 24 032 49 CCFA 0.7 37 CR 008E 21, 39 MLAV 24 032 49 CCFA 1.0 37 CR 008E 21, 39 MLAV 24 032 49 CCFA 1.0 37 CX 01 YAF 26 MLF0 06 LG40 43 CCFA 1.5 37 CX 01 YAM 26 MLF0 16 040 47 CCFA 2.5 37 CX 06 CYF 22 MLF0 16 040 47 CCFA 3.0 37 CX 06 CYF 22 MLF0 16 040 47 CCFA 3.0 37 CX 06 CYF 22 MLF0 16 040 43 CCFD 0.3 37 CX 08 CYF 23 MLFV 06 LG25 43 CCFD 0.3 37 CX 08 CYF 23 MLFV 06 LG25 43 CCFD 0.5 37 CX 08 CYM 23 MLFV 06 LG32 43 CCFD 0.5 37 CX 08 CYM 23 MLFV 06 LG32 43 CCFD 0.5 37 MLFV 10 C35 45 CCFD 1.0 37 MLFV 10 C35 45 CCFD 1.5 37 MLFV 10 C35 45 CCFD 1.5 37 MLFV 10 C40 45 CCFD 2.0 37 MLAP 06 L25 42 MLFV 16 G25 47 CCFD 3.0 37 MLAP 06 L32 42 MLFV 16 G40 47 CCFD 3.0 37 MLAP 06 L32 42 MLFV 16 G40 47 CCMA 0.3 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0.5 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0.5 37 MLAP 06 L32 42 MLFV 24 G32 49 CCMA 0.7 37 MLAP 06 L25 42 MLFV 24 G32 49 CCMA 0.7 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 06 L32 42 MLFV 24 G40 49 CCMA 1.0 37 MLAP 10.3 44 MLFV 10 C45 43 CCMD 1.0 37 MLAP 10.2 44 M			CQM 2182	MLAV 16 G25	47
CCFA 0.3 37 CQYM 05 99 MLAV 24 G25 49 CCFA 0.5 37 CQYM 08E 20, 36 MLAV 24 G32 49 CCFA 0.5 37 CX 08E 21, 39 MLAV 24 G32 49 CCFA 0.7 37 CX 01 YAF 26 MLFO 06 LG40 43 CCFA 1.5 37 CX 01 YAF 26 MLFO 06 LG40 45 CCFA 2.5 37 CX 01 YAM 26 MLFO 10 G40 45 CCFA 2.5 37 CX 06 CYF 22 MLFO 16 G40 47 CCFA 3.0 37 CX 06 CYF 22 MLFO 16 G40 49 CCFA 4.0 37 CX 06 CYF 22 MLFO 16 G40 49 CCFA 4.0 37 CX 08 CYF 23 MLFV 06 LG25 43 CCFD 0.3 37 CX 08 CYF 23 MLFV 06 LG25 43 CCFD 0.3 37 CX 08 CYF 23 MLFV 06 LG25 43 CCFD 0.3 37 CX 08 CYM 23 MLFV 06 LG25 43 CCFD 0.1 37 MLFV 10 G25 45 CCFD 1.0 37 MLFV 10 G25 42 MLFV 10 G25 47 CCFD 3.0 37 MLAP 06 L25 42 MLFV 16 G25 47 CCFD 3.0 37 MLAP 06 L32 42 MLFV 16 G40 47 CCMA 0.3 37 MLAP 06 L25 42 MLFV 16 G40 47 CCMA 0.3 37 MLAP 06 L25 42 MLFV 16 G40 47 CCMA 1.0 37 MLAP 06 L23 42 MLP 06 L20 42 MLFV 24 G25 49 CCMA 1.0 37 MLAP 06 L23 42 MLP 06 L20 44 MLP 06 L20 42 MLP 06 L20 42 MLP 06 L20 42 MLP 06 L20 44 MLP 06 L20			CQYF 0519	MLAV 16 G32	47
CCFA 0.5			CQYF 08E20, 36	MLAV 16 G40	47
CCFA 0.7			CQYM 0519	MLAV 24 G25	49
CCFA 1.0			CQYM 08E20, 36	MLAV 24 G32	49
CCFA 1.5. 37 CX 01 YAM			CR Q08E21, 39	MLAV 24 G40	49
CCFA 2.5. 37	CCFA 1.0	37	CX 01 YAF26	MLFO 06 LG40	43
CCFA 3.0	CCFA 1.5	37	CX 01 YAM26	MLFO 10 G40	45
CCFA 4.0	CCFA 2.5	37	CX 06 CYF22	MLFO 16 G40	47
CCFD 0.3. 37 CX 08 CYF 23 MLFV 06 LG32 43 CCFD 0.5. 37 CX 08 CYM. 23 MLFV 06 LG40 43 CCFD 0.7. 37 MLFV 10 G25. 45 CCFD 1.0. 37 MLFV 10 G32 45 CCFD 1.5. 37 MLFV 10 G40 45 CCFD 1.5. 37 MLFV 10 G40 45 CCFD 2.5. 37 MLFV 16 G25 47 CCFD 3.0. 37 MLAP 06 L25 42 MLFV 16 G32 47 CCFD 4.0. 37 MLAP 06 L32 42 MLFV 16 G32 47 CCFD 4.0. 37 MLAP 06 L32 42 MLFV 16 G40 47 CCMA 0.3. 37 MLAP 06 L25 42 MLFV 24 G25 49 CCMA 0.5. 37 MLAP 06 L225 42 MLFV 24 G32 49 CCMA 0.7. 37 MLAP 06 L225 42 MLFV 24 G40 49 CCMA 1.0. 37 MLAP 06 L322 42 MLFV 24 G40 49 CCMA 1.0. 37 MLAP 06 L323 42 MLFV 26 G40 49 CCMA 1.5. 37 MLAP 06 L323 42 MLFV 26 G40 42 CCMA 1.5. 37 MLAP 06 L332 42 MLFV 26 G40 42 CCMA 1.5. 37 MLAP 06 L332 42 MLFV 26 G40 42 CCMA 2.5. 37 MLAP 06 L532 42 MLFV 26 G40 42 CCMA 3.0. 37 MLAP 06 L532 42 MLP 06 L220 42 CCMA 4.0. 37 MLAP 06 L532 42 MLP 06 L520 42 CCMA 4.0. 37 MLAP 06 L532 42 MLP 06 L520 42 CCMA 4.0. 37 MLAP 06 L532 42 MLP 06 L520 42 CCMA 4.0. 37 MLAP 06 L532 42 MLP 06 L520 42 CCMA 4.0. 37 MLAP 06 L525 44 MLP 10.20 44 CCMD 0.3. 37 MLAP 10.25 44 MLP 10.20 44 CCMD 0.5. 37 MLAP 10.25 44 MLP 10.220 44 CCMD 0.5. 37 MLAP 10.25 44 MLP 10.220 44 CCMD 0.5. 37 MLAP 10.24 44 MLP 24.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 46 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 44 MLP 10.20 44 CCMD 0.3. 37 MLAP 10.24 46 MLP 10.25 48 CCMD 1.5. 37 MLAP 10.24 48 CCMD 1.5. 38 MLAP 16.24	CCFA 3.0	37	CX 06 CYM22	MLFO 24 G40	49
CCFD 0.5	CCFA 4.0	37	CX7ES71*	MLFV 06 LG25	43
CCFD 0.7. 37  CCFD 1.0. 37  CCFD 1.5. 37  MLFV 10 G3245  CCFD 1.5. 37  MLFV 10 G3245  CCFD 2.5. 37  MLFV 16 G2547  CCFD 2.5. 37  MLFV 16 G3247  CCFD 3.0. 37  MLAP 06 L2542  MLFV 16 G3247  CCFD 4.0. 37  MLAP 06 L3242  MLFV 16 G3247  CCMA 0.3. 37  MLAP 06 L3242  MLFV 16 G4047  CCMA 0.5. 37  MLAP 06 L4042  MLFV 24 G3249  CCMA 0.7. 37  MLAP 06 L22542  MLFV 24 G3249  CCMA 1.0. 37  MLAP 06 L24042  MLFV 24 G4049  CCMA 1.5. 37  MLAP 06 L3242  MLFV 24 G4049  CCMA 1.5. 37  MLAP 06 L3242  MLP 06 L2042  CCMA 1.5. 37  MLAP 06 L3242  MLP 06 L2042  CCMA 2.5. 37  MLAP 06 L3242  MLP 06 L2042  CCMA 3.0. 37  MLAP 06 LS3242  MLP 06 L2042  CCMA 3.0. 37  MLAP 06 LS3242  MLP 06 L52042  CCMA 4.0. 37  MLAP 06 LS2442  MLP 06 LS2042  CCMA 0.3. 37  MLAP 06 LS2442  MLP 06 LS2042  CCMA 4.0. 37  MLAP 06 LS2442  MLP 06 LS2042  CCMA 0.3. 37  MLAP 06 LS2442  MLP 10.2044  CCMD 0.3. 37  MLAP 06 LS2444  MLP 10.22044  CCMD 0.5. 37  MLAP 10.2544  MLP 10.22044  CCMD 0.5. 37  MLAP 10.2544  MLP 10.22044  CCMD 0.5. 37  MLAP 10.2544  MLP 10.22044  CCMD 1.0. 37  MLAP 10.2244  MLP 10.2548  CCMD 1.0. 37  MLAP 10.2344  MLP 10.2548  CCMD 1.0. 37  MLAP 10.2544  MLP 10.2548  CCMD 1.5. 37  MLAP 10.2544  MLV 10 G2545  CCMD 1.0. 37  MLAP 10.2544  MLV 10 G2545  CCMD 2.5. 37  MLAP 10.2544  MLV 24 G3247  CCMD 2.5. 37  MLAP 10.2544  MLV 24 G3247  CCMD 2.5. 37  MLAP 10.2546  MLAP 16.2546  MLAP 16.2546  MLAP 16.2546  MLAP 16.2546  MLAP 16.2049  CCMD 1.5. 37  MLAP 16.2546  MLAP 16.2546  MLAP 16.2049  CCMD 1.0. 37  MLAP 16.2044  MLV 10 G2545  CCMD 2.5. 37  MLAP 16.2044  MLV 10 G2545  CCMD 2.5. 37  MLAP 10.2044  MLV 10 G2545  CCMD 1.5. 37  MLAP 16.2046  MLAP 16.2046  MLAP 16.2046  MLAP 16.2048  RCF2D 0.3. 71*  CL11646  MLAP 24.22548  RCF2D 0.5. 71*  CL11648	CCFD 0.3	37	CX 08 CYF23	MLFV 06 LG32	43
CCFD 1.0	CCFD 0.5	37	CX 08 CYM23	MLFV 06 LG40	43
CCFD 1.5.         .37         M         MLFV 10 G40         .45           CCFD 2.5.         .37         MLAP 06 L25         .47         MLFV 16 G25         .47           CCFD 3.0.         .37         MLAP 06 L32         .42         MLFV 16 G32         .47           CCFD 4.0.         .37         MLAP 06 L32         .42         MLFV 24 G32         .49           CCMA 0.3.         .37         MLAP 06 L40         .42         MLFV 24 G32         .49           CCMA 0.5.         .37         MLAP 06 L225         .42         MLFV 24 G32         .49           CCMA 0.7.         .37         MLAP 06 L232         .42         MLFV 24 G40         .49           CCMA 1.0.         .37         MLAP 06 L832         .42         MLP 06 L20         .42           CCMA 2.5.         .37         MLAP 06 L832         .42         MLP 06 L20         .42           CCMA 2.5.         .37         MLAP 06 L832         .42         MLP 06 L220         .42           CCMA 3.0.         .37         MLAP 06 L823         .42         MLP 06 L820         .42           CCMA 3.0.         .37         MLAP 06 L823         .42         MLP 06 L820         .42           CCMA 3.0.         .37	CCFD 0.7	37		MLFV 10 G25	45
M MLFV 16 G25	CCFD 1.0	37		MLFV 10 G32	45
MLPV 16 G25	CCFD 1.5	37	M	MLFV 10 G40	45
CCFD 4.0. 37 MLAP 06 L32 42 MLFV 16 G40. 47 CCMA 0.3. 37 MLAP 06 L32 42 MLFV 24 G25. 49 CCMA 0.5. 37 MLAP 06 L225. 42 MLFV 24 G32. 49 CCMA 0.7. 37 MLAP 06 L322 42 MLFV 24 G40. 49 CCMA 1.0. 37 MLAP 06 L322 42 MLFV 24 G40. 49 CCMA 1.0. 37 MLAP 06 L322 42 MLFV 24 G40. 49 CCMA 1.5. 37 MLAP 06 L322 42 MLP 06 L220. 42 CCMA 1.5. 37 MLAP 06 L532. 42 MLP 06 L220. 42 CCMA 1.5. 37 MLAP 06 L532. 42 MLP 06 L520. 42 CCMA 2.5. 37 MLAP 06 L532. 42 MLP 06 L520. 42 CCMA 3.0. 37 MLAP 06 L5232 42 MLP 06 L520. 42 CCMA 3.0. 37 MLAP 06 L5240. 42 MLP 10.20. 44 CCMD 0.3. 37 MLAP 10.25. 44 MLP 10.20. 44 CCMD 0.5. 37 MLAP 10.25. 44 MLP 16.225. 46 CCMD 0.7. 37 MLAP 10.32 44 MLP 16.225. 46 CCMD 0.7. 37 MLAP 10.22 44 MLP 24.25. 48 CCMD 1.0. 37 MLAP 10.232 44 MLP 06 L625. 43 CCMD 1.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 1.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 1.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 1.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232 44 MLY 06 LG25. 43 CCMD 2.5. 37 MLAP 10.240 44 MLY 10 G25. 45 CCMD 3.0. 37 MLAP 16.25 46 MLY 16 G32 47 CCMD 4.0. 37 MLAP 16.25 46 MLY 16 G32 47 CCMD 4.0. 37 MLAP 16.25 46 MLY 12 G32 49 CDF 08. 83 MLAP 16.20 46 CCMD 1.5. 42 MLAP 24.22 48 CCMD 1.5. 42 MLAP 24.22 48 CCMD 1.5. 42 MLAP 24.22 48 CCMD 1.5. 42 MLAP 24.25 48 CCMD 1.5. 42 MLAP 24.25 48 CCMD 1.5. 42 MLAP 24.20 48 CCMD 1.6. 46 MLAP 24.225 48 CCMD 1.6. 46 MLAP 24.225 48 CCMD 1.6. 46 MLAP 24.225 48 CCMD 1.6. 48 MLAP 24.220 48 CCMD 1.6. 48 MLAP 24.240 48 CCMD 1	CCFD 2.5	37	IAI	MLFV 16 G25	47
CCMA 0.3	CCFD 3.0	37	MLAP 06 L2542	MLFV 16 G32	47
CCMA 0.5	CCFD 4.0	37	MLAP 06 L3242	MLFV 16 G40	47
CCMA 0.7. 37 MLAP 06 L232 42 MLFV 24 G40 49  CCMA 1.0. 37 MLAP 06 L240 42 MLP 06 L20 42  CCMA 1.5. 37 MLAP 06 LS32 42 MLP 06 L220 42  CCMA 2.5. 37 MLAP 06 LS40 42 MLP 06 LS20 42  CCMA 3.0. 37 MLAP 06 LS232 42 MLP 06 LS220 42  CCMA 4.0. 37 MLAP 06 LS240 42 MLP 10.20 44  CCMD 0.3. 37 MLAP 10.25 44 MLP 10.20 44  CCMD 0.3. 37 MLAP 10.25 44 MLP 16.225 46  CCMD 0.5. 37 MLAP 10.40 44 MLP 24.225 48  CCMD 1.5. 37 MLAP 10.232 44 MLP 10.225 45  CCMD 1.5. 37 MLAP 10.232 44 MLP 10.25 45  CCMD 1.5. 37 MLAP 10.232 44 MLP 24.225 45  CCMD 2.5. 37 MLAP 10.240 44 MLV 16 G32 47  CCMD 2.5. 37 MLAP 16.25 46 MLV 16 G32 47  CCMD 4.0. 37 MLAP 16.32 46 MLV 16 G32 47  CCMD 4.0. 37 MLAP 16.32 46 MLV 16 G32 49  CDF 08 83 MLAP 16.25 46 MLV 24 G32 49  CDF 08 83 MLAP 16.225 48  CCM 65 78 MLAP 16.232 46  CKR 65 78 MLAP 16.232 46  CKR 65 78 MLAP 16.232 46  CKR 65 78 MLAP 16.232 48  CLI 06 L 42 MLAP 24.25 48  CLI 06 L 42 MLAP 24.25 48  CLI 10 44 MLP 24.25 48  CLI 10 44 MLAP 24.40 48  CCII 10 44 MLAP 24.40 48  CCII 10 44 MLAP 24.40 48  CCII 10 44 MLAP 24.20 48  CCII 10 44 MLAP 24.20 48  CLI 10 44 MLAP 24.20 48  CLI 10 44 MLAP 24.20 48  CCII 10 48 MLAP 24.20 48  CCII 24 48 MLAP 24	CCMA 0.3	37	MLAP 06 L4042	MLFV 24 G25	49
CCMA 1.0. 37	CCMA 0.5	37	MLAP 06 L22542	MLFV 24 G32	49
CCMA 1.5. 37 MLAP 06 LS32 42 MLP 06 L220 42 CCMA 2.5. 37 MLAP 06 LS40 42 MLP 06 LS20 42 CCMA 3.0. 37 MLAP 06 LS232 42 MLP 06 LS220 42 CCMA 4.0. 37 MLAP 06LS232 42 MLP 10.20 44 CCMD 0.3. 37 MLAP 10.25 44 MLP 10.20 44 CCMD 0.5. 37 MLAP 10.25 44 MLP 10.220 44 CCMD 0.7. 37 MLAP 10.32 44 MLP 16.225 48 CCMD 1.0. 37 MLAP 10.225 44 MLP 24.225 48 CCMD 1.5. 37 MLAP 10.232 44 MLP 24.225 48 CCMD 1.5. 37 MLAP 10.232 44 MLV 10 G25 43 CCMD 2.5. 37 MLAP 10.240 44 MLV 10 G25 45 CCMD 3.0. 37 MLAP 16.25 46 MLV 16 G32 47 CCMD 4.0. 37 MLAP 16.25 46 MLV 16 G32 47 CCMD 4.0. 37 MLAP 16.32 46 MLV 24 G32 49 CDF 08 83 MLAP 16.40 46 MQA 08 O25 38 CCM 08 83 MLAP 16.225 48 CCM 08 83 MLAP 16.225 48 CCM 08 83 MLAP 16.225 48 CCM 08 83 MLAP 16.225 46 CCM 08 83 MLAP 16.240 46 CLI 06 L 42 MLAP 24.255 48 CLI 06 L 42 MLAP 24.255 48 CLI 10 44 MLAP 24.40 48 CLI 10 44 MLAP 24.40 48 CCF2D 0.5. 71* CLI 10 44 MLAP 24.225 48 CCF2D 0.5. 71* CLI 10 44 MLAP 24.225 48 CCF2D 0.5. 71* CLI 10 44 MLAP 24.225 48 CCF2D 0.5. 71* CLI 10 44 MLAP 24.225 48 CCF2D 0.5. 71* CLI 12 44 MR MLAP 24.240 48 CCF2D 0.7. 71* CQ4F 03 85 MLAP 24.240 48 CCF2D 0.7. 71*	CCMA 0.7	37	MLAP 06 L23242	MLFV 24 G40	49
CCMA 2.5. 37 MLAP 06 LS40. 42 MLP 06 LS20. 42 CCMA 3.0. 37 MLAP 06LS232. 42 MLP 06 LS220. 42 CCMA 4.0. 37 MLAP 06LS240. 42 MLP 10.20. 44 CCMD 0.3. 37 MLAP 10.25. 44 MLP 10.220. 44 CCMD 0.5. 37 MLAP 10.32. 44 MLP 16.225. 46 CCMD 0.7. 37 MLAP 10.40. 44 MLP 24.25. 48 CCMD 1.0. 37 MLAP 10.225. 44 MLP 24.225. 48 CCMD 1.0. 37 MLAP 10.232. 44 MLP 24.225. 48 CCMD 1.5. 37 MLAP 10.232. 44 MLV 06 LG25. 43 CCMD 2.5. 37 MLAP 10.232. 44 MLV 10 G25. 45 CCMD 3.0. 37 MLAP 16.25. 46 MLV 16 G32. 47 CCMD 3.0. 37 MLAP 16.25. 46 MLV 16 G32. 47 CCMD 4.0. 37 MLAP 16.32. 46 MLV 24 G32. 49 CDF 08. 83 MLAP 16.40. 46 MQA 08 O25. 38 CDM 08. 83 MLAP 16.25. 46 MQA 08 V25. 38 CKR 65. 78* MLAP 16.232. 46 CKR 65 D. 78* MLAP 16.232. 46 CLI 06 L. 42 MLAP 24.25. 48 CLI 06 L. 42 MLAP 24.25. 48 CLI 06 L. 42 MLAP 24.25. 48 CLI 10 MLAP 24.20.	CCMA 1.0	37	MLAP 06 L24042	MLP 06 L20	42
CCMA 3.0	CCMA 1.5	37	MLAP 06 LS3242	MLP 06 L220	42
CCMA 4.0       .37       MLAP 06LS240       .42       MLP 10.20       .44         CCMD 0.3       .37       MLAP 10.25       .44       MLP 10.220       .44         CCMD 0.5       .37       MLAP 10.32       .44       MLP 16.225       .46         CCMD 0.7       .37       MLAP 10.40       .44       MLP 24.225       .48         CCMD 1.0       .37       MLAP 10.225       .44       MLV 24.225       .48         CCMD 1.5       .37       MLAP 10.232       .44       MLV 06 LG25       .43         CCMD 2.5       .37       MLAP 10.240       .44       MLV 10 G25       .45         CCMD 3.0       .37       MLAP 16.25       .46       MLV 16 G32       .47         CCMD 4.0       .37       MLAP 16.32       .46       MLV 24 G32       .49         CDF 08       .83       MLAP 16.40       .46       MQA 08 O25       .38         CDF 08       .83       MLAP 16.225       .46       MQA 08 V25       .38         CKR 65       .78*       MLAP 16.232       .46       MQA 08 V25       .38         CKR 65 D       .78*       MLAP 24.225       .48       R         CLI 06 L       .42       MLAP 24.32			MLAP 06 LS4042	MLP 06 LS20	42
CCMD 0.3. 37 MLAP 10.25 44 MLP 10.220 44  CCMD 0.5. 37 MLAP 10.32 44 MLP 16.225 46  CCMD 0.7. 37 MLAP 10.40 44 MLP 24.25 48  CCMD 1.0. 37 MLAP 10.225 44 MLP 24.25 48  CCMD 1.5. 37 MLAP 10.232 44 MLV 06 LG25 43  CCMD 2.5. 37 MLAP 10.240 44 MLV 10 G25 45  CCMD 3.0. 37 MLAP 16.25 46 MLV 16 G32 47  CCMD 4.0. 37 MLAP 16.32 46 MLV 24 G32 49  CDF 08 83 MLAP 16.40 46 MQA 08 V25 38  CDM 08 83 MLAP 16.225 46  CKR 65 D. 78* MLAP 16.232 46  CKR 65 D. 78* MLAP 16.240 46  CLI 06 L. 42 MLAP 24.25 48  CLI 06 L. 42 MLAP 24.25 48  CLI 10 44 MLAP 24.40 48  CLI 10 44 MLAP 24.40 48  CLI 10 44 MLAP 24.20 48  CLI 16 46 MLAP 24.225 48  CLI 16 46 MLAP 24.225 48  CLI 16 48 MLAP 24.225 48  CLI 24 48 MLAP 24.232 48  CCF2D 0.5 71*  CQ4F 03 85 MLAP 24.240 48  CCF2D 1.0 71*	CCMA 3.0	37	MLAP 06LS23242	MLP 06 LS220	42
CCMD 0.5       .37       MLAP 10.32       .44       MLP 16.225       .46         CCMD 0.7       .37       MLAP 10.40       .44       MLP 24.25       .48         CCMD 1.0       .37       MLAP 10.225       .44       MLP 24.225       .48         CCMD 1.5       .37       MLAP 10.232       .44       MLV 06 LG25       .43         CCMD 2.5       .37       MLAP 10.240       .44       MLV 10 G25       .45         CCMD 3.0       .37       MLAP 16.25       .46       MLV 16 G32       .47         CCMD 4.0       .37       MLAP 16.32       .46       MLV 24 G32       .49         CDF 08       .83       MLAP 16.40       .46       MQA 08 O25       .38         CDM 08       .83       MLAP 16.225       .46       MQA 08 V25       .38         CKR 65       .78*       MLAP 16.232       .46       MQA 08 V25       .38         CKR 65 D       .78*       MLAP 16.240       .46       R         CLI 06 L       .42       MLAP 24.25       .48       R         CLI 10       .44       MLAP 24.32       .48       R       RCF2D 0.3       .71*         CLI 16       .46       MLAP 24.225       .48	CCMA 4.0	37	MLAP 06LS24042	MLP 10.20	44
CCMD 0.7       37       MLAP 10.40       44       MLP 24.25       48         CCMD 1.0       37       MLAP 10.225       44       MLP 24.225       48         CCMD 1.5       37       MLAP 10.232       44       MLV 06 LG25       43         CCMD 2.5       37       MLAP 10.240       44       MLV 10 G25       45         CCMD 3.0       37       MLAP 16.25       46       MLV 16 G32       47         CCMD 4.0       37       MLAP 16.32       46       MLV 24 G32       49         CDF 08       83       MLAP 16.40       46       MQA 08 O25       38         CDM 08       83       MLAP 16.225       46       MQA 08 V25       38         CKR 65       78*       MLAP 16.232       46       MQA 08 V25       38         CKR 65 D       78*       MLAP 16.232       46       R       R         CLI 06 L       42       MLAP 24.25       48       R         CLI 10 4       44       MLAP 24.25       48       R         CLI 10 4       44       MLAP 24.225       48       RCF2D 0.5       71*         CLI 16       46       MLAP 24.232       48       RCF2D 0.5       71*	CCMD 0.3	37	MLAP 10.2544	MLP 10.220	44
CCMD 1.0         .37         MLAP 10.225         .44         MLP 24.225         .48           CCMD 1.5         .37         MLAP 10.232         .44         MLV 06 LG25         .43           CCMD 2.5         .37         MLAP 10.240         .44         MLV 10 G25         .45           CCMD 3.0         .37         MLAP 16.25         .46         MLV 16 G32         .47           CCMD 4.0         .37         MLAP 16.32         .46         MLV 24 G32         .49           CDF 08         .83         MLAP 16.40         .46         MQA 08 O25         .38           CDM 08         .83         MLAP 16.225         .46         MQA 08 V25         .38           CKR 65         .78*         MLAP 16.232         .46         MQA 08 V25         .38           CKR 65 D         .78*         MLAP 16.240         .46         MARY         .46         R           CLI 06 LS         .42         MLAP 24.25         .48         R         R           CLI 10         .44         MLAP 24.40         .48         RCF2D 0.3         .71*           CLI 16         .46         MLAP 24.225         .48         RCF2D 0.5         .71*           CLI 24         .48         MLAP 24	CCMD 0.5	37	MLAP 10.3244	MLP 16.225	46
CCMD 1.5       .37       MLAP 10.232       .44       MLV 06 LG25       .43         CCMD 2.5       .37       MLAP 10.240       .44       MLV 10 G25       .45         CCMD 3.0       .37       MLAP 16.25       .46       MLV 16 G32       .47         CCMD 4.0       .37       MLAP 16.32       .46       MLV 24 G32       .49         CDF 08       .83       MLAP 16.40       .46       MQA 08 O25       .38         CDM 08       .83       MLAP 16.225       .46       MQA 08 V25       .38         CKR 65       .78*       MLAP 16.232       .46       MQA 08 V25       .38         CKR 65 D       .78*       MLAP 16.240       .46       MCA 08 V25       .38         CLI 06 L       .42       MLAP 24.25       .48       R         CLI 106 L       .42       MLAP 24.32       .48       R       R         CLI 10       .44       MLAP 24.40       .48       RCF2D 0.3       .71*         CLI 16       .46       MLAP 24.225       .48       RCF2D 0.5       .71*         CLI 24       .48       MLAP 24.232       .48       RCF2D 0.7       .71*         CLI 24       .48       MLAP 24.240       .48	CCMD 0.7	37	MLAP 10.4044	MLP 24.25	48
CCMD 2.5       37       MLAP 10.240       44       MLV 10 G25       .45         CCMD 3.0       37       MLAP 16.25       .46       MLV 16 G32       .47         CCMD 4.0       37       MLAP 16.32       .46       MLV 24 G32       .49         CDF 08       83       MLAP 16.40       .46       MQA 08 O25       .38         CDM 08       83       MLAP 16.225       .46       MQA 08 V25       .38         CKR 65       78*       MLAP 16.232       .46       MQA 08 V25       .38         CKR 65 D       78*       MLAP 16.240       .46       MLAP 24.25       .48       R         CLI 06 L       .42       MLAP 24.32       .48       R       R         CLI 10       .44       MLAP 24.40       .48       RCF2D 0.3       .71*         CLI 16       .46       MLAP 24.225       .48       RCF2D 0.5       .71*         CLI 24       .48       MLAP 24.232       .48       RCF2D 0.7       .71*         CQ4F 03       .85       MLAP 24.240       .48       RCF2D 1.0       .71*	CCMD 1.0	37	MLAP 10.22544	MLP 24.225	48
CCMD 3.0       .37       MLAP 16.25       .46       MLV 16 G32       .47         CCMD 4.0       .37       MLAP 16.32       .46       MLV 24 G32       .49         CDF 08       .83       MLAP 16.40       .46       MQA 08 O25       .38         CDM 08       .83       MLAP 16.225       .46       MQA 08 V25       .38         CKR 65       .78*       MLAP 16.232       .46       .46	CCMD 1.5	37	MLAP 10.23244	MLV 06 LG25	43
CCMD 4.0       37       MLAP 16.32       46       MLV 24 G32       49         CDF 08       83       MLAP 16.40       46       MQA 08 O25       38         CDM 08       83       MLAP 16.225       46       MQA 08 V25       38         CKR 65       78*       MLAP 16.232       46         CKR 65 D       78*       MLAP 16.240       46         CLI 06 L       42       MLAP 24.25       48         CLI 106 LS       42       MLAP 24.32       48         CLI 10       44       MLAP 24.40       48       RCF2D 0.3       71*         CLI 16       46       MLAP 24.225       48       RCF2D 0.5       71*         CLI 24       48       MLAP 24.232       48       RCF2D 0.7       71*         CQ4F 03       85       MLAP 24.240       48       RCF2D 1.0       71*	CCMD 2.5	37	MLAP 10.24044	MLV 10 G25	45
CDF 08       83       MLAP 16.40       46       MQA 08 O25       38         CDM 08       83       MLAP 16.225       46       MQA 08 V25       38         CKR 65       78*       MLAP 16.232       46         CKR 65 D       78*       MLAP 16.240       46         CLI 06 L       42       MLAP 24.25       48         CLI 06 LS       42       MLAP 24.32       48         CLI 10       44       MLAP 24.40       48       RCF2D 0.3       71*         CLI 16       46       MLAP 24.225       48       RCF2D 0.5       71*         CLI 24       48       MLAP 24.232       48       RCF2D 0.7       71*         CQ4F 03       85       MLAP 24.240       48       RCF2D 1.0       71*	CCMD 3.0	37	MLAP 16.2546	MLV 16 G32	47
CDM 08	CCMD 4.0	37	MLAP 16.3246	MLV 24 G32	49
CKR 65	CDF 08	83	MLAP 16.4046	MQA 08 O25	38
CKR 65 D       78*       MLAP 16.240       46         CLI 06 L       42       MLAP 24.25       48         CLI 06 LS       42       MLAP 24.32       48         CLI 10       44       MLAP 24.40       48       RCF2D 0.3       71*         CLI 16       46       MLAP 24.225       48       RCF2D 0.5       71*         CLI 24       48       MLAP 24.232       48       RCF2D 0.7       71*         CQ4F 03       85       MLAP 24.240       48       RCF2D 1.0       71*	CDM 08	83	MLAP 16.22546	MQA 08 V25	38
CLI 06 L	CKR 65	78*	MLAP 16.23246		
CLI 06 LS       42       MLAP 24.32       48         CLI 10       44       MLAP 24.40       48       RCF2D 0.3       71*         CLI 16       46       MLAP 24.225       48       RCF2D 0.5       71*         CLI 24       48       MLAP 24.232       48       RCF2D 0.7       71*         CQ4F 03       85       MLAP 24.240       48       RCF2D 1.0       71*	CKR 65 D	78*	MLAP 16.24046		
CLI 06 LS       .42       MLAP 24.32       .48         CLI 10       .44       MLAP 24.40       .48       RCF2D 0.3       .71*         CLI 16       .46       MLAP 24.225       .48       RCF2D 0.5       .71*         CLI 24       .48       MLAP 24.232       .48       RCF2D 0.7       .71*         CQ4F 03       .85       MLAP 24.240       .48       RCF2D 1.0       .71*	CLI 06 L	42	MLAP 24.2548	D	
CLI 16	CLI 06 LS	42	MLAP 24.3248	17	
CLI 24	CLI 10	44	MLAP 24.4048	RCF2D 0.37	'1*
CQ4F 0385 MLAP 24.24048 RCF2D 1.071*	CLI 16	46	MLAP 24.22548	RCF2D 0.57	'1*
	CLI 24	48	MLAP 24.23248	RCF2D 0.77	'1*
CQ4M 0385 MLAV 06 LG2543 RCF2D 1.571*	CQ4F 03	85	MLAP 24.24048	RCF2D 1.07	'1*
	CQ4M 03	85	MLAV 06 LG2543	RCF2D 1.57	'1*

 $<sup>\</sup>ensuremath{^{*}}$  These items are also shown in various sections throughout the catalogue



RCF2D 2.571*	RX7M2D 1070, 74	TAVH 10 G3255
RCF2D 3.071*	RX7M2D 10 P89	TAVH 16 G3257
RCF2D 4.071*	RX7M2D 1670, 74	TAVH 16 G4057
RCM2D 0.371*	RX7M2D 16 P89	TAVH 24 G3259
RCM2D 0.571*	RX7M2D 16 XF70, 74	TAVH 24 G4059
RCM2D 0.771*	RX7M2D 16XFP89	TCHC 06 L53, 61
RCM2D 1.071*	RX7M2D 2570, 74	TCHC 06 SL53, 61
RCM2D 1.571*	RX7M2D 25 P89	TCHC 1055, 63
RCM2D 2.571*	RXCF 4/270	TCHC 10 S55, 63
RCM2D 3.071*	RXCF 4/874	TCHC 1657, 65
RCM2D 4.071*	RXCM 4/270	TCHC 16 S57, 65
RDF2D 0.383	RXCM 4/874	TCHC 2459, 67
RDF2D 0.583	RXF2D 1.585	TCHC 24 S59, 67
RDF2D 0.783	RXF2D 2.585	TCP 0687
RDF2D 1.083	RXF2D 4.085	THCC 06 LG61
RDF2D 1.583	RXF2D 6.085	THCC 10 G63
RDF2D 2.583	RXM2D 1.585	THCC 16 G65
RDM2D 0.383	RXM2D 2.585	THCC 24 G67
RDM2D 0.583	RXM2D 4.085	THCH 06 LG53
RDM2D 0.783	RXM2D 6.085	THCH 10 G55
RDM2D 1.083		THCH 16 G57
RDM2D 1.583		THCH 24 G59
RDM2D 2.583	-	THIC 06 L60
RIFD 0.282	Т	THIC 1062
RIFD 0.382	TAPC 06 L2560	THIC 1664
RIFD 0.582	TAPC 06 L3260	THIC 2466
RIMD 0.282	TAPC 10.2562	THIH 06 L52
RIMD 0.382	TAPC 10.3262	THIH 1054
RIMD 0.582	TAPC 16.3264	THIH 1656
RKAX 03 I78	TAPC 16.4064	THIH 2458
RKAX 03 IA78	TAPC 24.3266	TMAO 06 L2552, 60
RKAX 03 IA478	TAPC 24.4066	TMAO 06 L3252, 60
RKAX AP2080	TAPH 06 L2552	TMAO 10.2554, 62
RKAX AP2580	TAPH 06 L3252	TMAO 10.3254, 62
RKAX IAF2081	TAPH 10.2554	TMAO 16.3256, 64
RKAX IAF2581	TAPH 10.3254	TMAO 16.4056, 64
RKAX IAP2080	TAPH 16.3256	TMAO 24.3258, 66
RKAX IAP2580	TAPH 16.4056	TMAO 24.4058, 66
RKAX IF81	TAPH 24.3258	TMAV 06 L2552, 60
RKAX IFC81	TAPH 24.4058	TMAV 06 L3252, 60
RKAX VG2079	TAVC 06 LG2561	TMAV 10.2554, 62
RKAX VG2579	TAVC 06 LG3261	TMAV 10.3254, 62
RQF 0584	TAVC 10 G2563	TMAV 16.3256, 64
RQM 0584	TAVC 10 G2263	TMAV 16.4056, 64
RX7F2D 6.070, 74	TAVC 16 G3265	TMAV 24.3258, 66
RX7F2D 1070, 74	TAVC 16 G4065	TMAV 24.4058, 66
RX7F2D 1670, 74	TAVC 24 G3267	
RX7F2D 16 XF70, 74	TAVC 24 G4067	
RX7F2D 2570, 74	TAVH 06 LG2553	
RX7M2D 6.070, 74	TAVH 06 LG3253	
RX7M2D 6.0 P89	TAVH 10 G2555	

 $<sup>\</sup>ensuremath{^{*}}$  These items are also shown in various sections throughout the catalogue

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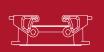


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