

# CT - CTSE series

## Inserts with incorporated terminal block for multipole connectors (16A max versions)

### Use.

The CT - CTSE series multipole connectors (with incorporated terminal block) are recommended for greater cost-saving and safety for use on machines and command and control panels.

The CT - CTSE series inserts (16A max versions) are supplied in the plug or socket versions and may be mounted with insertion from the front of the enclosure (**Figure 1** for all the polarities of the inserts) or with insertion from the rear of the enclosure (**Figure 2**, only for 16 and 24-pole inserts).

As an alternative to the traditional terminal blocks, the inserts can be mounted inside the control panels on DIN EN rails (**Figure 5**) using suitable accessories providing the added advantage of easy sectioning.

The special structure of the CT - CTSE inserts has all the conductor connections on the same side providing for easier wiring and a complete view of the work area.

The terminal block also has slots for housing the identification wire markers of each contact.

Wire markers of different manufacturers may be used such as: Cabur, Grafoplast, Modernotecnica, Phoenix, Siemens, Wago, Weidmüller.

The CT - CTSE series is available in the versions "left" and "right" for mounting on the left (**Figure 3**) or on the right (**Figure 4**) of the control panel walls.

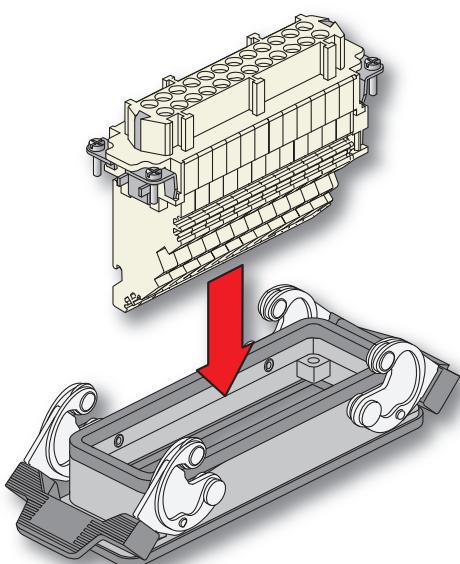
This characteristic is determined by the position of contact "1" and the ground terminal in the upper part of the insert terminal block for both left and right mounting.

The installation of inserts on DIN rails (**Figure 5**) inside the control panels is usually made to facilitate the wiring into sectionable parts.

In this case the degree of protection for coupled connectors is IP20 (in accordance with EN 60529).

This type of mounting requires supports (CT APE) to be provided to the inserts suitable for mounting on DIN EN 60715 rails.

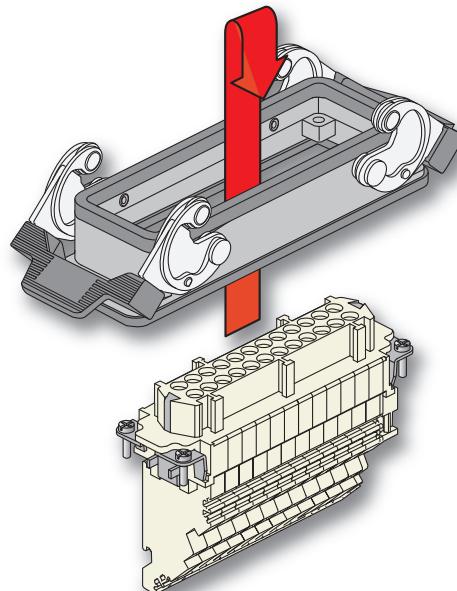
Furthermore, to ensure a stable and secure mating between the CT and CTSE inserts installed on DIN rails and counterparts CNE, CSE, CCE, CSH, CSS mating screws CRBF (female) and CRBM (male) are recommended, to replace the ordinary fastening screws to the enclosures (**Figure 5**).



**Figure 1** (front mounting)

The insert is inserted into the bulkhead housing without wired conductors or with pre-wired conductors that are not connected at the opposite end.

Mounting for inserts of 06, 10, 16 and 24 poles



**Figure 2** (rear mounting)

The insert is inserted into the bulkhead housing with pre-wired conductors connected at the opposite end.

Mounting for inserts of 16 and 24 poles

Except version T-TYPE

# CT - CTSE series

Inserts with incorporated terminal block for multipole connectors

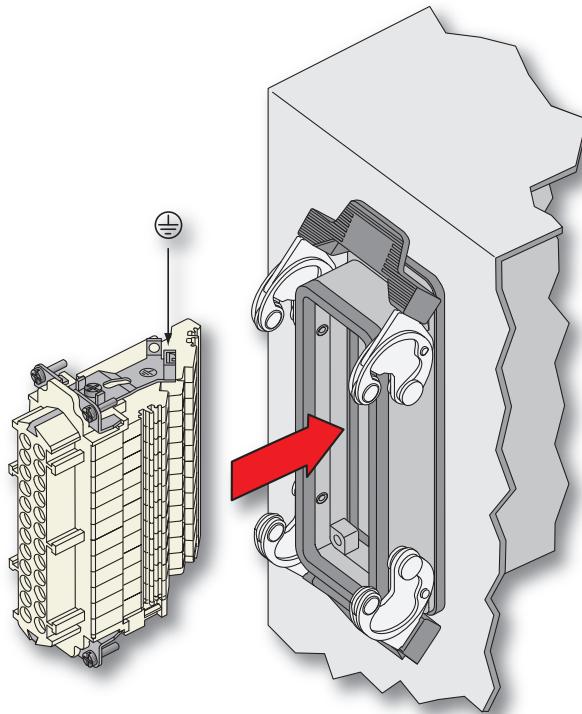


Figure 3 (left mounting)

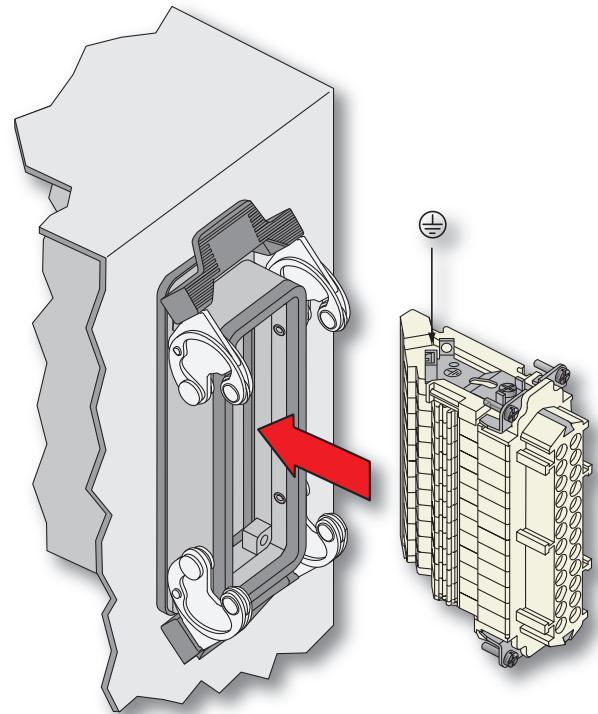


Figure 4 (right mounting)

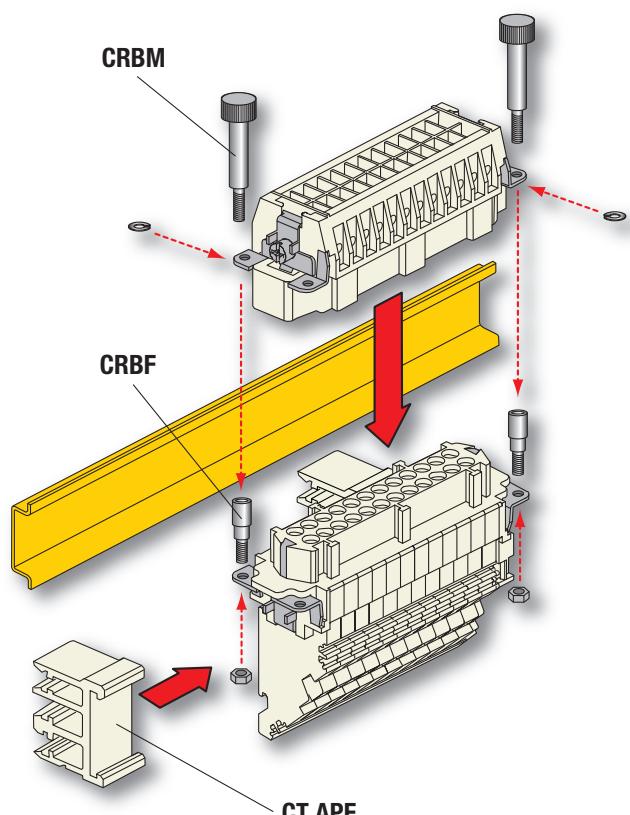
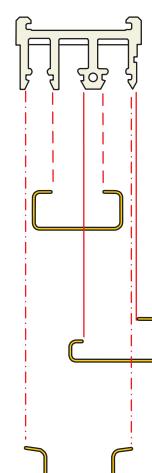


Figure 5 (mounting on DIN rail)



#### CT APE

possibility of coupling to DIN EN 60715 rail (for a greater stability of the CT, CTSE inserts of 16 and 24 poles we recommend using the two CT APE supports)

EN 60715  
C 30

EN 60715  
G 32

EN 60715  
TH 35-7,5 and TH 35-15

#### Accessories for CT, CTSE inserts

- support for mounting on DIN rail (**CT APE** page 476)
- inserts coupling screws (**CRBM** and **CRBF** page 476)
- cable-clamping plates (**CRAD** and **CRAS** page 476)

enclosures \*:  
size "44.27" page:

C-TYPE IP65/IP66 ..... 240 and 243  
C7 IP67, single lever ..... 274  
V-TYPE IP65/IP66, single lever ..... 280/284  
BIG hoods ..... 304 - 306  
T-TYPE IP65 insulating ..... 326 - 327  
T-TYPE / W IP66 insulating ..... 336 - 337  
HYGIENIC T-TYPE / H IP66/IP69 ..... 350 - 351  
HYGIENIC T-TYPE / C IP66/IP69, -50 °C ..... 358 - 359  
W-TYPE for aggressive environments ..... 373  
EMC ..... 392  
central lever ..... 404  
LS-TYPE ..... 450

\*) only bulkhead mounted housing and BIG hoods  
- can be mated with CNE, CCE, CSS, CSE, CSH inserts  
- inserts may be fitted from front of enclosure

## description

side mounting (see page 129)  
female inserts with female contacts 1)  
male inserts with male contacts 1)

side mounting (see page 129)  
female inserts with female contacts  
male inserts with male contacts

## 1) for non-prepared conductors

- characteristics according to EN 61984:  
**16A 230/400V 4kV 3 (CT)**  
**16A 400V 4kV 2 (CT)**  
**16A 500V 6kV 3 (CTSE)**  
**16A 400/690V 6kV 2 (CTSE)**
- UL, CSA, CCC \*, GL, EAC certified
- \* CQC certification being applied for
- 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:  $\leq 4 \text{ m}\Omega$
- for maximum current load, see the following load curves
- inserts, for more information see pages 560, 561

diagram CT 06 poles

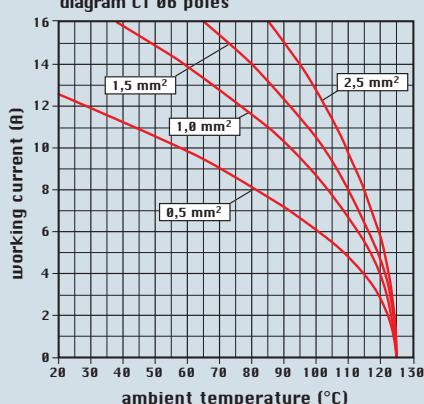
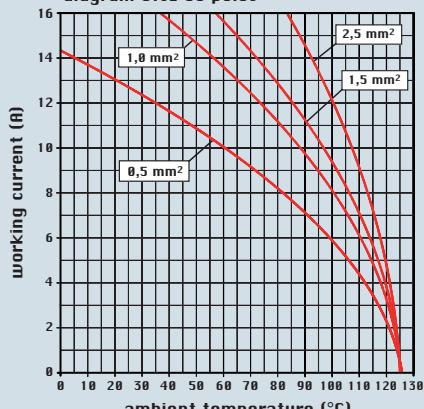
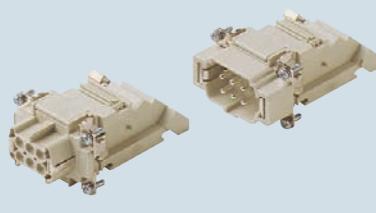


diagram CTSE 06 poles



dimensions shown are not binding  
and may be changed without notice

terminal block inserts  
screw terminal connection

silver plated contacts

terminal block inserts  
spring terminal connection

silver plated contacts

part No. part No.

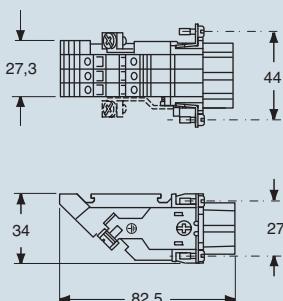
left CTF 06 L right CTF 06 R  
CTM 06 L CTM 06 R

part No. part No.

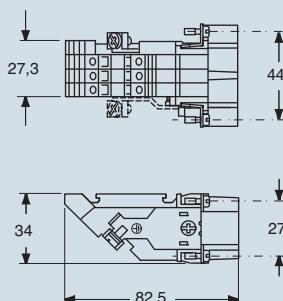
left CTSEF 06 L right CTSEF 06 R  
CTSEM 06 L CTSEM 06 R

dimensions in mm

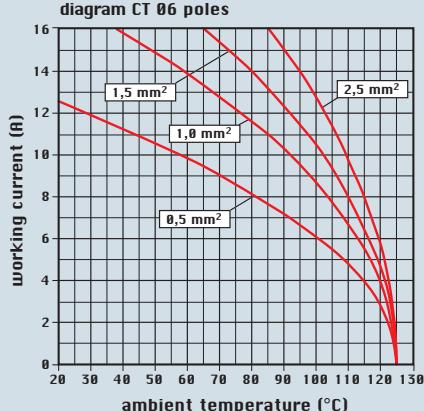
## female inserts (CTF and CTSEF)



## male inserts (CTM and CTSEM)

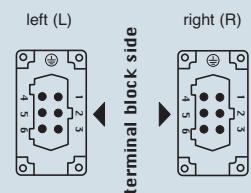


## working current (A)

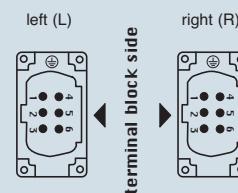


## contacts side (front view)

## female inserts (CTF and CTSEF)



## male inserts (CTM and CTSEM)

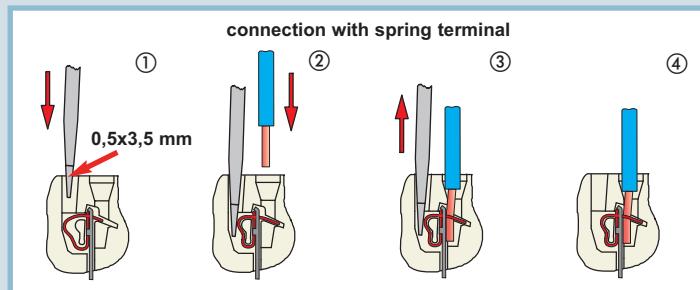


## - CT inserts with plate, for section conductors:

- 0,75 - 2,5 mm² - AWG 18 - 14
- conductors stripping length: 12 mm
- terminal screw torque: 0,4 Nm (3,54 lb.in), for more information see page 34 and 35

## - CTSE spring inserts for section conductors:

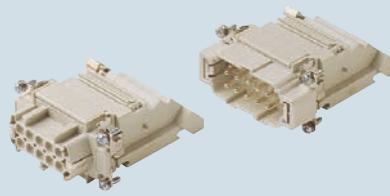
- 0,14 - 2,5 mm² - AWG 26 - 14
- conductors stripping length: 9...11 mm



enclosures *:	
size "57.27"	page:
C-TYPE IP65/IP66 .....	244
C7 IP67, two levers .....	275
V-TYPE IP65/IP66, single lever .....	281/288
BIG hoods .....	308 - 311
T-TYPE IP65 insulating .....	328 - 329
T-TYPE / W IP66 insulating .....	338 - 339
HYGIENIC T-TYPE / H IP66/IP69 .....	352 - 353
HYGIENIC T-TYPE / C IP66/IP69, -50 °C .....	360 - 361
W-TYPE for aggressive environments .....	374
EMC .....	393
central lever .....	406
LS-TYPE .....	452

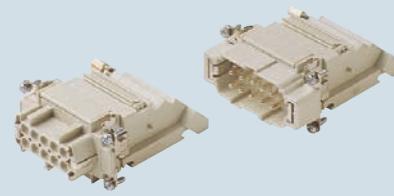
\*) only bulkhead mounted housing and BIG hoods  
 - can be mated with CNE, CCE, CSS, CSE, CSH inserts  
 - inserts may be fitted from front of enclosure

### terminal block inserts screw terminal connection



silver plated contacts

### terminal block inserts spring terminal connection



silver plated contacts

description	part No.	part No.	part No.	part No.
side mounting (see page 129) female inserts with female contacts 1) male inserts with male contacts 1)	left CTF 10 L CTM 10 L	right CTF 10 R CTM 10 R		
side mounting (see page 129) female inserts with female contacts male inserts with male contacts			left CTSEF 10 L CTSEM 10 L	right CTSEF 10 R CTSEM 10 R

#### 1) for non-prepared conductors

- characteristics according to EN 61984:  
**16A 230/400V 4kV 3 (CT)**  
**16A 400V 4kV 2 (CT)**  
**16A 500V 6kV 3 (CTSE)**  
**16A 400/690V 6kV 2 (CTSE)**
- UL, CSA, CCC \*, GL, EAC certified
- \* CQC certification being applied for
- rated voltage according to UL/CSA: 600V
- 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: ≤ 4 mΩ
- for maximum current load, see the following load curves
- inserts, for more information see pages 560, 561

diagram CT 10 poles

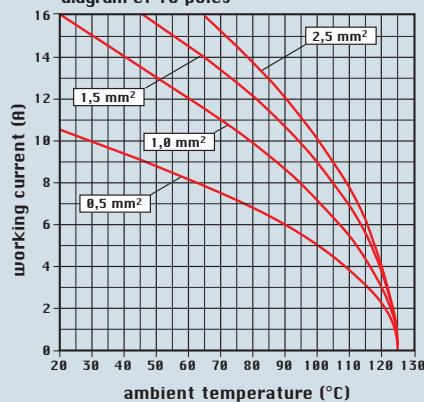
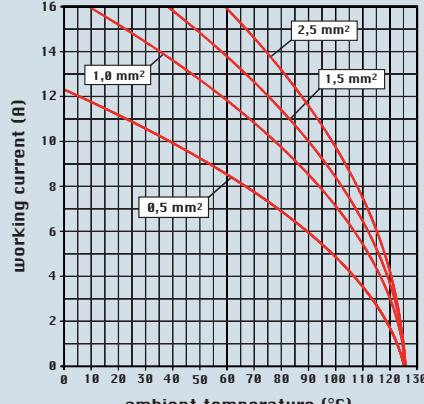


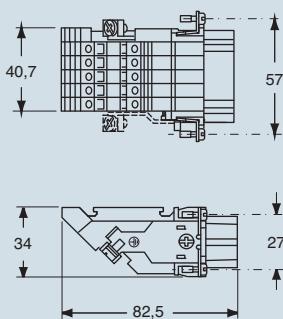
diagram CTSE 10 poles



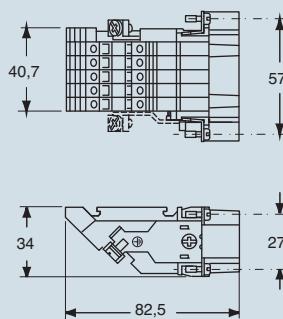
dimensions shown are not binding  
 and may be changed without notice

dimensions in mm

#### female inserts (CTF and CTSEF)

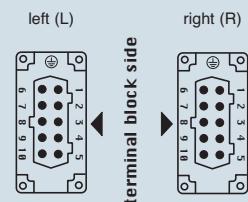


#### male inserts (CTM and CTSEM)

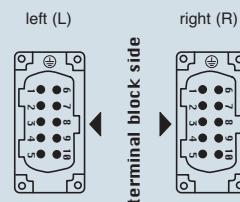


#### contacts side (front view)

#### female inserts (CTF and CTSEF)



#### male inserts (CTM and CTSEM)

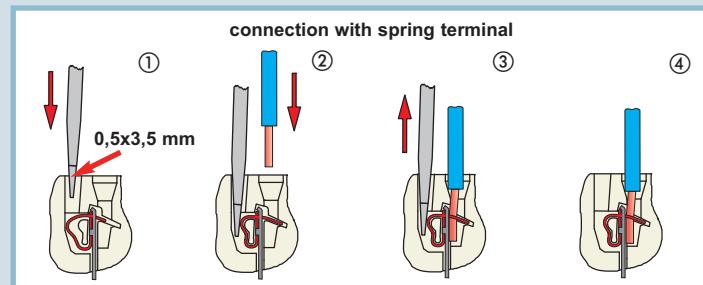


#### - CT inserts with plate, for section conductors:

- 0.75 - 2.5 mm² - AWG 18 - 14
- conductors stripping length: 12 mm
- terminal screw torque: 0.4 Nm (3.54 lb.in), for more information see page 34 and 35

#### - CTSE spring inserts for section conductors:

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



enclosures *:	
size "77.27"	page:
C-TYPE IP65/IP66 .....	250
C7 IP67, two levers .....	276
V-TYPE IP65/IP66, single lever .....	282/292
BIG hoods .....	312 - 315
T-TYPE / W IP66 insulating .....	330 - 331
T-TYPE / W IP66 insulating .....	340 - 341
HYGIENIC T-TYPE / H IP66/IP69 .....	354 - 355
HYGIENIC T-TYPE / C IP66/IP69, -50 °C .....	362 - 363
W-TYPE for aggressive environments .....	375
EMC .....	394
central lever .....	408
LS-TYPE .....	454
*) only bulkhead mounted housing and BIG hoods	
- can be mated with CNE, CCE, CSS, CSE, CSH inserts	
- inserts may be fitted from front of enclosure	

terminal block inserts  
screw terminal connection

silver plated contacts

terminal block inserts  
spring terminal connection

silver plated contacts

description	part No.	part No.	part No.
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side mounting (see page 129)  
female inserts with female contacts 1)  
male inserts with male contacts 1)

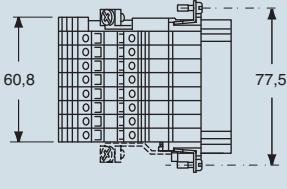
side mounting (see page 129)  
female inserts with female contacts  
male inserts with male contacts

left CTF 16 L CTM 16 L	right CTF 16 R CTM 16 R
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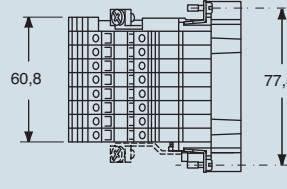
left CTSEF 16 L CTSEM 16 L	right CTSEF 16 R CTSEM 16 R
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## dimensions in mm

## female inserts (CTF and CTSEF)



## male inserts (CTM and CTSEM)



## 1) for non-prepared conductors

- characteristics according to EN 61984:  
**16A 230/400V 4kV 3 (CT)**  
**16A 400V 4kV 2 (CT)**  
**16A 500V 6kV 3 (CTSE)**  
**16A 400/690V 6kV 2 (CTSE)**
- UL, CSA, CCC \*, GL, EAC certified
- \* CQC certification being applied for
- 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:  $\leq 4 \text{ m}\Omega$
- for maximum current load, see the following load curves
- inserts, for more information see pages 560, 561

diagram CT 16 poles

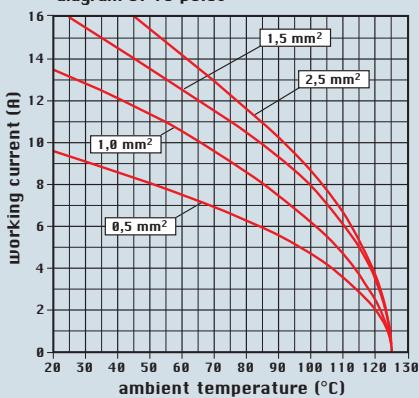
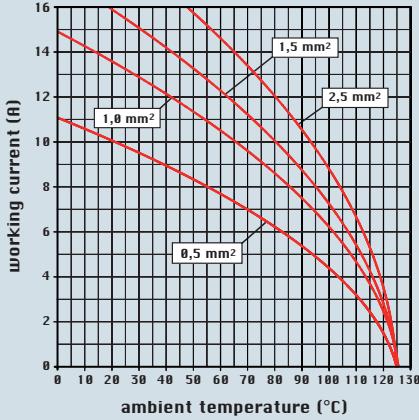
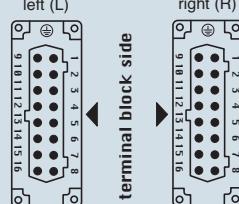


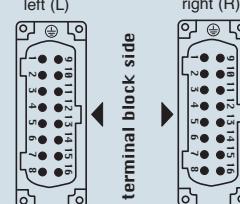
diagram CTSE 16 poles



dimensions shown are not binding  
and may be changed without notice

contacts side (front view)  
female inserts (CTF and CTSEF)

## male inserts (CTM and CTSEM)



- CT inserts with plate, for section conductors: 0,75 - 2,5 mm<sup>2</sup> - AWG 18 - 14

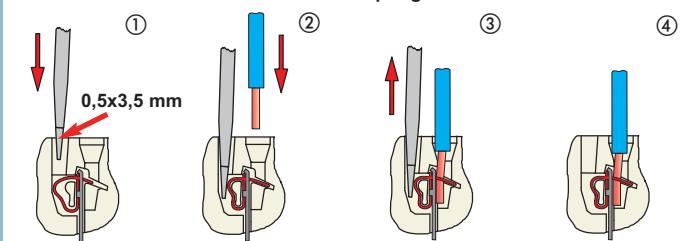
- conductors stripping lenght: 12 mm

- terminal screw torque: 0,4 Nm (3,54 lb.in), for more information see page 34 and 35

- CTSE spring 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



enclosures \*:  
size "104.27" page:

C-TYPE IP65/IP66 .....	258
C7 IP67, two levers .....	277
V-TYPE IP65/IP66, single lever .....	283/296
BIG hoods .....	316 - 319
T-TYPE IP65 insulating .....	332 - 333
T-TYPE / W IP66 insulating .....	342 - 343
HYGIENIC T-TYPE / H IP66/IP69 .....	356 - 357
HYGIENIC T-TYPE / C IP66/IP69, -50 °C .....	364 - 365
W-TYPE for aggressive environments .....	376
EMC .....	395
central lever .....	410
LS-TYPE .....	456 - 457

\*) only bulkhead mounted housing and BIG hoods  
- can be mated with CNE, CCE, CSS, CSE, CSH inserts  
- inserts may be fitted from front of enclosure

### terminal block inserts screw terminal connection



silver plated contacts

### terminal block inserts spring terminal connection



silver plated contacts

description	part No.	part No.	part No.	part No.
side mounting (see page 129) female inserts with female contacts 1) male inserts with male contacts 1)	left CTF 24 L CTM 24 L	right CTF 24 R CTM 24 R		
side mounting (see page 129) female inserts with female contacts male inserts with male contacts			left CTSEF 24 L CTSEM 24 L	right CTSEF 24 R CTSEM 24 R

#### 1) for non-prepared conductors

- characteristics according to EN 61984:  
**16A 230/400V 4kV 3 (CT)**  
**16A 400V 4kV 2 (CT)**  
**16A 500V 6kV 3 (CTSE)**  
**16A 400/690V 6kV 2 (CTSE)**
- UL, CSA, CCC \*, GL, EAC certified
- \* CQC certification being applied for
- 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:  $\leq 4 \text{ m}\Omega$
- for maximum current load, see the following load curves
- inserts, for more information see pages 560, 561

diagram CT 24 poles

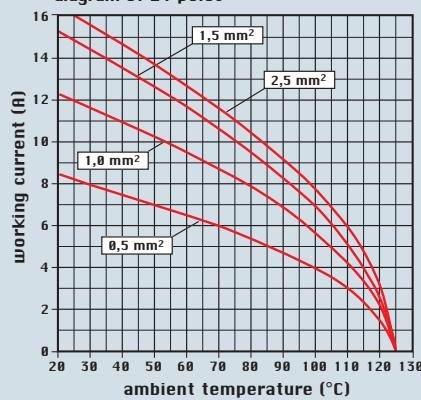
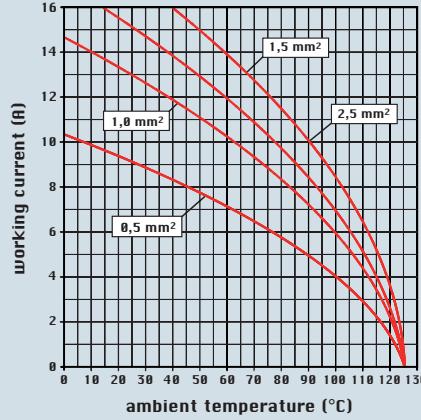
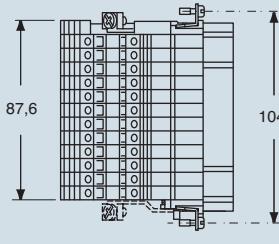


diagram CTSE 24 poles

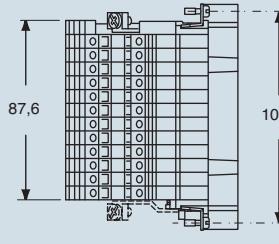


dimensions in mm

#### female inserts (CTF and CTSEF)

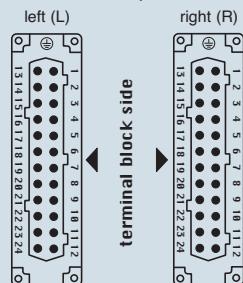


#### male inserts (CTM and CTSEM)

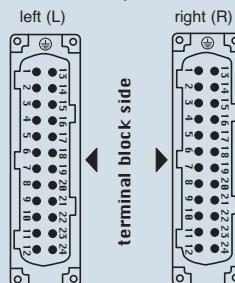


contacts side (front view)

#### female inserts (CTF and CTSEF)



#### male inserts (CTM and CTSEM)



- CT inserts with plate, for section conductors: 0,75 - 2,5 mm<sup>2</sup> - AWG 18 - 14

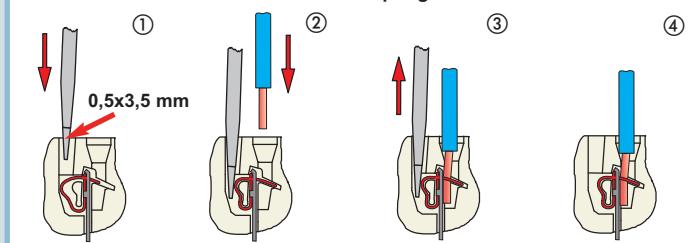
- conductors stripping length: 12 mm

- terminal screw torque: 0,4 Nm (3,54 lb.in), for more information see page 34 and 35

- CTSE spring inserts 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 ..... 267

W-TYPE for aggressive environments .. 377

\*) only bulkhead mounted housing

- CT screw version: on request
- can be mated with CNE, CCE, CSS, CSE, CSH inserts
- inserts may be fitted from front of enclosure

### terminal block inserts spring terminal connection



**silver  
plated  
contacts**

**NEW**

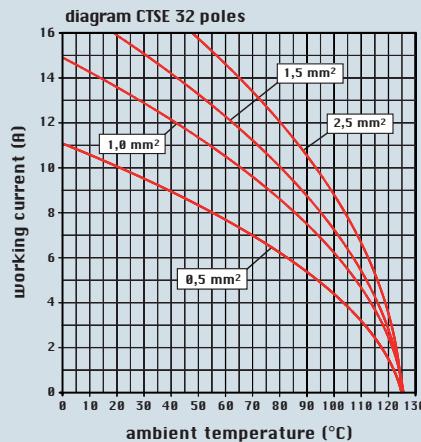
#### description

side mounting (see page 129)  
female inserts with female contacts, No. (1-16) and (17-32) 1)  
male inserts with male contacts, No. (1-16) and (17-32) 1)

part No.	part No.	part No.	part No.
left <b>CTSEF 16 LN</b> CTSEM 16 LN	right <b>CTSEF 16 R</b> CTSEM 16 R	<b>CTSEF 16 L</b> CTSEM 16 L	<b>CTSEF 16 RN</b> CTSEM 16 RN

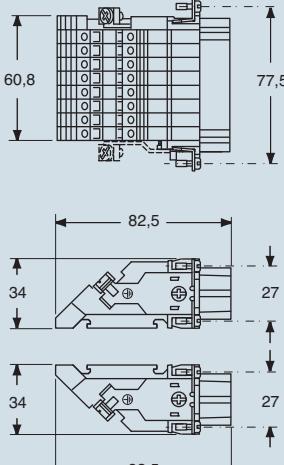
#### 1) for non-prepared conductors

- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC \*, GL, EAC certified  
\* CQC certification being applied for
- 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:  $\leq 4 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see pages 561

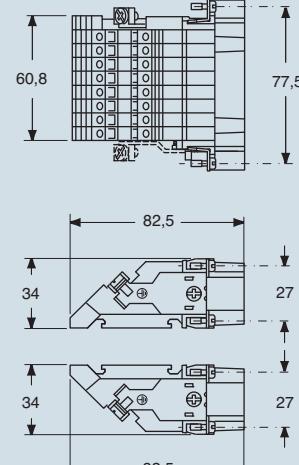


#### dimensions in mm

##### female inserts (CTSEF)



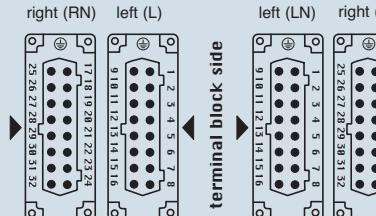
##### male inserts (CTSEM)



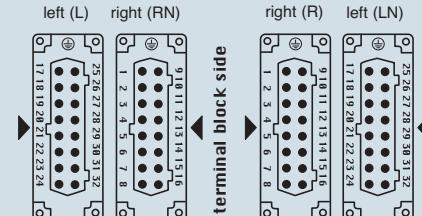
#### working current (A)

##### contacts side (front view)

##### female inserts (CTSEF)

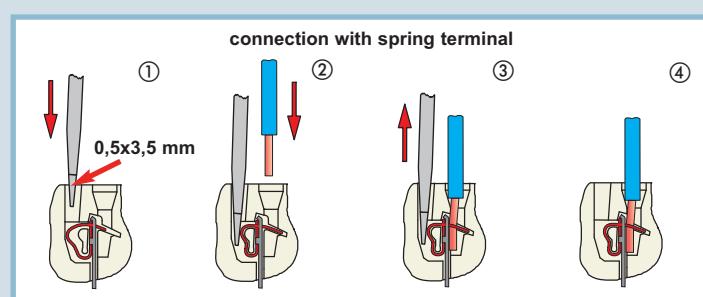


##### male inserts (CTSEM)



- CTSE spring inserts for section conductors: 0,14 - 2,5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping lenght: 9...11 mm

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

\*) only bulkhead mounted housing

- CT screw version: on request
- can be mated with CNE, CCE, CSS, CSE, CSH inserts
- inserts may be fitted from front of enclosure

### terminal block inserts spring terminal connection



silver plated contacts

NEW

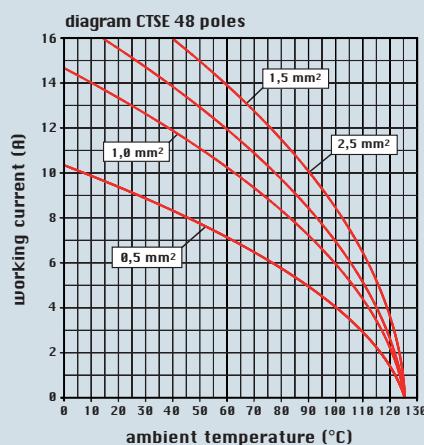
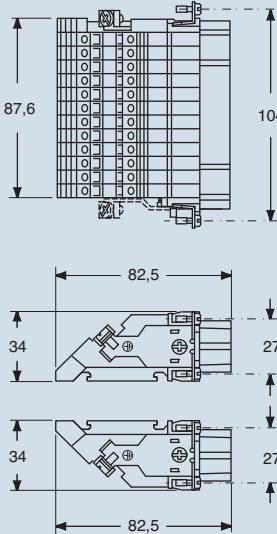
## description

side mounting (see page 129)  
female inserts with female contacts, No. (1-24) and (25-48) 1)  
male inserts with male contacts, No. (1-24) and (25-48) 1)

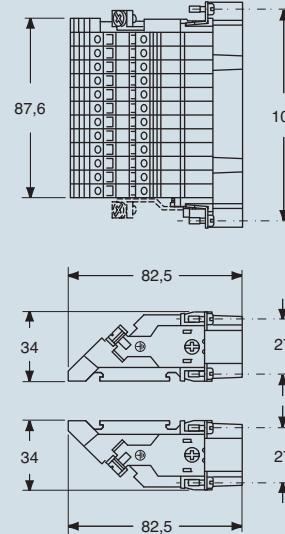
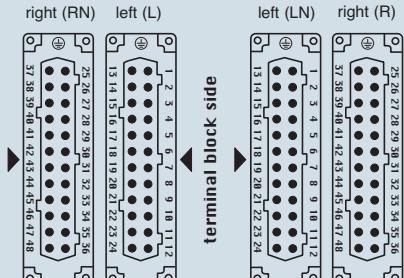
part No.	part No.	part No.	part No.
left <b>CTSEF 24 LN</b> CTSEM 24 LN	right <b>CTSEF 24 R</b> CTSEM 24 R	<b>CTSEF 24 L</b> CTSEM 24 L	<b>CTSEF 24 RN</b> CTSEM 24 RN

## 1) for non-prepared conductors

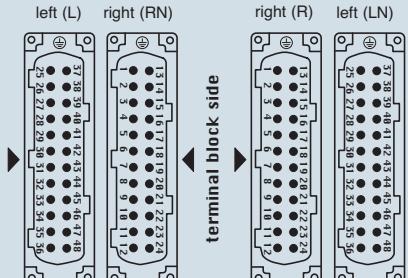
- characteristics according to EN 61984:  
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**
- UL, CSA, CCC \*, GL, EAC certified  
\* CQC certification being applied for
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- ambient temperature limit:  $-40^\circ\text{C} \dots +125^\circ\text{C}$
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- contact resistance:  $\leq 4 \text{ m}\Omega$
- for maximum current load, see the following load curves inserts, for more information see pages 561

dimensions in mm  
female inserts (CTF and CTSEF)

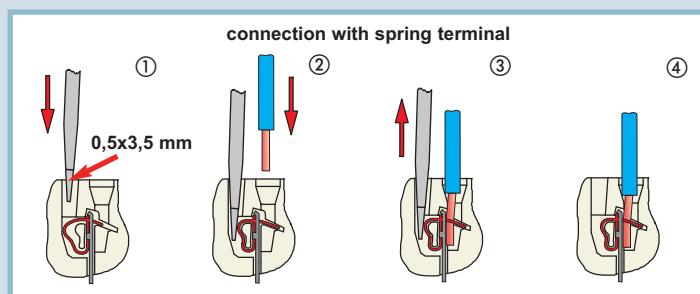
## male inserts (CTM and CTSEM)

contacts side (front view)  
female inserts (CTSEF)

## male inserts (CTSEM)



- CTSE spring inserts 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