

CDA-CDC series

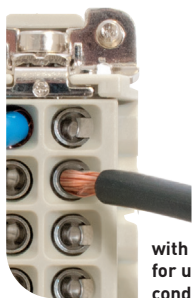
The compact inserts

CDA inserts with screw-type termination

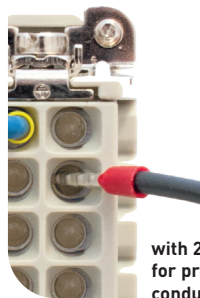
The screw-type connector inserts CDA series with 10 and 16 poles + \oplus are now made using screw-type terminals (CNE series) with a built-in wire protection pressure plate of proven reliability and practicality.

The wire protection pressure plate preserves the conductors in case of wiring with **unprepared conductors** (i.e. without wire end ferrules) up to a maximum wire cross-section of **4 mm²** (12 AWG).

The variant without a wire protection pressure plate (code with suffix X) is also available, for use with **prepared conductors** featuring a wire end ferrule with a maximum usable wire cross-section of **2,5 mm²** (14 AWG).



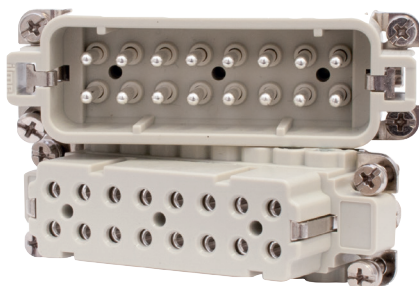
with 4 mm²
for unprepared
conductors



with 2,5 mm²
for prepared
conductors

CDC inserts with crimp termination

The crimp termination CDC series of inserts with 10 and 16 poles + \oplus now adopt the tried and tested contact retention technique of connector series CCE and CQE for removable crimp contacts (series CC, max 16A).



CDA-CDC INSERTS SUM-UP

- ☑ According to standard EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
- ☑ Insulation resistance: $\geq 10 \text{ G}\Omega$
- ☑ Ambient temperature limit: -40 °C ... +125 °C
- ☑ Construction material: UL 94 V-0 self-extinguishing thermoplastic resin
- ☑ Mechanical life: ≥ 500 cycles
- ☑ Built-in silver plated contacts (only CDA series)

The applications

Like those of the previous series, CDA and CDC inserts and their enclosures are used in accordance with the recommendations EUROMAP 12, EUROMAP 13, EUROMAP 14-1, EUROMAP 16 and EUROMAP 62 (European industry consortium for moulding machines and plastic processing).

The CDC inserts can also be used with CC series crimp contacts made of iron/constantan (Fe-CuNi) for the cabling of J type thermocouples in accordance with IEC/EN 60584-1 (EUROMAP 14-1 recommendation).

The CDA/CDC series inserts can also be coupled with previous insert versions.



CDC 10 poles + ⊕ 16A - 250Venclosures:
size "49.16"

page:

IL-BRID

374 - 377, 382

CZ7 IP67, single lever

384

W-TYPE for aggressive environments

519

E-Xtreme® corrosion proof

540

EMC

576

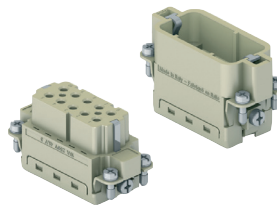
panel supports:

page:

COB + adapter

652 - 654

inserts, crimp connections

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

STANDARD

ADVANCED OPENING

description

part No.

part No.

part No.

without contacts (to be ordered separately)

female inserts for female contacts

CDCF 10

male inserts for male contacts

CDCM 10

16A female contacts

0,14-0,37 mm ²	AWG 26-22	one groove
0,5 mm ²	AWG 20	with no grooves
0,75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1,5 mm ²	AWG 16	two grooves
2,5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male contacts

0,14-0,37 mm ²	AWG 26-22	one groove
0,5 mm ²	AWG 20	with no grooves
0,75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1,5 mm ²	AWG 16	two grooves
2,5 mm ²	AWG 14	three grooves
3 mm ²	AWG 12	one wide groove
4 mm ²	AWG 12	with no grooves

16A male crimp contacts for advanced opening

0,5 mm ²	AWG 20	with no grooves
0,75 mm ²	AWG 18	one groove (back side)
1 mm ²	AWG 18	one groove
1,5 mm ²	AWG 16	two grooves
2,5 mm ²	AWG 14	three grooves

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

silver plated

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

gold plated+

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

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

* for basic or high thickness
gold plating, please refer
to page 675

- characteristics according to EN 61984:

16A 250V 4kV 3
16A 230/400V 4kV 2

- cULus (UL for USA and Canada),

BUREAU VERITAS ENE certified

- rated voltage according to UL/CSA: 600V

- insulation resistance: ≥ 10 GΩ

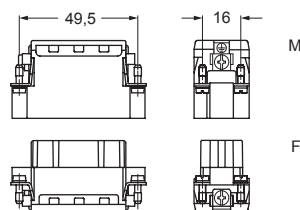
- ambient temperature limit: -40 °C ... +125 °C

- made of self-extinguishing thermoplastic resin UL 94V-0

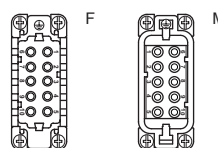
- mechanical life: ≥ 500 cycles- contact resistance: ≤ 1 mΩ

- according to recommendations EUROMAP N° 16

- for max. current load see the connector inserts derating diagram below; for more information see page 28

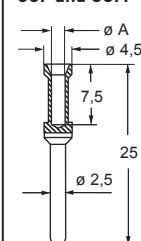


contacts side (front view)

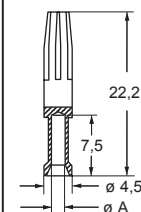
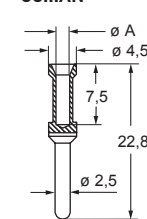


- it is recommended to crimp the contacts with
crimping tools homologated by ILME (please see
the crimping tool section 16A contacts, CCF, CCM
and CC...AN series on pages 708 - 741)

CCF and CCM

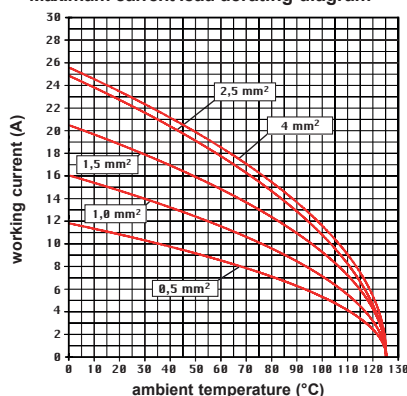


CC...AN



CCF, CCM and CC...AN contacts

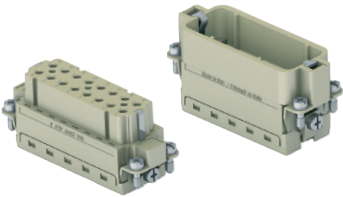
conductor section mm ²	conductor slot ø A (mm)	conductors stripping length (mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
0,75	1,3	7,5
1,0	1,45	7,5
1,5	1,8	7,5
2,5	2,2	7,5
3	2,55	7,5
4	2,85	7,5

CDC 10 poles connector inserts
Maximum current load derating diagram

CDC 16 poles + ⊕ 16A - 250V

enclosures: size "66.16"	page:
IL-BRID	378 - 382
CZ7 IP67, single lever	385
W-TYPE for aggressive environments	520
E-Xtreme® corrosion proof	541
EMC	577
panel supports: COB + adapter	page: 652 - 654

inserts, crimp connections



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

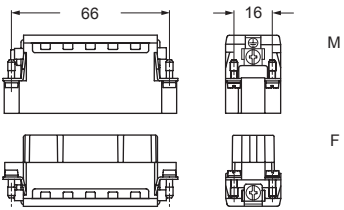


STANDARD

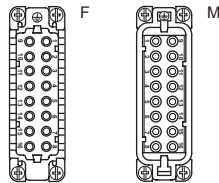
ADVANCED OPENING

description	part No.	part No.	part No.
without contacts (to be ordered separately)			
female inserts for female contacts	CDCF 16		
male inserts for male contacts	CDCM 16		
16A female contacts			
0,14-0,37 mm ² AWG 26-22 one groove	CCFA 0.3	CCFD 0.3	
0,5 mm ² AWG 20 with no grooves	CCFA 0.5	CCFD 0.5	
0,75 mm ² AWG 18 one groove (back side)	CCFA 0.7	CCFD 0.7	
1 mm ² AWG 18 one groove	CCFA 1.0	CCFD 1.0	
1,5 mm ² AWG 16 two grooves	CCFA 1.5	CCFD 1.5	
2,5 mm ² AWG 14 three grooves	CCFA 2.5	CCFD 2.5	
3 mm ² AWG 12 one wide groove	CCFA 3.0	CCFD 3.0	
4 mm ² AWG 12 with no grooves	CCFA 4.0	CCFD 4.0	
16A male contacts			
0,14-0,37 mm ² AWG 26-22 one groove	CCMA 0.3	CCMD 0.3	
0,5 mm ² AWG 20 with no grooves	CCMA 0.5	CCMD 0.5	
0,75 mm ² AWG 18 one groove (back side)	CCMA 0.7	CCMD 0.7	
1 mm ² AWG 18 one groove	CCMA 1.0	CCMD 1.0	
1,5 mm ² AWG 16 two grooves	CCMA 1.5	CCMD 1.5	
2,5 mm ² AWG 14 three grooves	CCMA 2.5	CCMD 2.5	
3 mm ² AWG 12 one wide groove	CCMA 3.0	CCMD 3.0	
4 mm ² AWG 12 with no grooves	CCMA 4.0	CCMD 4.0	
16A male crimp contacts for advanced opening			
0,5 mm ² AWG 20 with no grooves	CC 0.5 AN		* for basic or high thickness gold plating, please refer to page 675
0,75 mm ² AWG 18 one groove (back side)	CC 0.7 AN		
1 mm ² AWG 18 one groove	CC 1.0 AN		
1,5 mm ² AWG 16 two grooves	CC 1.5 AN		
2,5 mm ² AWG 14 three grooves	CC 2.5 AN		

- characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
- cULus (UL for USA and Canada),
- BUREAU VERITAS ENEC certified
- 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: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- according to recommendations EUROMAP N° 13 / N° 14.1
- for max. current load see the connector inserts derating diagram below; for more information see page 28

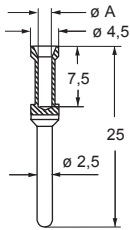


contacts side (front view)

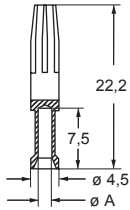
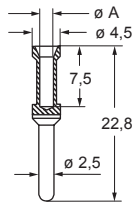


- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 16A contacts, CCF, CCM and CC...AN series on pages 708 - 741)

CCF and CCM



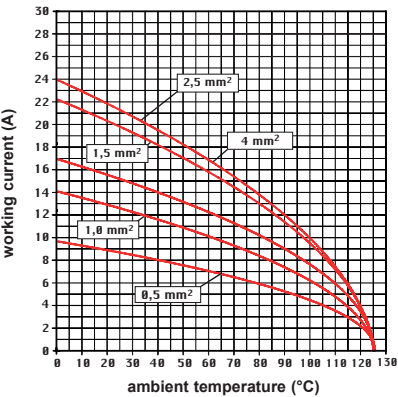
CC...AN



CCF, CCM and CC...AN contacts

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

CDC 16 poles connector inserts
Maximum current load derating diagram

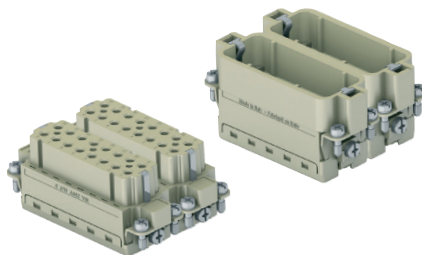


CDC 32 poles + ⊕ 16A - 250Venclosures:
size "66.40"

page:

C-TYPE IP65 or IP66/IP69
W-TYPE for aggressive environments
E-Xtreme® corrosion proof431 - 434
527
548

inserts, crimp connections

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

STANDARD

ADVANCED OPENING

description	part No.	part No.	part No.	part No.
without contacts (to be ordered separately)				
female inserts, No. (1-16) and (17-32)				
male inserts, No. (1-16) and (17-32)				
16A female contacts				
0,14-0,37 mm ² AWG 26-22 one groove	CDCF 16	CDCF 16 N	CCFA 0.3	CCFD 0.3
0,5 mm ² AWG 20 with no grooves	CDCM 16	CDCM 16 N	CCFA 0.5	CCFD 0.5
0,75 mm ² AWG 18 one groove (back side)			CCFA 0.7	CCFD 0.7
1 mm ² AWG 18 one groove			CCFA 1.0	CCFD 1.0
1,5 mm ² AWG 16 two grooves			CCFA 1.5	CCFD 1.5
2,5 mm ² AWG 14 three grooves			CCFA 2.5	CCFD 2.5
3 mm ² AWG 12 one wide groove			CCFA 3.0	CCFD 3.0
4 mm ² AWG 12 with no grooves			CCFA 4.0	CCFD 4.0
16A male contacts				
0,14-0,37 mm ² AWG 26-22 one groove			CCMA 0.3	CCMD 0.3
0,5 mm ² AWG 20 with no grooves			CCMA 0.5	CCMD 0.5
0,75 mm ² AWG 18 one groove (back side)			CCMA 0.7	CCMD 0.7
1 mm ² AWG 18 one groove			CCMA 1.0	CCMD 1.0
1,5 mm ² AWG 16 two grooves			CCMA 1.5	CCMD 1.5
2,5 mm ² AWG 14 three grooves			CCMA 2.5	CCMD 2.5
3 mm ² AWG 12 one wide groove			CCMA 3.0	CCMD 3.0
4 mm ² AWG 12 with no grooves			CCMA 4.0	CCMD 4.0
16A male crimp contacts for advanced opening				
0,5 mm ² AWG 20 with no grooves			CC 0.5 AN	* for basic or high thickness gold plating, please refer to page 675
0,75 mm ² AWG 18 one groove (back side)			CC 0.7 AN	
1 mm ² AWG 18 one groove			CC 1.0 AN	
1,5 mm ² AWG 16 two grooves			CC 1.5 AN	
2,5 mm ² AWG 14 three grooves			CC 2.5 AN	

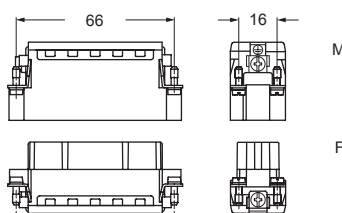
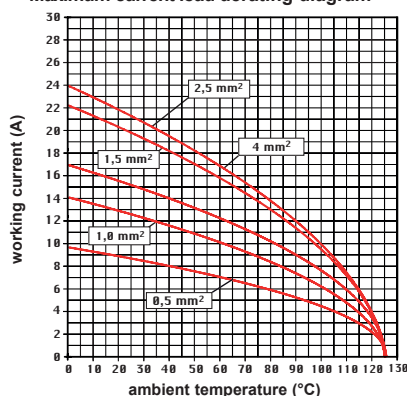
- characteristics according to EN 61984:

16A 250V 4kV 3
16A 230/400V 4kV 2

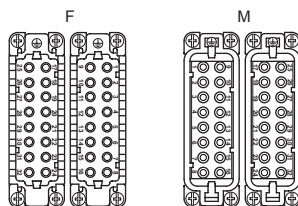
- cULus (UL for USA and Canada),

ENEC certified

- 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: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- according to recommendations EUROMAP N° 12 / N° 62
- for max. current load see the connector inserts derating diagram below; for more information see page 28

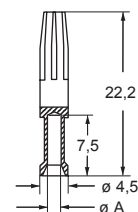
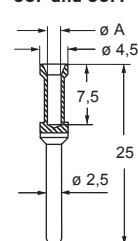
CDC 32 poles connector inserts
Maximum current load derating diagram

contacts side (front view)

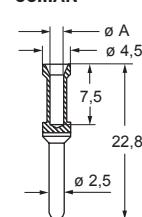


- it is recommended to crimp the contacts with crimping tools homologated by ILME (please see the crimping tool section 16A contacts, CCF, CCM and CC...AN series on pages 708 - 741)

CCF and CCM



CC...AN



CCF, CCM and CC...AN contacts

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

RECOMMENDED TIGHTENING TORQUE

- insert terminal screws, including PE terminal and fixing screws
- axial screw insert, MIXO series CX 02 4A / CX 02 4B
- enclosures assembly screws

Insert terminal screws, including PE terminal and fixing screws

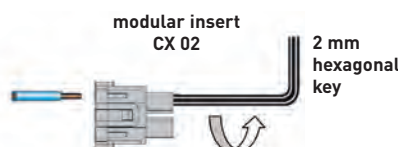
Increasing the tightening torque of terminal screws does not considerably improve the contact resistance. The screw torques are selected according to standard EN 60999-1, to provide excellent mechanical, thermal and electric behaviour. The conductor or terminal may be damaged if the recommended values are significantly exceeded.

Screw size	Connector type	Recommended tightening torque		Recommended size of screwdriver
		(Nm)	(lb.in)	
	LINE TERMINALS			
M2,5	CT 40, 64	0,4	3,5	0,5 x 3
M2,6	CT 06..24	0,4	3,5	0,5 x 3
M3	CK	0,5	4,4	0,5 x 3
M3	CDA	0,5	4,4	Ph0 or 0,6 x 3,5
M3	CNE, CME	0,5	4,4	Ph0 or 0,8 x 4
M3	CX 4/2, CX 4/8 (16A)	0,5	4,4	0,6 x 3,5
M3	CX 4/8 Q (16A)	0,5	4,4	Ph0
M4	CP	1,2	10,6	Ph1 or 0,8 x 4
M6	CX 4/.. (80A)	2,5	22,1	1,0 x 5,5
	PE TERMINAL			
M3	CK, CQ 05, CQ 07, CQ 12	0,5	4,4	0,5x3
M4	all series except CD 15, CD 25, CDA, CDC, CSAH, MIXO	1,2	10,6	Ph2 or 1,0 x 5,5
M3,5	series CD 15, CD 25, CDA, CDC, CSAH	0,8	7,1	Ph1 or 0,8 x 5,5
M3	small PE terminal, MIXO frames series	0,5	4,4	Ph1 or 1,0 x 4,5
M4	large PE terminal, MIXO frames series	1,2	10,6	Ph1 or 1,0 x 5,5
M4	PE terminal, MIXO ONE enclosures	1,2	10,6	Ph1 or 1,0 x 5,5
	FASTENING SCREWS			
M3	CK, CKS, CKSH, CD 07, CD 08, CQ 05, CQ 07, CQ 12, CQ 21, CQ4 02 /02 H, CQ4 03, CX 1/2 BD	0,5	4,4	Ph1 or 0,8 x 5,5
M3	screw for fastening inserts to enclosures of all series except T-TYPE, CQ-MQ 08 and MIXO ONE	0,8	7,1	Ph1 or 0,8 x 4
Ø 2,9	screws for fastening "32.13" inserts CQ 04/2, CQ 08, CQ 17 to CQ-MQ 08 enclosures	0,7	6,2	Ph1
M3	screw for fastening inserts to T-TYPE enclosures	0,5	4,4	Ph1 or 0,8 x 4
Ø 2,9	series MIXO ONE enclosures, assembly of top and bottom parts	0,8	7,1	Ph1
M4	CYR 16.3, CYR 24.4 cable pass-through hoods, assembly of two halves	1,2	10,6	Ph2 or 1,0 x 5,5
M4	CYG 16 in-line joint, assembly of two halves and mounting of two bulkhead mounting housings size "77.27"	1,2	10,6	Ph2 or 1,0 x 5,5
M5	series BIG enclosures, assembly of top and bottom parts	1,0	8,8	Ph2

Axial screw insert, MIXO series CX 02 4A / CX 02 4B

The connections of the conductors to the female and male inserts are made via axial screw. Fully insert the stripped wire in the back of the contact (axial screw terminals are supplied fully opened); while holding the wire down, insert a 2 mm hexagonal key in the front of the contact and tighten to recommended torque. After assembling the complete connector periodically check that the contact is screwed tight by re-applying the proper tightening torque.

- Usable conductor cross-sections (EN 60228 Class 5):
 - from 2,5 to 8 mm² (14 AWG to 10 AWG) (CX 02 4AF/M)
 - from 6 to 10 mm² (10 AWG to 8 AWG) (CX 02 4BF/M)
 - (extra-flexible EN 60228 class 6: 2,5... 6 mm² (14 AWG to 10 AWG))
- Use only stranded flexible copper conductors
- Do not twist the strands!
- Tightening torque with 2 mm hexagonal Allen key:
 - 1,5 Nm (13,3 lb.in) max for conductors with section 2,5 ... 4 mm² (14 AWG to 12 AWG)
 - 2 Nm (17,7 lb.in) max for conductors with section 6 ... 10 mm² (10 AWG to 8 AWG)
- Stripping length: 8+1 mm



Enclosures assembly screws

In the table below, the recommended minimum and maximum tightening torque to apply to the fixing screws of ILME bulkhead mounting housings are shown, assuming the use of steel screws with 8.8 resistance class and a good fixing panel surface according to the requirements mentioned therein.

Series	Number of screws	Screw size	Recommended torque		Flange sealing element
			(Nm)	(lb.in)	
CK/MK, CKX, CKA/MKA, CQ	2	M3	0,8 – 1,0	7,1 – 8,9	Gasket
MIXO ONE	4	M3	0,5 – 0,9	4,4 – 8,0	Gasket
CZI 15 /25	4	M3	0,8 – 1,0	7,1 – 8,9	Gasket
CHI 50	4	M4	1,2 – 1,8	10,6 – 15,9	Gasket
CHI 06 /10 /16 /24	4	M4	0,8 – 1,2	7,1 – 10,6	Gasket
CHI 32	4	M4	1,2 – 1,8	10,6 – 15,9	Gasket
CHI 48	4	M6	3,0 – 3,6	26,6 – 31,9	Gasket
CGK/MGK (IP68)	2	M4	0,8 – 1,2	7,1 – 10,6	O-ring
CGI/ MGI 06/ 10/ 16/ 24 (IP68)	2	M6	3,0 – 3,6	26,6 – 31,9	O-ring
T-TYPE, T-TYPE/H, T-TYPE/C, T-TYPE/ W	4	M4	0,8 – 1,2	7,1 – 10,6	Gasket

To guarantee the declared IP degree of protection of the housings reported in this catalogue, according to EN IEC 60529 or to the relevant Type rating per ANSI/UL 50 and 50E (for those products bearing approval to those ratings), the surface of the mounting panel must meet the following requirements (definitions are provided in ISO 4287 standard):

- Waviness $W_t \leq 0,2$ mm over a distance of 200 mm (measured on the panel without load)
- Roughness $R_a \leq 16$ μ m

NOTE: The values of tightening torque indicated in the above table are just recommended values, that must be related – by the designer of the final application – to the resistance class of the screws (not included in the delivery), with the assumption that the mounting panel is sufficiently rigid (stiff). If the deflection of the panel, under the effect of tightening the screws, is greater than 0,7 mm over a distance of 100 mm, it is necessary to use the counter-flanges mentioned in our catalogue or the special flange gaskets available upon request (please contact our Sales Department). For the CGI/MGI IP68 enclosures the specific counter-flanges mentioned in our catalogue are always recommended.

Enclosures locking screws

Series	Number of screws	Screw size	Recommended tightening torque		Recommended size of screwdriver
			(Nm)	(lb.in)	
CGK/MGK	2	M4	1,2	10,6	1,0 x 5,5 or 7 mm hexagonal key
CG/IMG	2	M6	2,5	22,1	1,6 x 10 or 10 mm hexagonal key

RANGE OF CONDUCTOR CROSS-SECTIONAL AREA AND STRIPPING LENGTH

Connector inserts connection technique	Range of conductor cross-sectional area		Stripping length
Screw	(mm ²)	AWG	(mm)
CK	0,75 – 2,5	18 – 14	6
CX 4/2, CX 4/8 (poles 16A) ¹⁾	0,75 – 4	18 – 12	7
	0,75 – 2,5	18 – 14	7
CNE ¹⁾	0,5 – 4	20 – 12	7
CNE..X	0,25 – 2,5	24 – 14	7
CDA ¹⁾	0,5 – 4	20 – 12	7
CDA..X	0,25 – 2,5	24 – 14	7
CT 06..24	0,75 – 2,5	18 – 14	12
CT 40 and 64	0,75 – 2,5	18 – 14	12
CME ¹⁾	0,5 – 4	20 – 12	7
CME..X	0,5 – 2,5	20 – 14	7
CP ¹⁾	0,75 – 6	18 – 10	10,5
CX 4/.. (80A poles)	4 – 16	12 – 5	14
Crimp			
MIXO (5A), CX 25 IB	0,08 – 0,75	28 – 18	4
CQ 21	0,08 – 0,5	28 – 20	4
CDD, CD, MIXO (10A), CQ 12, CQ 07	0,14 – [2,5]*	26 – 14	8 – * [6 for 2,5 mm ²]
CCE, CDC, CMCE, CQ, CQE, CQEE, MIXO (16A)	0,14 – 4	26 – 12	7,5
CX, MIXO (40A), CQ4 03	1,5 – 2,5	16 – 14	9
	4 – 6	12 – 10	9,6
MIXO (70A)	10 – 25	7 – 4	15
MIXO (100A), CX 6/6	10 – 35	7 – 2	15
MIXO (200A)	16 – 70	6 – 2/0	15
Spring			
CSE, CSH, CTSE 06..24, CMSH, MIXO [CX 05 S ²⁾ , CX 05 SH], CSS	0,14 – 2,5	26 – 14	9 - 11
CTS 40/64	0,14 – 2,5 unprepared	26 – 14 unprepared	9 - 11
	0,14 – 1 prepared	26 – 18 prepared	
CKS, CKSH, CDS, CDSH, CSAH	0,14 – 2,5 unprepared	26 – 14 unprepared	9 - 11
	0,14 – 1,5 prepared	26 – 16 prepared	

¹⁾ For CNE, CDA, CP, CME, "CX 4/8 – pole 16A" series connectors with screw terminal and conductor protection plate, the use of ferrules is not necessary (= unprepared conductor). The use of ferrules (= prepared conductor) causes a reduction in maximum useful cross-section to the lower size (e.g. 4 mm² unprepared - 2,5 mm² prepared).

²⁾ Available upon request.

LOAD CURVES

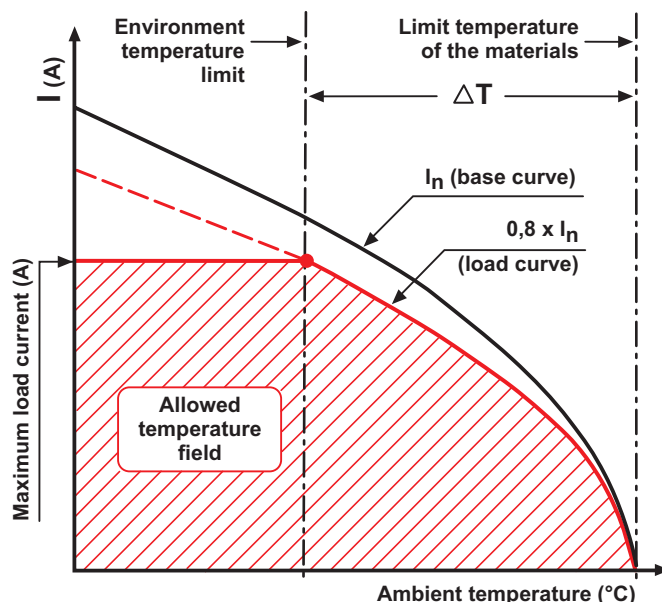
The permitted current carrying capacity for connectors is variable: it becomes lower with the increase of the number of poles and of the ambient temperature in which the connector is installed and it depends upon the thermal properties of the material used for the contacts and the insulating parts including those of the type of conductor used. The current carrying capacity is obtained from the load curves which are constructed according to standard IEC 60512-5-2 for currents circulating simultaneously in all poles.

The limit current curves express current values that determine the achievement of the upper limit temperature of the materials. The choice of the permanent load applicable on the contacts **must be made within the field of operation possible delimited by the above mentioned curves.**

Since use of connectors at the limit values of their characteristics is not recommended, the **base curve** is de-rated. The reduction of the load currents to 80% defines the correction curve where both the maximum permissible contact resistances and the inaccuracy of the temperature measurements are sufficiently taken into consideration.

The correction curve represents the final **limit current curve (load curve)** as defined by standard IEC 60512-5-2. It therefore bears in consideration the differences between the various connector inserts, as well as errors in the temperature measurements.

All the load curves presented in this catalogue include the correction. See figure below.



Legend

Maximum load current (A)

Value for which the connector reaches the upper limit temperature of the material at the corresponding ambient temperature intersected on the load curve.

Limit temperature of the materials

Value determined by the characteristics of the material used. The sum of the environmental temperature and the increase of the ΔT (temperature rise) caused by the current flow must not exceed the limit temperature of the materials.

Environment temperature limit

The environmental conditions must not exceed this value. It may be known and determines the maximum load current, or it may be directly obtained from the load curve.

Base curve

Set of current and temperature values obtained from laboratory tests and influenced by the connector's characteristics (number of poles, construction shape, thermal conductivity of the materials, etc.) and the cross-section of the conductor used.

Load curve (limit current curve)

Obtained from the base curve via the safety coefficient.

ΔT (temperature rise)

Temperature rise produced by a permanent current circulating through all the poles of a connector coupling; difference between the upper limit temperature of the material and the ambient temperature obtained on the limit current curve.