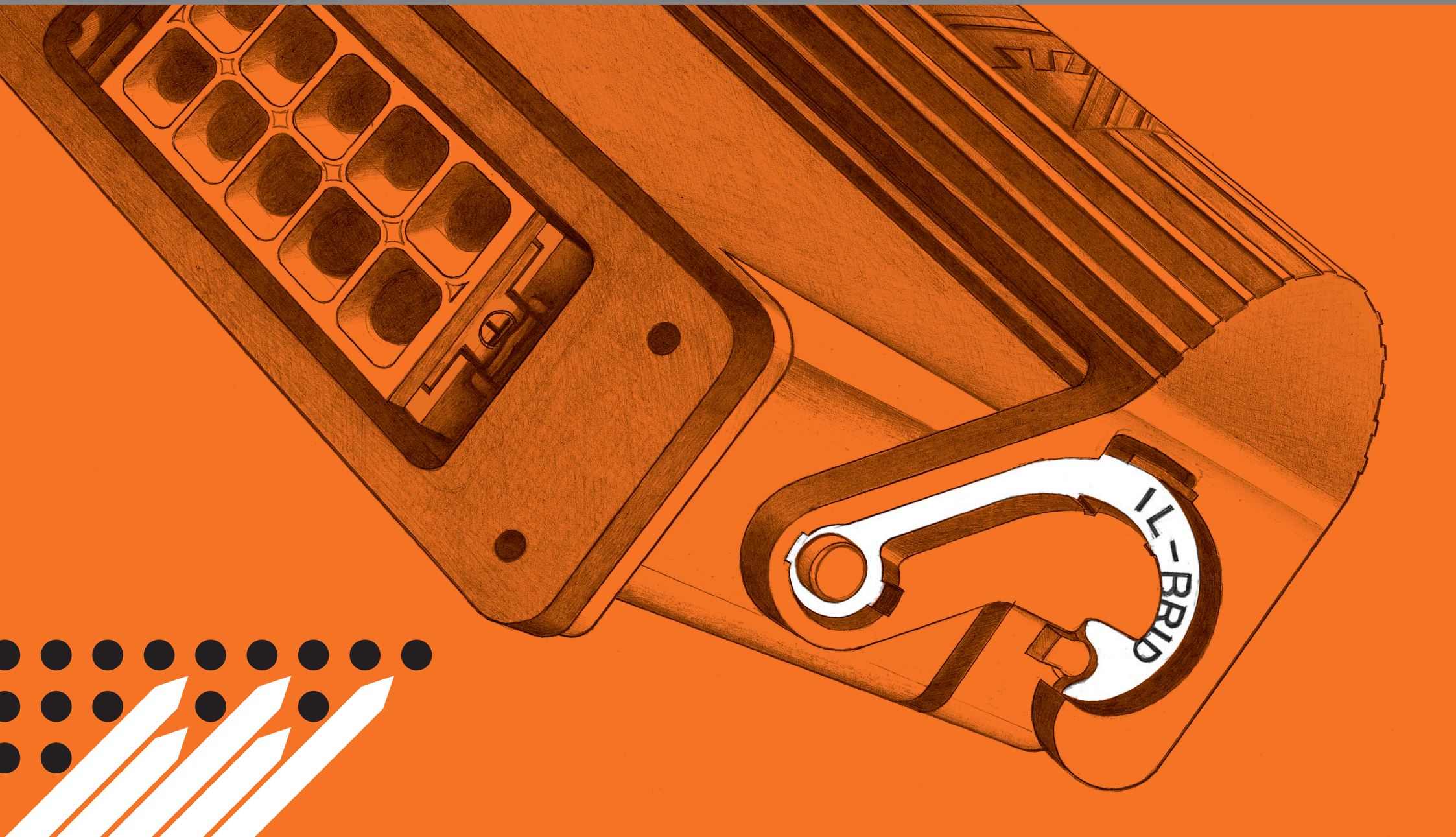
ENGLISH

Multipole connectors
CDA inserts and IL-BRID enclosures



The Company and the Product

INDUSTRIA LOMBARDA MATERIALE ELETTRICO SpA has been operating **in Milan since 1938,** in particular in the electrotechnical sector for the manufacturing of equipment for industrial installations.
ILME reflects the traditional **entrepreneurial spirit of Lombardy,** and has enjoyed continuous expansion for over half a century. The company has carved an important role for itself in the main world markets, also operating directly in the countries that have assumed world leadership in the field of automation, including Germany and Japan.
In the **electrical connection** sector with applications in industrial automation, characterised by **top performance** and utmost **reliability needs,** ILME is today the acknowledged partner of many leading companies worldwide.
The company's fundamental values are:
product innovation, original solutions, excellent **price-quality ratio,** a customer oriented **sense of service,** ethical behaviour and an environmentally friendly approach.

To promote the continuing improvement of its **qualitative results,** ILME has always encouraged its collaborators to work with utmost **responsibility and participation.**
The company focuses on a series of benefits to the user, including research into the most suitable materials, high quality and safe cabling, a rapid turnaround and readily available services.

CE marking

As from 1 January 1997, in order to launch electrical products on the European market the manufacturer must ensure these bear the relevant CE marking, in line with the Low Voltage Directive 73/23/EEC * (implemented in Italy as law 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).
Said marking must be placed on the product or, if this is not possible, on the packaging, the instructions for use or the warranty certificate and acts as a declaration by the manufacturer that the product complies with all relevant EU directives.

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

Almost all ILME products fall under the Low Voltage Directive. A declaration of compliance is required before applying the CE marking. This document, to which the market is not directly entitled, must be made available to the control authorities (in Italy the Ministry for Industry, Commerce and Handicraft) at all times.
In it, the manufacturer declares the technical safety standard(s) followed to manufacture 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 directive's basic safety requirements.

Compliance with harmonised technical standards (i.e. ratified by the CENELEC) constitutes presumed conformity to the directive's basic safety requirements.
The CE marking of ILME products results from said products' declaration of conformity 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 EU standards on which voluntary safety certification markings are based (e.g. IMQ and VDE).
In this way, ILME intends to award 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.

This EC declaration of conformity becomes null and void when the assembly of products includes one or more components not manufactured by us and without EC approval.

*** Note:**
new legal reference for the Low Voltage Directive is 2006/95/EC which is the consolidated edition of Directive 73/23/EEC + Directive 93/68/EEC.

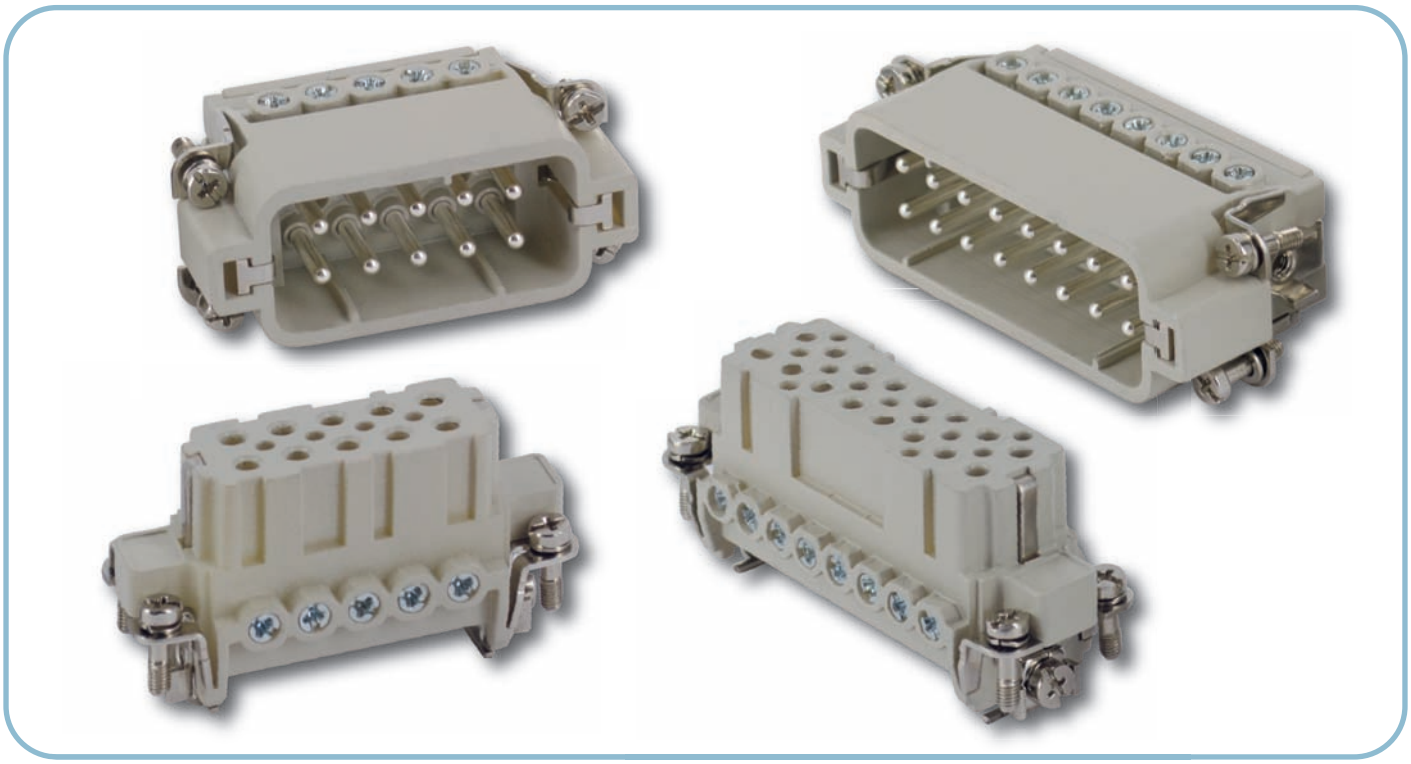
All information contained in this catalogue
is not binding and may be changed without notice

Certification ISO 9001: 2008
Design, manufacture and distribution of industrial electrical equipment (IAF 19, 29a)
Certificate No. 50 100 11133

NEW

The new compact connectors

CDA/CDC inserts: the renewal



The new screw type 10 and 16-poles + ⏚ inserts of the CDA series have been created using CNE series contacts with incorporated wire protection pressure plate.

The wire protection pressure plate allows effective clamping of an unprepared wire (if it without a terminal end-sleeve) up to a maximum wire cross-section of 4 mm² (12 AWG).

The screws are now better retained thanks to the extension of the screw sliding channel.

The characteristics of the inserts are:
- according to EN 61984:
  16A 250V 4kV 3
  16A 230/400V 4kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V-0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ

The CDA series inserts can also be mated with the preceding series of CDA/CDC inserts and CZ enclosures.

The renewed crimp type inserts series **CDC** 10 and 16 poles + PE now take the well tried and tested contact holding technique of connector series CCE and CQE for removable crimp contacts series CC for 16A max. The removal tool is therefore the same (CQES).

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

The CDC inserts can be used with crimp contacts made by iron/constantan (Fe-CrNi) series CC for the wiring of thermocouples type J according to IEC/EN 60584-1 (and Recommendation EUROMAP 14-1).

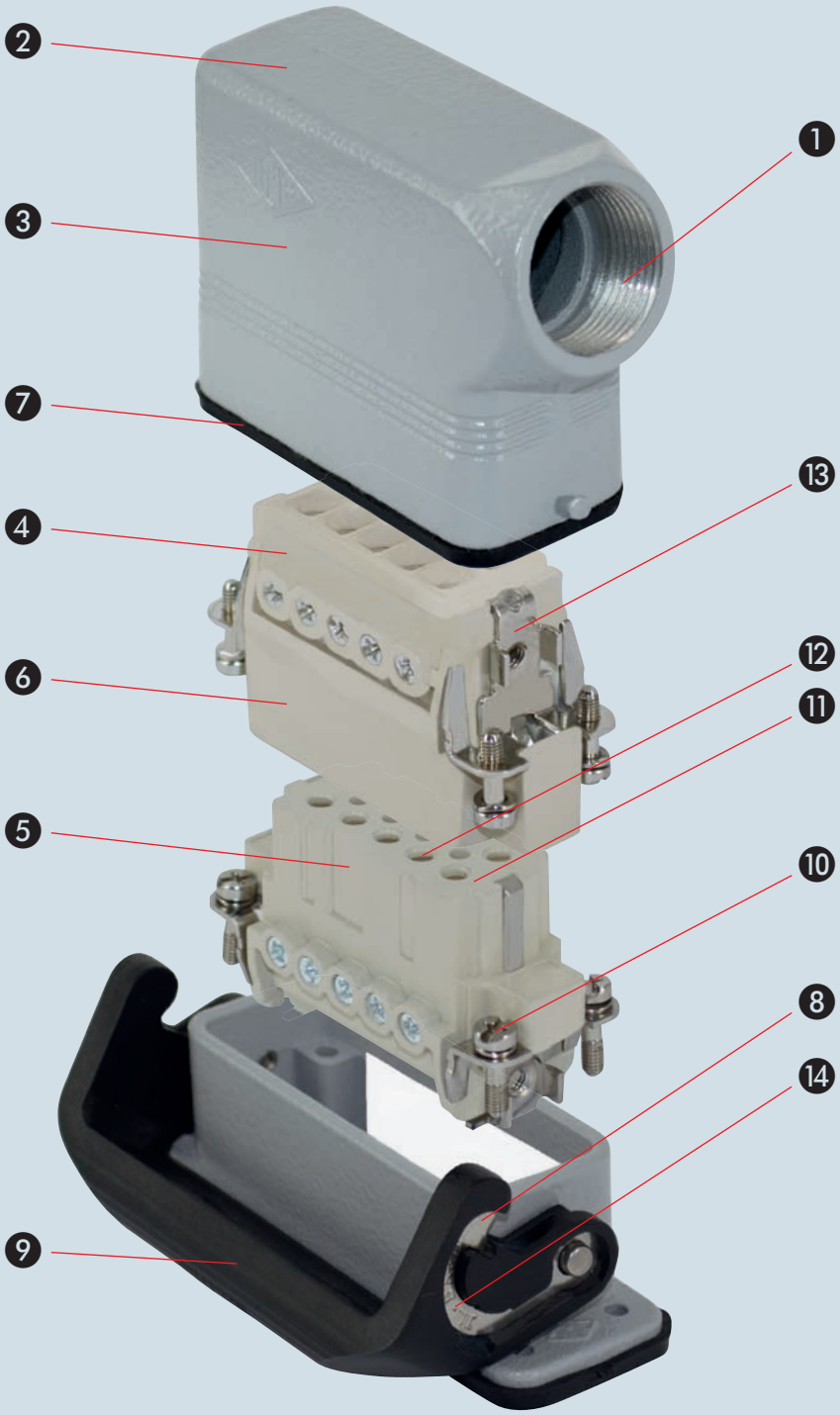
IL-BRID:
evolution of the steel core

The new IL-BRID locking lever, through its original design, combines the strength of the thermoplastic material with the sturdiness and elasticity of the stainless steel spring.

The steel spring that hooks onto the pegs is contained inside the locking lever made by thermoplastic material, **guaranteeing improved resistance to impacts and stresses induced on the enclosures by heavy cables.**

The locking lever also has a linear design which does not attract dirt and is easy to clean.

The IL-BRID series of enclosures can be used with the new CDA, CD, CDC inserts and MIXO single mobile.



❶ Threaded cable passage in various Pg diameters (types with pre code “C”) or metric passage (types with pre code “M”) in accordance with EN 60423, for cable entry devices in accordance with EN 50262 (NPT threading on request), may be located vertically, horizontally or frontally.

❷ Rugged die cast aluminum alloy enclosures. Surface mounting bulkhead and hood versions are available, with or without fixed covers or with mobile protection covers.

❸ Metallic enclosures with a coated finish of epoxy polyester with high resistance to mechanical stress and external agents.

❹ Inserts are made of UL certified self extinguishing fibreglass reinforced thermoplastics, and feature an operating temperature range between 40 °C and +125 °C.

❺ Insert profiles polarised with asymmetrical guides to avoid incorrect matings.
Inserts have a mechanical life equal to or higher than 500 mating cycles.

❻ Inserts are manufactured in compliance with European standard EN 61984 (DIN VDE 0627).

❼ Special seal gaskets in vinyl nitrile elastomer, in anti aging, oil resistant, fuel resistant, together with the cable entry devices (not supplied) provide an IP66 degree of protection for coupled connectors.

❽ Stainless Steel closure springs which guarantee perfect closure and sealing.

❾ Locking device available with one lever.

❿ Captive insert fastening screws, with anti slackening spring washer or under head knurling.

⓫ Contact position identified with numbers or codes on both sides of each insert and printed with a laser system or from a die.

⓬ Silver plated brass contacts connected to the wires by means of captive screws supplied already slackened.

⓭ Protective earth terminal with a wide contact surface.

⓮ IL BRID locking lever with improved resistance to wear and tear.

Recommended tightening torque and size of screwdriver

size of screw	connector type	tightening torque (Nm)	tightening torque (lb.in)	recommended size of screwdriver (mm)
M3	CDA	0,5	4.4	Ph0 or 0,8x4
M3	screw for fastening to enclosures	0,5 0,8	4.4 7.1	Ph1 or 0,8x4
M3,5	screw of protective earthing terminal series CDA, CDC	0,8	7.1	Ph1 or 1,0x5,5

Increasing the tightening torque does not improve considerably the contact resistance. The screw tightening 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.

Stripping length

connector inserts connection technique	conductor cross section (mm^2)	(AWG)	stripping length (mm)
Screw			
CDA [1)]	0,5÷4	20÷12	7
CDA ... X	0,25÷2,5	24÷14	7
Crimp			
CDC	0,14÷4	26÷12	7,5

1) For CDA 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 section to the lower size (e.g. 4 mm^2 unprepared → 2,5 mm^2 prepared).

description

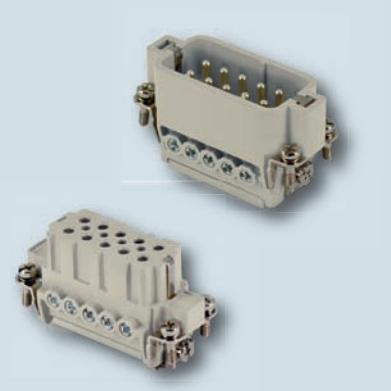
The different types of conductor connections on the male and female inserts are described on the right.
The types are summarised as follows:

screw terminals
crimp terminals

N.B.:
for all inserts with screw terminals it is important that the right tightening torque is applied to the screws in order to prevent wrong contacts or damage to the conductor, the screw or the terminal (see data mentioned in the inserts pages).

The 10A and 16A crimp contacts are available either **silver** or **gold-plated**.
The gold plated crimp contacts are recommended for applications with very low rated currents and rated voltages.
Thanks to the conduction characteristics of gold, the deterioration of signals is prevented and an excellent resistance to the surface oxidation of the contacts is obtained.
In particular, gold plated contacts are recommended with signals with ≤ 5 mA current and ≤ 5V voltage.

contacts with screw terminal connections with or without wire protection

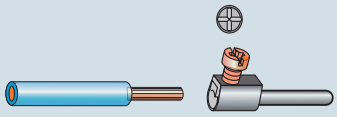


description

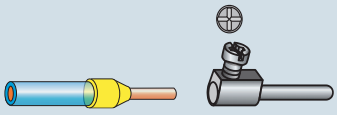
inserts: CDA

The renewed screw type connector inserts series CDA 10 and 16 poles + PE are now made using screw terminals Series CNE, with wire protection pressure plate built with proven reliability and practicality.
The wire protection pressure plate allows to preserve the integrity of the conductors in case of wiring with non prepared conductors (i.e. without wire end ferrules) to the wire cross section up to 4 mm^2 (12 AWG) .
The variant without wire protection pressure plate (code with suffix X) remains available, for use only with prepared conductors with wire end ferrule with limitation of maximum usable wire cross section up to 2,5 mm^2 (14AWG).
Unlooseable terminal screws have been improved thanks to the elongation of the flowing channel for the same when being unscrewed.

The connections of the conductors on the female and male inserts is made with screws (in accordance with standard EN 60999 1).
Two different types of clamping are possible:
With a pressure plate for unprepared conductors.
Without wire protection which requires the conductors to be prepared with wire end sleeves (ferrules).



with wire protection



without wire protection

removable crimp contacts (with retainer device inside insert)

description

inserts: CDC

Connecting the conductors to the removable contacts of the male and female inserts is done with a crimping tool and locator.
The crimped connections are then fitted inside the CDC inserts and firmly held in place by retainer devises located within each terminal of the insert.
The contact can be removed by using special extraction tools that open the retainer devises and release the contact.
The wire housing entry on the contact is tapered to facilitate wire insertion and to avoid any damages occurring after the crimping operation.

16A max contacts

conductor section (mm^2)	AWG	throat identification
0,14 ÷ 0,37	26 ÷ 22	
0,5	20	
0,75	18	
1	18	
1,5	16	
2,5	14	
3,0	12	
4	12	

Contacts can be supplied in the silver or gold plated version.
Male contacts can also be supplied in the “advanced” version (shortened contact)

standard version

IL-BRID

description

The enclosures size “49.16” and “66.16” can be used with the following inserts:

Series **CD** and **CDD** (**CDM/F 15** 15P+PE for size “49.16”, **CDM/F 25** and **CDDM/F 38** for size “66.16”, respectively 25P+PE and 38P+PE) available with the crimp connection technology of removable contacts series CD, for current carrying capacity up to 10A.

Series **CDC** available for crimp contacts with a higher current rating up to 16A (**CDCM/F 10**, **CDCM/F 16**).

Series **CDA** available with screw type terminals: **CDAM/F 10** and **CDAM/F 16** (and their variants).

MIXO single module for inserts from 5A to 70A, RJ45, USB, D SUB and pneumatic.

IP66 and IP69 protection ratings.

characteristics of materials used:

IL-BRID series

made of die cast aluminium alloy;
with epoxy polyester powder coating;
gaskets in anti aging, oil resistant, grease resistant and fuel resistant vinyl nitrile elastomer;
locking device with springs in stainless steel;
lever handles in self extinguishing thermoplastic material reinforced with glass fibres, UL approved.

	rated current			
	10A	10A	16A	70A 40A 16A 10A 5A
	insert series			
enclosures size	CD	CDD	CDA, CDC	MIXO
	insert polarity + ⏚			
49.16	15		10	①*
66.16	25	38	16	

◯* = number of modular inserts that may be inserted in the enclosures (CX 01 T frame)

CDA 10 poles + ⏚ 16A - 250V

enclosures:
size “49.16” page:

panel supports: page:

*** refer to catalogue page CN.12**

inserts,
screw terminal connection

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inserts,
screw terminal connection

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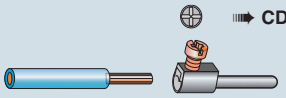
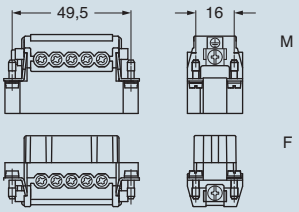
description	part No.	part No.
indirect, with pressure plate [1] female inserts with female contacts male inserts with male contacts	**CDAF 10** **CDAM 10**	
direct, without pressure plate [2] female inserts with female contacts male inserts with male contacts		**CDAF 10 X** **CDAM 10 X**

[1] for unprepared conductors

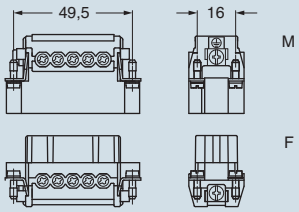


[2] for conductors with end sleeve ferrule

dimensions in mm

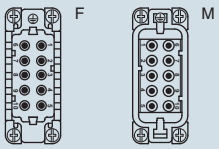


dimensions in mm

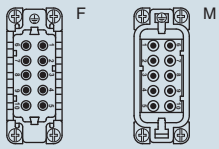


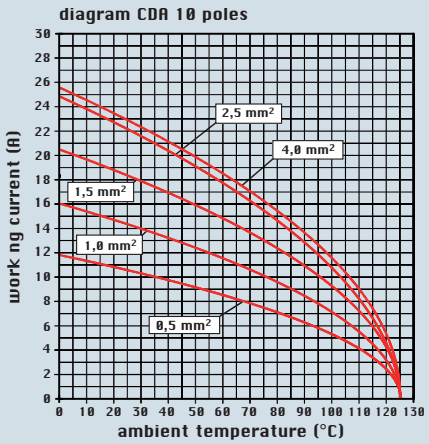
characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12

contacts side (front view)



contacts side (front view)





inserts with pressure plate for conductors cross sections:
0,5 4 mm² AWG 20 12
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

inserts without pressure plate for prepared conductors with cross sections:
0,25 2,5 mm² AWG 24 14
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

dimensions shown are not binding
and may be changed without notice

CDC 10 poles + ⏚ 16A - 250V

enclosures:
size "49.16" page:

panel supports: page:
COB + adaptor ..... 410 412 *

*** refer to catalogue page CN.12**

for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486 catalogue CN.12

inserts, crimp connections

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16A crimp contacts
normal and for advanced opening
silver and gold plated

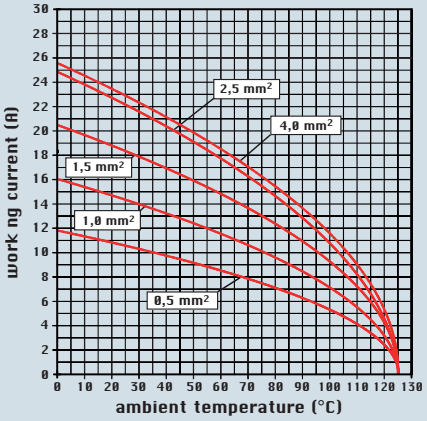
description	part No.	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	**CDCF 10** **CDCM 10**		
16A female contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no 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**	**CCFD 0.3** **CCFD 0.5** **CCFD 0.7** **CCFD 1.0** **CCFD 1.5** **CCFD 2.5** **CCFD 3.0** **CCFD 4.0**
16A male contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no grooves		**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**
16A male crimp contacts for advanced opening 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves		**CC 0.5 AN** **CC 0.7 AN** **CC 1.0 AN** **CC 1.5 AN** **CC 2.5 AN**	

silver plated

gold plated

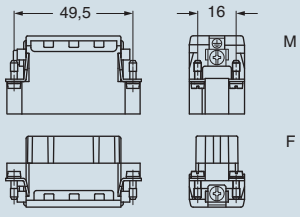
characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12

diagram CDC 10 poles

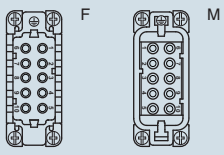


dimensions shown are not binding
and may be changed without notice

dimensions in mm

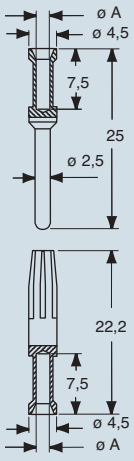


contacts side (front view)

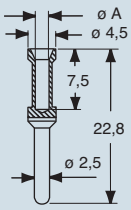


dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC..AN contacts

conductor section mm²	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

CDA 16 poles + ⏚ 16A - 250V

enclosures:
size “66.16” page:

panel supports: page:

*** refer to catalogue page CN.12**

inserts,
screw terminal connection

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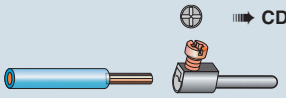
3rd QUARTER 2014

inserts,
screw terminal connection

AVAILABLE
3rd QUARTER 2014

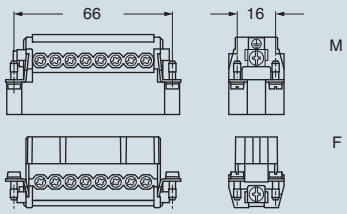
description	part No.	part No.
indirect, with pressure plate [1] female inserts with female contacts male inserts with male contacts	**CDAF 16** **CDAM 16**	
direct, without pressure plate [2] female inserts with female contacts male inserts with male contacts		**CDAF 16 X** **CDAM 16 X**

[1] for unprepared conductors

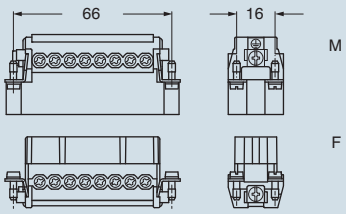


[2] for conductors with end sleeve ferrule

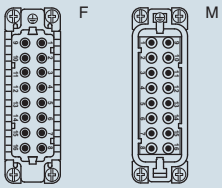
dimensions in mm



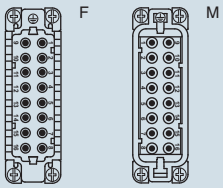
dimensions in mm



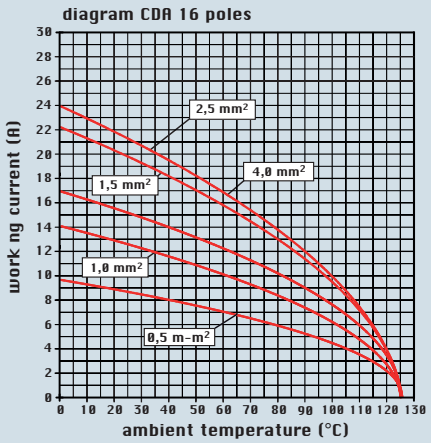
contacts side (front view)



contacts side (front view)



characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12



inserts with pressure plate for conductors cross sections:
0,5 4 mm² AWG 20 12
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

inserts without pressure plate for prepared conductors with cross sections:
0,25 2,5 mm² AWG 24 14
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

dimensions shown are not binding
and may be changed without notice

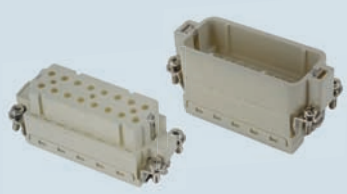
CDC 16 poles + ⏚ 16A - 250V

enclosures:
size “66.16” page:

*** refer to catalogue page CN.12**

for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486 catalogue CN.12

inserts, crimp connections



AVAILABLE 4th QUARTER 2014

16A crimp contacts
normal and for advanced opening
silver and gold plated

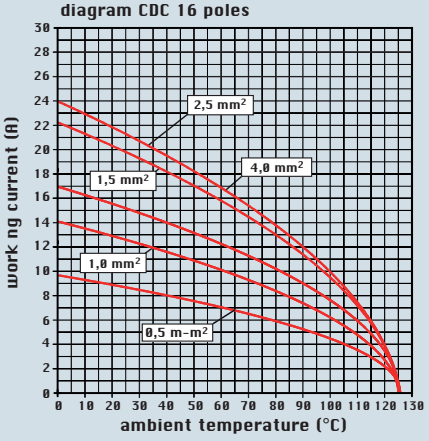
description	part No.	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	**CDCF 16** **CDCM 16**		
16A female contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no 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**	**CCFD 0.3** **CCFD 0.5** **CCFD 0.7** **CCFD 1.0** **CCFD 1.5** **CCFD 2.5** **CCFD 3.0** **CCFD 4.0**
16A male contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no grooves		**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**
16A male crimp contacts for advanced opening 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves		**CC 0.5 AN** **CC 0.7 AN** **CC 1.0 AN** **CC 1.5 AN** **CC 2.5 AN**	

silver plated

gold plated

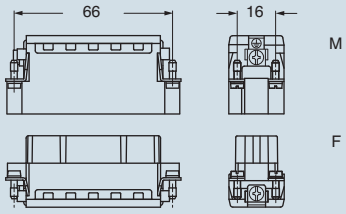
characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12

diagram CDC 16 poles

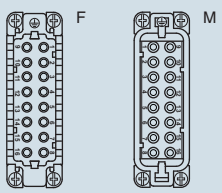


dimensions shown are not binding
and may be changed without notice

dimensions in mm

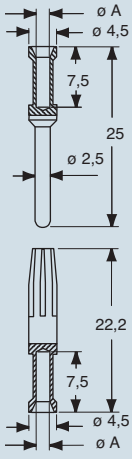


contacts side (front view)

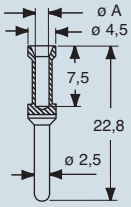


dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC..AN contacts

conductor section mm²	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

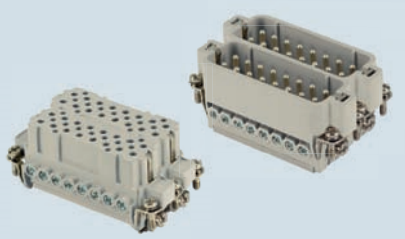
CDA 32 poles + ⏚ 16A - 250V

enclosures:
size "66.40" page:

C-TYPE IP65/IP66 ..... 215 217 *
aggressive environments..... 328 *

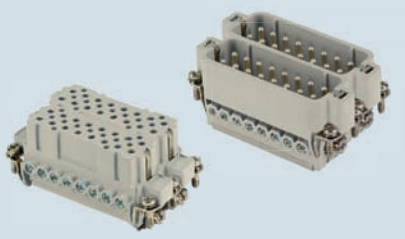
*** refer to catalogue page CN.12**

inserts,
screw terminal connection



AVAILABLE
3rd QUARTER 2014

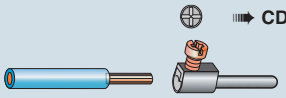
inserts,
screw terminal connection



AVAILABLE
3rd QUARTER 2014

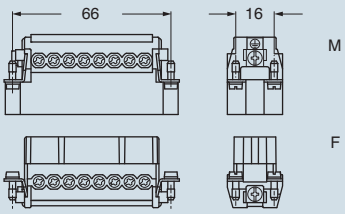
description	part No.	part No.	part No.	part No.
indirect, with pressure plate [1] female inserts, No. (1 16) and (17 32) male inserts, No. (1 16) and (17 32)	**CDAF 16** **CDAM 16**	**CDAF 16 N** **CDAM 16 N**		
direct, without pressure plate [2] female inserts, No. (1 16) and (17 32) male inserts, No. (1 16) and (17 32)			**CDAF 16 X** **CDAM 16 X**	**CDAF 16 XN** **CDAM 16 XN**

[1] for unprepared conductors

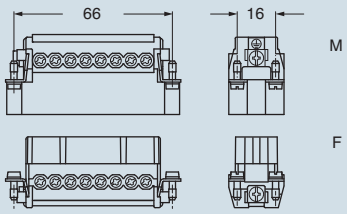


[2] for conductors with end sleeve ferrule

dimensions in mm

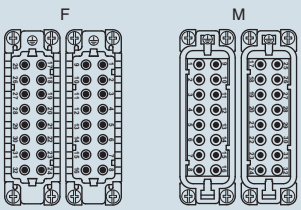


dimensions in mm

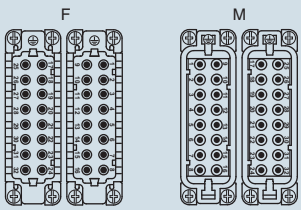


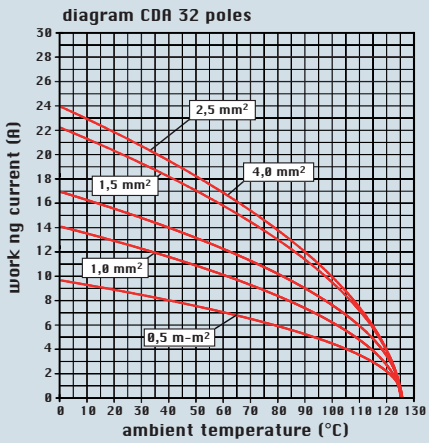
characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12

contacts side (front view)



contacts side (front view)





inserts with pressure plate for conductors cross sections:
0,5 4 mm² AWG 20 12
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

inserts without pressure plate for prepared conductors with cross sections:
0,25 2,5 mm² AWG 24 14
conductors stripping lenght: 7 mm
terminal screw torque: 0,5 Nm (4.4 lb.in), for more information see page 21 and 22 catalogue CN.12

dimensions shown are not binding
and may be changed without notice

CDC 32 poles + ⏚ 16A - 250V

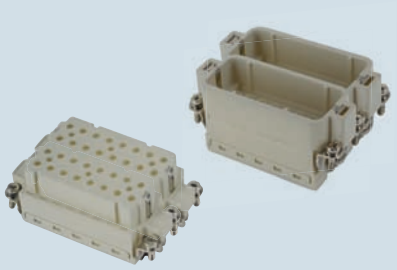
enclosures:
size "66.40" page:

C-TYPE IP65/IP66 ..... 215 217 *
aggressive environments..... 328 *

*** refer to catalogue page CN.12**

for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486 catalogue CN.12

inserts, crimp connections



AVAILABLE 4th QUARTER 2014

16A crimp contacts
normal and for advanced opening
silver and gold plated

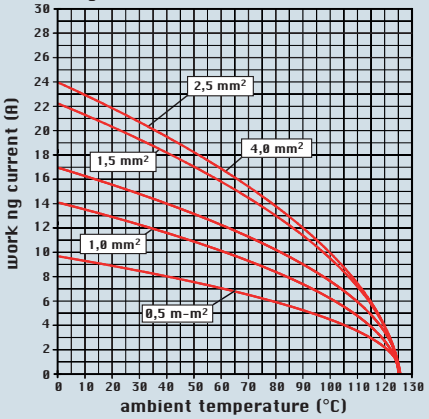
description	part No.	part No.	part No.	part No.
without contacts (to be ordered separately) female inserts, No. (1 16) and (17 32) male inserts, No. (1 16) and (17 32)	**CDCF 16** **CDCM 16**	**CDCF 16 N** **CDCM 16 N**		
16A female contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no 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**	**CCFD 0.3** **CCFD 0.5** **CCFD 0.7** **CCFD 1.0** **CCFD 1.5** **CCFD 2.5** **CCFD 3.0** **CCFD 4.0**
16A male contacts 0,14 0,37 mm² AWG 26 22 three grooves 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves 3 mm² AWG 12 one wide groove 4 mm² AWG 12 with no grooves			**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**
16A male crimp contacts for advanced opening 0,5 mm² AWG 20 with no grooves 0,75 mm² AWG 18 one groove (back side) 1 mm² AWG 18 one groove 1,5 mm² AWG 16 two grooves 2,5 mm² AWG 14 three grooves			**CC 0.5 AN** **CC 0.7 AN** **CC 1.0 AN** **CC 1.5 AN** **CC 2.5 AN**	

silver plated

gold plated

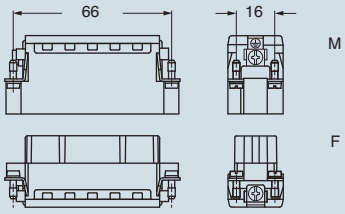
characteristics according to EN 61984:
16A 250V 4kV 3
16A 230/400V 4kV 2
insulation resistance: ≥ 10 GΩ
ambient temperature limit: 40 °C ... +125 °C
are made of self extinguishing thermoplastic resin UL 94 V0
mechanical life: ≥ 500 cycles
contact resistance: ≤ 1 mΩ
for maximum current load, see the following inserts load curves, for more information see page 494 catalogue CN.12

diagram CDC 32 poles

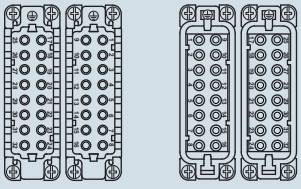


dimensions shown are not binding
and may be changed without notice

dimensions in mm

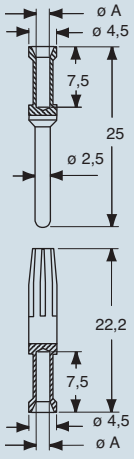


contacts side (front view)

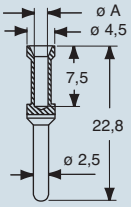


dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC..AN contacts

conductor section mm²	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

inserts: page

CD	15	poles + ⏚	47 *
CDA	10	poles + ⏚	8
CDC	10	poles + ⏚	9
MIXO	1	module	156÷195 *

*** refer to catalogue page CN.12**

bulkhead mounting housings with single lever

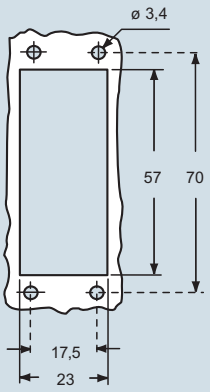
AVAILABLE 4th QUARTER 2014

surface mounting housings with single lever

AVAILABLE 4th QUARTER 2014

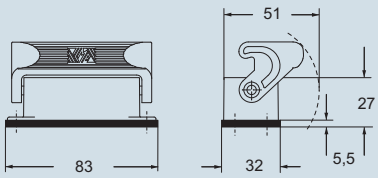
description	part No.	part No.	entry Pg	part No.	entry M
with single lever	**CZI 15 L**				
with single lever and cover	**CZI 15 LS**				
with single lever		**CZP 15 L**	16		
with single lever		**CZP 15 L2**	16 x 2	**MZP 15 L225**	25
with single lever		**CZP 15 L21**	21	**MZP 15 L25**	25
with lever and cover		**CZP 15 LS221**	21 x 2	**MZP 15 LS225**	25 x 2

panel cut out for bulkhead mounting housings in mm

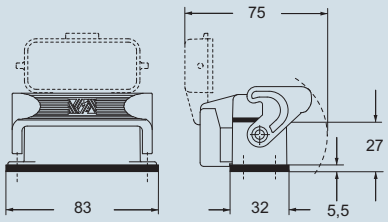


dimensions in mm

CZI L

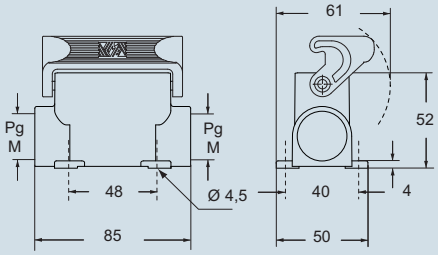


CZI LS

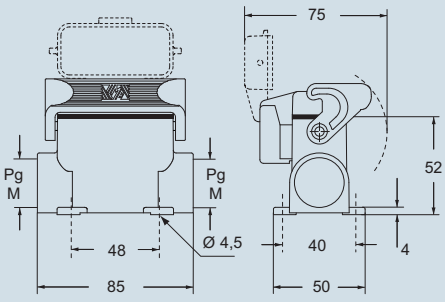


dimensions in mm

CZP L and **MZP L**



CZP LS and **MZP LS**



NB:
the enclosures ensure IP66 protection (or IP65 for cover versions) rating when mated and locked with the closing levers.

EN 60529 IP66 IEC 60529

dimensions shown are not binding
and may be changed without notice

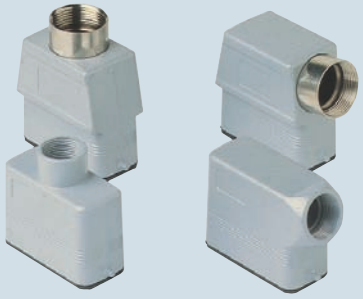
inserts: page

CD	15	poles + ⏚	47 *
CDA	10	poles + ⏚	8
CDC	10	poles + ⏚	9
MIXO	1	module	156÷195 *

*** refer to catalogue page CN.12**

Cover versions L and LG cannot be used together with coding pins. If this application is required, please contact ILME SpA.

hoods with 2 pegs



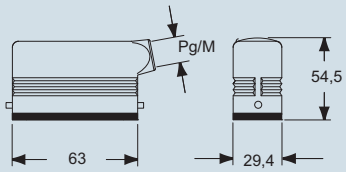
covers

description	part No.	entry Pg	part No.	entry M	part No.
with pegs, side entry	**CZO 15 L**	16	**MZO 15 L20**	20	
with pegs, side entry			**MZO 15 L25**	25	
with pegs, side entry, high construction	**CZAO 15 L16**	16	**MZAO 15 L20**	20	
with pegs, side entry, high construction	**CZAO 15 L21**	21	**MZAO 15 L25**	25	
with pegs, top entry	**CZV 15 L**	13.5	**MZV 15 L20**	20	
with pegs, top entry, high construction	**CZAV 15 L16**	16	**MZAV 15 L20**	20	
with pegs, top entry, high construction	**CZAV 15 L21**	21	**MZAV 15 L25**	25	
with pegs, side entry, high construction, without adaptor *	**CZFO 15 L16**	16	**MZFO 15 L20**	20	
with pegs, side entry, high construction, without adaptor *	**CZFO 15 L21**	21	**MZFO 15 L25**	25	
with pegs, top entry, high construction, without adaptor *	**CZFV 15 L16**	16	**MZFV 15 L20**	20	
with pegs, top entry, high construction, without adaptor *	**CZFV 15 L21**	21	**MZFV 15 L25**	25	
with pegs (for 1 lever enclosures)					**CZC 15 L**

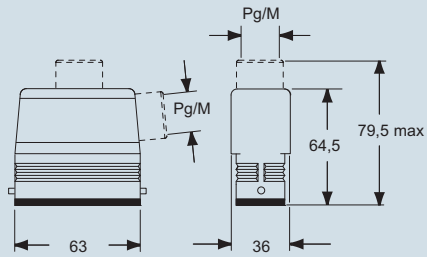
* enclosure without adaptor, threaded on the body, to be used only with a complete cable gland.

dimensions in mm

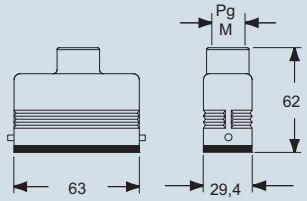
CZO L and **MZO L**



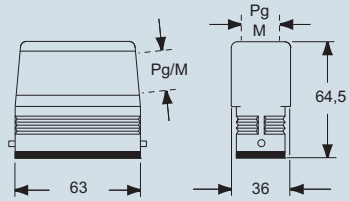
CZAO L - MZAO L and **CZAV L - MZAV L**



CZV L and **MZV L**

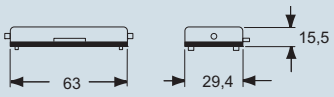


CZFO L - MZFO L and **CZFV L - MZFV L**



dimensions in mm

CZC L



EN 60529 IP66 IEC 60529

dimensions shown are not binding and may be changed without notice

inserts: page

CD ..... 25 poles + ⏚ 48 *
CDD ..... 38 poles + ⏚ 60 *
CDA ..... 16 poles + ⏚ 10
CDC ..... 16 poles + ⏚ 11

*** refer to catalogue page CN.12**

bulkhead mounting housings with single lever

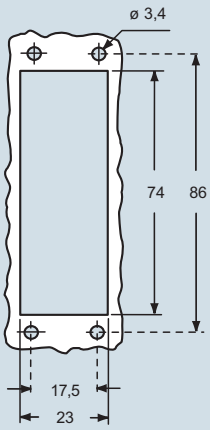
AVAILABLE 4th QUARTER 2014

surface mounting housings with single lever

AVAILABLE 4th QUARTER 2014

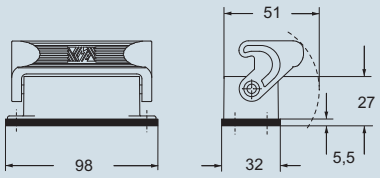
description	part No.	part No.	entry Pg	part No.	entry M
with single lever	**CZI 25 L**				
with single lever and cover	**CZI 25 LS**				
with single lever, high construction		**CZAP 25 L**	16		
with single lever, high construction		**CZAP 25 L2**	16 x 2	**MZAP 25 L225**	25 x 2
with single lever, high construction		**CZAP 25 L21**	21	**MZAP 25 L25**	25
with single lever and cover, high construction		**CZAP 25LS221**	21 x 2	**MZAP 25LS225**	25 x 2

panel cut out for bulkhead mounting housings in mm

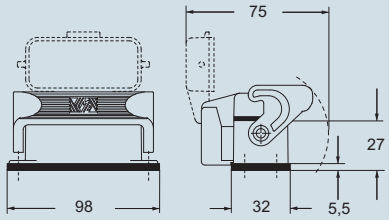


dimensions in mm

CZI L

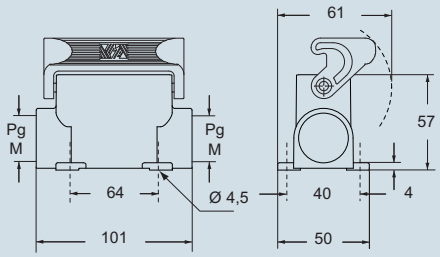


CZI LS

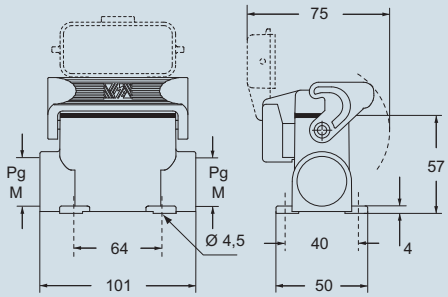


dimensions in mm

CZAP L and **MZAP L**



CZAP LS and **MZAP LS**



NB:
the enclosures ensure IP66 protection (or IP65 for cover versions) rating when mated and locked with the closing levers.

EN 60529 IP66 IEC 60529

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inserts: page

CD ..... 25 poles + ⏚ 48 *
CDD ..... 38 poles + ⏚ 60 *
CDA ..... 16 poles + ⏚ 10
CDC ..... 16 poles + ⏚ 11

*** refer to catalogue page CN.12**

Cover versions L and LG cannot be used together with coding pins. If this application is required, please contact ILME SpA.

hoods with 2 pegs

hoods with 2 pegs, double top entry

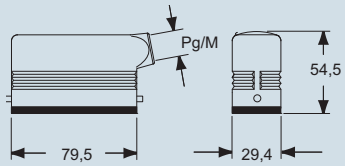
description	part No.	entry Pg	part No.	entry M	part No.	entry Pg	part No.	entry M
with pegs, side entry	**CZO 25 L**	16	**MZO 25 L20**	20				
with pegs, side entry			**MZO 25 L25**	25				
with pegs, side entry, high construction	**CZAO 25 L16**	16	**MZAO 25 L20**	20				
with pegs, side entry, high construction	**CZAO 25 L21**	21	**MZAO 25 L25**	25				
with pegs, top entry	**CZV 25 L**	16	**MZV 25 L20 ****	20				
with pegs, top entry, high construction	**CZAV 25 L16**	16	**MZAV 25 L20**	20				
with pegs, top entry, high construction	**CZAV 25 L21**	21	**MZAV 25 L25**	25				
with pegs, side entry, high construction, without adaptor *	**CZFO 25 L16**	16	**MZFO 25 L20**	20				
with pegs, side entry, high construction, without adaptor *	**CZFO 25 L21**	21	**MZFO 25 L25**	25				
with pegs, top entry, high construction, without adaptor *	**CZFV 25 L16**	16	**MZFV 25 L20**	20				
with pegs, top entry, high construction, without adaptor *	**CZFV 25 L21**	21	**MZFV 25 L25**	25				
with pegs for 1 lever					**CZAV 25 L216**	16 x 2	**MZAV 25 L220**	20 x 2
with pegs for 1 lever, without adaptor *					**CZFV 25 L216**	16 x 2	**MZFV 25 L220**	20 x 2

* enclosure without adaptor, threaded on the body, to be used only with a complete cable gland.

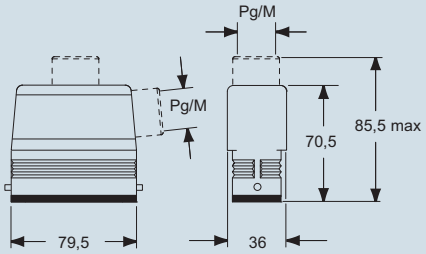
** can only be used with a complete cable gland (to be purchased separately)

dimensions in mm

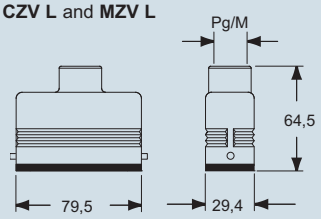
CZO L e **MZO L**



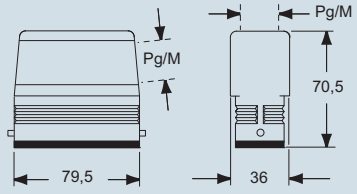
CZAO L - MZAO L and **CZAV L - MZAV L**



CZV L and **MZV L**

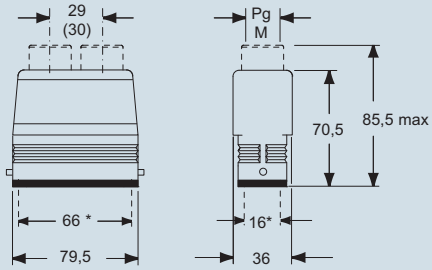


CZFO L - MZFO L and **CZFV L - MZFV L**



dimensions in mm

CZAV/CZFV L2 and **(MZAV)/MZFV L2**



EN 60529 IP66 IEC 60529

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inserts: page

CD ..... 25 poles + ⏚ 48 *
CDD ..... 38 poles + ⏚ 60 *
CDA ..... 16 poles + ⏚ 10
CDC ..... 16 poles + ⏚ 11

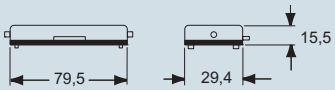
*** refer to catalogue page CN.12**

Cover versions L cannot be used together with coding pins. If this application is required, please contact ILME SpA.

covers

description	part No.
with pegs (for 1 lever enclosures)	**CZC 25 L**

dimensions in mm



EN 60529 IP66 IEC 60529

dimensions shown are not binding
and may be changed without notice

Notes

IMPORTANT NOTES

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 single part** and tested to be compliant with the essential safety requirements of the EU Low Voltage Directive 2006/95/EC and in particular the EN 61984 standard.
The design of this "modular" system guarantees that every approved 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 "installation 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.

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

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

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

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.

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

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.

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.

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.

The 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.

In order to keep the declared degree of protection (IP code), enclosures must be completed with cable glands and/or other accessories with at least an equal protection rating.

Moreover, the IP protection rating (according to EN 60529) is guaranteed when the enclosures, complete with inserts, are coupled and locked with their locking levers (or devices).

Finally, Please note:
- 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.).

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 (Series CG) cannot be guaranteed when coupled with other manufacturers' products.

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

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