



Multipole connectors

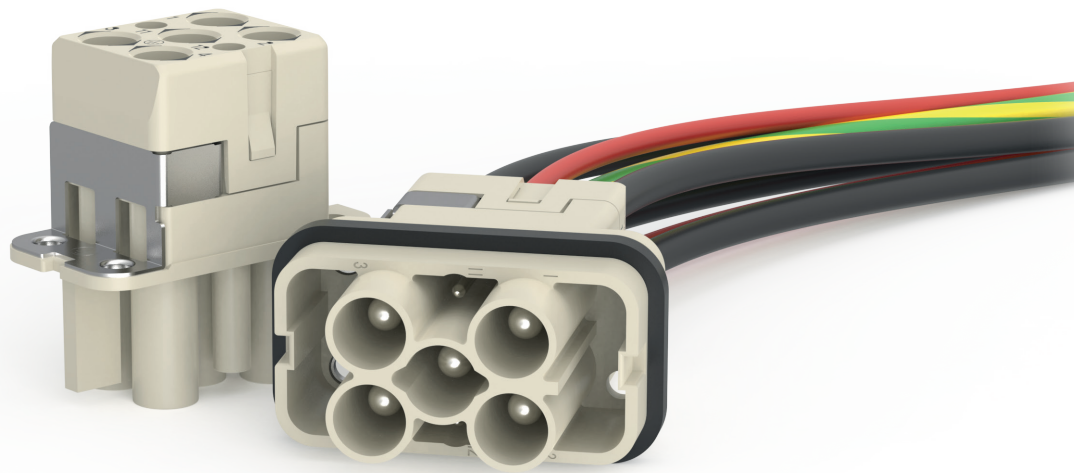


datasheet

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Newsbook

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**CQ SIZE "32.13" CRIMP INSERTS
FOR METAL ENCLOSURES**

TECHNICAL FEATURES

The new **CQF /M 04/2E** size “32.13” crimp connector inserts, for use with series **CX 40 A** power contacts (5 contacts per inserts required) and series **CD** auxiliary contacts, **are the variant with integral PE plate** of popular **CQF /M 04/2** crimp connector inserts, ISO 23570-3 standard and DESINA® specification compliant, with which they are intermateable, for use in the **new size “32.13” metallic enclosures with stainless steel lever series CQA/MQA**.

The integral PE plate implements the equipotential bonding contact between the protective power earth crimp contact (positioned in the middle of the inserts) and the CQA/MQA metal enclosure.

The existing crimp equivalent inserts **CQF /M 04/2** – unsuitable for metallic hoods/housings – needed to be complemented by this new variant, equipped with such integrated PE plate.

These **new crimp version CQF /M 04/2E** (the E after the polarity means with integrated PE plate) is suitable for use either inside traditional size “32.13” CQ/MQ insulating enclosures (where CQF /M 04/2 are enough) or inside the **new size “32.13” series CQA/MQA metallic enclosures (Figure 1)**.

These new connector inserts combined with CQA/MQA metallic enclosures, when used in conjunction with commercially available M25 EMC cable gland, and by replacing the standard rubber sealing gasket provided with the male insert **CQM 04/2E** with the special conductive sealing gasket **CR 08 EMC** (see CN.19 page 575), can provide improved EMC shielding attenuation compared with metallized insulating enclosures **CQS/MQS 08**, necessary when these connectors are used e.g., to feed three-phase AC motors through pulse width modulation (PWM) drives (inverters), for speed/torque motion control, known to inherently produce significant harmonic pollution.

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 the **new series CQA/MQA metallic enclosures**, these have been **provided with a coding** by means of **internal keys** that match only with the corresponding **keyways** foreseen on the new inserts with PE plate bonding connection to the PE contact. These **CQF /M 04/2E** (crimp) connector inserts size “32.13” are added to the already available **CQF /M 08E** (crimp) and **CQYF /M 08E (AXYR®)** as suitable for these metallic “32.13” coded enclosures.

Max diameter of wire sheathings:

- ø 5 mm for 4+PE power poles (max wire size 6 mm² / AWG 10)
- ø 3,8 mm for 2 auxiliary poles (max wire size 2,5 mm² / AWG 14)

CERTIFICATIONS

- cURus, CQC, DNV, BV, EAC pending.
- and markings.
- RoHS: compliant.

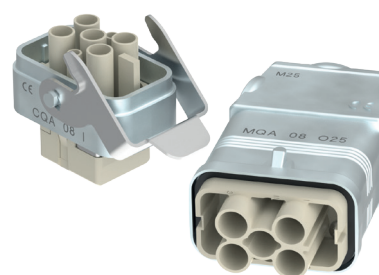
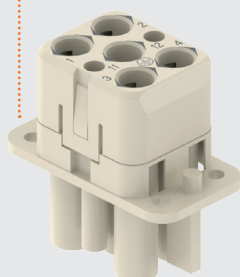
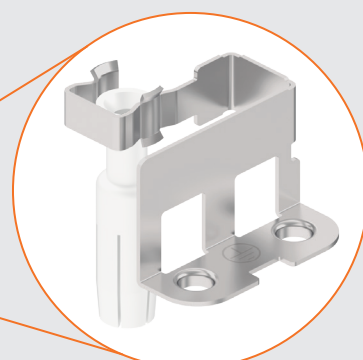
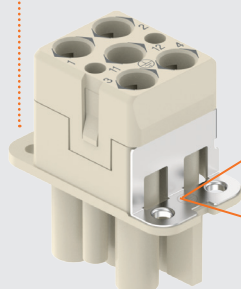


Figure 1. New size “32.13” series CQA/MQA metallic enclosures

▶ Existing CQF 04/2 crimp connector



▶ New CQF 04/2E with integrated PE plate for bonding to PE of metallic enclosures



▶ PE plate



CQ 04/2E 4 poles + ⊕ (40 A – 400/690 V) + 2 poles (10 A – 250 V)

enclosures:
size "32.13"

page:

insulating type
EMC (insulating)

365 - 367
573 - 574

page:

metallic

38

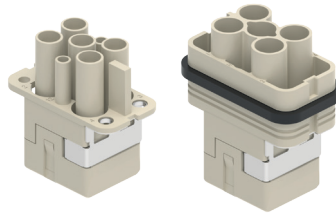
ISO 23570-3
standard and DESINA.
specification compliant



refer to CN.19 pages

refer to News 2022 pages

inserts,
crimp connections



Q SIZE "32.13"

FROM MARCH 2023

description

part No.

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

[CQF 04/2E](#)
[CQM 04/2E](#)

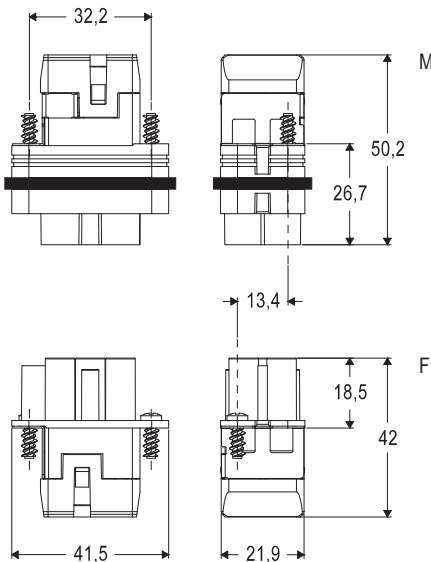
- characteristics according to EN 61984:
4 poles 40 A 400/690 V 6 kV 3
2 poles 10 A 250 V 4 kV 3

- cURus (ECBT2/8 and PVVA2/8) pending
- CQC, DNV, BV, EAC pending

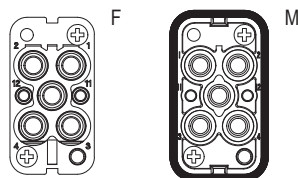
- rated voltage according to UL/CSA: 600 V
- insulation resistance: $\geq 10 \text{ G}\Omega$
- ambient temperature limit: $-40 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$
- made of self-extinguishing thermoplastic resin UL 94V-0

- mechanical life: ≥ 500 cycles
- contact resistance: $\leq 0,3 \text{ m}\Omega$ (4 P), $\leq 3 \text{ m}\Omega$ (2 P)
- Max diameter of wire sheathings:
- $\varnothing 5 \text{ mm}$ for 4+PE power poles (max wire size 6 mm^2 / AWG 10)
- $\varnothing 3,8 \text{ mm}$ for 2 auxiliary poles (max wire size $2,5 \text{ mm}^2$ / AWG 14)

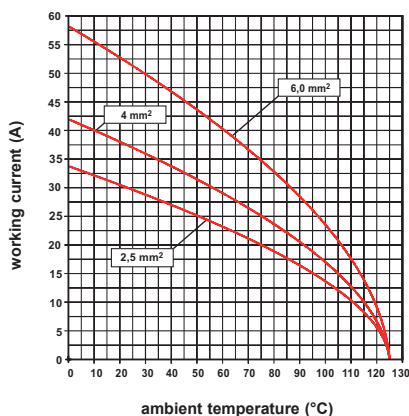
- for max. current load see the connector inserts derating diagram below; for more information see **page 28** of CN.19 catalogue.



contacts side (front view)



CQ 04/2E, 04/2 power poles connector inserts
Maximum current load derating diagram



- each insert supplied with 2 fixing screws,
self-tapping, zinc plated steel $\varnothing 2,9 \times 9,5 \text{ mm}$, Ph1



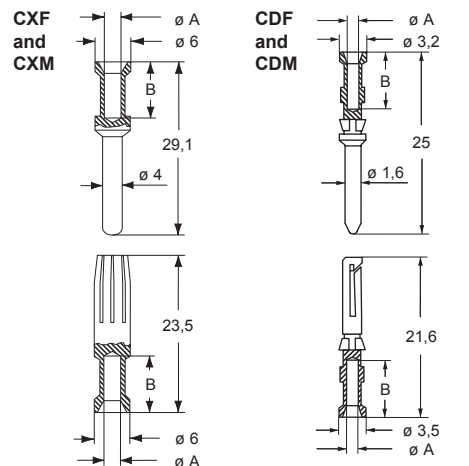
**40 A and 10 A crimp contacts
silver and gold plated**



description	part No.	part No.
40 A female crimp contacts		
1,5 mm ² AWG 16	CXFA 1.5	silver plated
2,5 mm ² AWG 14	CXFA 2.5	
4 mm ² AWG 12	CXFA 4.0	
6 mm ² AWG 10	CXFA 6.0	
40 A male crimp contacts		
1,5 mm ² AWG 16	CXMA 1.5	silver plated
2,5 mm ² AWG 14	CXMA 2.5	
4 mm ² AWG 12	CXMA 4.0	
6 mm ² AWG 10	CXMA 6.0	
10 A female crimp contacts		
0,14-0,37 mm ² AWG 26-22 identification No. 1	CDFA 0.3	gold plated
0,5 mm ² AWG 20 identification No. 2	CDFA 0.5	
0,75 mm ² AWG 18 identification No. ②	CDFA 0.7	
1 mm ² AWG 18 identification No. 3	CDFA 1.0	
1,5 mm ² AWG 16 identification No. 4	CDFA 1.5	
2,5 mm ² AWG 14 identification No. 5	CDFA 2.5	
10 A male crimp contacts		
0,14-0,37 mm ² AWG 26-22 identification No. 1	CDMA 0.3	gold plated
0,5 mm ² AWG 20 identification No. 2	CDMA 0.5	
0,75 mm ² AWG 18 identification No. ②	CDMA 0.7	
1 mm ² AWG 18 identification No. 3	CDMA 1.0	
1,5 mm ² AWG 16 identification No. 4	CDMA 1.5	
2,5 mm ² AWG 14 identification No. 5	CDMA 2.5	

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

- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 40A contacts, CXF, CXM series and 10A contacts CDF, CDM series on CN.19 at pages 708 - 741)



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



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