

As an improvement of high-performance industrial connections, ILME developed a new evolution of its own spring-clamp connectors, to meet the market needs and make the installation simpler.

The new **CSH series "SQUICH"** (with spring and actuator button), the logical evolution of the CSE series, is characterized by the following advantages: reduced cabling time, no need for tools, quick identification of cabled and non cabled terminals, terminals already opened for conductor clamping, possibility to use wires with or without ferrule of up to 2.5 mm<sup>2</sup>, thanks to the "**SQUICH**" connection.

Each of the spring terminals has an actuator button (pin), suitably shaped and incorporated in the cavity. When this button is pressed with a finger, 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 distinguishable by the **orange colour which makes them stand out from the insulating body of the connector**.

The actuator buttons are arranged in their own cavities **aside the openings for the insertion of conductors in the terminals**, for easy access to the terminals themselves in case of re-opening.

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**.

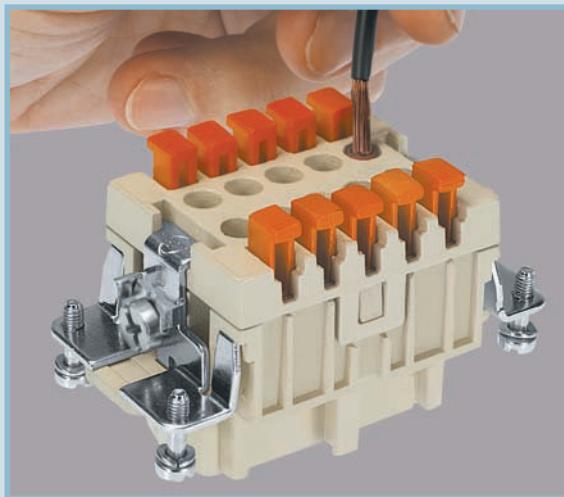
To reopen the terminals, simply introduce the tip of a common 0.5 x 3.5 mm flat blade screwdriver in the shaped pocket on the head of the actuator, and slightly rotate the screwdriver downwards: this will lift up the actuator in its "open terminal" position.

The new connector inserts are available in the **standard versions**, with operating range from -40° C to +125° C, in these sizes:

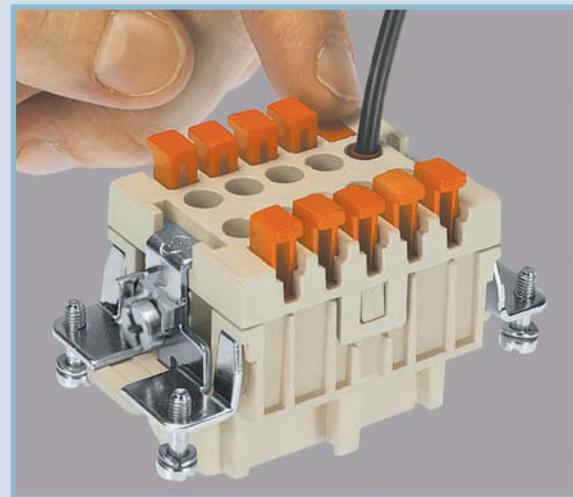
- "44.27" : **CSHM / F 06**
- "57.27" : **CSHM / F 10**
- "77.27" : **CSHM / F 16** and **CSHM / F 16 N** (special numbering 17-32)
- "104.27": **CSHM / F 24** and **CSHM / F 24 N** (special numbering 25-48)

CSH connector inserts can be mated with the corresponding inserts of series CNE, CSE, CCE, CTE, CTSE, CT and CSS.

## CSH series Connections without tools **SQUICH**



**1) insert the wire**



**2) press**

**Cabling time: 50% quicker than the screw-type connection and 20% quicker than the conventional spring-type connection**

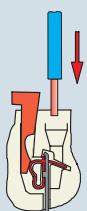
**Spring connection contacts  
with actuator button**

**description**
**inserts series: CSH**

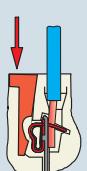
in this layout the wires are connected to the socket and plug insert contacts by means of a spring terminal with actuator button.

This type of connection offers the following advantages:

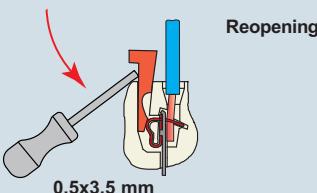
- no special wire preparation (**other than stripping**)
- no cabling tool is necessary
- it offers an excellent fastening solution and a great resistance to strong vibrations
- allows rigid and flexible wires with cross-sections between 0,14 and 2,5 mm<sup>2</sup> to be used (26 - 14 AWG)
- greatly reduces insert preparation and cabling times
- a screwdriver with a 0.5 x 3.5 mm blade is the only tool required to remove the wire from the contact.


**Step 1**

deep insertion of the conductor (with its insulation removed) in its own round seat


**Step 2**

press the actuator button to close the terminal

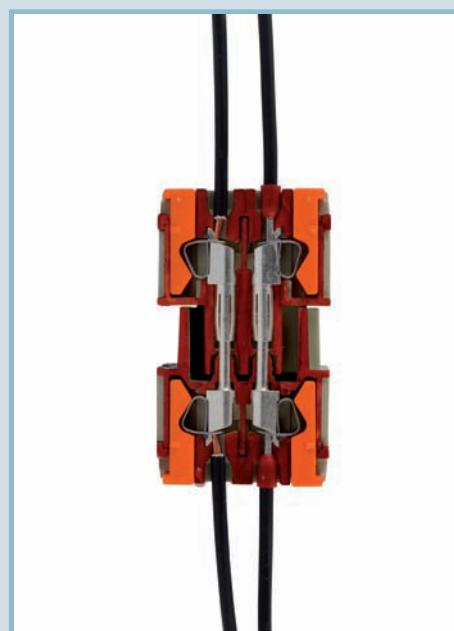

**Reopening**

0.5x3.5 mm

inserts series		CSH
No. of poles <sup>1)</sup>	main contact + ⊕	6, 10, 16, 24, (32), (48)
	auxiliary contacts	--
rated current <sup>2)</sup>		16A
EN 61984 pollution degree 3	rated voltage	500V
	rated holding impulse withstand voltage	6kV
	pollution degree	3
EN 61984 pollution degree 2	rated voltage	400/690V
	rated holding impulse withstand voltage	6kV
	pollution degree	2
UL/CSA certification	rated voltage (a.c./d.c.)	600V
certifications		UL, CSA, CCC, GOST
contact resistance		≤ 3 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 and clamp with actuator button
conductor cross-section	mm <sup>2</sup>	0.14 ÷ 2.5
	AWG	26 ÷ 14
mechanical endurance (mating cycles)		≥500

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

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



enclosures:	
size "44.27"	page:
C-TYPE IP65/IP66 .....	218 - 221
C7 IP67 stainless steel lever .....	254
V-TYPE IP65/IP66 stainless steel lever .....	260 - 262
T-TYPE IP65 insulating .....	282
JEI zinc-plated steel lever .....	288 - 289
BIG hoods .....	304 - 306
aggressive environments .....	329
EMC .....	348
central lever .....	360 - 361
IP68 .....	374 - 377
panel supports:	page:
COB .....	410 - 411

inserts,  
spring terminal connections

NEW

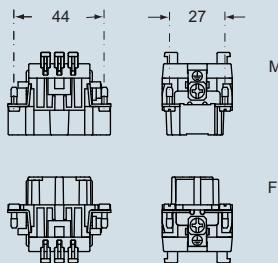
## part No.

CSHF 06  
CSHM 06

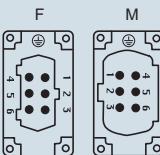
spring terminals with actuator button  
female inserts with female contacts  
male inserts with male contacts

- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin  
UL 94 VO
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

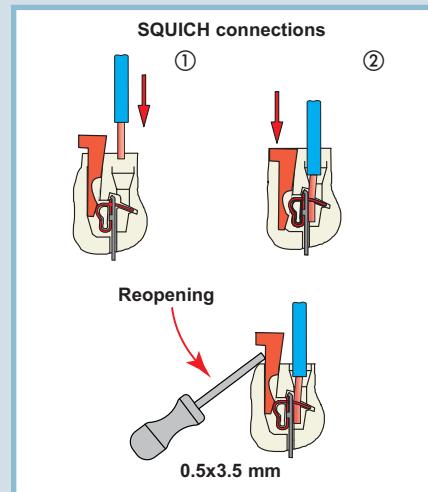
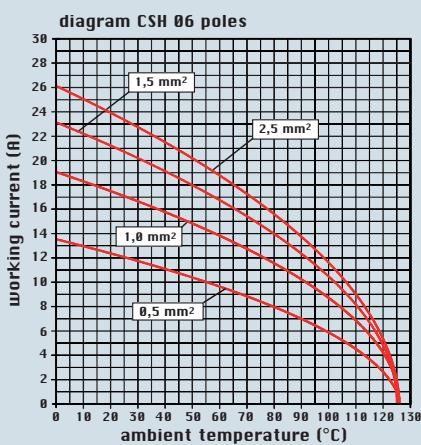
## dimensions in mm



## contacts side (front view)



- inserts for connectors with the following sections:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "57.27"	page:
<b>C-TYPE IP65/IP66</b>	222 - 227
<b>C7 IP67 stainless steel lever</b>	255
<b>V-TYPE IP65/IP66</b> stainless steel lever	264 - 267
<b>T-TYPE IP65 insulating</b>	283
<b>JEI zinc-plated steel lever</b>	290 - 291
<b>BIG hoods</b>	308 - 311
<b>aggressive environments</b>	330
<b>EMC</b>	349
<b>central lever</b>	362 - 363
<b>IP68</b>	378 - 381
panel supports:	page:
<b>COB</b>	410 - 411

inserts,  
spring terminal connections



**NEW**

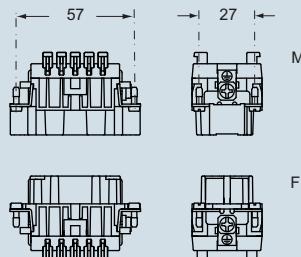
part No.

spring terminals with actuator button  
female inserts with female contacts  
male inserts with male contacts

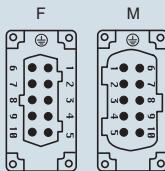
**CSHF 10**  
**CSHM 10**

- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin  
UL 94 VO
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

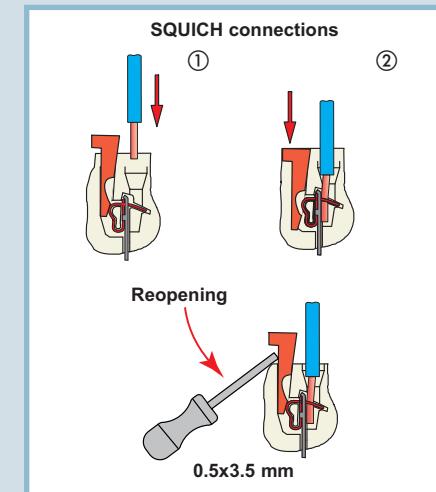
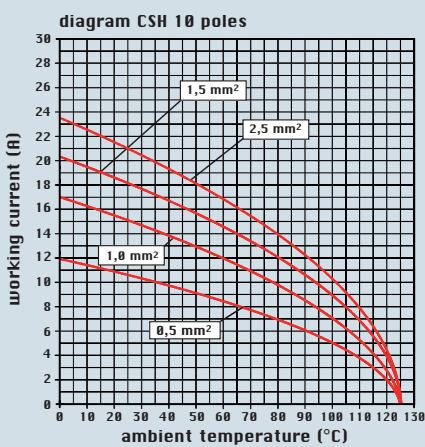
dimensions in mm



contacts side (front view)

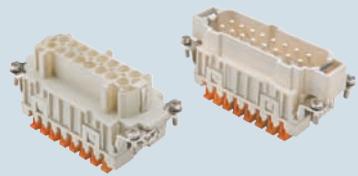


- inserts for connectors with the following sections:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "77.27"	page:
C-TYPE IP65/IP66 .....	228 - 234
C7 IP67 stainless steel lever .....	256
V-TYPE IP65/IP66 stainless steel lever .....	268 - 271
T-TYPE IP65 insulating .....	284
JEI zinc-plated steel lever .....	292 - 293
BIG hoods .....	312 - 315
aggressive environments .....	331
EMC .....	350
central lever .....	364 - 365
IP68 .....	382 - 385
panel supports:	page:
COB .....	410 - 411

inserts,  
spring terminal connections

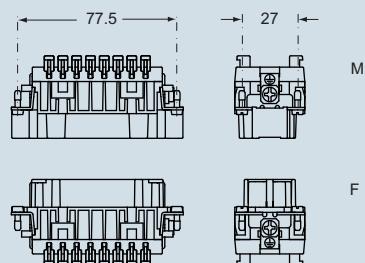
NEW

## part No.

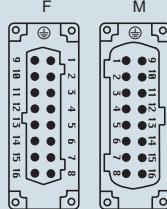
CSHF 16  
CSHM 16

- characteristics according to EN 61984:
  - 16A 500V 6kV 3**
  - 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 VO
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

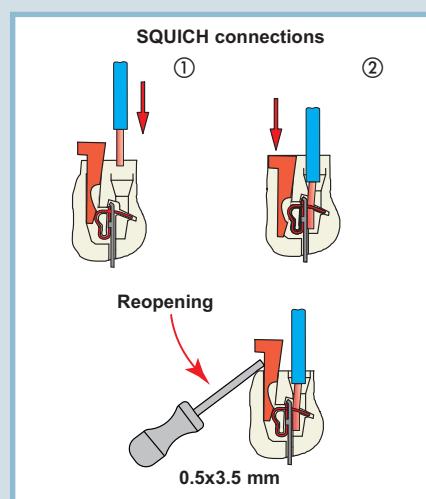
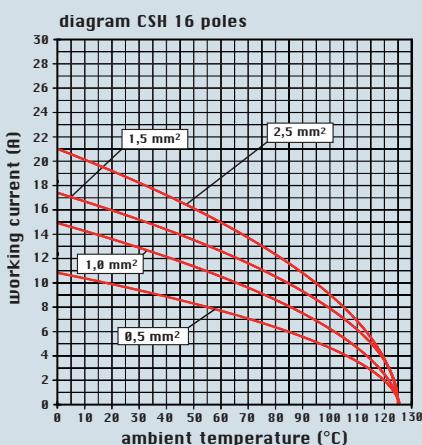
## dimensions in mm



## contacts side (front view)



- inserts for connectors with the following sections: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



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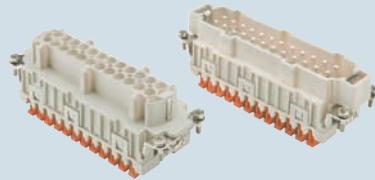
enclosures:  
size "104.27" page:

C-TYPE IP65/IP66 ..... 236 - 243  
 C7 IP67 stainless steel lever ..... 257  
 V-TYPE IP65/IP66  
 stainless steel lever ..... 272 - 275  
 T-TYPE IP65 insulating ..... 285  
 JEI zinc-plated steel lever ..... 294 - 295  
 BIG hoods ..... 316 - 319  
 aggressive environments ..... 332  
 EMC ..... 351  
 central lever ..... 366 - 368  
 IP68 ..... 386 - 389

panel supports:  
COB ..... 410 - 411

description

**inserts,  
spring terminal connections**



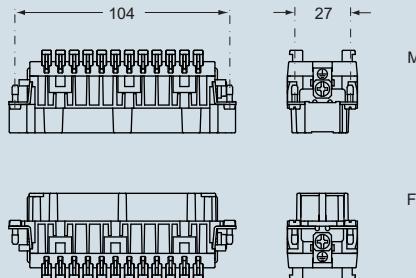
**NEW**

part No.

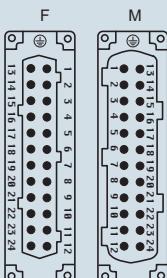
**CSHF 24**  
**CSHM 24**

- characteristics according to EN 61984:
  - 16A 500V 6kV 3**
  - 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 VO
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

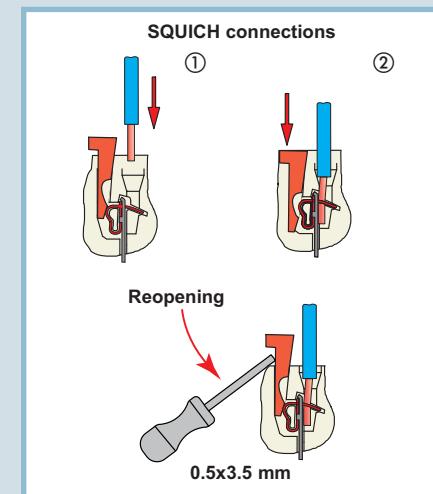
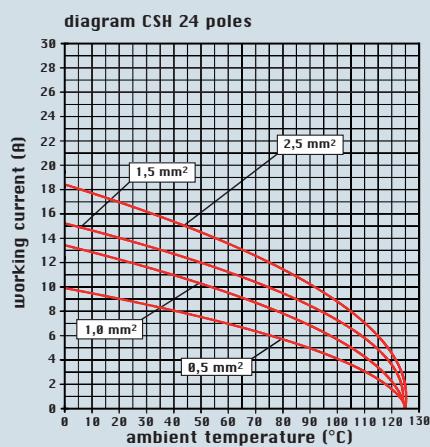
dimensions in mm



contacts side (front view)



- inserts for connectors with the following sections: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



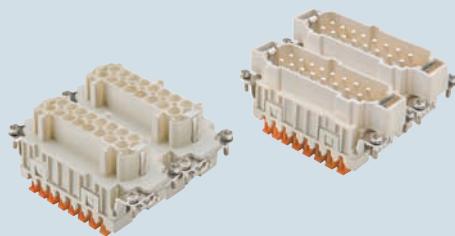
dimensions shown are not binding  
and may be changed without notice

enclosures:  
size "77.62"

page:

C-TYPE IP65/IP66 ..... 244 - 247  
aggressive environments ..... 333

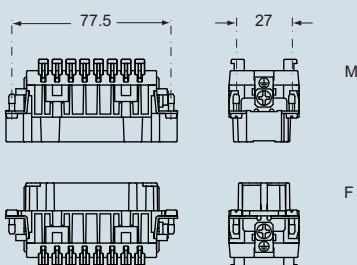
**inserts,  
spring terminal connections**

**NEW**

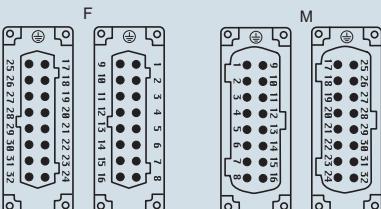
description	part No.	part No.
spring terminals with actuator button female inserts with female contacts, No. (1-16) and (17-32) male inserts with male contacts, No. (1-16) and (17-32)	CSHF 16 CSHM 16	CSHF 16 N CSHM 16 N

- characteristics according to EN 61984:
  - 16A 500V 6kV 3**
  - 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

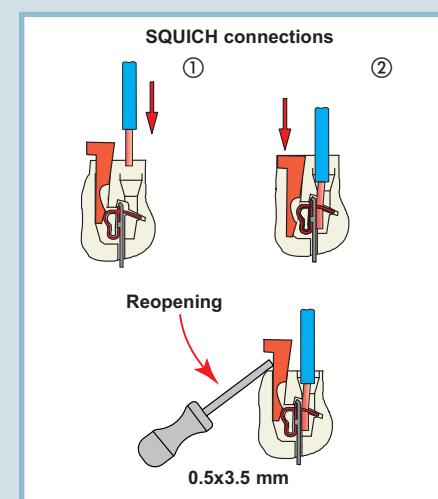
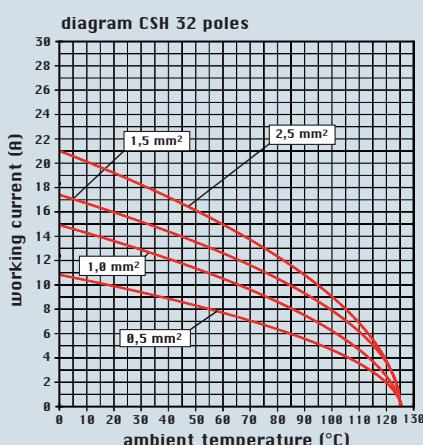
dimensions in mm



contacts side (front view)



- inserts for connectors with the following sections: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm

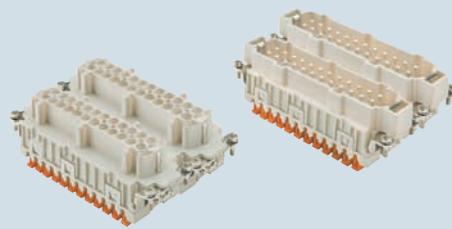


dimensions shown are not binding  
and may be changed without notice

enclosures:  
size "104.62"

page:

C-TYPE IP65/IP66 ..... 248  
aggressive environments ..... 334

inserts,  
spring terminal connections

## description

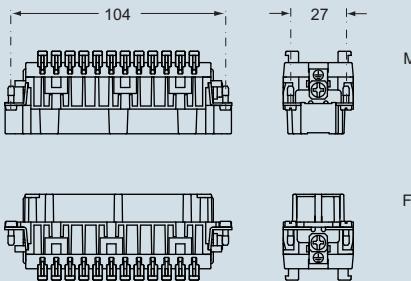
## part No.

## part No.

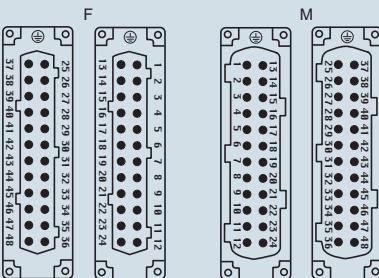
spring terminals with actuator button  
female inserts with female contacts, No. (1-24) and (25-48)  
male inserts with male contacts, No. (1-24) and (25-48)

- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin  
UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

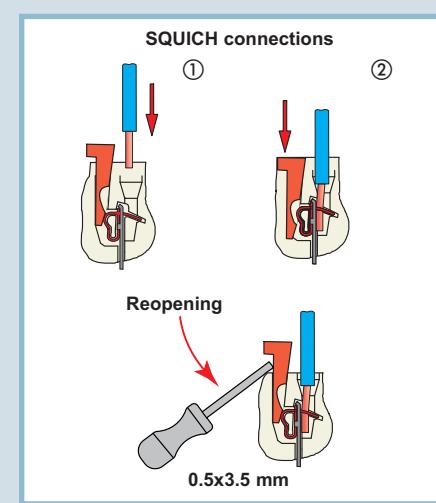
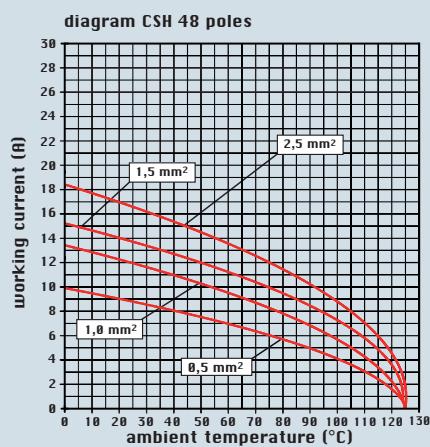
## dimensions in mm



## contacts side (front view)



- inserts for connectors with the following sections:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:

size "44.27"

page:

**C-TYPE IP65/IP66** ..... 218 - 221

**C7 IP67 stainless steel lever** ..... 254

**V-TYPE IP65/IP66**

stainless steel lever ..... 260 - 262

**T-TYPE IP65 insulating** ..... 282

**JEI zinc-plated steel lever** ..... 288 - 289

**BIG hoods** ..... 304 - 306

**aggressive environments** ..... 329

**EMC** ..... 348

**central lever** ..... 360 - 361

**IP68** ..... 374 - 377

panel supports:

page:

**COB** ..... 410 - 411

inserts, crimp connections



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



description

part No.

part No.

part No.

without contacts (to be ordered separately)

female inserts for female contacts

male inserts for male contacts

**CCEF 06**  
**CCEM 06**

16A female contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male crimp contacts for advanced opening

0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

- characteristics according to EN 61984:

**16A 500V 6kV 3**

**16A 400/690V 6kV 2**

- UL, CSA, GL, GOST certified

- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$

- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$

- are made of self-extinguishing thermoplastic resin

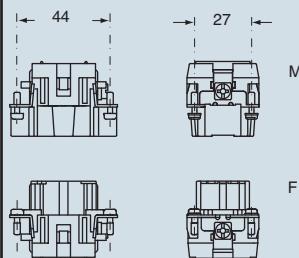
UL 94 V0

- mechanical life:  $\geq 500$  cycles

- contact resistance:  $\leq 1 \text{ m}\Omega$

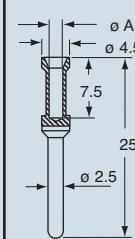
- for maximum current load, see the following load curves inserts, for more information see page 495

dimensions in mm

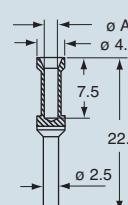


dimensions in mm

**CCF and CCM**



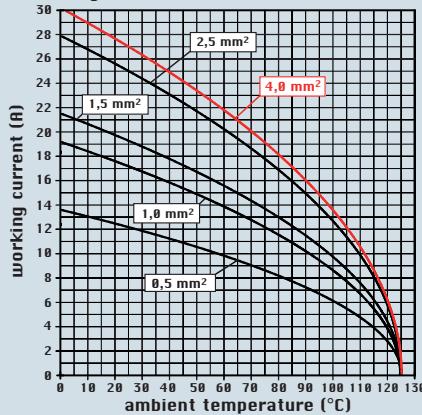
**CC...AN**



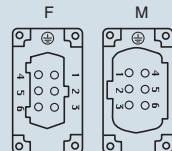
**CCF, CCM and CC..AN contacts**

conductor section	conductor slot	conductors
mm <sup>2</sup>	ø A (mm)	stripping length (mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

diagram CCE 06 poles



contacts side (front view)



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

dimensions shown are not binding and may be changed without notice

enclosures:

size "44.27"

page:

C-TYPE IP65/IP66 ..... 218 - 221

C7 IP67 stainless steel lever ..... 254

V-TYPE IP65/IP66

stainless steel lever ..... 260 - 262

T-TYPE IP65 insulating ..... 282

JEI zinc-plated steel lever ..... 288 - 289

BIG hoods ..... 304 - 306

aggressive environments ..... 329

EMC ..... 348

central lever ..... 360 - 361

IP68 ..... 374 - 377

panel supports:

page:

COB ..... 410 - 411

description

indirect, with plate 1)

female inserts with female contacts

male inserts with male contacts

direct, without plate 2)

female inserts with female contacts

male inserts with male contacts

spring terminal

female inserts with female contacts

male inserts with male contacts

- characteristics according to EN 61984:

16A 500V 6kV 3

16A 400/690V 6kV 2

- UL, CSA, CCC, GL, GOST certified

- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$ - ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$ 

- are made of self-extinguishing thermoplastic resin

UL 94 V0

- mechanical life:  $\geq 500$  cycles- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)

- for maximum current load, see the following load curves

inserts, for more information see page 495 and 496

diagram CNE 06 poles

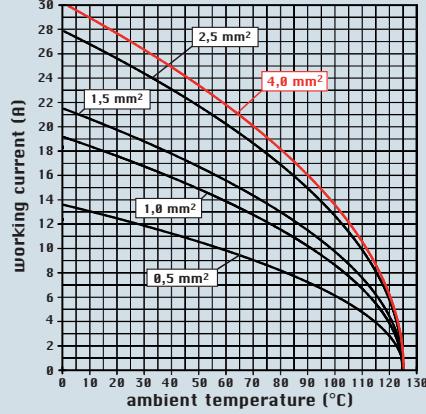
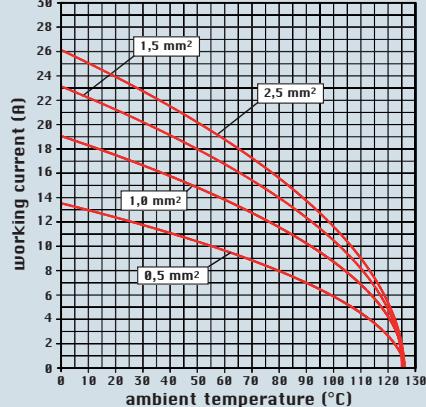
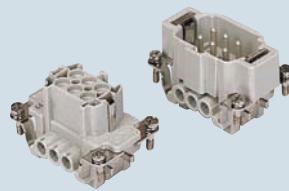


diagram CSE 06 poles

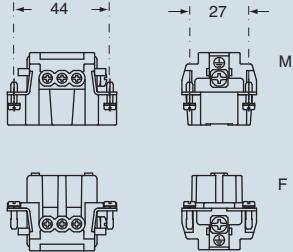
inserts,  
screw terminal connectionssilver  
plated  
contactsinserts,  
spring terminal connectionssilver  
plated  
contacts

part No.

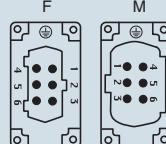
part No.

CNEF 06 T  
CNEM 06 TCSEF 06  
CSEM 06

dimensions in mm



contacts side (front view)



- inserts with plate for section conductors:  $0.5 \dots 4 \text{ mm}^2$  - AWG 20 - 12
- inserts without plate for section conductors:  $0.25 \dots 2.5 \text{ mm}^2$  - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0.5 Nm (4.4 lb.in), for more information see page 21 and 22

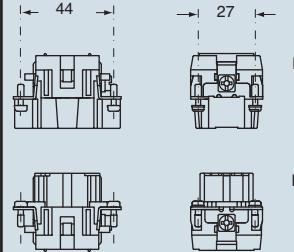
1) for non-prepared conductors



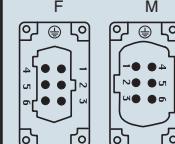
2) for bush terminal conductors



dimensions in mm

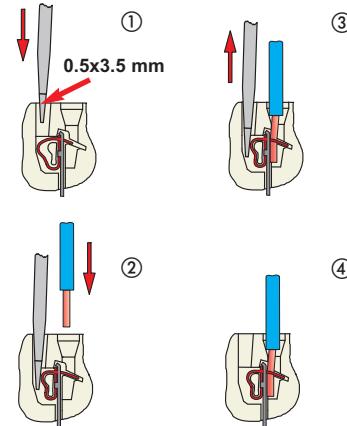


contacts side (front view)



- inserts for section conductors:  $0.14 \dots 2.5 \text{ mm}^2$  - AWG 26 - 14
- conductors stripping lenght: 9...11 mm

## connection with spring terminal



dimensions shown are not binding and may be changed without notice

enclosures:

size "57.27"

page:

C-TYPE IP65/IP66 .....	222 - 227
C7 IP67 stainless steel lever .....	255
V-TYPE IP65/IP66 stainless steel lever .....	264 - 267
T-TYPE IP65 insulating .....	283
JEI zinc-plated steel lever .....	290 - 291
BIG hoods .....	308 - 311
aggressive environments .....	330
EMC .....	349
central lever .....	362 - 363
IP68 .....	378 - 381

panel supports:

page:

COB .....	410 - 411
-----------	-----------

description

part No.

part No.

part No.

without contacts (to be ordered separately)

female inserts for female contacts

male inserts for male contacts

CCEF 10  
CCEM 10

16A female contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male crimp contacts for advanced opening

0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

- characteristics according to EN 61984:

16A 500V 6kV 3

16A 400/690V 6kV 2

- UL, CSA, GL, GOST certified

- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$ - ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$ 

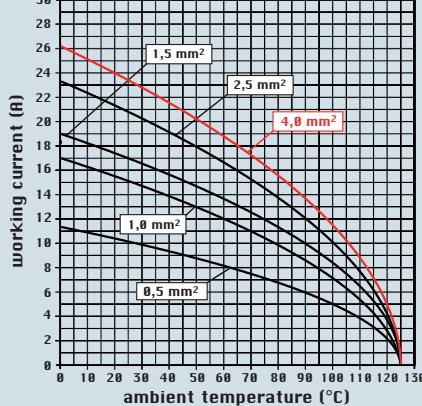
- are made of self-extinguishing thermoplastic resin

UL 94 V0

- mechanical life:  $\geq 500$  cycles- contact resistance:  $\leq 1 \text{ m}\Omega$ 

- for maximum current load, see the following load curves inserts, for more information see page 495

diagram CCE 10 poles



dimensions shown are not binding and may be changed without notice

## inserts, crimp connections



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



CCFA 0.3

CCFA 0.5

CCFA 0.7

CCFA 1.0

CCFA 1.5

CCFA 2.5

CCFA 3.0

CCFA 4.0

silver plated

CCFD 0.3

CCFD 0.5

CCFD 0.7

CCFD 1.0

CCFD 1.5

CCFD 2.5

CCFD 3.0

CCFD 4.0

gold plated

CCMA 0.3

CCMA 0.5

CCMA 0.7

CCMA 1.0

CCMA 1.5

CCMA 2.5

CCMA 3.0

CCMA 4.0

CCMD 0.3

CCMD 0.5

CCMD 0.7

CCMD 1.0

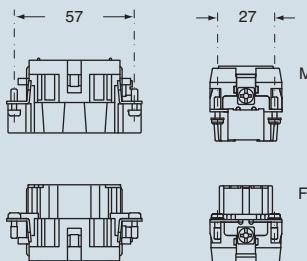
CCMD 1.5

CCMD 2.5

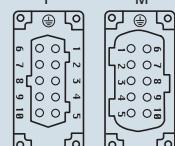
CCMD 3.0

CCMD 4.0

dimensions in mm

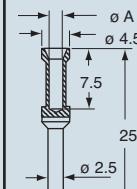


contacts side (front view)

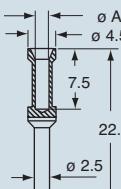


dimensions in mm

CCF and CCM



CC...AN

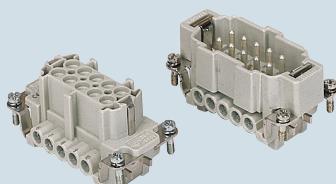
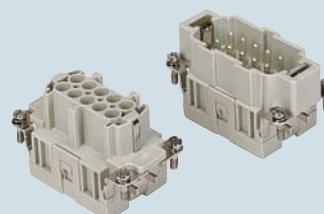


CCF, CCM and CC...AN contacts

conductor section	conductor slot	conductors
mm <sup>2</sup>	$\phi A$ (mm)	stripping length (mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

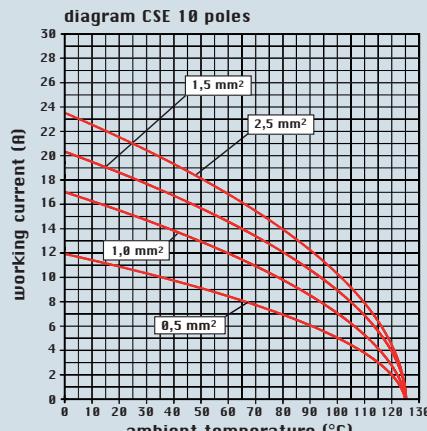
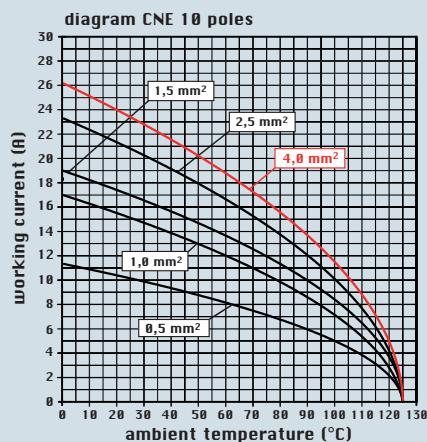
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC...AN series) on pages 466, 470, 480, 482, 484, 486

enclosures:	
size "57.27"	page:
C-TYPE IP65/IP66 .....	222 - 227
C7 IP67 stainless steel lever .....	255
V-TYPE IP65/IP66 stainless steel lever .....	264 - 267
T-TYPE IP65 insulating .....	283
JEI zinc-plated steel lever .....	290 - 291
BIG hoods .....	308 - 311
aggressive environments .....	330
EMC .....	349
central lever .....	362 - 363
IP68 .....	378 - 381
panel supports:	page:
COB .....	410 - 411

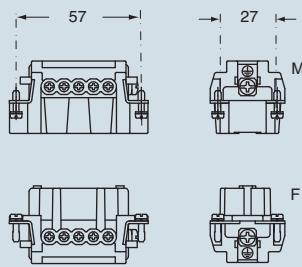
inserts,  
screw terminal connectionssilver  
plated  
contactsinserts,  
spring terminal connectionssilver  
plated  
contacts

description	part No.	part No.
indirect, with plate 1) female inserts with female contacts male inserts with male contacts	CNEF 10 T CNEM 10 T	
direct, without plate 2) female inserts with female contacts male inserts with male contacts	CNEF 10 TX CNEM 10 TX	
spring terminal female inserts with female contacts male inserts with male contacts		CSEF 10 CSEM 10

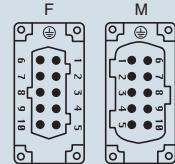
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)
- for maximum current load, see the following load curves
- inserts, for more information see page 495 and 496



## dimensions in mm



## contacts side (front view)



- inserts with plate for section conductors: 0.5 - 4 mm<sup>2</sup> - AWG 20 - 12
- inserts without plate for section conductors: 0.25 - 2.5 mm<sup>2</sup> - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0.5 Nm (4.4 lb.in), for more information see page 21 and 22

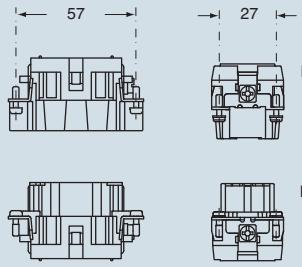
## 1) for non-prepared conductors



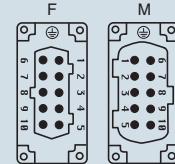
## 2) for bush terminal conductors



## dimensions in mm

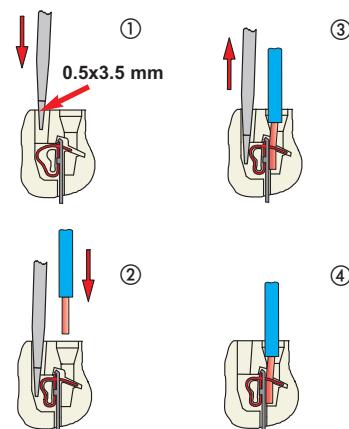


## contacts side (front view)



- inserts for section conductors: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping lenght: 9...11 mm

## connection with spring terminal



dimensions shown are not binding and may be changed without notice

enclosures:

size "77.27"

page:

C-TYPE IP65/IP66 .....	228 - 234
C7 IP67 stainless steel lever .....	256
V-TYPE IP65/IP66 stainless steel lever .....	268 - 271
T-TYPE IP65 insulating .....	284
JEI zinc-plated steel lever .....	292 - 293
BIG hoods .....	312 - 315
aggressive environments .....	331
EMC .....	350
central lever .....	364 - 365
IP68 .....	382 - 385

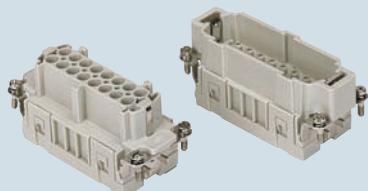
panel supports:

page:

COB .....	410 - 411
-----------	-----------

description

## inserts, crimp connections



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



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

part No.

part No.

part No.

CCEF 16  
CCEM 16

16A female contacts		
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male contacts

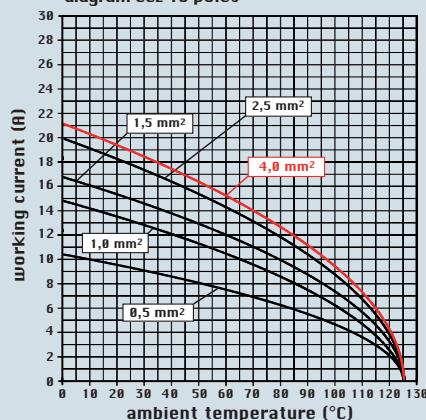
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male crimp contacts for advanced opening

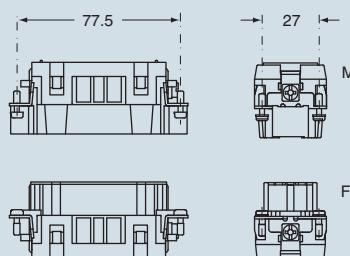
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

- characteristics according to EN 61984:
- 16A 500V 6kV 3
- 16A 400/690V 6kV 2
- UL, CSA, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 495

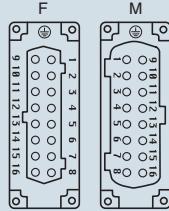
diagram CCE 16 poles



dimensions in mm

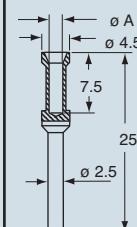


contacts side (front view)

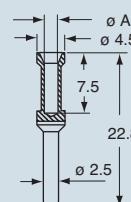


dimensions in mm

CCF and CCM



CC...AN



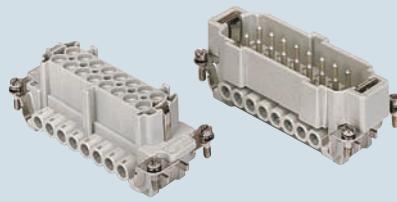
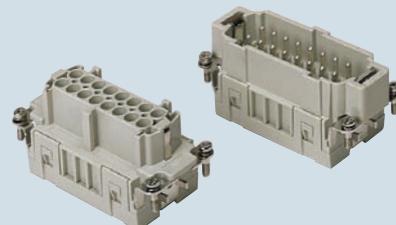
CCF, CCM and CC...AN contacts

conductor section	conductor slot	conductors stripping length (mm)
mm <sup>2</sup>	$\varnothing A$ (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

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

dimensions shown are not binding and may be changed without notice

enclosures:	
size "77.27"	page:
C-TYPE IP65/IP66 .....	228 - 234
C7 IP67 stainless steel lever .....	256
V-TYPE IP65/IP66 stainless steel lever .....	268 - 271
T-TYPE IP65 insulating .....	284
JEI zinc-plated steel lever .....	292 - 293
BIG hoods .....	312 - 315
aggressive environments .....	331
EMC .....	350
central lever .....	364 - 365
IP68 .....	382 - 385
panel supports:	page:
COB .....	410 - 411

inserts,  
screw terminal connectionssilver  
plated  
contactsinserts,  
spring terminal connectionssilver  
plated  
contacts

## description

## part No.

## part No.

indirect, with plate 1)  
female inserts with female contacts  
male inserts with male contacts

CNEF 16 T  
CNEM 16 T

direct, without plate 2)  
female inserts with female contacts  
male inserts with male contacts

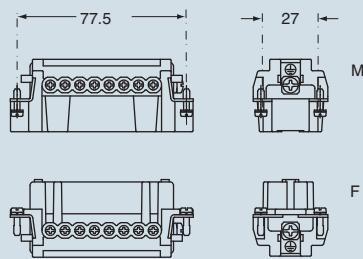
CNEF 16 TX  
CNEM 16 TX

spring terminal  
female inserts with female contacts  
male inserts with male contacts

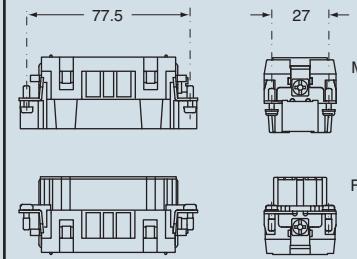
CSEF 16  
CSEM 16

- characteristics according to EN 61984:
- 16A 500V 6kV 3
- 16A 400/690V 6kV 2
- UL, CSA, CCC, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)
- for maximum current load, see the following load curves
- inserts, for more information see page 495 and 496

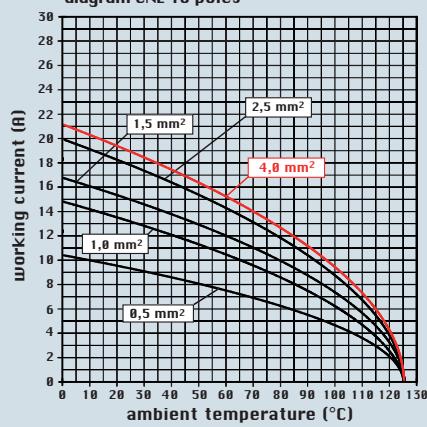
## dimensions in mm



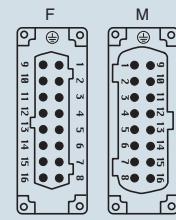
## dimensions in mm



## diagram CNE 16 poles



## contacts side (front view)



- inserts with plate for section conductors:  $0.5 \text{ - } 4 \text{ mm}^2$  - AWG 20 - 12
- inserts without plate for section conductors:  $0.25 \text{ - } 2.5 \text{ mm}^2$  - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0.5 Nm (4.4 lb.in), for more information see page 21 and 22

## 1) for non-prepared conductors



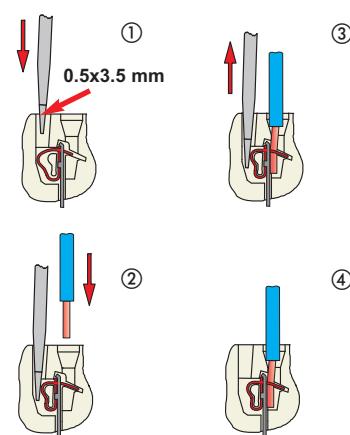
## 2) for bush terminal conductors



## diagram CSE 16 poles



## connection with spring terminal



dimensions shown are not binding and may be changed without notice

enclosures:

size "104.27"

page:

C-TYPE IP65/IP66 .....	236 - 243
C7 IP67 stainless steel lever .....	257
V-TYPE IP65/IP66 stainless steel lever .....	272 - 275
T-TYPE IP65 insulating .....	285
JEI zinc-plated steel lever .....	294 - 295
BIG hoods .....	316 - 319
aggressive environments .....	332
EMC .....	351
central lever .....	366 - 368
IP68 .....	386 - 389

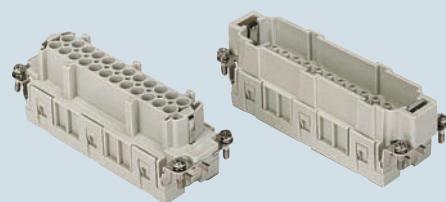
panel supports:

page:

COB .....	410 - 411
-----------	-----------

description

## inserts, crimp connections



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



without contacts (to be ordered separately)

female inserts for female contacts  
male inserts for male contacts

part No.

part No.

part No.

16A female contacts		
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male contacts

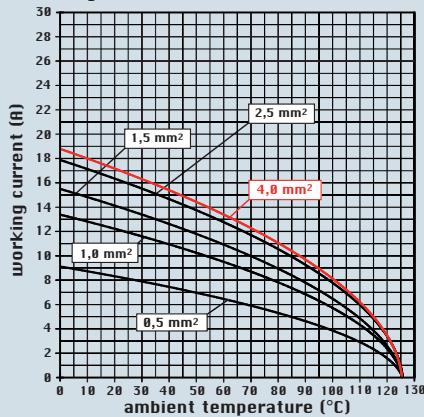
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

16A male crimp contacts for advanced opening

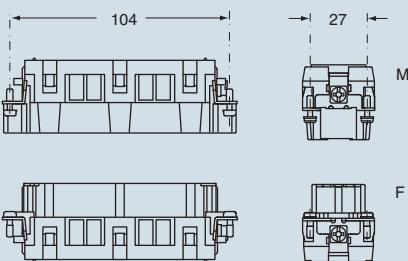
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

- characteristics according to EN 61984:
- 16A 500V 6kV 3
- 16A 400/690V 6kV 2
- UL, CSA, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 495

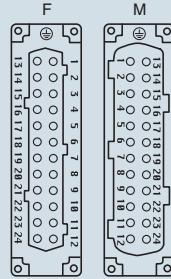
diagram CCE 24 poles



dimensions in mm

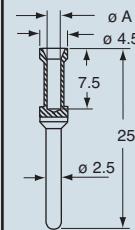


contacts side (front view)

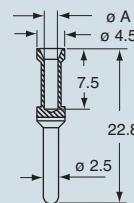


dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC...AN contacts

conductor section	conductor slot	conductors stripping length (mm)
mm <sup>2</sup>	ø A (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

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

dimensions shown are not binding and may be changed without notice

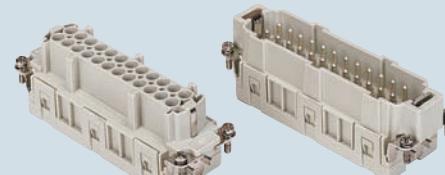
enclosures:	
size "104.27"	page:
<b>C-TYPE IP65/IP66</b>	236 - 243
<b>C7 IP67 stainless steel lever</b>	257
<b>V-TYPE IP65/IP66</b> stainless steel lever	272 - 275
<b>T-TYPE IP65 insulating</b>	285
<b>JEI zinc-plated steel lever</b>	294 - 295
<b>BIG hoods</b>	316 - 319
<b>aggressive environments</b>	332
<b>EMC</b>	351
<b>central lever</b>	366 - 368
<b>IP68</b>	386 - 389
panel supports:	page:
<b>COB</b>	410 - 411

### inserts, screw terminal connections



silver  
plated  
contacts

### inserts, spring terminal connections



silver  
plated  
contacts

#### description

indirect, with plate 1)  
female inserts with female contacts  
male inserts with male contacts

direct, without plate 2)  
female inserts with female contacts  
male inserts with male contacts

spring terminal  
female inserts with female contacts  
male inserts with male contacts

#### part No.

**CNEF 24 T**  
**CNEM 24 T**

#### part No.

**CSEF 24**  
**CSEM 24**

- characteristics according to EN 61984:
- 16A 500V 6kV 3**
- 16A 400/690V 6kV 2**
- UL, CSA, CCC, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)
- for maximum current load, see the following load curves
- inserts, for more information see page 495 and 496

diagram CNE 24 poles

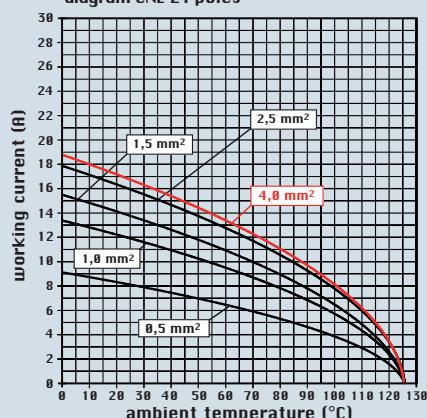
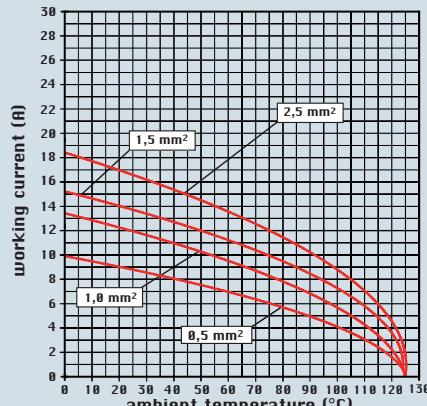
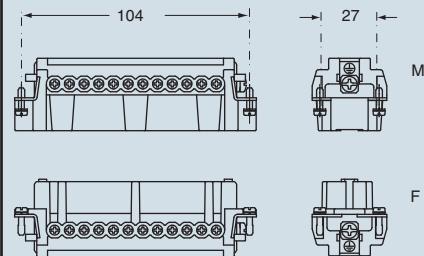


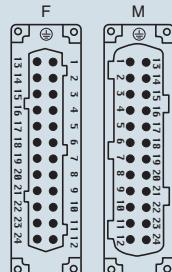
diagram CSE 24 poles



#### dimensions in mm

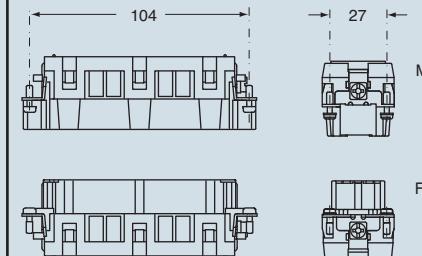


#### contacts side (front view)

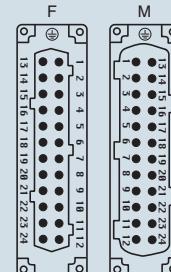


- inserts with plate for section conductors: 0.5 - 4 mm² - AWG 20 - 12
- inserts without plate for section conductors: 0.25 - 2.5 mm² - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0.5 Nm (4.4 lb.in), for more information see page 21 and 22

#### dimensions in mm



#### contacts side (front view)



- inserts for section conductors: 0.14 - 2.5 mm² - AWG 26 - 14
- conductors stripping length: 9...11 mm

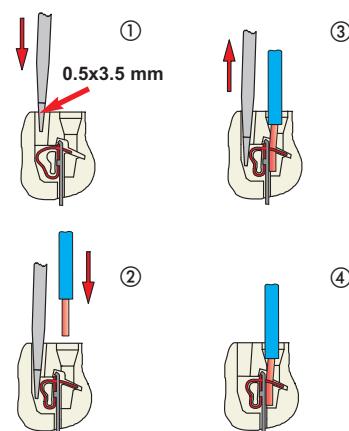
#### 1) for non-prepared conductors



#### 2) for bush terminal conductors



#### connection with spring terminal



dimensions shown are not binding and may be changed without notice

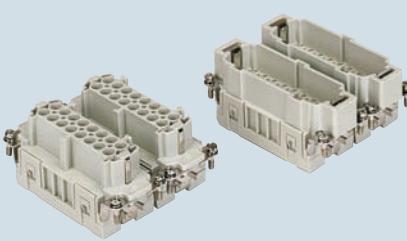
enclosures:

size "77.62"

page:

C-TYPE IP65/IP66 ..... 244 - 247  
 aggressive environments ..... 333

## inserts, crimp connections



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



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

## description

part No.

part No.

part No.

part No.

without contacts (to be ordered separately)  
 female inserts, No. (1-16) and (17-32)  
 male inserts, No. (1-16) and (17-32)

CCEF 16  
CCEM 16CCEF 16 N  
CCEM 16 N

16A female contacts		
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

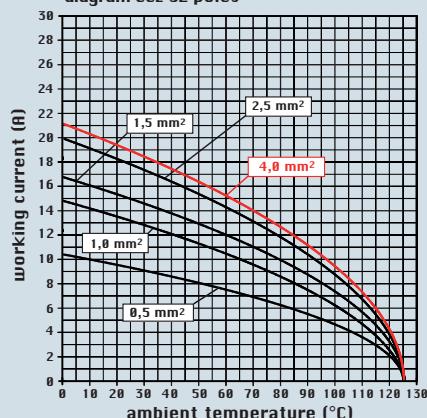
16A male contacts		
0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

## 16A male crimp contacts for advanced opening

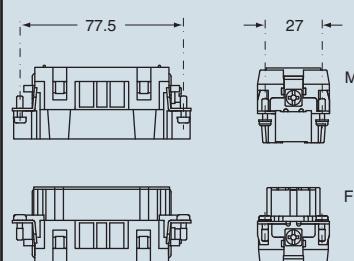
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

- characteristics according to EN 61984:
- 16A 500V 6kV 3**
- 16A 400/690V 6kV 2**
- UL, CSA, GL, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 1 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 495

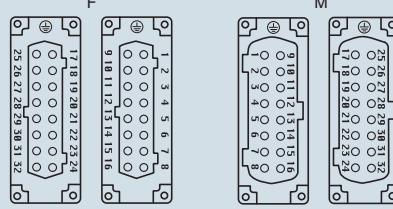
## diagram CCE 32 poles



## dimensions in mm

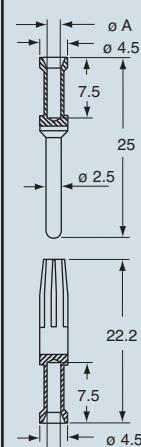


## contacts side (front view)

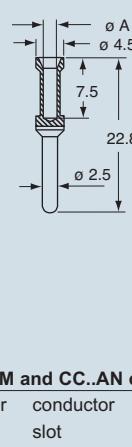


## dimensions in mm

## CCF and CCM



## CC..AN



## CCF, CCM and CC..AN contacts

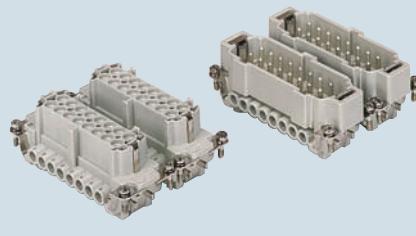
conductor section	conductor slot	conductors stripping length
mm <sup>2</sup>	ø A (mm)	(mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

dimensions shown are not binding and may be changed without notice

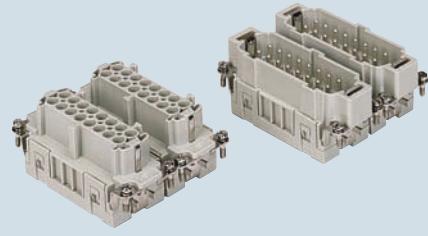
enclosures:  
size "77.62"

page:

C-TYPE IP65/IP66 ..... 244 - 247  
aggressive environments ..... 333

inserts,  
screw terminal connections

silver plated contacts

inserts,  
spring terminal connections

silver plated contacts

description	part No.	part No.	part No.	part No.
indirect, with plate 1) female inserts, No. (1-16) and (17-32) male inserts, No. (1-16) and (17-32)	CNEF 16 T CNEM 16 T	CNEF 16 TN CNEM 16 TN		
direct, without plate 2) female inserts, No. (1-16) and (17-32) male inserts, No. (1-16) and (17-32)	CNEF 16 TX CNEM 16 TX	CNEF 16 TXN CNEM 16 TXN		
spring terminal female inserts, No. (1-16) and (17-32) male inserts, No. (1-16) and (17-32)			CSEF 16 CSEM 16	CSEF 16 N CSEM 16 N

- characteristics according to EN 61984:

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

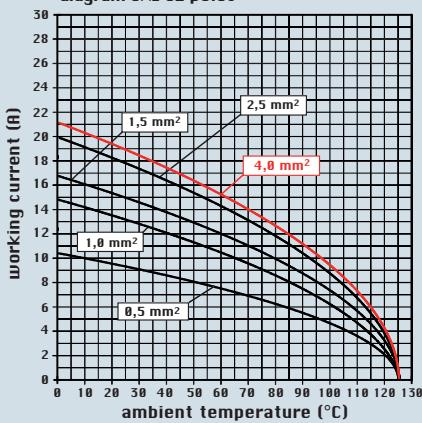
- UL, CSA, CCC, GL, GOST certified

- rated voltage according to UL/CSA: 600V

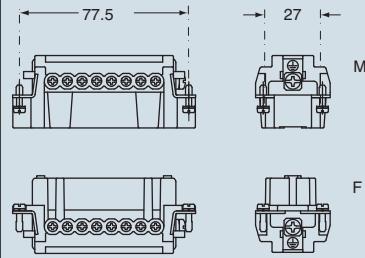
- insulation resistance:  $\geq 10 \text{ G}\Omega$ - ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$ - are made of self-extinguishing thermoplastic resin  
UL 94 V0- mechanical life:  $\geq 500$  cycles- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)

- for maximum current load, see the following load curves inserts, for more information see page 495 and 496

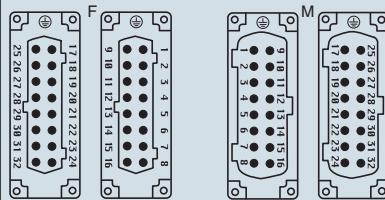
## diagram CNE 32 poles



## dimensions in mm

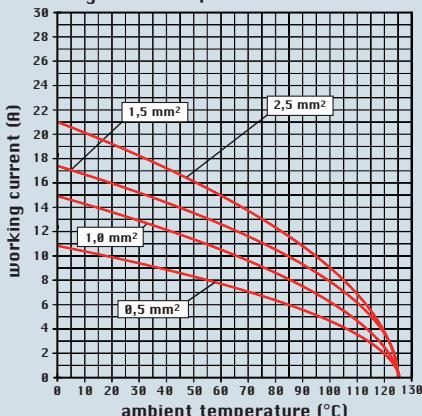


## contacts side (front view)



- inserts with plate for section conductors:  $0.5 \dots 4 \text{ mm}^2$  - AWG 20 - 12
- inserts without plate for section conductors:  $0.25 \dots 2.5 \text{ mm}^2$  - AWG 24 - 14
- conductors stripping length: 7 mm
- terminal screw torque: 0.5 Nm (4.4 lb.in), for more information see page 21 and 22

## diagram CSE 32 poles



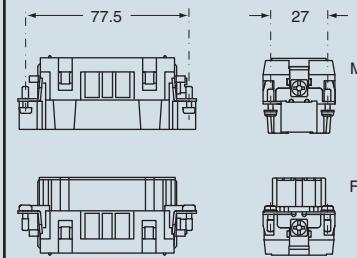
## 1) for non-prepared conductors



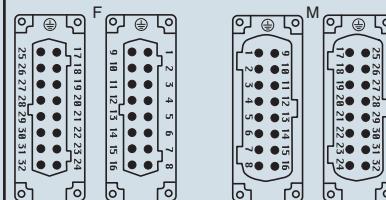
## 2) for bush terminal conductors



## dimensions in mm

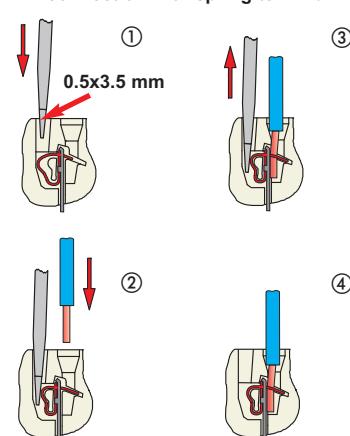


## contacts side (front view)



- inserts for section conductors:  $0.14 \dots 2.5 \text{ mm}^2$  - AWG 26 - 14
- conductors stripping length: 9...11 mm

## connection with spring terminal



dimensions shown are not binding and may be changed without notice

enclosures:  
size "104.62"

page:

C-TYPE IP65/IP66 ..... 248  
aggressive environments ..... 334

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

## description

without contacts (to be ordered separately)  
female inserts, No. (1-24) and (25-48)  
male inserts, No. (1-24) and (25-48)

## 16A female contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

## 16A male contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

## 16A male crimp contacts for advanced opening

0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

## - characteristics according to EN 61984:

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

- UL, CSA, GL, GOST certified

- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$ - ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$ 

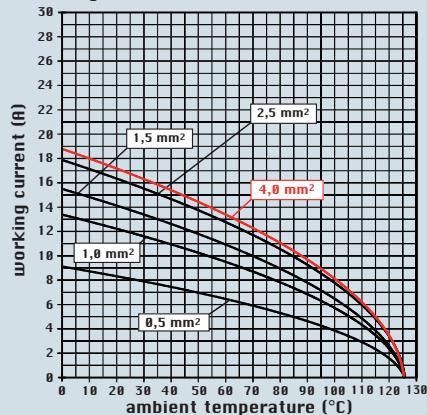
- are made of self-extinguishing thermoplastic resin

UL 94 V0

- mechanical life:  $\geq 500$  cycles- contact resistance:  $\leq 1 \text{ m}\Omega$ 

- for maximum current load, see the following load curves inserts, for more information see page 495

## diagram CCE 48 poles



## inserts, crimp connections

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

part No.

CCEF 24  
CCEM 24

part No.

CCEF 24 N  
CCEM 24 N

part No.

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

part No.

CCFD 0.3  
CCFD 0.5  
CCFD 0.7  
CCFD 1.0  
CCFD 1.5  
CCFD 2.5  
CCFD 3.0  
CCFD 4.0silver plated  
gold plated

16A male contacts

0.14-0.37 mm <sup>2</sup>	AWG 26-22	three grooves
0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves
3 mm <sup>2</sup>	AWG 12	one wide groove
4 mm <sup>2</sup>	AWG 12	with no grooves

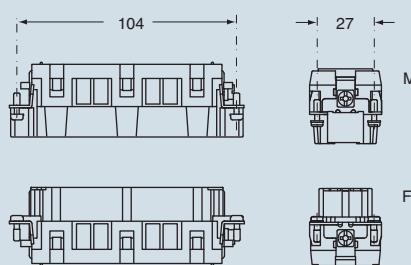
CCMA 0.3  
CCMA 0.5  
CCMA 0.7  
CCMA 1.0  
CCMA 1.5  
CCMA 2.5  
CCMA 3.0  
CCMA 4.0CCMD 0.3  
CCMD 0.5  
CCMD 0.7  
CCMD 1.0  
CCMD 1.5  
CCMD 2.5  
CCMD 3.0  
CCMD 4.0

## 16A male crimp contacts for advanced opening

0.5 mm <sup>2</sup>	AWG 20	with no grooves
0.75 mm <sup>2</sup>	AWG 18	one groove (back side)
1 mm <sup>2</sup>	AWG 18	one groove
1.5 mm <sup>2</sup>	AWG 16	two grooves
2.5 mm <sup>2</sup>	AWG 14	three grooves

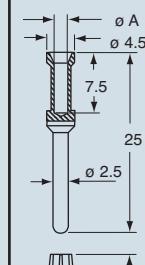
CC 0.5 AN  
CC 0.7 AN  
CC 1.0 AN  
CC 1.5 AN  
CC 2.5 AN

## dimensions in mm

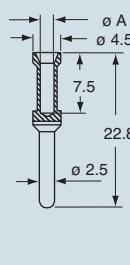


## dimensions in mm

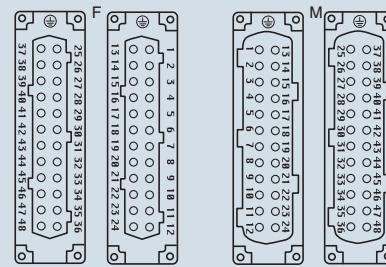
## CCF and CCM



## CC...AN



## contacts side (front view)

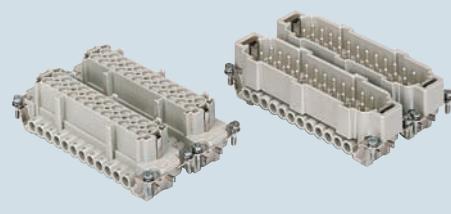
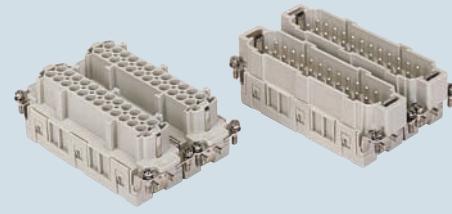


## CCF, CCM and CC..AN contacts

conductor section	conductor slot	conductors
mm <sup>2</sup>	ø A (mm)	stripping length (mm)
0.14-0.37	0.9	7.5
0.5	1.1	7.5
0.75	1.3	7.5
1.0	1.45	7.5
1.5	1.8	7.5
2.5	2.2	7.5
3	2.55	7.5
4	2.85	7.5

dimensions shown are not binding and may be changed without notice

enclosures:	
size "104.62"	page:
C-TYPE IP65/IP66 .....	248
aggressive environments .....	334

inserts,  
screw terminal connectionssilver  
plated  
contactsinserts,  
spring terminal connectionssilver  
plated  
contacts

description	part No.	part No.	part No.	part No.
indirect, with plate 1) female inserts, No. (1-24) and (25-48) male inserts, No. (1-24) and (25-48)	CNEF 24 T CNEM 24 T	CNEF 24 TN CNEM 24 TN		
direct, without plate 2) female inserts, No. (1-24) and (25-48) male inserts, No. (1-24) and (25-48)	CNEF 24 TX CNEM 24 TX	CNEF 24 TXN CNEM 24 TXN		
spring terminal female inserts, No. (1-24) and (25-48) male inserts, No. (1-24) and (25-48)			CSEF 24 CSEM 24	CSEF 24 N CSEM 24 N

- characteristics according to EN 61984:

16A 500V 6kV 3

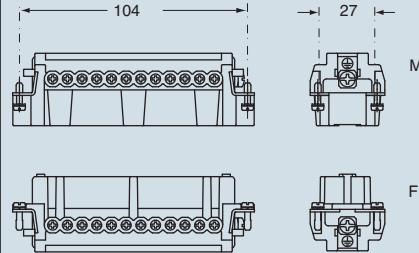
16A 400/690V 6kV 2

- UL, CSA, CCC, GL, GOST certified

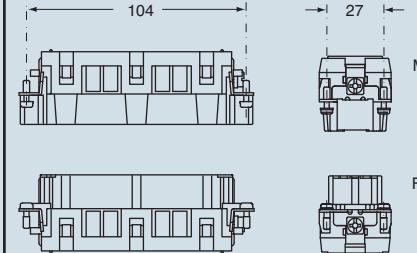
- rated voltage according to UL/CSA: 600V

- insulation resistance:  $\geq 10 \text{ G}\Omega$ - ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$ - are made of self-extinguishing thermoplastic resin  
UL 94 V0- mechanical life:  $\geq 500$  cycles- contact resistance:  $\leq 1 \text{ m}\Omega$  (CNE) -  $\leq 3 \text{ m}\Omega$  (CSE)- for maximum current load, see the following load curves  
inserts, for more information see page 495 and 496

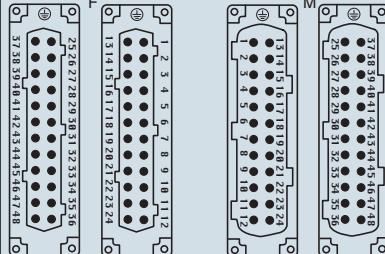
dimensions in mm



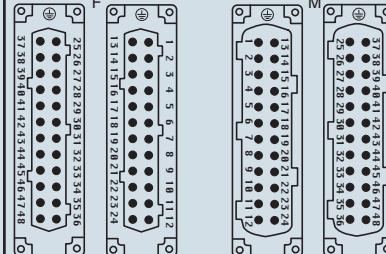
dimensions in mm



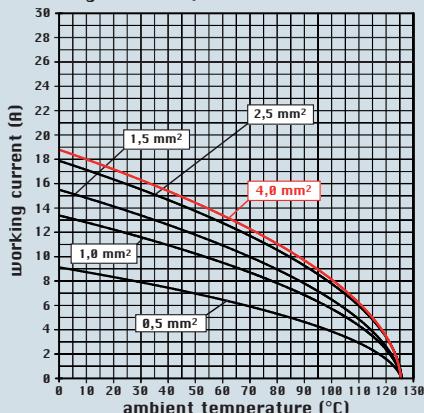
contacts side (front view)



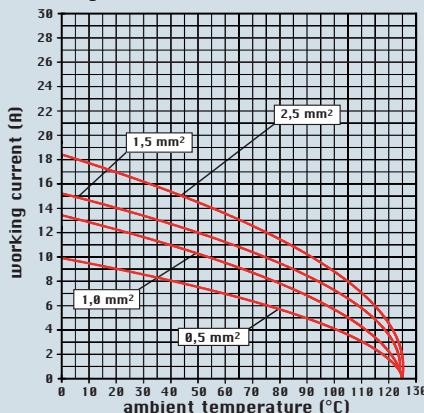
contacts side (front view)



## diagram CNE 48 poles



## diagram CSE 48 poles



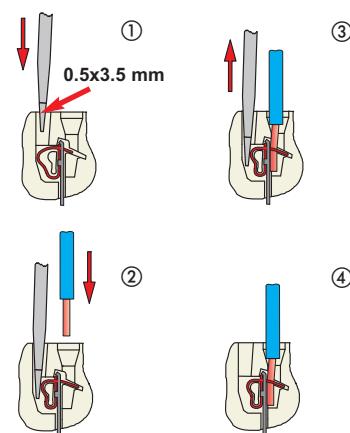
1) for non-prepared conductors



2) for bush terminal conductors



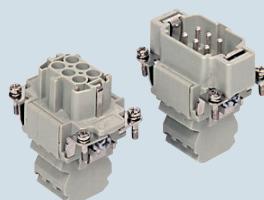
## connection with spring terminal



dimensions shown are not binding and may be changed without notice

enclosures:	
size "44.27"	page:
C-TYPE IP65/IP66 .....	218 - 221
C7 IP67 stainless steel lever .....	254
V-TYPE IP65/IP66 stainless steel lever .....	260 - 262
T-TYPE IP65 insulating .....	282
JEI zinc-plated steel lever .....	288 - 289
BIG hoods .....	304 - 306
aggressive environments .....	329
EMC .....	348
central lever .....	360 - 361
IP68 .....	374 - 377
panel supports:	page:
COB .....	410 - 411

**inserts,  
connection with dual spring  
terminal per pole**



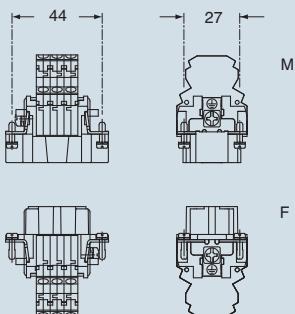
part No.

CSSF 06  
CSSM 06

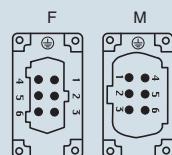
The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

- can be mated with CNE, CSE, CCE, CTE, CTSE, CSH inserts
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

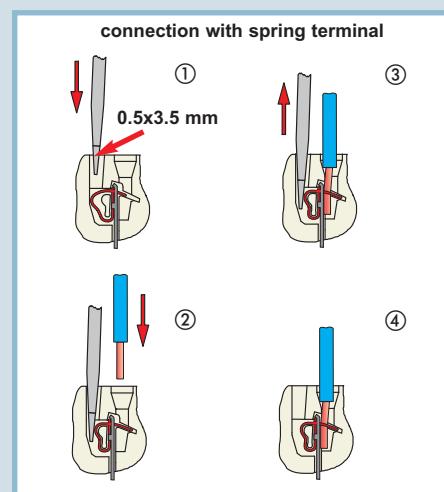
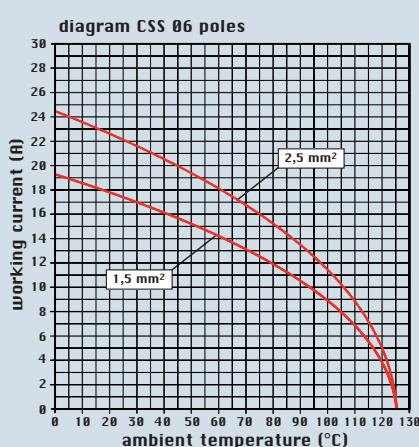
dimensions in mm



contacts side (front view)



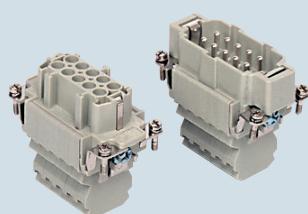
- inserts with plate, for section conductors:  $0.14 - 2.5 \text{ mm}^2$  - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "57.27"	page:
C-TYPE IP65/IP66 .....	222 - 227
C7 IP67 stainless steel lever .....	255
V-TYPE IP65/IP66 stainless steel lever .....	264 - 267
T-TYPE IP65 insulating .....	283
JEI zinc-plated steel lever .....	290 - 291
BIG hoods .....	308 - 311
aggressive environments .....	330
EMC .....	349
central lever .....	362 - 363
IP68 .....	378 - 381
panel supports:	page:
COB .....	410 - 411

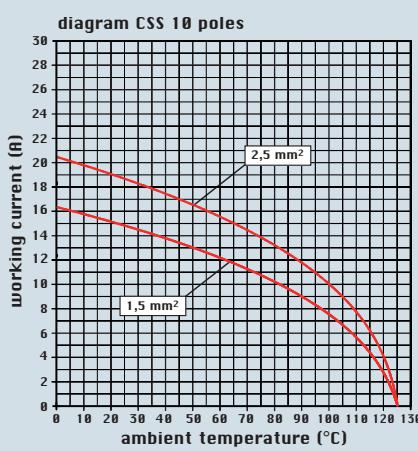
**inserts,  
connection with dual spring  
terminal per pole**



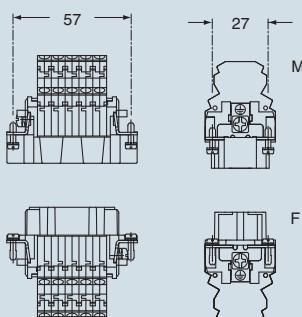
description	part No.
dual spring terminal per pole socket inserts with female contacts plug inserts with male contacts	CSSF 10 CSSM 10

The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

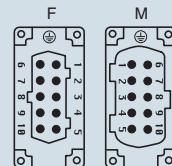
- can be mated with CNE, CSE, CCE, CTE, CTSE, CSH inserts
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496



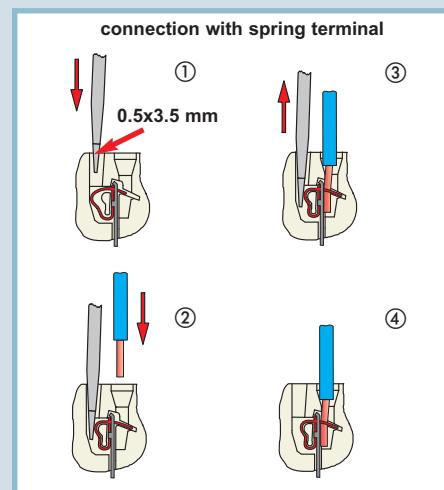
dimensions in mm



contacts side (front view)



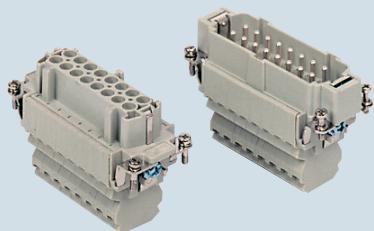
- inserts with plate, for section conductors:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "77.27"	page:
C-TYPE IP65/IP66 .....	228 - 234
C7 IP67 stainless steel lever .....	256
V-TYPE IP65/IP66 stainless steel lever .....	268 - 271
T-TYPE IP65 insulating .....	284
JEI zinc-plated steel lever .....	292 - 293
BIG hoods .....	312 - 315
aggressive environments .....	331
EMC .....	350
central lever .....	364 - 365
IP68 .....	382 - 385
panel supports:	page:
COB .....	410 - 411

**inserts,  
connection with dual spring  
terminal per pole**



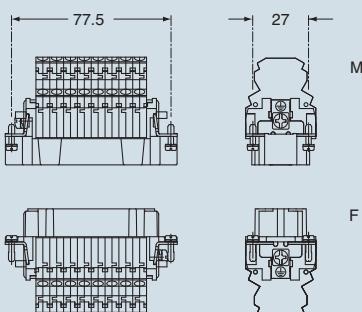
part No.

CSSF 16  
CSSM 16

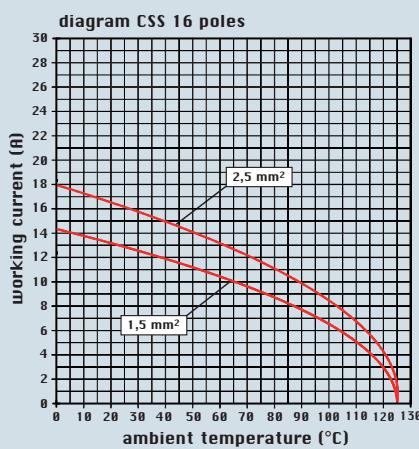
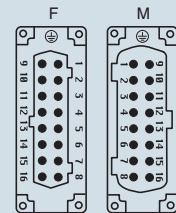
The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

- can be mated with CNE, CSE, CCE, CTE, CTSE, CSH inserts
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

dimensions in mm

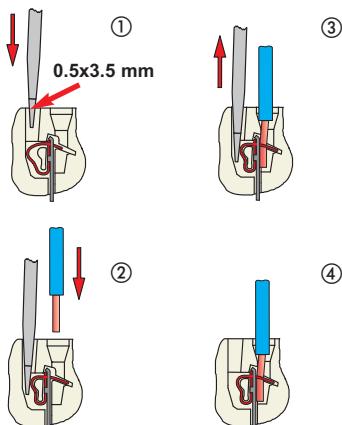


contacts side (front view)



- inserts with plate, for section conductors: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm

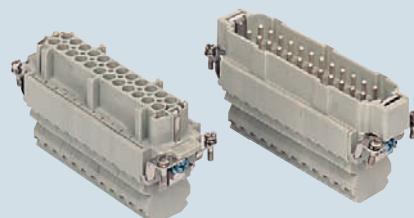
**connection with spring terminal**



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "104.27"	page:
<b>C-TYPE IP65/IP66</b>	236 - 243
<b>C7 IP67 stainless steel lever</b>	257
<b>V-TYPE IP65/IP66</b> stainless steel lever	272 - 275
<b>T-TYPE IP65 insulating</b>	285
<b>JEI zinc-plated steel lever</b>	294 - 295
<b>BIG hoods</b>	316 - 319
<b>aggressive environments</b>	332
<b>EMC</b>	351
<b>central lever</b>	366 - 368
<b>IP68</b>	386 - 389
panel supports:	page:
<b>COB</b>	410 - 411

**inserts,  
connection with dual spring  
terminal per pole**

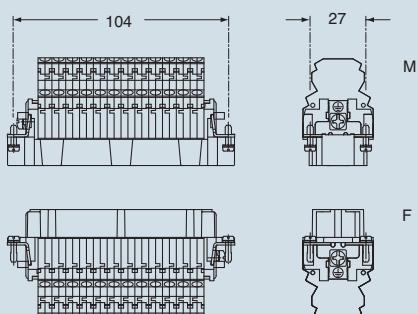


description	part No.
dual spring terminal per pole socket inserts with female contacts plug inserts with male contacts	<b>CSSF 24</b> <b>CSSM 24</b>

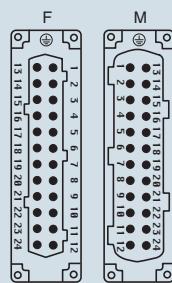
The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

- can be mated with CNE, CSE, CCE, CTE, CTSE, CSH inserts
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

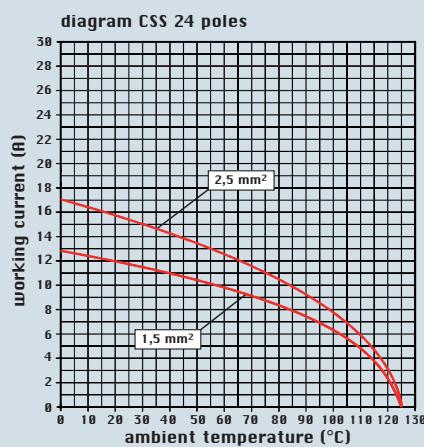
dimensions in mm



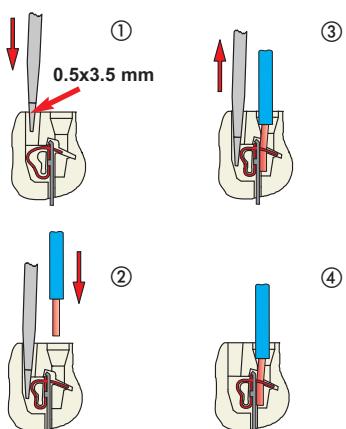
contacts side (front view)



- inserts with plate, for section conductors:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



**connection with spring terminal**



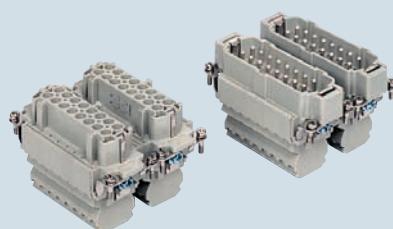
dimensions shown are not binding  
and may be changed without notice

enclosures:  
size "77.62"

page:

C-TYPE IP65/IP66 ..... 244 - 247  
aggressive environments ..... 333

**inserts,  
connection with dual spring  
terminal per pole**



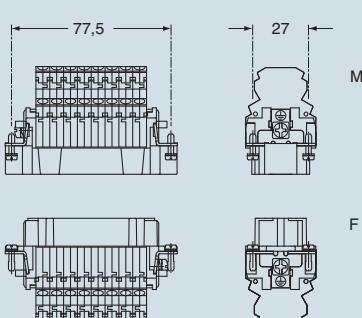
- can be mated with CNE, CSE, CCE, CSH inserts

description	part No.	part No.
dual spring terminal per pole female inserts, No. (1-16) and (17-32) male inserts, No. (1-16) and (17-32)	CSSF 16 CSSM 16	CSSF 16 N CSSM 16 N

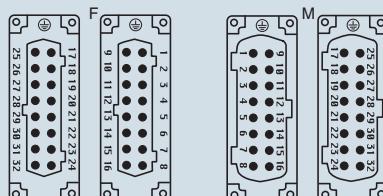
The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

- characteristics according to EN 61984:
  - 16A 500V 6kV 3**
  - 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

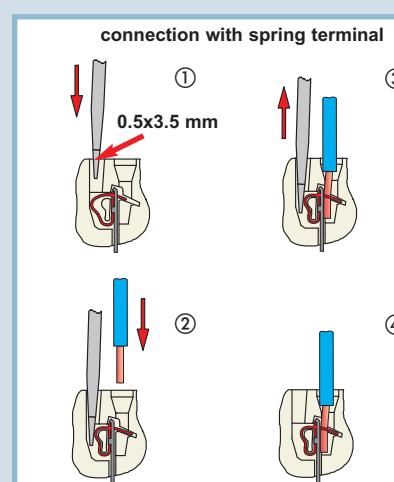
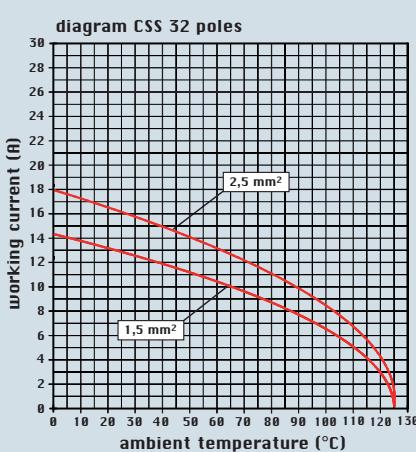
dimensions in mm



contacts side (front view)



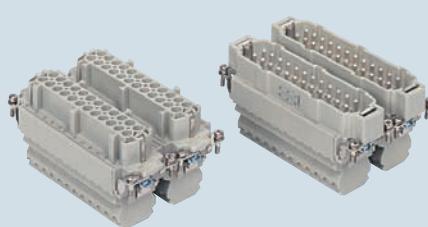
- inserts with plate, for section conductors: 0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice

enclosures:	
size "104.62"	page:
C-TYPE IP65/IP66 .....	248
aggressive environments .....	334

**inserts,  
connection with dual spring  
terminal per pole**



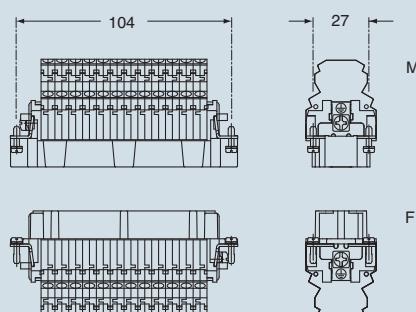
- can be mated with CNE, CSE, CCE, CSH inserts

description	part No.	part No.
dual spring terminal per pole female inserts, No. (1-24) and (25-48) male inserts, No. (1-24) and (25-48)	CSSF 24 CSSM 24	CSSF 24 N CSSM 24 N

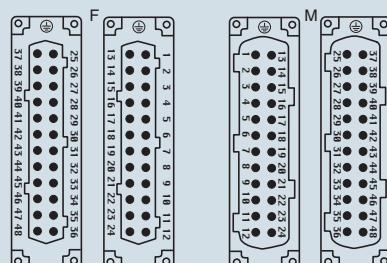
The CSS series inserts can be inserted in flush mounted enclosures or in fixed / portable high enclosures.

- characteristics according to EN 61984:
  - 16A 500V 6kV 3**
  - 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 3 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see page 496

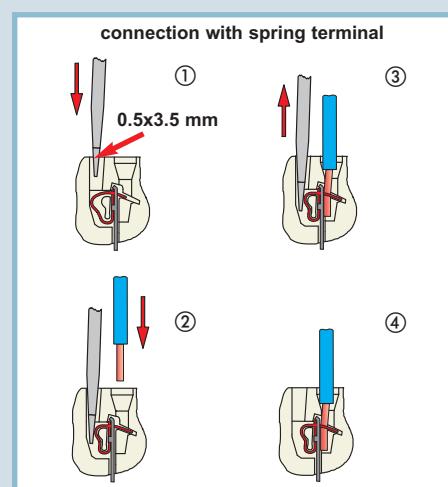
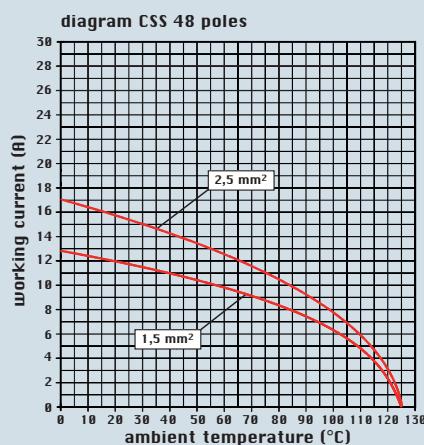
dimensions in mm



contacts side (front view)



- inserts with plate, for section conductors:  
 $0.14 \dots 2.5 \text{ mm}^2$  - AWG 26 - 14
- conductors stripping length: 9...11 mm



dimensions shown are not binding  
and may be changed without notice