Multipole connectors
New products 2016

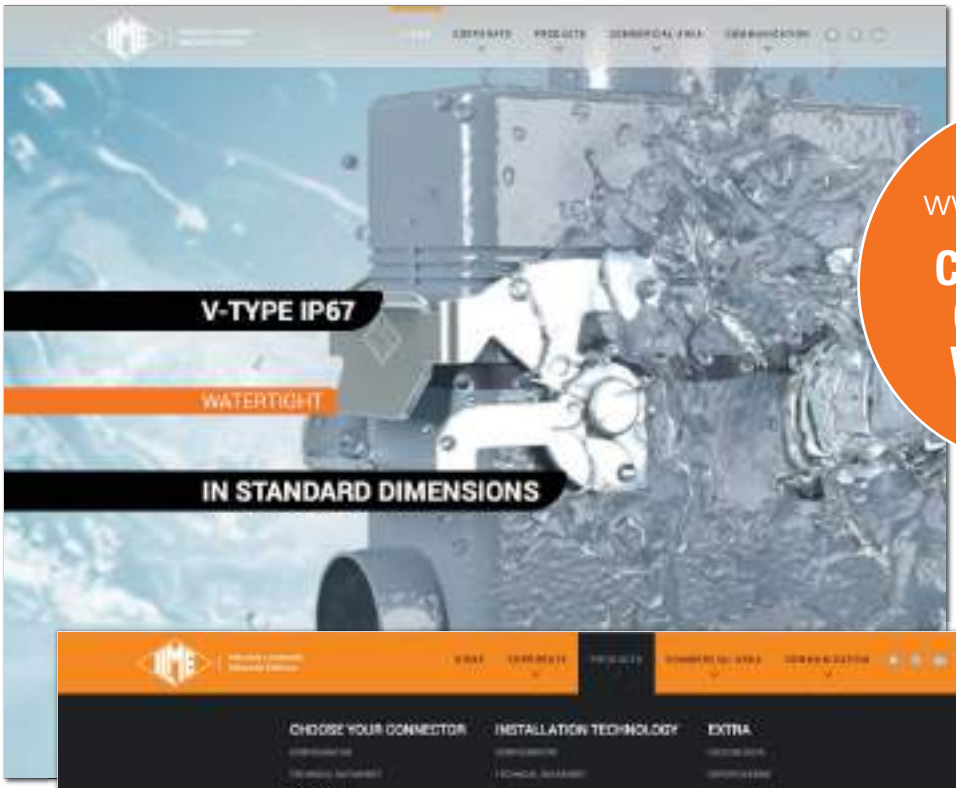
News 2016

G - 16
ENGLISH

New Website

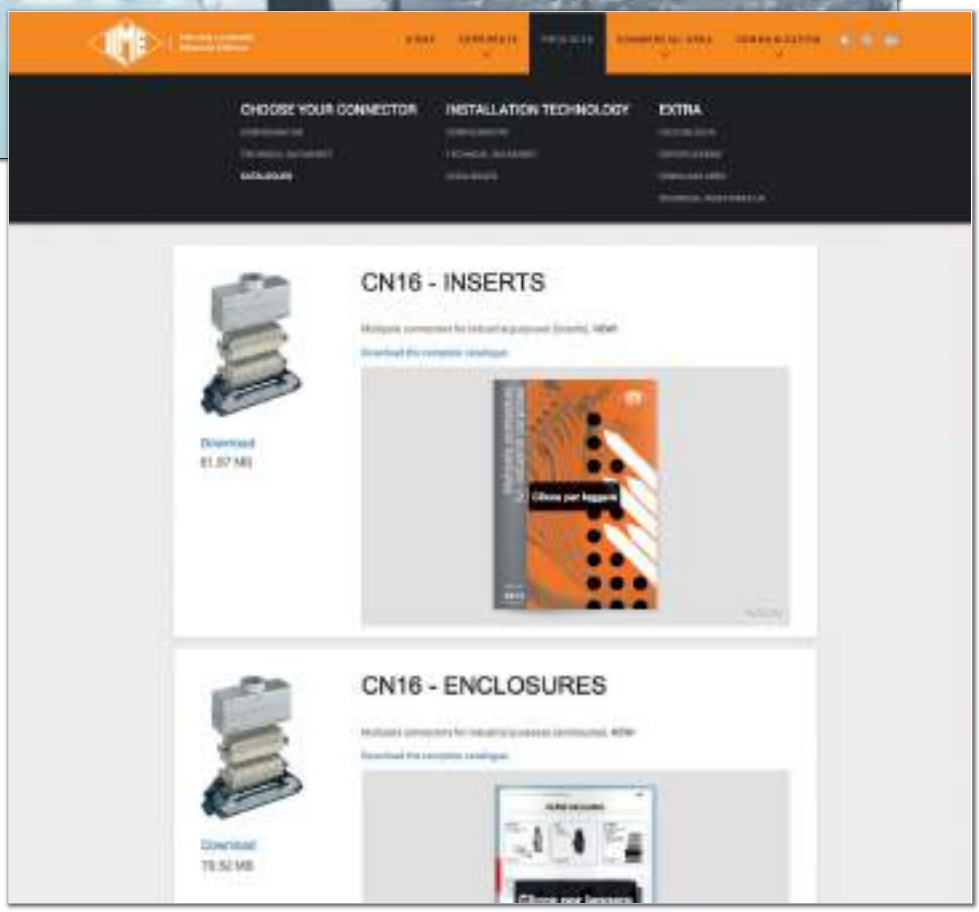
www.ilme.com

Easy navigation, new look and feel, mobile device compatibility



www.ilme.com

CHECK OUT OUR NEW WEBSITE!



MOBILE FRIENDLY

Share our passion for connectors!

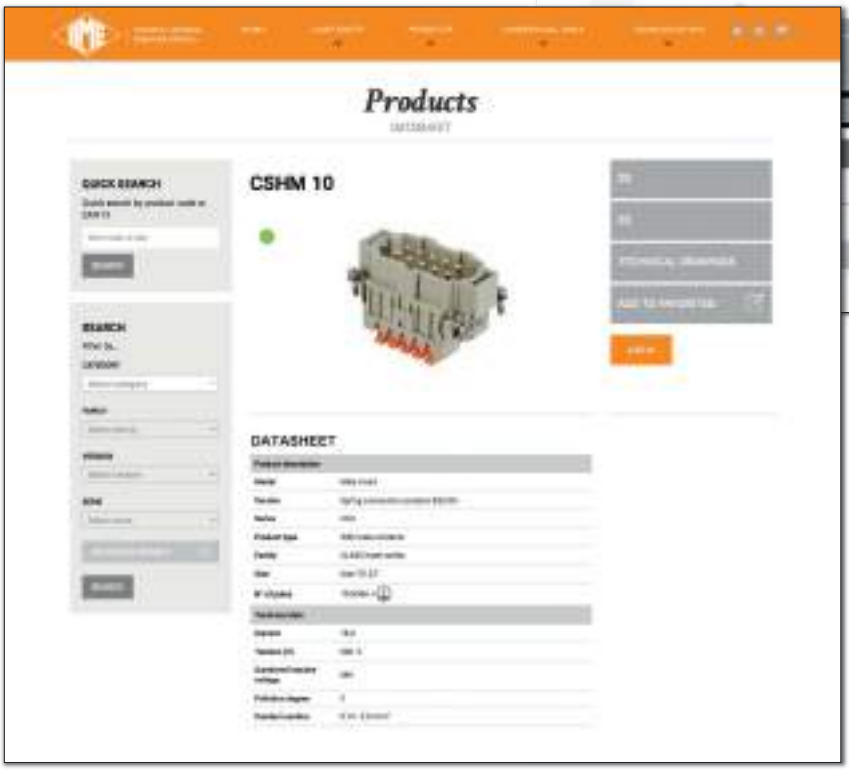
New Website

Technical features available on www.ilme.com

Choose your connector

Starting from
INSERTS
through
APPLICATIONS
and
ENCLOSURES

FIND US
ON-LINE!



Starting from
PART NUMBER
or TECHNICAL DETAILS
to find
the DATASHEET

New Website

Technical features available on www.ilme.com

CAD/CAE software

DOWNLOAD AREA

CAD DRAWINGS

New products 2016 - General index

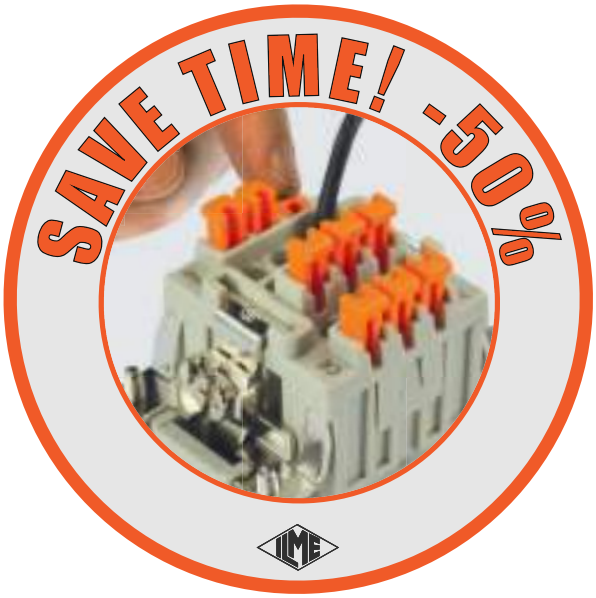
NEW

New products 2016 - General index

NEW

CDSH - SQUICH® series

Spring connection contacts with actuator button



STANDARD 16A		CDSH - HIGH DENSITY 10A	
06 poles	→	09 poles	+50%
10 poles	→	18 poles	+80%
16 poles	→	27 poles	+70%
24 poles	→	42 poles	+75%
32 poles	→	54 poles	+70%
48 poles	→	84 poles	+75%

CDSH - SQUICH® series

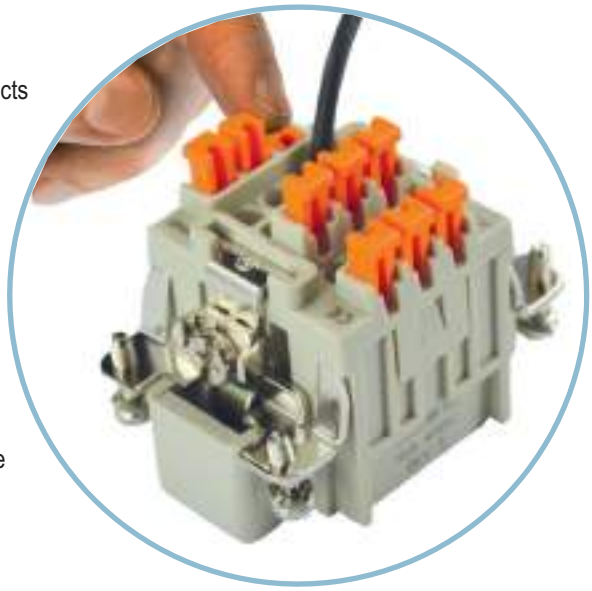
Spring connection contacts with actuator button

Inserts series: CDSH

In this layout the wires are connected to the socket and plug insert contacts by means of a **spring terminal with actuator button**.

This type of connection offers the following advantages:

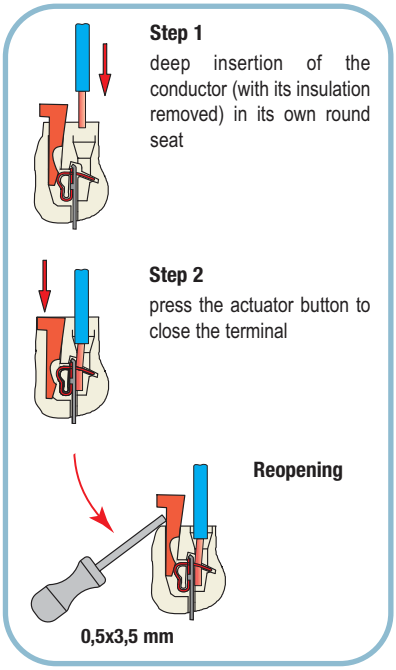
- ❱ **no special wire preparation** (other than stripping);
- ❱ it offers an excellent fastening solution and a **great resistance to strong vibrations**;
- ❱ it allows the use of rigid and flexible wires with cross-sections between 0,14 and 2,5 mm² (AWG 26 - 14);
- ❱ for wires with crimped ferrule, usable section: up to 1,5 mm² (AWG 16);
- ❱ a screwdriver with a 0,5 x 3,5 mm blade is the only tool required to remove the wire from the contact;
- ❱ the profile of the actuator button allows them section of a test probe.



Inserts series		CDSH
No. of poles [1]	main contacts + ⏚	**9, 18, 27, 42, (54), (84)**
	auxiliary contacts	--
rated current [2]		10A
EN 61984 pollution degree 3	rated voltage	400V
	rated impulse withstand voltage	6kV
	pollution degree	3
EN 61984 pollution degree 2	rated voltage	400V/690V
	rated impulse withstand voltage	6kV
	pollution degree	2
contact resistance		≤ 1 mΩ
insulation resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40
	max	+125
degree of protection	with enclosures	IP65, IP66, IP67, IP68, IP69K (according to type)
	without enclosures	IP20
conductor connections		spring
conductor cross-section	mm²	0,14 - 2,5 (for wires with crimped ferrule, usable section: up to 1,5 mm²
	AWG	26 - 14 (AWG 16 with crimped ferrule)
mechanical endurance (rating cycles)		≥ 500

1) Polarities shown in brackets may be achieved by using two inserts in their own double sized housings.

2) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.



CDSH - SQUICH® series

Spring connection contacts with actuator button

The new **CDSH series "SQUICH®" (with spring and actuator button)**, the logical evolution of the CDS series, is characterized by the following advantages:

- Greater pole density as compared to existing connector with screw terminals.
- Reduced inserts preparation and cabling times.
- Cabling tool is not necessary.
- Quick identification of wired and non-wired terminals.
- Terminals already open and ready for conductor clamping.
- Option to use wires up to 2,5 mm^2.

The continuous demand for a greater number of poles and of smaller dimensions has led to the design and manufacture of the new CDSH series, which offers single connectors with a maximum number of 84 poles that occupy the same space of standard connectors with screw/spring connection.

CDSH - 9 poles

CDSH - 18 poles

CDSH - 27 poles

CDSH - 42 poles

Each of the spring terminals has an actuator button, suitably shaped and incorporated in the cavity. When this button is pressed, it triggers the closure of the spring device of the corresponding terminal, safely and reliably connecting the conductor to its respective electric contact in the connector.

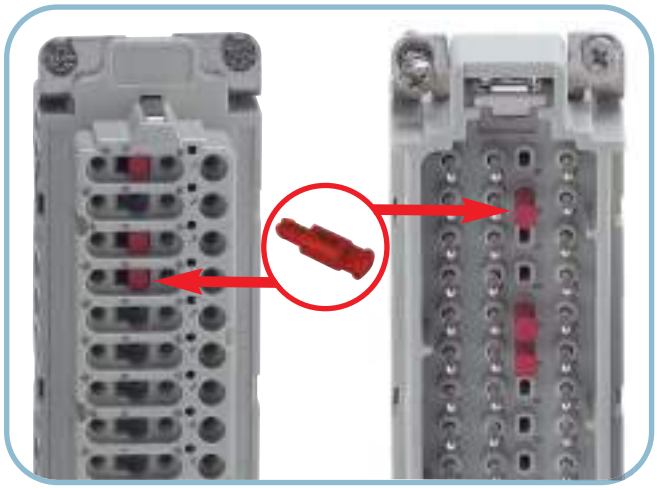
The actuator buttons are supplied lifted, in the "open terminal" position and are easily distinguisheable by the **orange colour which makes them stand out from the insulating body of the connector**.

The advantage of such an **exclusive solution** is that the **actuators disappear completely within the body of the connector**, making it easy to identify terminals not yet closed and eliminating possible obstacles to the movement of the conductors during installation and maintenance.

In this manner during the cabling phase the **need for a tool to activate the terminal is completely eliminated** and **a simple operation is all you need to make the connection**.

CDSH - SQUICH® series

Spring connection contacts with actuator button



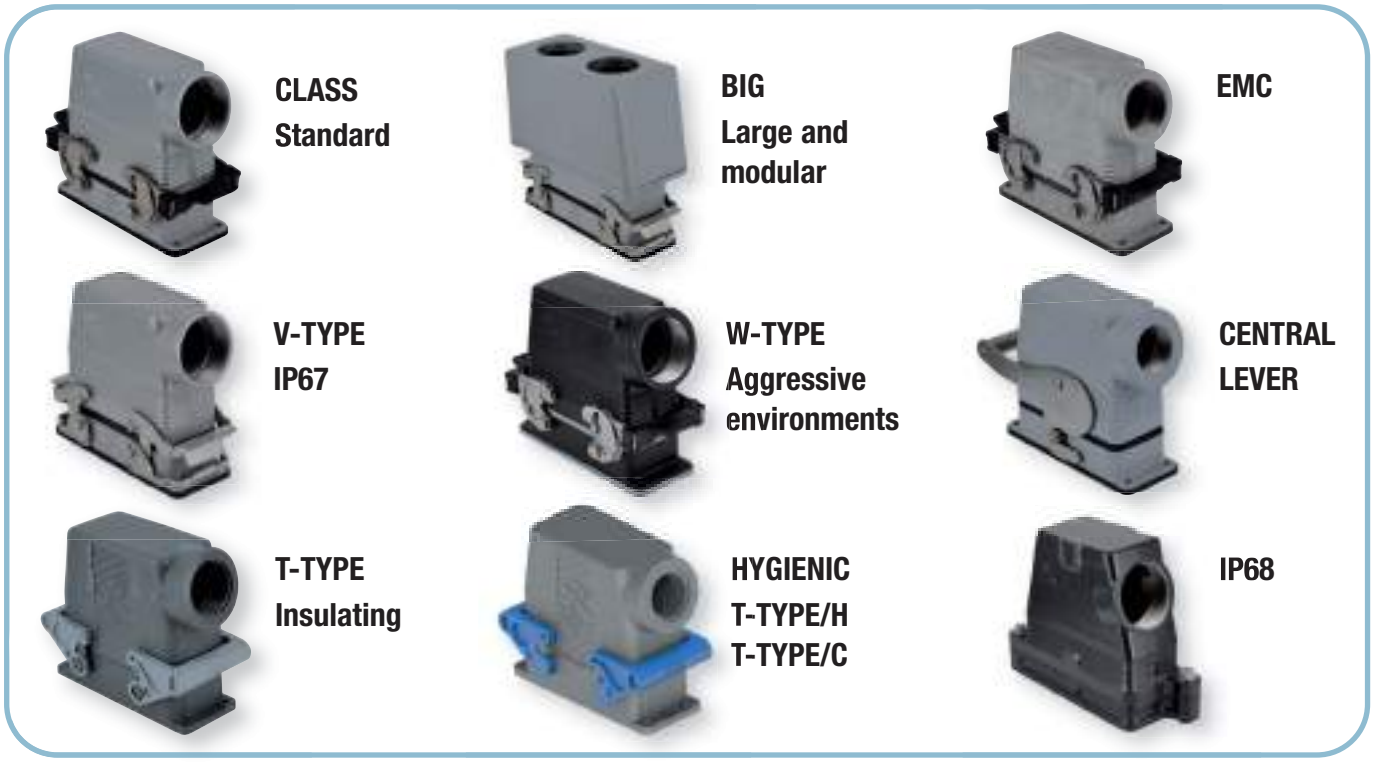
It is possible to insert in the front area the new CR CDS coding pin that enables the polarisation of inserts in a wide range of combinations.
This means that it is possible to install side by side identical connectors with different functions.
The new CR CDS coding pins can also be used in combination with other CR 20 / CRM / CRF / CR 72 metal pins instead of insert fixing screws in order to increase the number of possible combinations.

Each position of the coding pin used on the female insert must correspond to an unused position on the male insert.
The required number of coding pins, depending on the size of connectors, and the maximum number of possible codings is shown in the following table.

CDSH series - Coding with CR CDS pins

Size of connectors	Slots for coding pins (M) = male insert (F) = female insert	Required coding pins for each coupling	Possible codings
9P+⏚	3 (M) + 3 (F)	3 2 (M) + 1 (F)	3
18P+⏚	6 (M) + 6 (F)	6 3 (M) + 3 (F)	20
27P+⏚	9 (M) + 9 (F)	9 5 (M) + 4 (F)	126
42P+⏚	14 (M) + 14 (F)	14 7 (M) + 7 (F)	3.432

CDSH series can be used with the whole range of ILME enclosures



enclosures:
size "44.27" page:

panel supports: page:

refer to catalogue page CN.16

inserts,
spring terminal connections

silver plated contacts

AVAILABLE
3rd QUARTER 2016

description	part No.
spring terminals with actuator button female inserts with female contacts male inserts with male contacts	**CDSHF 09** **CDSHM 09**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

dimensions in mm

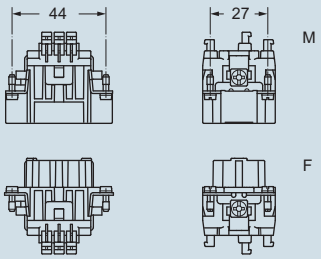
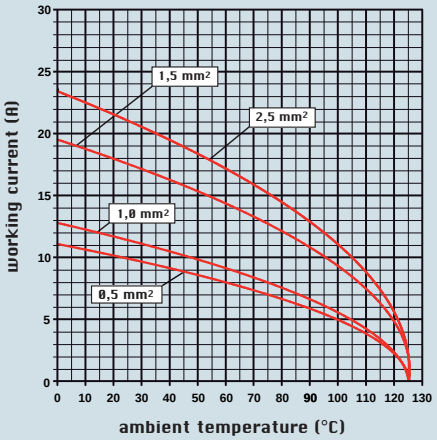
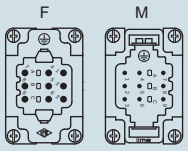


diagram CDSH 09 poles

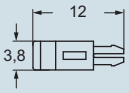


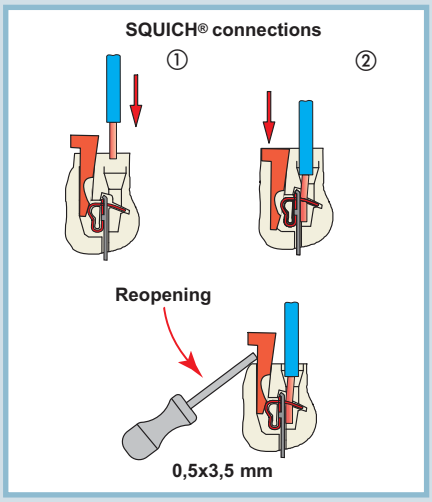
contacts side (front view)



- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

CR CDS coding pin





dimensions shown are not binding
and may be changed without notice

inserts,
spring terminal connections

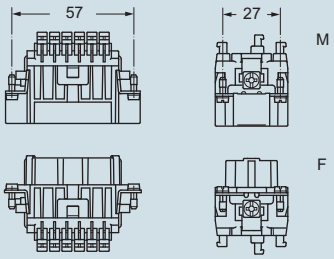
silver plated contacts

AVAILABLE
3rd QUARTER 2016

description	part No.
spring terminals with actuator button female inserts with female contacts male inserts with male contacts	**CDSHF 18** **CDSHM 18**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

dimensions in mm



contacts side (front view)

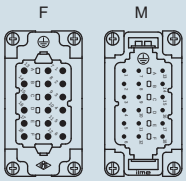
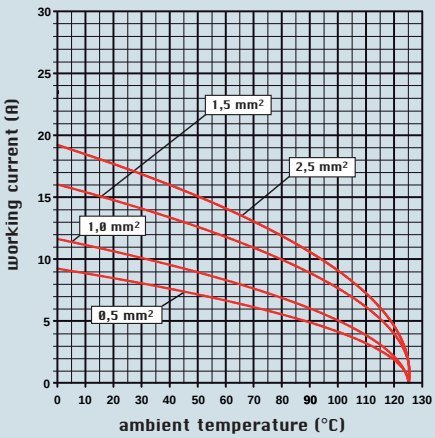
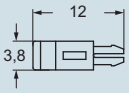


diagram CDSH 18 poles

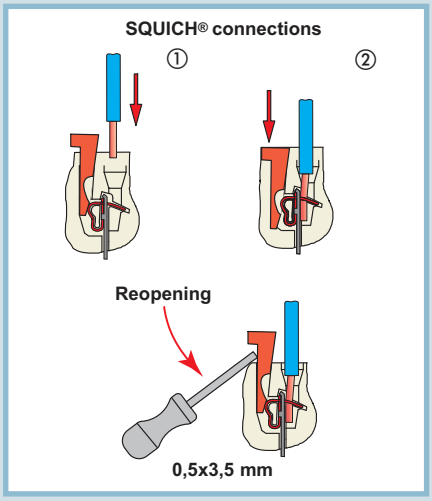


- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

CR CDS coding pin



SQUICH® connections



dimensions shown are not binding
and may be changed without notice

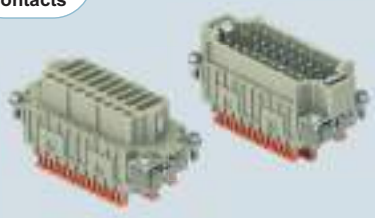
enclosures:
size "77.27" page:

panel supports: page:

refer to catalogue page CN.16

inserts,
spring terminal connections

silver plated contacts

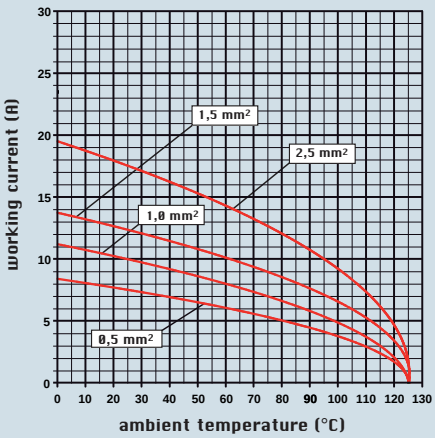


AVAILABLE
3rd QUARTER 2016

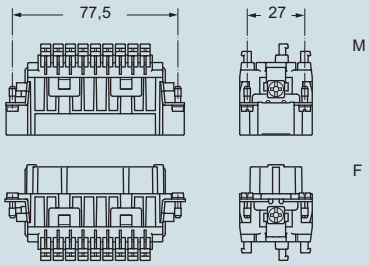
description	part No.
spring terminals with actuator button female inserts with female contacts male inserts with male contacts	**CDSHF 27** **CDSHM 27**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

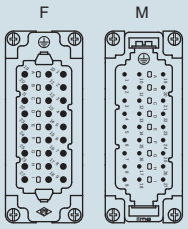
diagram CDSH 27 poles



dimensions in mm

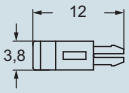


contacts side (front view)

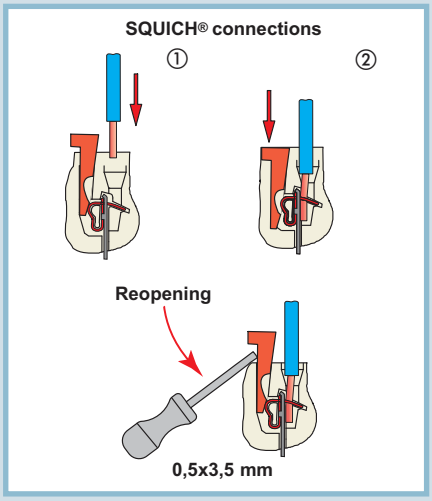


- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

CR CDS coding pin



SQUICH® connections



dimensions shown are not binding
and may be changed without notice

enclosures:
size "104.27" page:

panel supports: page:

refer to catalogue page CN.16

inserts,
spring terminal connections

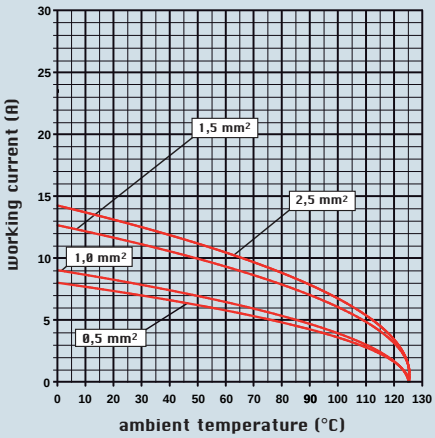
silver plated contacts

AVAILABLE
3rd QUARTER 2016

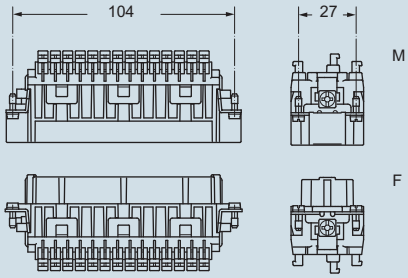
description	part No.
spring terminals with actuator button female inserts with female contacts male inserts with male contacts	**CDSHF 42** **CDSHM 42**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

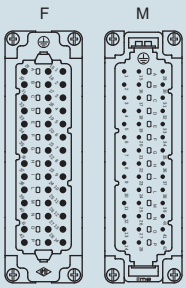
diagram CDSH 42 poles



dimensions in mm

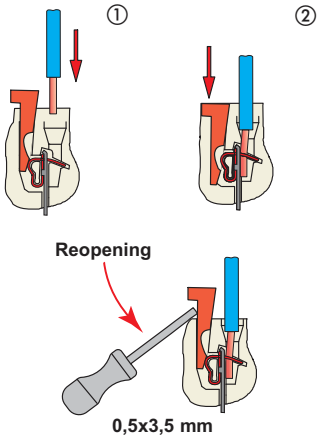


contacts side (front view)



- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

SQUICH® connections



CR CDS coding pin

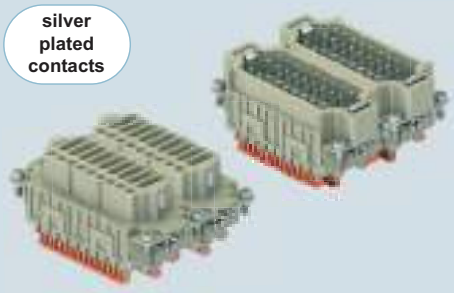
dimensions shown are not binding
and may be changed without notice

enclosures:
size "77.62" page:

refer to catalogue page CN.16

inserts,
spring terminal connections

silver plated contacts



AVAILABLE
3rd QUARTER 2016

description	part No.	part No.
spring terminals with actuator button female inserts with female contacts, No. (1-27) and (28-54) male inserts with male contacts, No. (1÷27) and (28-54)	**CDSHF 27** **CDSHM 27**	**CDSHF 27 N** **CDSHM 27 N**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

dimensions in mm

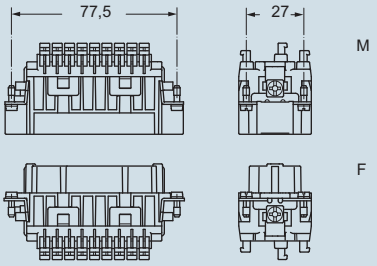
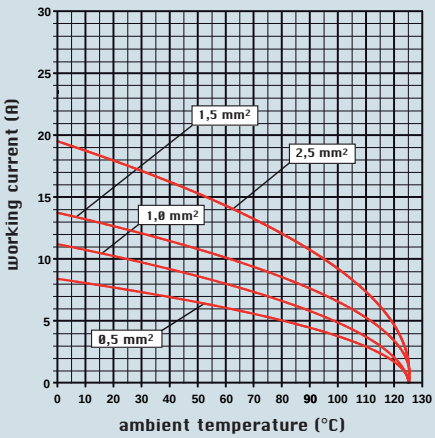
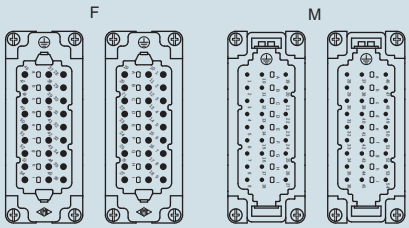


diagram CDSH 54 poles

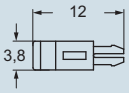


contacts side (front view)

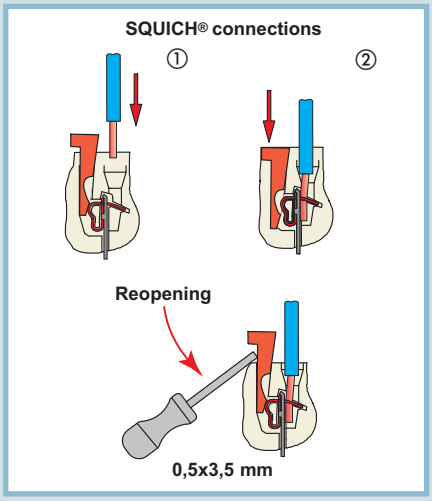


- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

CR CDS coding pin



SQUICH® connections



dimensions shown are not binding
and may be changed without notice

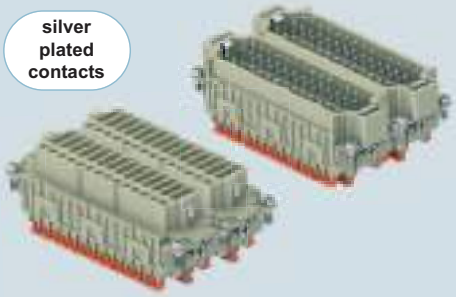
enclosures:
size "104.62" page:

C-TYPE IP65/IP66..... 271
W-TYPE for aggressive environments 378

refer to catalogue page CN.16

inserts,
spring terminal connections

silver plated contacts

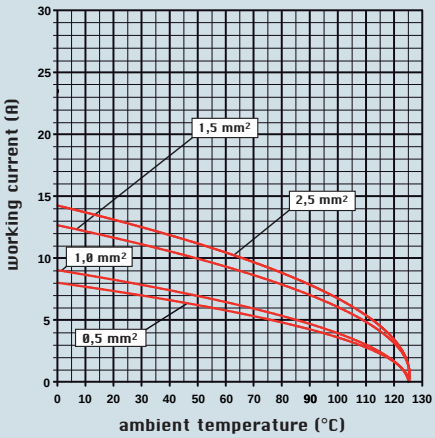


AVAILABLE
3rd QUARTER 2016

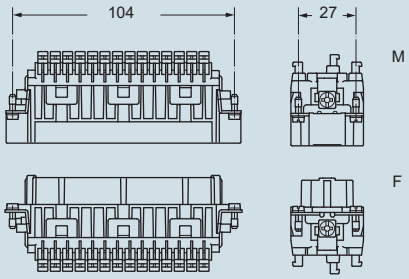
description	part No.	part No.
spring terminals with actuator button female inserts with female contacts, No. (1-42) and (43-84) male inserts with male contacts, No.(1-42) and (43-84)	**CDSHF 42** **CDSHM 42**	**CDSHF 42 N** **CDSHM 42 N**

- characteristics according to EN 61984:
  10A 400V 6kV 3
  10A 400V/690V 6kV 2
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts

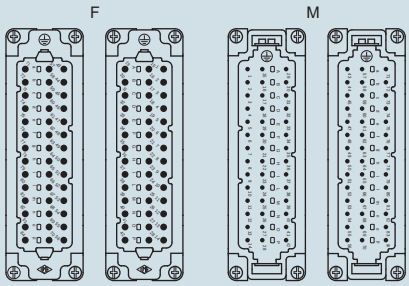
diagram CDSH 84 poles



dimensions in mm

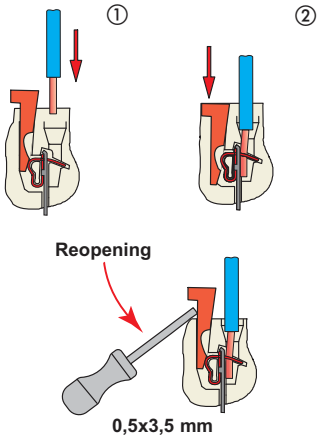


contacts side (front view)

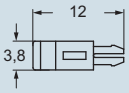


- inserts for conductors section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, usable section:
  up to 1,5 mm² (AWG 16)
- conductors stripping lenght: 9...11 mm

SQUICH® connections



CR CDS coding pin

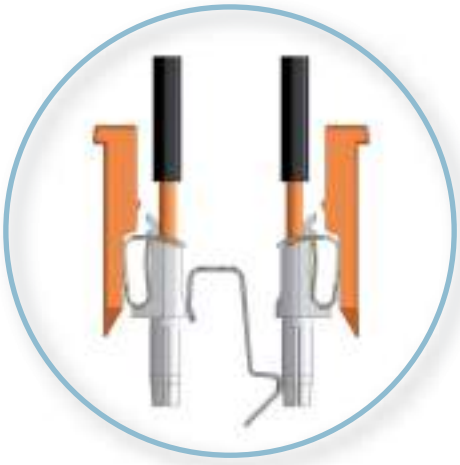


dimensions shown are not binding
and may be changed without notice

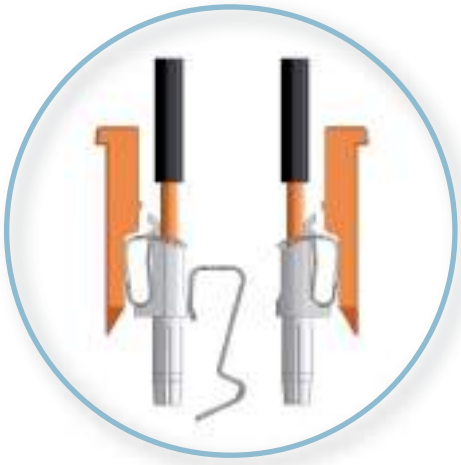
AutoShort Connector

for the interfacing of measuring current transformer

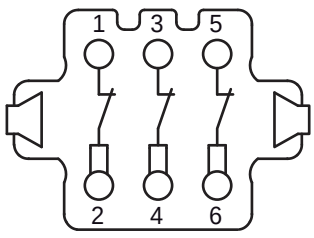
3 contact pairs with an AutoShort NC contact element



①



②

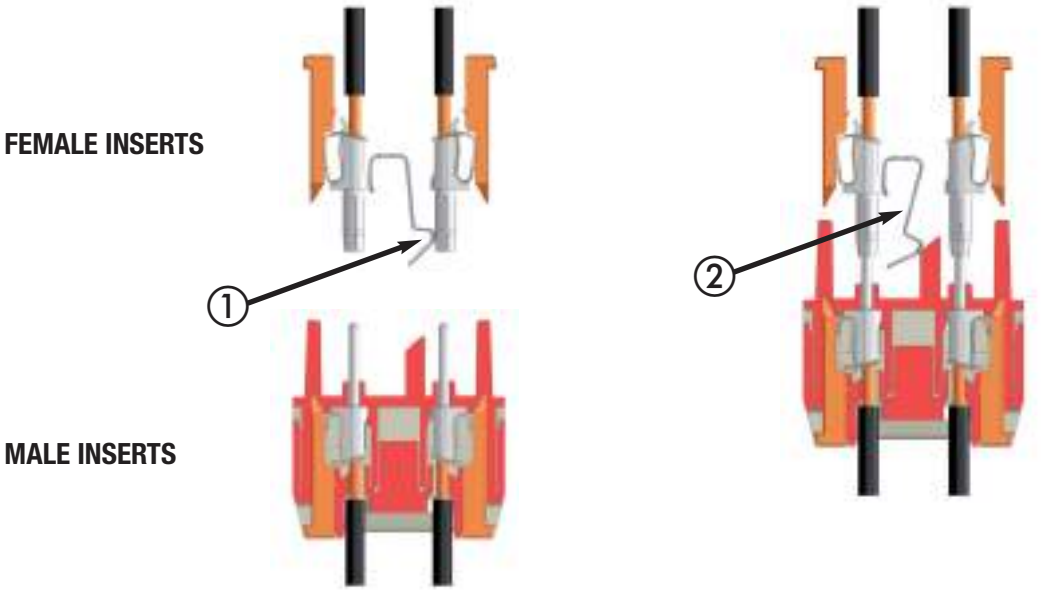


CDSH NC - SQUICH® series

AutoShort connector

ILME developed an innovative connector **suitable for interfacing measuring current transformers** (CTs) with the dedicated electronic measurement processing equipment. Use of such systems is increasing in transformer substations with the diffusion of smart grid concepts due to the growth of self-standing power generation plants (photovoltaic, wind).
The new **CDSH…NC** connector has the same dimensions of a 6 poles size "44.27" CSH connector, and it is **easy to wire thanks to ILME proprietary SQUICH® tool-less quick connection technology**.
Inside the female insert, for **each of the three contact pairs 1-2, 3-4 and 5-6**, a suitable spring element is foreseen, **providing a NC (normally closed) contact between the female contact pair**.
Said short-circuit element automatically **establishes a short-circuit between the female contact pair while the connector is being unmated**, before the complete withdrawal of the corresponding male connector.
This protects the measuring current transformer's secondary windings to which this connector is deemed to be wired, against the high voltage that would arise if the ends of each winding were left open while the primary winding (the power line busbars) are still under load.
During the mating of these specially designed connector inserts, **three corresponding actuator pins realized on the mating face of the male connector**, once the male contacts are already engaged with the corresponding female contacts, **push aside the facing end of the AutoShort NC contact element**, in order to release the short-circuit previously provided. In mated condition the proper termination of the secondary windings of the CT must be provided by the customer's downstream circuit, e.g. by suitable resistors.

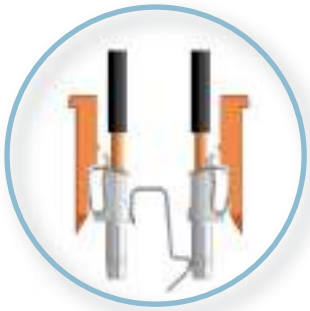
AUTOSHORT NC (NORMALLY CLOSED CONTACT ELEMENT)



This new **CDSH…NC** connector can be used only for connecting up to three secondary (output) windings of measuring current transformers to specific measuring circuits; on the female side each contact pair is provided with said AutoShort NC contact element, to keep the secondary winding ends shorted while the female connector is not engaged with the male connector, thus avoiding damages to the insulation of the current transformer and consequent hazardous condition for the personnel operating the unmating of the connector while the power busbars are energized. When the female and male connectors are being mated, the short-circuit is released after proper electrical engagement of the two connector halves, thus allowing again current measurement by the dedicated electronic measurement processing equipment wired on the male connector side.
The new connector inserts can be used in size "44.27" connector enclosures, either metal (conductive) or thermoplastics (insulating), with up to IP68 degree of protection (IP66/IP68 with series CG/MG), within enclosures for aggressive environments (series "W") or with up to IP66/IP69 within series T-TYPE HYGIENIC enclosures for hygienic applications.

CDSH NC - SQUICH® series

AutoShort connector



REQUIREMENTS

- **Connections**: 3 pairs of contacts (with autoshunt on each pair of female connector), plus protective earth, size 44.27 housings
- **Electrical contacts**: 6 spring clamp type contacts with actuator (SQUICH®) made by copper alloy, silver plated
- **Wire gauge range**: 0,14 ÷ 2,5 mm² (AWG 26 ÷ 14) for solid or unprepared stranded copperwires,
  0,14 ÷ 1,5 mm² (AWG 26 ÷ 16) for stranded copper wires prepared with ferrules
- **Temperature range**: -40 °C ÷ +125 °C
- **Rating**: 6A 250V 4kV 3; 6A 500V 4kV 2 according EN 61984
  Fault condition (rated short time thermal current): 50A for 1 s
- **Flammability**: 94V – 0 according to UL 94
- **Mating cycles**: ≥ 50
- **Contact resistance (connector mated)**: ≤ 3 mΩ
- **Insulation resistance**: ≥ 10 GΩ
- **Degree of protection**: IP20 (connector without housing), IP65 or IP66 (connectors in T-TYPE housings), IP66 or more (connectors in ILME metal housings)

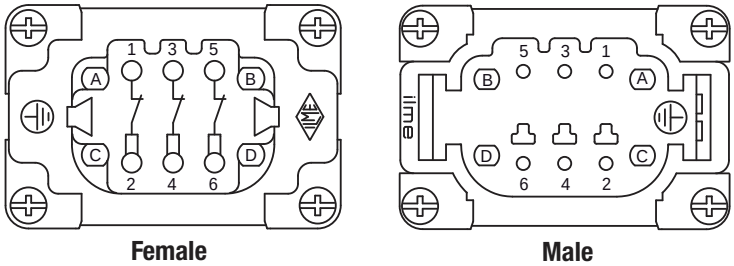
PIN ASSIGNMENT

Female inserts with NC shorting contacts between contacts of pairs 1-2, 3-4, 5-6, opening upon with male inserts.

Pin assignment of contacts for the connector is the following:

Pin	Assignment
1	Winding 1 start
2	Winding 1 end
3	Winding 2 start
4	Winding 2 end
5	Winding 3 start
6	Winding 3 end
PE	Protective Earth

View from the contact side



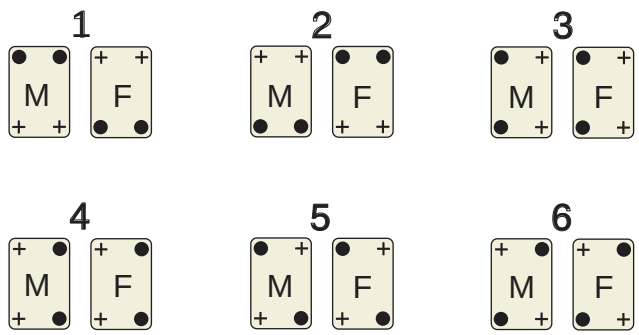
Female **Male**

CDSH NC - SQUICH® series

AutoShort connector

Optionally, it is possible to add the four special coding pins **CR CDS** that allow up to 6 different codings, by installing 2 coding pins on the male connector half and correspondingly 2 on the female connector half, according to the coding scheme provided in the following:

CODING SCHEME



Legend

● = coding pin installed
\+ = no coding pin

The CR CDS coding pins can also be used in combination with other CR 20 / CRM / CRF / CR 72 metal pins instead of insert fixing screws in order to increase the number of possible combinations.

enclosures:
size "44.27" page:

panel supports: page:

refer to catalogue page CN.16

inserts,
spring clamp connections with actuator pin,
female inserts with NC shorting contacts

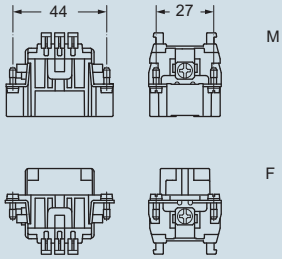
silver plated contacts

NEW

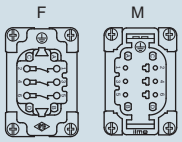
description	part No.
spring terminals with actuator button female inserts with female contacts male inserts with male contacts	**CDSHF 06 NC** **CDSHM 06 NC**

- characteristics according to EN 61984:
  6A 250V 4kV 3
  6A 500V 4kV 2
  10A with connector mated
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- made of self-extinguishing thermoplastic resin 94V-0 according to UL 94
- mechanical life: ≥ 50 cycles
- contact resistance: ≤ 3 mΩ
- NC = Normally Closed

dimensions in mm

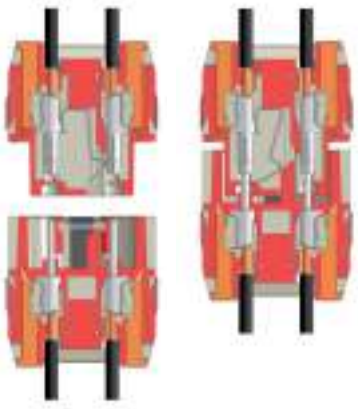


contacts side (front view)



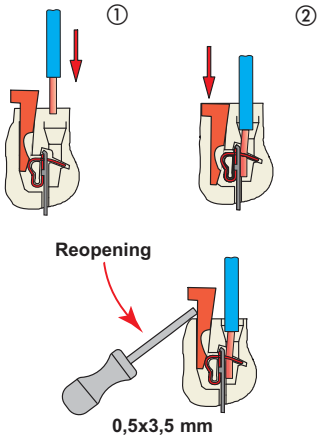
- inserts for conductors cross-section:
  0,14 - 2,5 mm² - AWG 26 - 14
- for wires with crimped ferrule, useful cross-section:
  up to 1,5 mm² - AWG 16
- conductors stripping lenght: 9...11 mm

Female inserts with NC shorting contacts



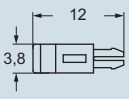
Male inserts

SQUICH® connections



0,5x3,5 mm

CR CDS coding pin



dimensions shown are not binding
and may be changed without notice

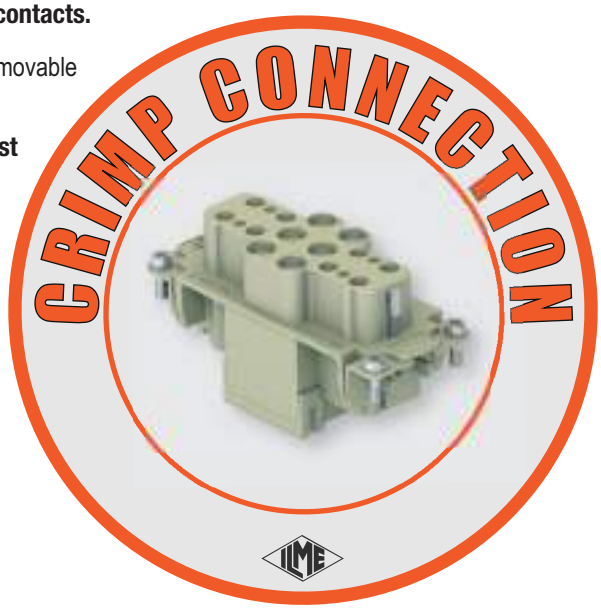
CX 6/12 inserts

Main features

New CX 6/12 insert has been developed **with a retainer device on crimp contacts.**

This layout enables the wires to be connected to the socket and plug insert removable contacts by crimping them with a crimp tool and its locating turret.

The crimp connection is insured and is **extremely resistant even to the most insidious strains**, such as vibrations.



Inserts series: advantages

❱ great resistance to strong vibrations;

❱ for wires: up to 10 mm² (AWG 8);

❱ auxiliary crimp contacts: silver or gold plated.

Inserts series		**CX**	
No. of poles	main contact	6 + ⏚ (40A)	
	auxiliary contacts	12 (10A)	
rated current [1]		40A	10A
EN 61984 pollution degree 3	rated voltage	690V	230V/400V
	rated impulse withstand voltage	8kV	4kV
	pollution degree	3	3
contact resistance		≤ 0,3 mΩ (40A) ≤ 1 mΩ (16A)	
insulation resistance		≥ 10 GΩ	
ambient temperature limit (°C)	min	-40 °C	
	max	+125 °C	
degree of protection	with enclosures (according to version)	IP65, IP66, IP67, IP68, IP69K	
	without enclosures	IP20	
conductor connections		crimp	
conductor cross-section	mm²	1,5 10	
	AWG	16 - 8	
conductor cross-section (CC contact series)	mm²	0,14 2,5	
	AWG	26 - 14	
CX/CC stripping lenght	mm	8 / 9 / 15	
mechanical endurance (rating cycles)		≥ 500	

CX 6 poles (40A - 690V) + 12 poles (10A - 230V/400V) + ⏚

enclosures:
size "77.27" page:

panel supports: page:

refer to catalogue page CN.16

**inserts,
crimp connections**

NEW

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

40A

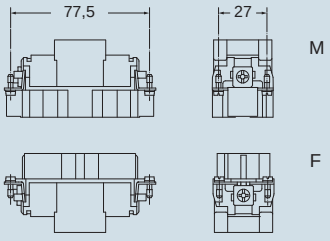
10A

description	part No.	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	**CXF 6/12** **CXM 6/12**		
40A female crimp contacts 1,5 mm² AWG 16 2,5 mm² AWG 14 4 mm² AWG 12 6 mm² AWG 10 10 mm² AWG 8		**CXFA 1.5** **CXFA 2.5** **CXFA 4.0** **CXFA 6.0** **CXFA 10**	silver plated
40A male crimp contacts 1,5 mm² AWG 16 2,5 mm² AWG 14 4 mm² AWG 12 6 mm² AWG 10 10 mm² AWG 8		**CXMA 1.5** **CXMA 2.5** **CXMA 4.0** **CXMA 6.0** **CXMA 10**	silver plated
10A female contacts 0,14-0,37 mm² AWG 26-22 identification No. 1 0,5 mm² AWG 20 identification No. 2 0,75 mm² AWG 18 identification No. ② 1 mm² AWG 18 identification No. 3 1,5 mm² AWG 16 identification No. 4 2,5 mm² AWG 14 identification No. 5		**CDFA 0.3** **CDFA 0.5** **CDFA 0.7** **CDFA 1.0** **CDFA 1.5** **CDFA 2.5**	silver plated **CDFD 0.3** **CDFD 0.5** **CDFD 0.7** **CDFD 1.0** **CDFD 1.5** **CDFD 2.5** gold plated 1)
10A male contacts 0,14-0,37 mm² AWG 26-22 identification No. 1 0,5 mm² AWG 20 identification No. 2 0,75 mm² AWG 18 identification No. ② 1 mm² AWG 18 identification No. 3 1,5 mm² AWG 16 identification No. 4 2,5 mm² AWG 14 identification No. 5		**CDMA 0.3** **CDMA 0.5** **CDMA 0.7** **CDMA 1.0** **CDMA 1.5** **CDMA 2.5**	silver plated **CDMD 0.3** **CDMD 0.5** **CDMD 0.7** **CDMD 1.0** **CDMD 1.5** **CDMD 2.5** gold plated 1)

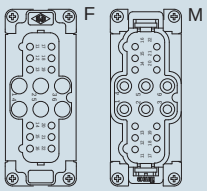
- characteristics according to EN 61984:
  40A 690V 8kV 3
  10A 230V/400V 4kV 3
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 0,3 mΩ (6 poles)
  ≤ 1 mΩ (12 poles)
- cable diameter: up to 7,5 mm
- contact section: up to 10 mm²

dimensions shown are not binding
and may be changed without notice

dimensions in mm



contacts side (front view)

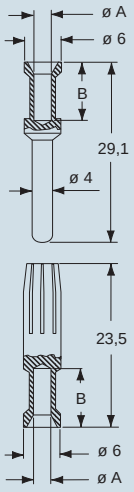


CXF and CXM contacts

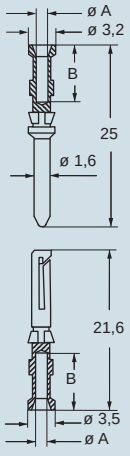
conductor section mm²	conductor slot ø A (mm)	conductors stripping length B (mm)
1,5	1,8	9
2,5	2,2	9
4	2,85	9,6
6	3,5	9,6
10	4,3	15

dimensions in mm

CXF and CXM



CDF and CDM



for contact crimping instructions, please see the crimping tool section (40A contacts CXF, CXM series and 10A contacts CDF, CDM series) on pages 534, 536, 538, 544, 546, 548 catalogue CN.16

CDF and CDM contacts

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

1) basic or high thickness gold plating page 480 Cat. CN.16

CQ series

Main features

New CQ4 inserts ensure a 40A current in the same **size** of the standard **21.21 inserts** (normally 10A/16A).

They can be used with crimp contacts with a conductor **cross-section up to 10 mm²**.

The new CQ4 series is completed by the new **MKA enclosures with M25 thread size**.

Inserts series: CQ4

❱ for wires: up to 10 mm² (AWG 8);

❱ finger safe male and female contacts.

Inserts series		CQ4
No. of poles	main contact	3 + ⏚
rated current [1]		40A
EN 61984 pollution degree 3	rated voltage	400V
	rated impulse withstand voltage	6kV
	pollution degree	3
contact resistance		≤ 0,3 mΩ
insulation resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40 °C
	max	+125 °C
degree of protection	with enclosures (according to version)	IP65, IP66, IP67, IP68, IP69K
	without enclosures	IP20
conductor connections		crimp
conductor cross-section	mm²	1,5 10
	AWG	16 - 8
stripping lenght	mm	9 - 15
mechanical endurance (rating cycles)		≥ 500

CQ 3 poles + ⏚ 40A - 400V

enclosures:
size "21.21" page:

refer to catalogue page CN.16

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

**inserts,
crimp connections**

NEW

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

description	part No.	part No.
without contacts (to be ordered separately)		
female inserts for female contacts	**CQ4F 03 ***	
male inserts for male contacts	**CQ4M 03 ***	
40A female crimp contacts		
1,5 mm² AWG 16		**CXFA 1.5**
2,5 mm² AWG 14		**CXFA 2.5**
4 mm² AWG 12		**CXFA 4.0**
6 mm² AWG 10		**CXFA 6.0**
10 mm² AWG 8		**CXFA 10**
40A male crimp contacts		
1,5 mm² AWG 16		**CXMA 1.5**
2,5 mm² AWG 14		**CXMA 2.5**
4 mm² AWG 12		**CXMA 4.0**
6 mm² AWG 10		**CXMA 6.0**
10 mm² AWG 8		**CXMA 10**

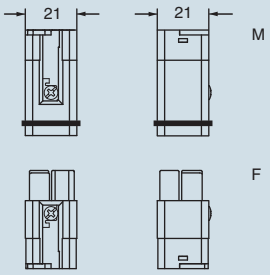
silver plated

- characteristics according to EN 61984:
  40A 400V 6kV 3
- 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: ≤ 0,3 mΩ
- male and female contacts to test of contact with fingers
- for contact crimping instructions, please see the crimping tool section (40A contacts CXF, CXM series) on pages 534, 536, 538, 544, 546, 548 catalogue CN.16

- it is **guarantee maximum safety even in case of accidental contact with fingers (IPXXB or IP2X)**. Safety is guaranteed as standard on female contacts, but also on male contacts. This feature is important as it ensures full compliance with the recent safety standard **EN 60204-1**, concerning electric equipment fitted on machines and in particular with the requirements of Article 6.2.4 concerning protection against residual voltage.
  In the case of plugs or similar devices, the withdrawal of which results in the exposure of conductors (for example pins), the discharge time shall not exceed 1 s, otherwise such conductors shall be protected against direct contact to at least an IP2X or IPXXB.

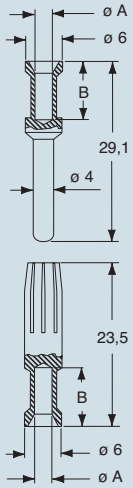
* cable diameter: up to 7,5 mm
contact section: up to 10 mm²

dimensions in mm

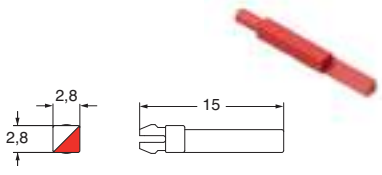


contacts side (front view)

dimensions in mm



coding pins CR Q03 (4 possible positions)



CXF and CXM contacts

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

dimensions shown are not binding
and may be changed without notice

inserts: page:

CK	3 poles + ⏚	48 *
CK	4 poles + ⏚	48 *
CKS	3 poles + ⏚	49 *
CKS	4 poles + ⏚	49 *
CD	8 poles	54 *
CQ	12 poles + ⏚	165 *
CQ	5 poles + ⏚	166 *
CQ	3 poles + ⏚	23

*** refer to catalogue page CN.16**

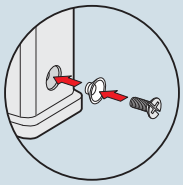
insert dimensions:
21 x 21 mm

hoods

NEW

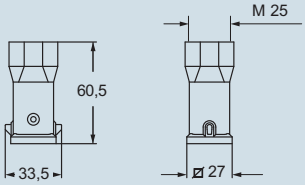
description	part No. (entry - M 25)
with pegs, top entry	**MKA V25**
gasket and screw kit for IP66/IP67 **1)** for CK, CQ 05, CKS inserts	**CKR 65**
gasket and screw kit for IP66/IP67 **1)** for CD 08 inserts	**CKR 65 D**

1) To obtain the protection rating IP66/IP67 a kit is provided that includes a gasket to fit under the insert fixing screws supplied with the kit (see illustrative example).
CQ 12 inserts are already supplied with a gasket and screw which ensure IP66/IP67 protection rating.



dimensions in mm

MKA V25



NEW THREAD SIZE M25

EN 60529 IP44 IEC 60529 IP66/IP67 with CKR 65 (D) **1)**

dimensions shown are not binding
and may be changed without notice

inserts: page:

CK	3 poles + ⏚	48 *
CK	4 poles + ⏚	48 *
CKS	3 poles + ⏚	49 *
CKS	4 poles + ⏚	49 *
CD	8 poles	54 *
CQ	12 poles + ⏚	165 *
CQ	5 poles + ⏚	166 *
CQ	3 poles + ⏚	23

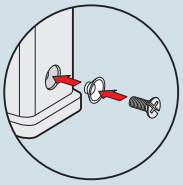
*** refer to catalogue page CN.16**

insert dimensions:
21 x 21 mm

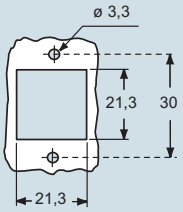
bulkhead mounting housings

description	part No.
with galvanised steel lever with stainless steel lever	**CKA 03 I** **CKAX 03 I**
gasket and screw kit for IP66/IP67 **1)** for CK, CQ 05, CKS inserts	**CKR 65**
gasket and screw kit for IP66/IP67 **1)** for CD 07/08 inserts	**CKR 65 D**

1) To obtain the protection rating IP66/IP67 a kit is provided that includes a gasket to fit under the insert fixing screws supplied with the kit (see illustrative example).
CQ 12 inserts are already supplied with a gasket and screw which ensure IP66/IP67 protection rating.

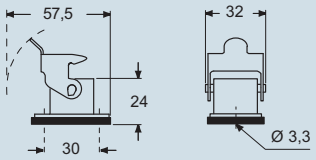


panel cut-out for enclosures, in mm

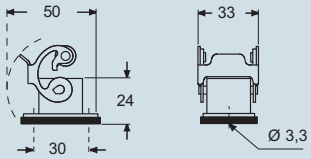


dimensions in mm

CKA I



CKAX I



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

IP66/IP67 with CKR 65 (D) **1)**

dimensions shown are not binding
and may be changed without notice

inserts: page:

CK	3 poles + ⏚	48 *
CK	4 poles + ⏚	48 *
CKS	3 poles + ⏚	49 *
CKS	4 poles + ⏚	49 *
CD	8 poles	54 *
CQ	12 poles + ⏚	165 *
CQ	5 poles + ⏚	166 *
CQ	3 poles + ⏚	23

*** refer to catalogue page CN.16**

insert dimensions:
21 x 21 mm

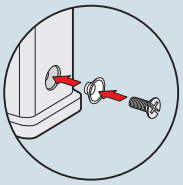
angled bulkhead mounting housings

bulkhead mounting housings with self closing cover

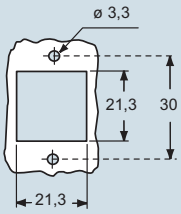
description	part No.	part No.
galvanized steel lever, M20 fixing thread (•) stainless steel lever, M20 fixing thread (•)	**MKA IAF20** 1) **MKAX IAF20** 1)	
galvanized steel lever, M25 fixing thread (•) stainless steel lever, M25 fixing thread (•)	**MKA IAF25** 1) **MKAX IAF25** 1)	
with galvanised steel lever, for female inserts with galvanised steel lever, for male inserts		**CKA 03 ILS** **CKA 03 ILSA**
with stainless steel lever, for female inserts with stainless steel lever, for male inserts		**CKAX 03 ILS** **CKAX 03 ILSA**
gasket and screw kit for IP66/IP67 1) for CK, CQ 05, CKS inserts	**CKR 65**	**CKR 65**
gasket and screw kit for IP66/IP67 1) for CD 07/08 inserts	**CKR 65 D**	**CKR 65 D**

(•) locknut supplied on request, see catalogue cable glands (articles AS M20N and AS M25N metallic, AS M20L and AS M25L insulating)

1) To obtain the protection rating IP66/IP67 a kit is provided that includes a gasket to fit under the insert fixing screws supplied with the kit (see illustrative example).
CQ 12 inserts are already supplied with a gasket and screw which ensure IP66/IP67 protection rating.



panel cut-out for enclosures CKA ILS/ILSA, in mm

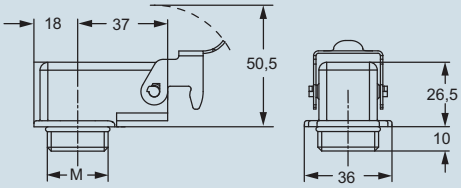


Type 12
Type 4/4X only
with CKR 65 (D)

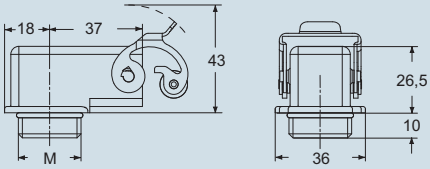
IP66/IP67 with CKR 65 (D) 1)

dimensions shown are not binding
and may be changed without notice

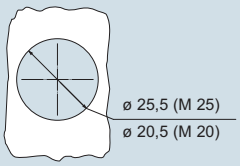
dimensions in mm
MKA IAF



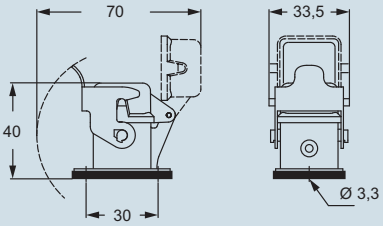
MKAX IAF



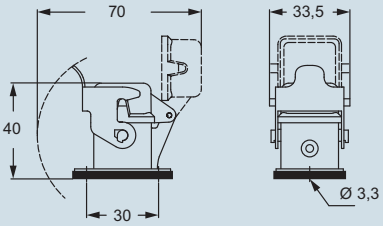
panel cut-out



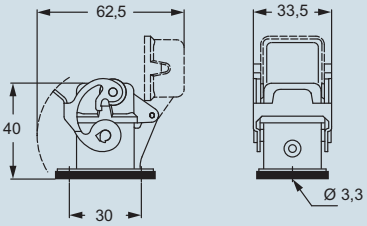
dimensions in mm
CKA ILS



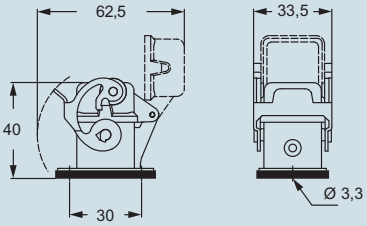
CKA ILSA



CKAX ILS



CKAX ILSA



CKA and **MKA** enclosures size “21.21” standard metallic version **C-TYPE**

inserts: page:

CK ..... 3 poles + ⏚ 48 *
CK ..... 4 poles + ⏚ 48 *
CKS ..... 3 poles + ⏚ 49 *
CKS ..... 4 poles + ⏚ 49 *
CD ..... 8 poles 54 *
CQ ..... 12 poles + ⏚ 165 *
CQ ..... 5 poles + ⏚ 166 *
CQ ..... 3 poles + ⏚ 23

*** refer to catalogue page CN.16**

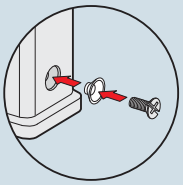
insert dimensions:
21 x 21 mm

hoods

covers

description	part No. (entry - Pg 11)	part No. (entry - M 20)	part No. (with eyelet)	part No. (with loop)
with pegs, top entry	**CKA 03 VS**	**MKA V20**		
with galvanised steel lever, top entry with stainless steel lever, top entry	**CKA 03 VGS** **CKAX 03 VGS**	**MKA VG20** **MKAX VG20**		
with pegs and gasket, for female inserts with pegs, for male inserts			**CKA 03 C** [1] **CKA 03 CA** [1]	**CKA 03 CS** [1] **CKA 03 CAS** [1]
with stainless steel lever and gasket, for female inserts with stainless steel lever, for male inserts				**CKAX 03 CX** **CKAX 03 CXA**
gasket and screw kit for IP66/IP67 [2] for CK, CQ 05, CKS inserts	**CKR 65**			
gasket and screw kit for IP66/IP67 [2] for CD 08 inserts	**CKR 65 D**			

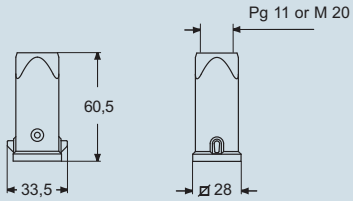
2) To obtain the protection rating IP66/IP67 a kit is provided that includes a gasket to fit under the insert fixing screws supplied with the kit (see illustrative example).
CQ 12 inserts are already supplied with a gasket and screw which ensure IP66/IP67 protection rating.



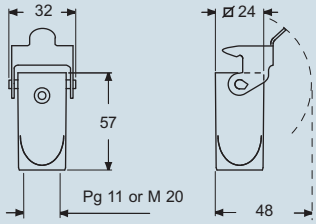
1) preferably be used with enclosures CKAX (stainless steel lever).

dimensions in mm

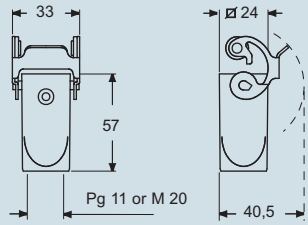
CKA VS and **MKA V**



CKA VGS and **MKA VG**

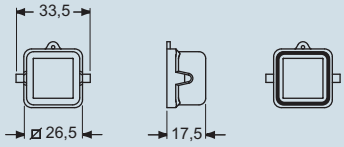


CKAX VGS and **MKAX VG**

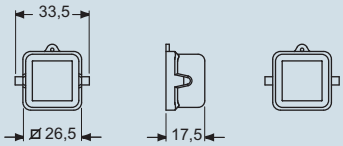


dimensions in mm

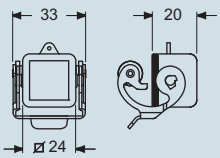
CKA C(S)



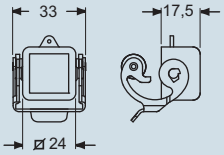
CKA CA(S)

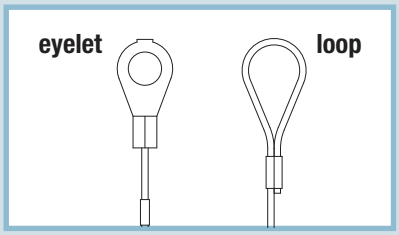


CKAX CX



CKAX CXA





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

IP66/IP67 with CKR 65 (D) [2]

dimensions shown are not binding
and may be changed without notice

SIMPLEX

Self-closing covers

ALWAYS PROTECTED

SIMPLEX covers

NEW

Enclosure versions

Bulkhead mount housings with new **SELF-CLOSING** covers ensure IP65 protection rating (according to EN 60529) when mated and locked with the closing lever.

Characteristics of materials used:

- 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.
- Self-closing covers in self-extinguishing thermoplastic material reinforced with glass fibres, UL approved.
- IP44 protection rating when not mated and not locked with lever (V-TYPE only).

SELF-CLOSING

V-TYPE LEVER

IL-BRID LEVER

inserts: page:

CD	15	poles + ⏚	55
CSAH	10	poles + ⏚	87
CDA	10	poles + ⏚	98
CDC	10	poles + ⏚	99
MIXO	1	module	179 - 214

refer to catalogue page CN.16

insert centre distance:
49 x 16 mm

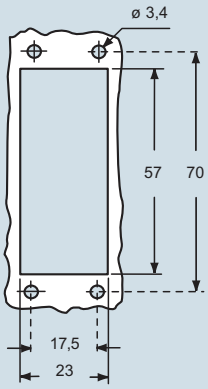
bulkhead mounting housings with 1 lever

IL-BRID lever

NEW

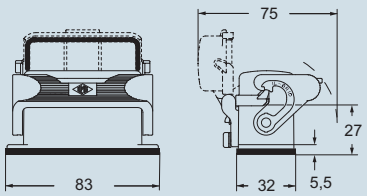
description	part No.
with single lever and cover	**CZI 15 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CZI LSP



N.B.:
The enclosures ensure IP65 protection 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	25 poles + ⏚	56
CDD	38 poles + ⏚	68
CSAH	16 poles + ⏚	88
CDA	16 poles + ⏚	100
CDC	16 poles + ⏚	101

refer to catalogue page CN.16

insert centre distance:
66 x 16 mm

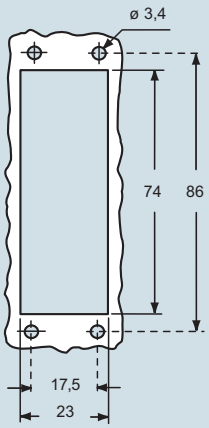
bulkhead mounting housings with 1 lever

IL-BRID lever

NEW

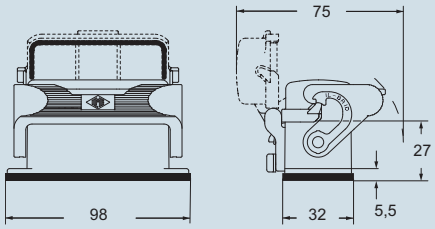
description	part No.
with single lever and cover	**CZI 25 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CZI LSP



N.B.:
The enclosures ensure IP65 protection 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:

CDD	24	poles + ⏚	67 *
CDS	9	poles + ⏚	78 *
CDSH	9	poles + ⏚	9
CSH	6	poles + ⏚	91 *
CNE, CSE	6	poles + ⏚	104 *
CCE	6	poles + ⏚	110 *
CSS	6	poles + ⏚	122 *
CT, CTSE (16A) ***)**	6	poles + ⏚	130 *
CQE	10	poles + ⏚	138 *
MIXO	2	modules	179 - 215 *

***)** can be used only in bulkhead mounting housings

*** refer to catalogue page CN.16**

insert centre distance:
44 x 27 mm

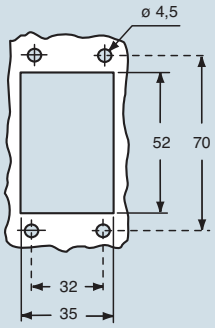
bulkhead mounting housings with 1 stainless lever

V-TYPE lever

NEW

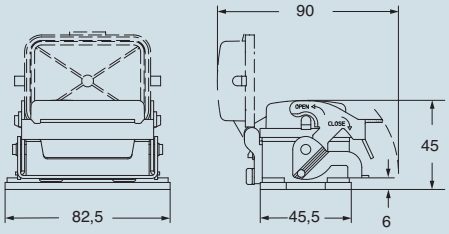
description	part No.
with lever and cover in plastic, size “44.27”	**CVI 06 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CVI LSP



NB:
The enclosures ensure IP65 protection rating when mated and locked with the closing lever, or IP44 protection when not mated and locked with lever.

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42 poles + ⏚	69 *
CDS	18 poles + ⏚	79 *
CDSH	18 poles + ⏚	10
CSH	10 poles + ⏚	92 *
CNE, CSE	10 poles + ⏚	105 *
CCE	10 poles + ⏚	111 *
CSS	10 poles + ⏚	123 *
CT, CTSE (16A) ***)**	10 poles + ⏚	131 *
CQE	18 poles + ⏚	139 *
CMCE	3+2 (aux) poles + ⏚	148 *
CMSH	3+2 (aux) poles + ⏚	149 *
CX	8/24 poles + ⏚	169 *
MIXO	3 modules	179 - 215 *

***)** can be used only in bulkhead mounting housings

*** refer to catalogue page CN.16**

insert centre distance: **57 x 27 mm**

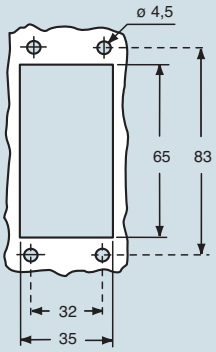
bulkhead mounting housings with 1 stainless lever

V-TYPE lever

NEW

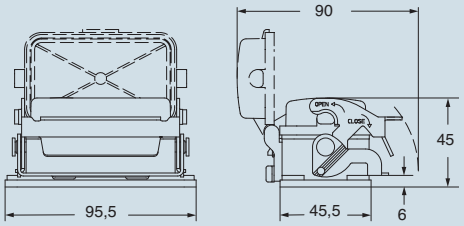
description	part No.
with lever and cover in plastic, size “57.27”	**CVI 10 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CVI LSP



NB:
The enclosures ensure IP65 protection rating when mated and locked with the closing lever, or IP44 protection when not mated and locked with lever.

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts:			page:
CD	40	poles + ⏚	57 *
CT, CTS (10A) ***)**	40	poles + ⏚	64 *
CDD	72	poles + ⏚	70 *
CDS	27	poles + ⏚	80 *
CDSH	27	poles + ⏚	11
CSH	16	poles + ⏚	93 *
CNE, CSE	16	poles + ⏚	106 *
CCE	16	poles + ⏚	112 *
CSS	16	poles + ⏚	124 *
CT, CTSE (16A) ***)**	16	poles + ⏚	132 *
CQE	32	poles + ⏚	140 *
CQEE	40	poles + ⏚	146 *
CMCE	6+2 (aux)	poles + ⏚	150 *
CMSH	6+2 (aux)	poles + ⏚	151 *
CP	6	poles + ⏚	162 *
CX 6/36, 6/12 and 12/2		poles + ⏚	170-171 *
CX	4/0 and 4/2	poles + ⏚	172 *
MIXO	4	modules	179-215 *

***)** can be used only in bulkhead mounting housings

*** refer to catalogue page CN.16**

insert centre distance: **77,5 x 27 mm**

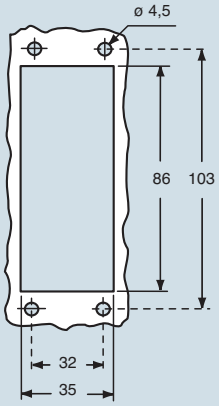
bulkhead mounting housings with 1 stainless lever

V-TYPE lever

NEW

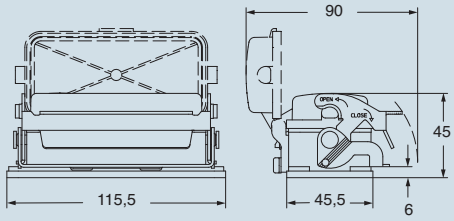
description	part No.
with lever and cover in plastic, size “77.27”	**CVI 16 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CVI LSP



NB:
The enclosures ensure IP65 protection rating when mated and locked with the closing lever, or IP44 protection when not mated and locked with lever.

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	64 poles + ⏚	59 *
CT, CTS (10A) *)	64 poles + ⏚	65 *
CDD	108 poles + ⏚	72 *
CDS	42 poles + ⏚	81 *
CDSH	42 poles + ⏚	12
CSH	24 poles + ⏚	94 *
CNE, CSE	24 poles + ⏚	107 *
CCE	24 poles + ⏚	113 *
CSS	24 poles + ⏚	125 *
CT, CTSE (16A) *)	24 poles + ⏚	133 *
CQE	46 poles + ⏚	141 *
CQEE	64 poles + ⏚	147 *
CMCE	10+2 (aux) poles + ⏚	152 *
CMSH	10+2 (aux) poles + ⏚	153 *
CX	4/8 and 6/6 poles + ⏚	173 and 175 *
MIXO	6modules	179-215 *

*) can be used only in bulkhead mounting housings

* **refer to catalogue page CN.16**

insert centre distance: **104 x 27 mm**

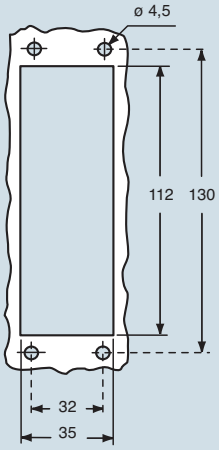
bulkhead mounting housings with 1 stainless lever

V-TYPE lever

NEW

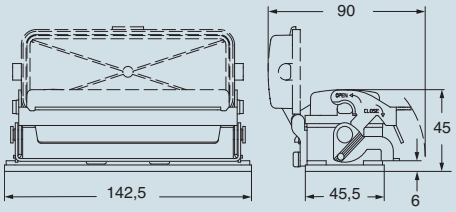
description	part No.
with lever and cover in plastic, size “104.27”	**CVI 24 LSP**

panel cut-out for bulkhead mounting housings in mm



dimensions in mm

CVI LSP



NB:
The enclosures ensure IP65 protection rating when mated and locked with the closing lever, or IP44 protection when not mated and locked with lever.

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	24	poles + ⏚	67 *
CDS	9	poles + ⏚	78 *
CSH	6	poles + ⏚	91 *
CNE, CSE	6	poles + ⏚	104 *
CCE	6	poles + ⏚	110 *
CSS	6	poles + ⏚	122 *
CQE	10	poles + ⏚	138 *
MIXO	2	modules	179 - 215 *
CDSH	9	poles + ⏚	9
CDSH NC	6	poles + ⏚	19

*** refer to catalogue page CN.16**

insert centre distance:
44 x 27 mm

surface mounting housings with single lever

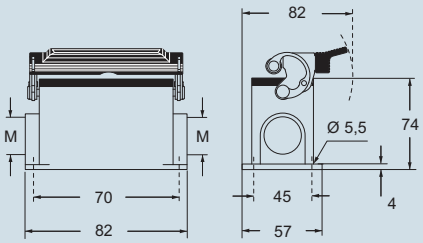
NEW

description	part No.	entry M
with lever, high construction *	**MAP 06 L25**	25
with lever, high construction *	**MAP 06 L225**	25 x 2

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

dimensions in mm

MAP L



dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42	poles + ⏚	69 *
CDS	18	poles + ⏚	79 *
CSH	10	poles + ⏚	92 *
CNE, CSE	10	poles + ⏚	105 *
CCE	10	poles + ⏚	111 *
CSS	10	poles + ⏚	123 *
CQE	18	poles + ⏚	139 *
CMCE	3+2 (aux)	poles + ⏚	148 *
CMSH	3+2 (aux)	poles + ⏚	149 *
CX	8/24	poles + ⏚	169 *
MIXO	3	modules	179 - 215 *
CDSH	18	poles + ⏚	10

* **refer to catalogue page CN.16**

insert centre distance:
57 x 27 mm

surface mounting housings with 2 levers

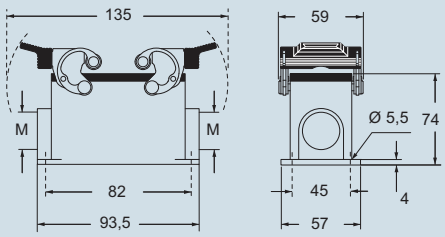
NEW

description	part No.	entry M
with levers, high construction *	**MAP 10.25**	25
with levers, high construction *	**MAP 10.225**	25 x 2

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

dimensions in mm

MAP



EN 60529 IP66 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	40	poles + ⏚	57 *
CDD	72	poles + ⏚	70 *
CDS	27	poles + ⏚	80 *
CSH	16	poles + ⏚	93 *
CNE, CSE	16	poles + ⏚	106 *
CCE	16	poles + ⏚	112 *
CSS	16	poles + ⏚	124 *
CQE	32	poles + ⏚	140 *
CQEE	40	poles + ⏚	146 *
CMCE, CMSH	6+2 (aux)	poles + ⏚	150-151 *
CP	6	poles + ⏚	162 *
CX	6/36, 6/12 and 12/2	poles + ⏚	170-171 *
CX	4/0 and 4/2	poles + ⏚	172 *
MIXO	4	modules	179-215 *
CDSH	27	poles + ⏚	11

*** refer to catalogue page CN.16**

insert centre distance: **77,5 x 27 mm**

surface mounting housings with 2 levers

NEW

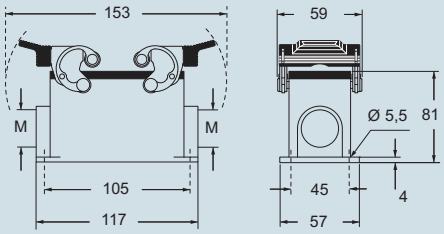
NEW THREAD SIZE M25

description	part No.	entry M
with levers, high construction *	**MAP 16.25**	25
with levers, high construction *	**MAP 16.225**	25 x 2

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

dimensions in mm

MAP



EN 60529 IP66 IEC 60529

dimensions shown are not binding and may be changed without notice

inserts: page:

CD	64 poles + ⏚	59 *
CDD	108 poles + ⏚	72 *
CDS	42 poles + ⏚	81 *
CSH	24 poles + ⏚	94 *
CNE, CSE	24 poles + ⏚	107 *
CCE	24 poles + ⏚	113 *
CSS	24 poles + ⏚	125 *
CQE	46 poles + ⏚	141 *
CQEE	64 poles + ⏚	147 *
CMCE	10+2 (aux) poles + ⏚	152 *
CMSH	10+2 (aux) poles + ⏚	153 *
CX	4/8 and 6/6 poles + ⏚	173 and 175 *
MIXO	6 modules	179-215 *
CDSH	42 poles + ⏚	12

*** refer to catalogue page CN.16**

insert centre distance: **104 x 27 mm**

surface mounting housings with 2 levers

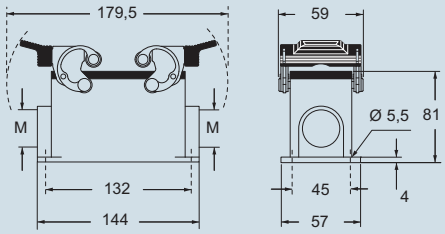
NEW

description	part No.	entry M
with levers, high construction *	**MAP 24.25**	25
with levers, high construction *	**MAP 24.225**	25 x 2

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

dimensions in mm

MAP



NEW THREAD SIZE M25

EN 60529 IP66 IEC 60529

dimensions shown are not binding and may be changed without notice

inserts: page:

CDD	24 poles + ⏚	67 *
CDS	9 poles + ⏚	78 *
CSH	6 poles + ⏚	91 *
CNE, CSE	6 poles + ⏚	104 *
CCE	6 poles + ⏚	110 *
CSS	6 poles + ⏚	122 *
CT, CTSE (16A) ***)**	6 poles + ⏚	130 *
CQE	10 poles + ⏚	138 *
MIXO	2 modules	179 - 215 *
CDSH	9 poles + ⏚	9
CDSH NC	6 poles + ⏚	19

***) only in the CHIN enclosure**

* **refer to catalogue page CN.16**

insert centre distance:
44 x 27 mm

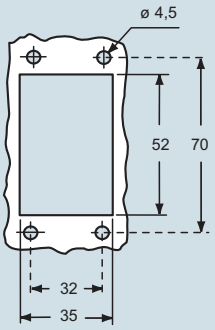
housings for 1 lever

NEW

hoods with 1 lever

description	part No.	part No.	entry M
bulkhead mounting housing, with 2 pegs	**CHIN 06 LCH**		
with lever and gasket, top entry		**MHVN 06 LG25**	25
with lever and gasket, top entry, high construction		**MFVN 06 LG25**	25

panel cut-out for bulkhead mounting housing in mm



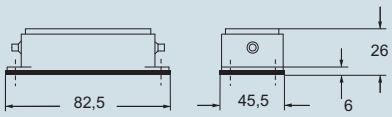
- kiln powder coating with RAL 9005 black epoxy polyester powder
- RAL 9005 black self-extinguishing thermoplastic locking lever (spare lever page 458 catalogue CN.16)

IP65 EN 60529 IEC 60529

dimensions shown are not binding
and may be changed without notice

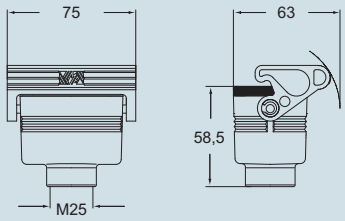
dimensions in mm

CHIN LCH

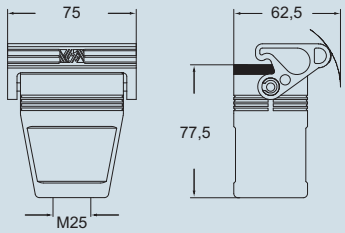


dimensions in mm

MHVN LG



MFVN LG



inserts: page:

CDD	42	poles + ⏚	69 *
CDS	18	poles + ⏚	79 *
CSH	10	poles + ⏚	92 *
CNE, CSE	10	poles + ⏚	105 *
CCE	10	poles + ⏚	111 *
CSS	10	poles + ⏚	123 *
CT, CTSE *)	10	poles + ⏚	131 *
CQE	18	poles + ⏚	139 *
CMCE	3+2 (aux)	poles + ⏚	148 *
CMSH	3+2 (aux)	poles + ⏚	149 *
CX	8/24	poles + ⏚	169 *
MIXO	3	modules	179 - 215 *
CDSH	18	poles + ⏚	10

***) only in the CHIN enclosure**

* **refer to catalogue page CN.16**

insert centre distance: **57 x 27 mm**

housings for 2 levers

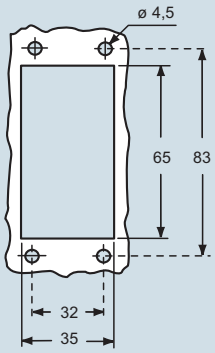
NEW

hoods with 2 levers

NEW

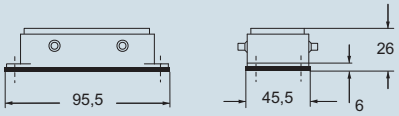
description	part No.	part No.	entry M
bulkhead mounting housing, with 4 pegs	**CHIN 10 CH**		
with 2 levers and gasket, top entry, high construction		**MFVN 10 G220**	20 x 2

panel cut-out for bulkhead mounting housing in mm



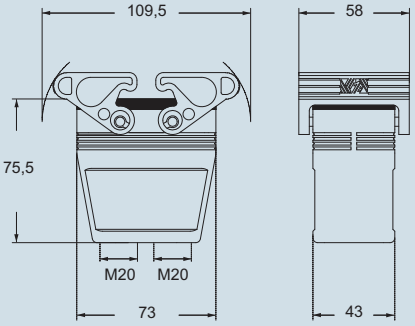
dimensions in mm

CHIN CH



dimensions in mm

MFVN G



- kiln powder coating with RAL 9005 black epoxy polyester powder
- RAL 9005 black self-extinguishing thermoplastic locking lever (spare lever page 458 catalogue CN.16)

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	40	poles + ⏚	57 *
CT, CTS (10A) ***)**	40	poles + ⏚	64 *
CDD	72	poles + ⏚	70 *
CDS	27	poles + ⏚	80 *
CSH	16	poles + ⏚	93 *
CNE, CSE	16	poles + ⏚	106 *
CCE	16	poles + ⏚	112 *
CSS	16	poles + ⏚	124 *
CT, CTSE (16A) ***)**	16	poles + ⏚	132 *
CQE	32	poles + ⏚	140 *
CQEE	40	poles + ⏚	146 *
CMCE	6+2 (aux)	poles + ⏚	150 *
CMSH	6+2 (aux)	poles + ⏚	151 *
CP	6	poles + ⏚	162 *
CX	6/36, 6/12 and 12/2	poles + ⏚	170-171 *
CX	4/0 and 4/2	poles + ⏚	172 *
MIXO	4	modules	179-215 *
CDSH	27	poles + ⏚	11

***) only in the CHIN enclosure**

*** refer to catalogue page CN.16**

insert centre distance: **77,5 x 27 mm**

housings for 2 levers

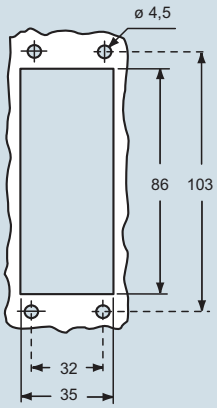
NEW

hoods with 2 levers

NEW

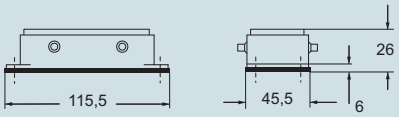
description	part No.	part No.	entry M
bulkhead mounting housing, with 4 pegs	**CHIN 16 CH**		
with 2 levers and gasket, top entry, high construction		**MFVN 16 G225**	25 x 2

panel cut-out for bulkhead mounting housing in mm

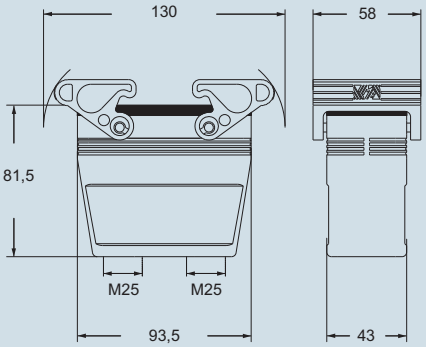


dimensions in mm

CHIN CH



MFVN G



- kiln powder coating with RAL 9005 black epoxy polyester powder
- RAL 9005 black self-extinguishing thermoplastic locking lever (spare lever page 458 catalogue CN.16)

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	64	poles + ⏚	59 *
CT, CTS (10A) *)	64	poles + ⏚	65 *
CDD	108	poles + ⏚	72 *
CDS	42	poles + ⏚	81 *
CSH	24	poles + ⏚	94 *
CNE, CSE	24	poles + ⏚	107 *
CCE	24	poles + ⏚	113 *
CSS	24	poles + ⏚	125 *
CT, CTSE (16A) *)	24	poles + ⏚	133 *
CQE	46	poles + ⏚	141 *
CQEE	64	poles + ⏚	147 *
CMCE	10+2 (aux)	poles + ⏚	152 *
CMSH	10+2 (aux)	poles + ⏚	153 *
CX	4/8 and 6/6	poles + ⏚	173 and 175 *
MIXO	6	modules	179-215 *
CDSH	42	poles + ⏚	12

***) only in the CHIN enclosure**

* **refer to catalogue page CN.16**

insert centre distance: **104 x 27 mm**

housings for 2 levers

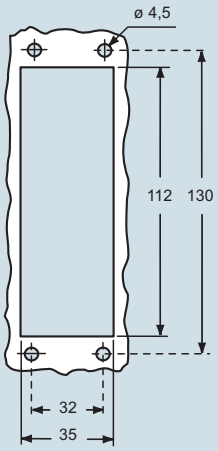
NEW

hoods with 2 levers

NEW

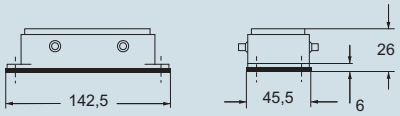
description	part No.	part No.	entry M
bulkhead mounting housing, with 4 pegs	**CHIN 24 CH**		
with 2 levers and gasket, top entry, high construction		**MFVN 24 G232**	32 x 2

panel cut-out for bulkhead mounting housing in mm

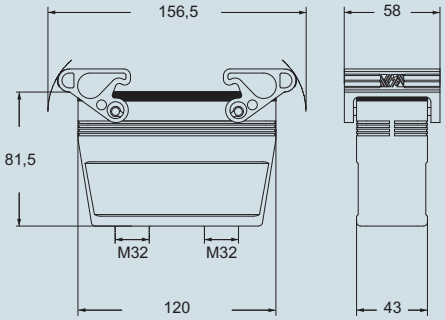


dimensions in mm

CHIN CH



MFVN G



- kiln powder coating with RAL 9005 black epoxy polyester powder
- RAL 9005 black self-extinguishing thermoplastic locking lever (spare lever page 458 catalogue CN.16)

EN 60529 IP65 IEC 60529

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD ..... 40, 64 poles + ⏚ 57 and 59
CDD ..... 24, 42, 72, 108 poles + ⏚ 67-72
CDS ..... 9, 18, 27, 42 poles + ⏚ 78-81
CSH ..... 6, 10, 16, 24 poles + ⏚ 91-94
CNE, CSE .... 6, 10, 16, 24 poles + ⏚ 104-107
CCE ..... 6, 10, 16, 24 poles + ⏚ 110-113
CSS ..... 6, 10, 16, 24 poles + ⏚ 122-125
CT, CTSE ..... 6, 10, 16, 24 poles + ⏚ 130-133
CQE ..... 10, 18, 32, 46 poles + ⏚ 138-141
CQEE ..... 40, 64 poles + ⏚ 146-147
CMCE 3, 6, 10, 16+2 (aux) poles + ⏚ 148-158
CMSH ..... 3, 6, 10+2 (aux) poles + ⏚ 149-153
CP ..... 6 poles + ⏚ 162
CX ..... 8/24, 6/36, 12/2 poles + ⏚ 169-171

refer to catalogue page CN.16

insert centre distance:
44 X 27 mm, 57 x 27 mm
77,5 x 27 mm, 104 x 27 mm

optional PE jumpers
for T-TYPE or COB enclosures

NEW

description	part No.
galvanized brass, to be optionally used with T-TYPE enclosures series and COB systems.	
- for inserts “44.27” size	**CR 06 BPE**
- for inserts “57.27” size	**CR 10 BPE**
- for inserts “77.27” size	**CR 16 BPE**
- for inserts “104.27” size	**CR 24 BPE**

CR...BPE accessories PE (protective earth) jumpers could be mounted under the connector inserts for the connection of the two insert’s PE plates.

To guarantee to proper alignment of the insert inside the enclosure, it is necessary to use both jumpers supplied (in the same housing or hood); the jumpers are not usable individually.

Furthermore the user is responsible for verifying the continuity of the PE connection ⏚ (male and female) independently of using CR...BPE earth jumpers.

dimensions shown are not binding
and may be changed without notice

RJ45 CONNECTORS

up to 10 Gbit/s

enclosures: page:
size "21.21"

insulating type ..... 526 - 527
(CK IN, CKG/MKG VN/VAN *)

metallic type
(CKAX I, CKAX/MKAX IAP/AP/VG) 223 and 528
(CKAG/MKAG V/VA *) 529

IP68 ..... 416 - 418
(CGK I, CGK/MGK IAP, CGK/MGK V)

*) angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

- characteristics according to EN 61984:
  1A 50V 0,8kV 3
- insulation resistance: ≥ 10 GΩ
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- temperature range: from -40 °C to +70 °C
- we recommend to fix the cable with cable tie

adapters for RJ45 male connectors, RJ45 female-female connectors

NEW

RJ45 male connectors, crimp IDC and termination

description	part No.	part No.
- socket insert with 1 RJ45 female connector, - plug inserts for 1 RJ45 male crimp connector, 8 data contacts (without RJ45 connector, to be ordered separately) - plug insert for 1 RJ45 male IDC connector, 8 data contacts (without RJ45 connector, to be ordered separately)	**CJK 8FT** **CJK 8MT** **CJK 8IMT**	
- RJ45 male crimp connector, 8 data contacts - RJ45 male IDC connector, 8 data contacts		**CX 8 J6M** **CX 8 J6IM**

CJK 8FT technical data:
- RJ45 female insert, Cat. 6 Class E_A
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at 50 °C: 1A
- adequate for Power over Ethernet: PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet: 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET Installation Guideline
- generic cabling systems: ANSI/TIA/EIA-568-C.2 ISO/IEC 11801 EN50173-1 ISO/IEC 24702 EN 61918
- class E_A (channel): ISO/IEC 11801, EN 50173-1

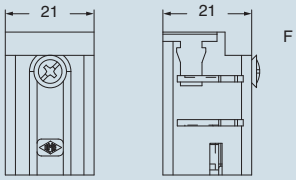
CX 8 J6M technical data:
- RJ45 male crimp connectors Cat. 6_A
- crimp pliers: **CJPZ T**
- screened cable stripper: **CJST**
- Cu-conductor diameter solid: 0,40 - 0,51 mm (AWG 26/1 - 24/1) stranded: 0,46 - 0,61 mm (AWG 27/7 - 24/7)
- insulation diameter: 0,85 - 1,05 mm
- cable diameter: 5,0 - 7,0 mm
- connectors: IEC 60603-7-51
- 10 Gigabit Ethernet acc. to IEEE 802.3an: adequate for 10 Gigabit Ethernet
- category 6_A: ISO/IEC 11801; EN 50173-1
- class E_A: ISO/IEC 11801; EN 50173-1
- category 6_A: ANSI/TIA/EIA-568-C.2

CX 8 J6IM technical data:
- RJ45 male IDC connectors Cat. 6 Class E_A
- Cu-conductor diameter solid: 0,41 - 0,64 mm (AWG 26/1 - 22/1) stranded: 0,48 - 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0,85 - 1,6 mm
- cable diameter: 5,5 - 8,5 mm
- connectors: IEC 60603-7-5
- category 6_A: ISO/IEC 11801; DIN EN 50173-1
- wrenches pliers for CX 8 J6IM: **CJPW K**
- 10 Gigabit Ethernet acc. to IEEE 802.3an: adequate for 10 Gigabit Ethernet
- class E_A: ISO/IEC 11801; EN 50173-1
- category 6: ANSI/TIA/EIA-568-C.2
- custom-designed cabling systems: according to PROFINET Installation Guideline

dimensions shown are not binding and may be changed without notice

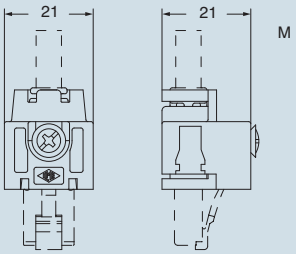
dimensions in mm

CJK 8FT

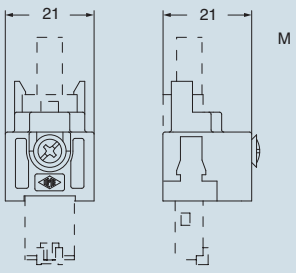


Female-Female

CJK 8MT [1]



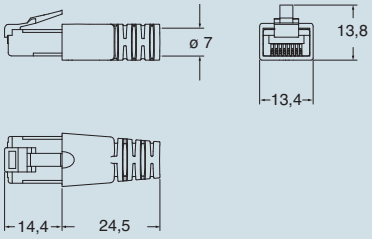
CJK 8IMT [1]



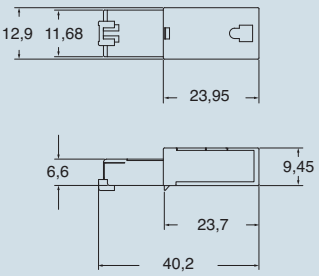
[1] to be used with hoods

dimensions in mm

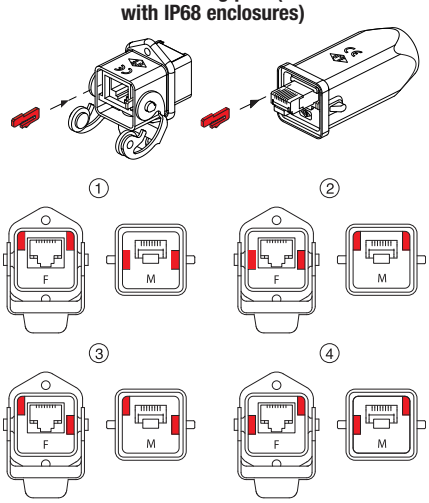
CX 8 J6M (can be used with CJK 8MT)



CX 8 J6IM (can be used with CJK 8IMT)



How to use CR KC coding pins (cannot be used with IP68 enclosures)



enclosures: page:
size "21.21"

insulating type ..... 526 - 527
(CK IN, CKG/MKG VN/VAN *)

metallic type
(CKAX I, CKAX/MKAX IAP/AP/VG) 223 and 528
(CKAG/MKAG V/VA *) 529

IP68 ..... 416 - 418
(CGK I, CGK/MGK IAP, CGK/MGK V)

***)** angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

- characteristics according to EN 61984:
  1A 50V 0,8kV 3
- insulation resistance: ≥ 10 GΩ
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- temperature range: from -40 °C to +70 °C
- we recommend to fix the cable with cable tie

adapters for RJ45 male connectors, RJ45 female - cable IDC connectors

NEW

RJ45 male connectors, IDC termination

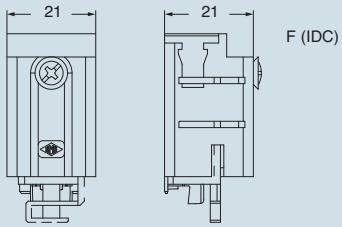
description	part No.	part No.
- socket insert with 1 RJ45 female connector, - plug insert for 1 RJ45 male IDC connector, 8 data contacts (without RJ45 connector, to be ordered separately)	**CJK 8IFT** **CJK 8IMT**	
- RJ45 male IDC connector, 8 data contacts		**CX 8 J6IM**

CJK 8IFT technical data:
- RJ45 female insert, Cat. 6_A
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at 50 °C: 1A
- adequate for Power over Ethernet:
  PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet:
  10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET
  Installation Guideline
- generic cabling systems:
  ANSI/TIA/EIA-568-C.2
  ISO/IEC 11801
  EN50173-1
  ISO/IEC 24702
  EN 61918
- class E_A (channel): ISO/IEC 11801, EN 50173-1

CX 8 J6IM technical data:
- RJ45 male IDC connectors Cat. 6 Class E_A
- Cu-conductor diameter
  solid: 0,41 - 0,64 mm (AWG 26/1 - 22/1)
  stranded: 0,48 - 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0,85 - 1,6 mm
- cable diameter: 5,5 - 8,5 mm
- connectors: IEC 60603-7-5
- category 6_A: ISO/IEC 11801; DIN EN 50173-1
- wrenches pliers for CX 8 J6IM: **CJPW K**
- 10 Gigabit Ethernet acc. to IEEE 802.3an:
  adequate for 10 Gigabit Ethernet
- class E_A: ISO/IEC 11801; EN 50173-1
- category 6: ANSI/TIA/EIA-568-C.2
- custom-designed cabling systems:
  according to PROFINET Installation Guideline

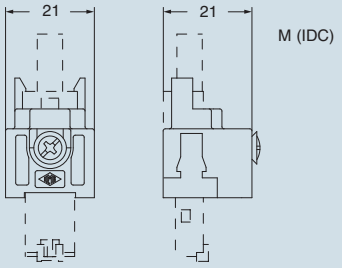
dimensions in mm

CJK 8IFT



Female-Cable IDC

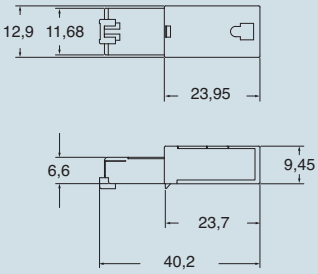
CJK 8IMT [1)]



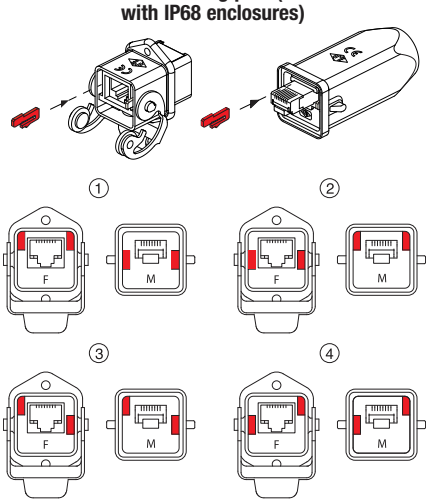
[1)] to be used with hoods

dimensions in mm

CX 8 J6IM (can be used with CJK 8IMT)



How to use CR KC coding pins (cannot be used with IP68 enclosures)



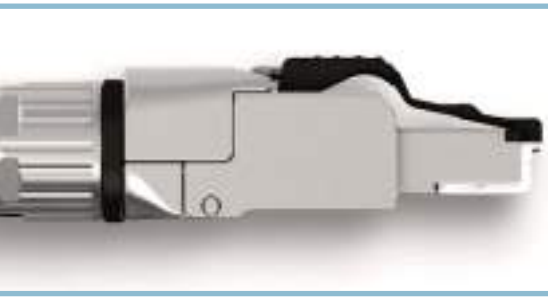
dimensions shown are not binding
and may be changed without notice

RJ45 CONNECTORS

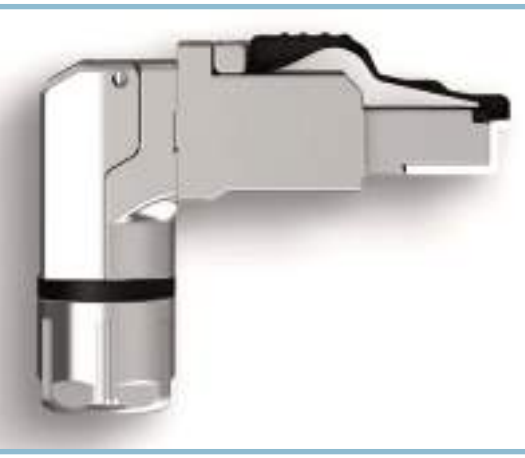
Field-assembly without any tools

90° | Cat.6A | 10 GBE | 500 MHz | fully shielded | PoE+

CJ 8 V6IM
Full-metal RJ45 field-assembly plug featuring four-step cable relief.



CJ 8 V6IMP
Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm.



CJ 8 VA6IM
Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief.
Most suited in confined spaces like sitch or control cabinets.

RJ45 male connectors, crimp IPC termination

NEW

RJ45 male connectors, IPC termination cable entry in 4 different directions

NEW

description	part No.	part No.
- RJ45 male IPC connector, 8 data contacts - RJ45 male IPC connector, 8 data contacts for cable diameter up to 10 mm	**CJ 8 V6IM** **CJ 8 V6IMP**	
RJ45 male IPC connector, 8 data contacts		**CJ 8 VA6IM**

CJ 8 V6IM technical data:
Full-metal RJ45 field-assembly plug featuring four-step cable relief.
Most suited for data center, enterprise and residential cabling.
Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 mating cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
  core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,0 - 9,0 mm
- Reusable IPC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20; UL listed
- according to PROFINET Installation Guideline

CJ 8 V6IMP technical data:
Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm.
Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 mating cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
  core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,5 - 10,0 mm
- Reusable IPC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20
- Cable strain relief: AF13

CJ 8 VA6IM technical data:
Full-metal RJ45 field-assembly plug featuring four-step cable relief.
Cable entry from 4 directions (4x90°)
Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
  core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,5 - 10,0 mm
- Reusable IDC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20; UL listed
- Cable strain relief: AF13

Can be used in bulkhead enclosures only, with RJ45 adaptors in the rear RJ45 female entry (internal housings cabling)

- MIXO RJ45

- CJK 8FT adaptors

Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief.

enclosures: page:
size “21.21”

***)** angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

USB female - female connectors

NEW

description	part No.
- female insert with USB 2.0 female - female connector	**CUK 2FT**
- female insert with USB 3.0 female - female connector	**CUK 3FT**

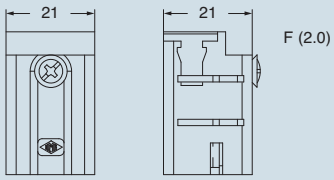
patch cable USB-A / USB-A, 2 m **

** 5 m on request

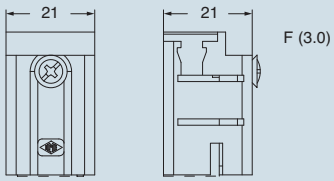
USB connector features:
- USB-A / USB-A Hi-Speed - 2.0 or 3.0 insert
- temperature range: from -25 °C to +80 °C

dimensions in mm

CUK 2FT



CUK 3FT

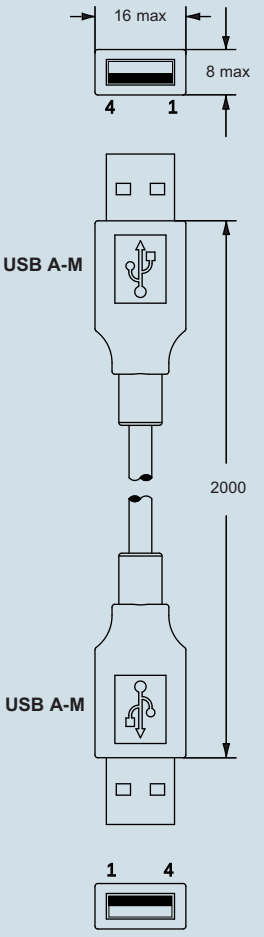


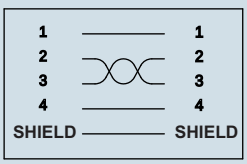
patch cable USB

part No.
CW 2 UAM

dimensions in mm

CW UAM





dimensions shown are not binding
and may be changed without notice

AT cover — for boxes for unit i Ø 22 mm

Technical Data

Mechanical Characteristics

Materials

Housing	PA UL94 V0 - black
Nut	PA UL94 V0 - black
Bulkhead protective cap	EPDM
Elastic band / Seal	EPDM
EC Directive 2002/95/EC (RoHS)	RoHS-compliant

Environmental Requirements

Protection against ingress

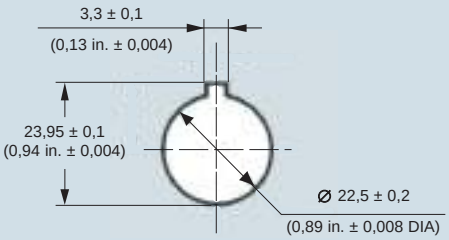
Particulate ingress	IP6X
Water / Immersion	IPX5
Degrees of protection provided by enclosures (IP code)	IEC 60529

Climatical and chemical

Ambient temperature	-40 °C bis / to + 70 °C

Mounting dimensions

wall thickness 1-5 mm (0,039-0,197 in.)



dimensions shown are not binding
and may be changed without notice

cover for RJ45/USB/LC connectors

NEW

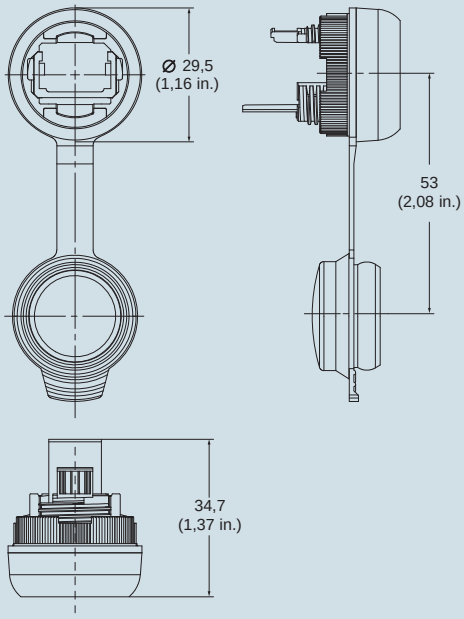
RJ45/USB/LC connectors for ATR C22

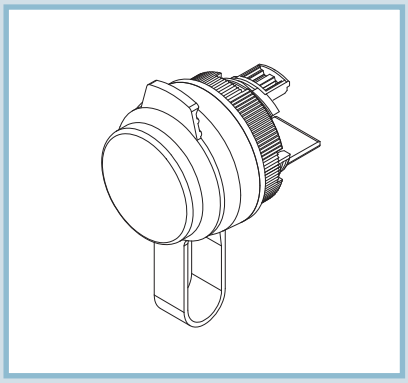
NEW

description	part No.	part No.
communication interface bulkhead IP65	**ATR C22**	
- RJ45 jack A Cat.6A * - RJ45 coupler Cat.6		**AT 8IFT** **AT 8FT**
- USB 2.0 coupler F-F Type A - USB 3.0 coupler F-F Type A		**AT U2F** **AT U3F**
- LC-Duplex adapter MM - LC-Duplex adapter SM		**AT LCMM** **AT LCSM**

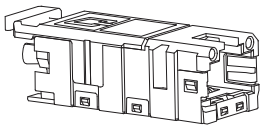
* jack B and jack P on request

dimensions in mm

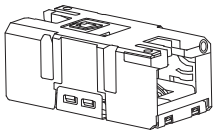




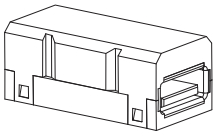
AT 8IFT (RJ45 IDC-FEMALE)



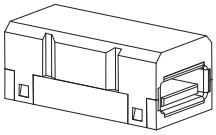
AT 8FT (RJ45 FEMALE-FEMALE)



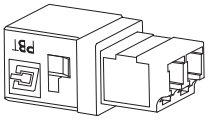
AT U2F (USB 2.0)



AT U3F (USB 3.0)



AT LCMM - AT LCSM (LC DUPLEX)



	hydraulic panel punch	punching die
	 NEW	 NEW
description	part No.	part No.
hydraulic punching tool (excluding punching die)	**CCW CT**	
punching unit - for M25 hole		**CCW M25 2)**
punching units for panel cut out of bulkhead mounting housings - for size 21.21 CK/CKA - for size 21.21 CKG IP68 - for size 49.16 - for size 66.16 - for size 44.27 - for size 57.27 - for size 77.27 - for size 104.27		 **CCW PD 03** **CCW PD 03G** **CCW PD 15** **CCW PD 25** **CCW PD 06** **CCW PD 10** **CCW PD 16** **CCW PD 24**

Rectangular punch mm	ILME Product Number	Draw stud **3)**	Suggested	Sheet thickness pilot hole	Manual screw-wrench use	Hydraulic use
21,3 x 21,3	**CCW PD 03**	13,0/11,0 mm	14,5 mm	St./Fe. 2 mm	x	x **(*)**
22,2 x 22,2	**CCW PD 03 G**	13,0/11,0 mm	14,5 mm	St./Fe. 2 mm	x	x **(*)**
24,0 x 57,0	**CCW PD 15**	19,0/14,0 mm	20,4 mm M20	St./Fe. 3 mm		x
24,0 x 73,0	**CCW PD 25**	19,0/14,0 mm	20,4 mm M20	St./Fe. 3 mm		x
36,0 x 52,0	**CCW PD 06**	25,0/21,0 mm	25,4 mm M25 **2)**	St./Fe. 3 mm		x
36,0 x 65,0	**CCW PD 10**	25,0/21,0 mm	25,4 mm M25 **2)**	St./Fe. 3 mm		x
36,0 x 86,0	**CCW PD 16**	25,0/21,0 mm	25,4 mm M25 **2)**	St./Fe. 3 mm		x
36,0 x 112,0	**CCW PD 24**	25,0/21,0 mm	25,4 mm M25 **2)**	St./Fe. 3 mm		x

accessory	ILME Product Number	Draw stud	Suggested pilot hole	Sheet thickness	Manual screw-wrench use	Hydraulic use
punch and die 25,4 M25	**CCW M25 (***)**	3/8" **3)**	10 mm	St./Fe. 2 mm		x **(**)**
Hydraulic hand pump	**CCW CT**					

(*) Adaptor (delivered with **CCW PD 03/03G**) and spacer (delivered with **CCW CT**) needed.
(**) Adaptor M25 and spacer (delivered with **CCW CT**) needed.

(***) CCW M25 can be used to drill M25 hole

③, ❻ and ⑦ delivered with **CCW CT**

LEGEND:

③ Draw stud 3/8"
❻ Spacer
⑦ Adaptor 3/8" - 3/4" UNF

Hydraulic operating instructions (CCW PD ..)

1. Screw the short thread of the 13,0/11,0 mm draw stud **(3)** into the ¾" UNF adaptor **(7)** (CCW PD 03/03 G only).
2. Screw the 13,0/11,0 mm draw stud **(3)** complete with the ¾" UNF adaptor **(7)** onto the hydraulic cylinder or screw the short thread of any of the larger draw studs **(3)** (without the adaptor) directly onto the hydraulic cylinder (CCW PD 03/03 G only).
3. Put the die **(4)** onto the draw stud **(3)** and move it towards the hydraulic cylinder. If necessary, place the spacer **(6)** between the hydraulic cylinder and die **(4)**.
4. Insert draw stud **(3)** with pre-monted die through the pilot hole in the sheet until the die abuts the sheet.
5. Place the punch **(2)** onto the draw stud and move it towards the sheet until it abuts the sheet.
6. Screw the counter nut **(1)** onto the thread of the draw stud **(3)**.
7. Adjust punch rectangularly (4 marks on die) and tighten counter nut manually.

Punching

8. Operate hydraulic punch CCW CT driver until punch is drawn through sheet.
9. Depressurise hydraulic punch driver after punching.
10. Remove the counter nut **(1)** and punch **(2)** from the draw stud **(3)**.
11. Remove the die **(4)** from the draw stud **(3)** and remove slugs from the die **(4)**.

Drilling mounting holes

When punching, the position of mounting holes are marked. Use suitable spiral drill to drill mounting holes.

Manual operating instructions (CCW PD 03 / 03G only)

Knockout punch mounting

1. Screw the ball-bearing nut **(5)** onto the long thread of the draw stud 13,0/11,0 mm **(3)**. Put the die **(4)** onto the draw stud **(3)** and move it towards the ball bearing nut **(5)**.
2. For further steps refer to hydraulic operating instructions steps 4 to 7.

Punching

3. Use screw wrench SW 24 to rotate ball-bearing nut **(5)** until punch is drawn through sheet.
4. For further steps refer to hydraulic operating instructions steps 10 to 11.

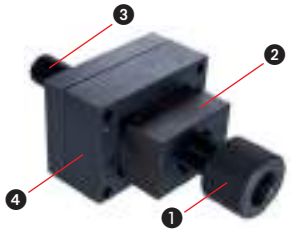
Prior to commisioning please read operating instructions

Components under voltage must not be machined. Prior to operating ensure tensionless state of the work environment (e.g. switch cabinet) or the material to be machined.

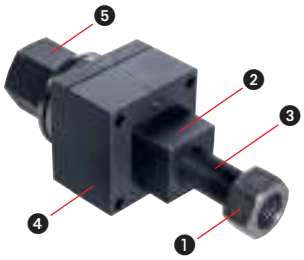
Punching tool components

CCW CT

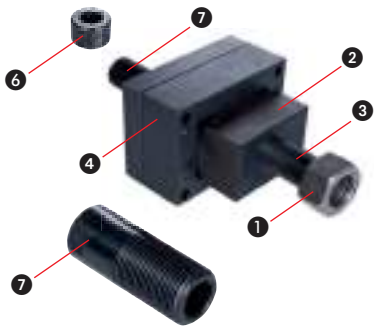
Hydraulic operating CCW PD .. (except CCW PD 03/03G)



Manual operating (CCW PD 03/03G only)



Hydraulic operating (CCW PD 03/03G only)



LEGEND:

1. Counter nut
2. Punch
3. Draw stud
4. Die
5. Ball-bearing nut
6. Spacer
7. Adaptor

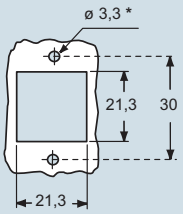
Accessories

Bulkhead housings Size	Punching die	Pilot hole	Mounting configuration	Draw stud Delivered with	Adaptor Delivered with	Spacer Delivered with
21.21	**CCW PD 03**	Ø 14,5 mm	***Hydraulic tool operation*** **CCW CT** with adaptor and with spacer ***Manual operation*** with screw ballbearing nut (no adaptor and spacer)	**CCW PD 03**	**CCW PD 03**	**CCW CT**
21.21 (**IP68**)	**CCW PD 03 G**			**CCW PD 03 G**	**CCW PD 03 G**	**CCW CT**
49.16	**CCW PD 15**	Ø 20,4 mm	***Hydraulic tool operation*** **CCW CT** without adaptor and without spacer	**CCW PD 15**	ND	ND
66.16	**CCW PD 25**			**CCW PD 25**	ND	ND
44.27	**CCW PD 06**	Ø 25,4 mm	***Hydraulic tool operation*** **CCW CT** without adaptor and without spacer	**CCW PD 06**	ND	ND
57.27	**CCW PD 10**			**CCW PD 10**	ND	ND
77.27	**CCW PD 16**			**CCW PD 16**	ND	ND
104.27	**CCW PD 24**			**CCW PD 24**	ND	ND
M25 hole or MKA IAF25 housings	**CCW M25** dimensions Ø 25 mm	Ø 10 mm	***Hydraulic tool operation*** **CCW CT** with adaptor and with spacer	**CCW CT**	**CCW CT**	**CCW CT**

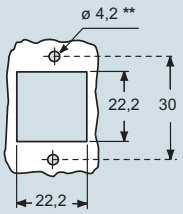
ND = Not Needed

Panel cut-out (in mm)

for size **21.21**

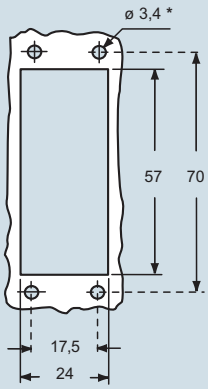


for size **21.21** (IP68)

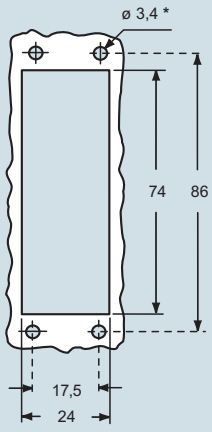


** the fixing holes are not indicated

for size **49.16**



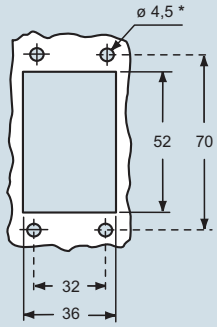
for size **66.16**



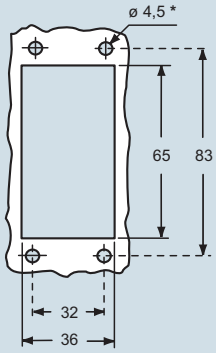
* fixing holes (to be pierced)

Panel cut-out (in mm)

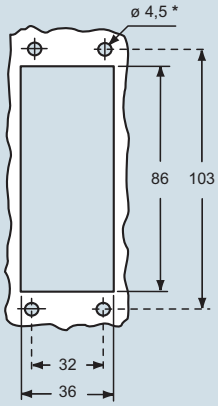
for size **44.27**



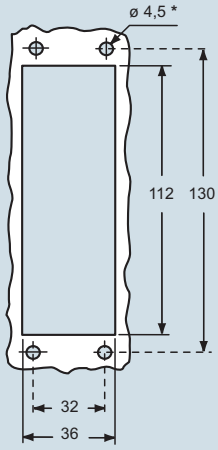
for size **57.27**



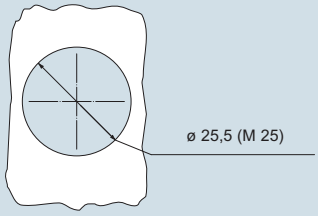
for size **77.27**, in mm



for size **104.27**



for size **21.21** (MKA IAF25)



* fixing holes (to be pierced)

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 complete connector** and tested to be compliant with the essential safety requirements of the EU Low Voltage Directive 2006/95/EC (2014/35/EU from April 20, 2016) and in particular the EN 61984 standard.
The design of this "whole" system guarantees that every allowed combination of inserts, enclosures and accessories cannot result as improper.

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.

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.

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.

On March 29, 2014, the new Low Voltage directive 2014/35/EU has been published on the Official Journal of the European Union, as a recast of the previous directive 2006/95/EC. It will enter into force on April 20, 2016.

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

I.L.M.E. SpA
via Marco Antonio Colonna, 9
20149 Milano - Italy
☎ +39 02345605.22 - fax +39 0233105813
www.ilme.com

ILME FRANCE S.A.R.L.
Rue Roland Garros - BP 125
Parc d'Activités de l'Aéroport
42163 Andrézieux-Bouthéon
☎ +33 (0) 4 77 36 23 36 - fax +33 (0) 4 77 36 97 97
e-mail: ilme-france@ilme.fr - www.ilme.fr

ILME GmbH
Max-Planck-Straße 12 - 51674 Wiehl
☎ +49 (0)2261 - 7955-0
fax +49 (0)2261 - 7955-5
e-mail: technik@ilme.de - www.ilme.de

ILME UK LIMITED
50 Evans Road, Venture Point
Speke, Merseyside L24 9PB
☎ +44 (0) 151 3369321 - fax +44 (0) 151 3369326
e-mail: sales@ilmeuk.co.uk - www.ilmeuk.co.uk

ILME NORDIC AB
Transportvägen 18
24642 Löddeköpinge (Sweden)
☎ +46 46 18 28 00 - fax +46 46 18 28 10
e-mail: info@ilme.se - www.ilme.se

ILME JAPAN CO. LTD.
Kobe International Business Center - 650-0047, 5-2, 5 - Chome,
Minatojima Minami-Machi - Chuo-Ku, Kobe Japan
☎ +81 7830 22005 - fax +81 7830 22060
www.ilme.jp

ILME CHINA CO. LTD.
Room 307, D area, No. 245,
Xin Jun Huan Road, MinHang Dis
201114 Shanghai (China)
☎ +86 - 21 - 62489961 - fax +86 - 21 - 62489961
www.ilmechina.com

w w w . i l m e . c o m

Ed.05/2016
XDG NEW 516
8 015747 228473
catalogues