

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.**

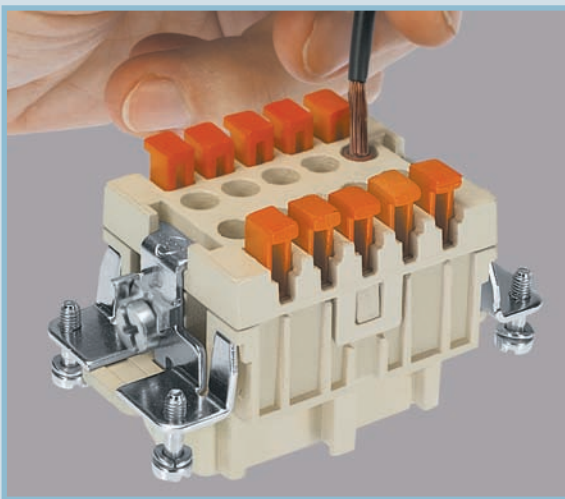
To reopen the terminals, simply introduce the tip of a common 0.5 x 3.5 mm flat blade screwdriver in the shaped pocket on the head of the actuator, and slightly rotate the screwdriver downwards: this will lift up the actuator in its "open terminal" position.

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

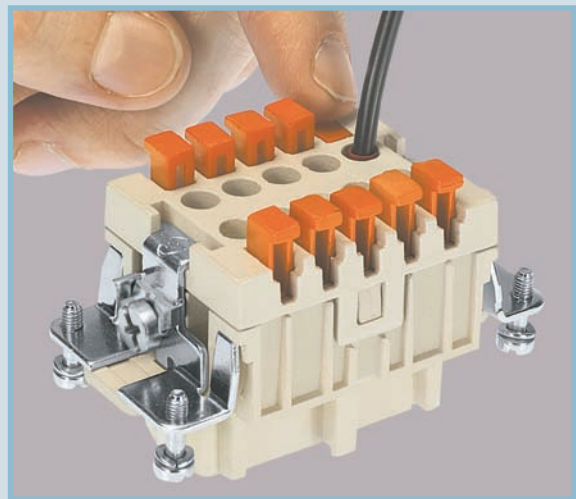
- "44.27" : **CSHM / F 06**
- "57.27" : **CSHM / F 10**
- "77.27" : **CSHM / F 16** and **CSHM / F 16 N** (special numbering 17-32)
- "104.27": **CSHM / F 24** and **CSHM / F 24 N** (special numbering 25-48)

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



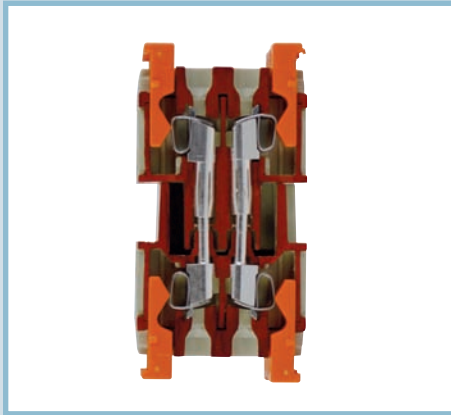
**1) insert the wire**



**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**



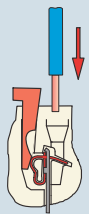
description

**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.

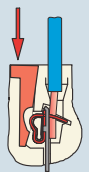
This type of connection offers the following advantages:

- 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.



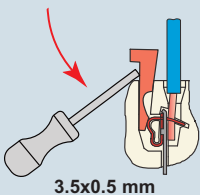
**Step 1**

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



**Step 2**

press the actuator button to close the terminal



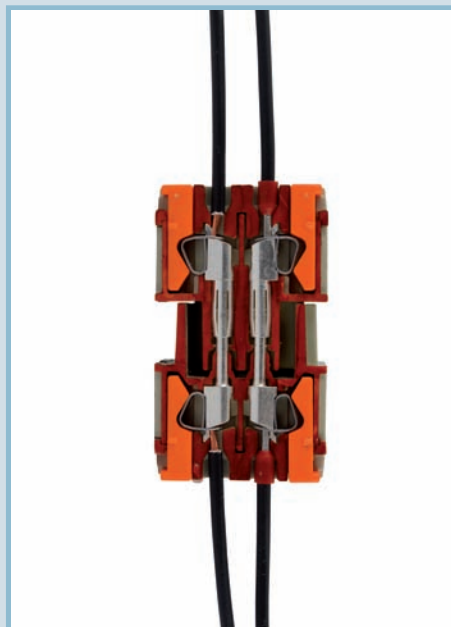
**Reopening**

3.5x0.5 mm

inserts series		CSH
No. of poles <sup>1)</sup>	main contact + ⊕	<b>6, 10, 16, 24, (32), (48)</b>
	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

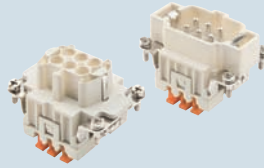
1) Polarities shown in brackets may be achieved by using two inserts in their own double housings.

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**

description

part No.

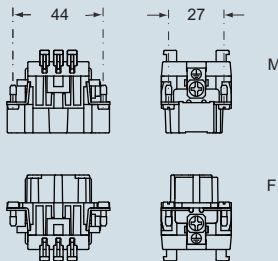
spring terminals with actuator button  
female inserts with female contacts  
male inserts with male contacts

CSHF 06  
CSHM 06

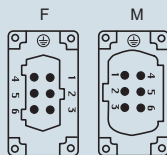
- characteristics according to EN 61984:

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

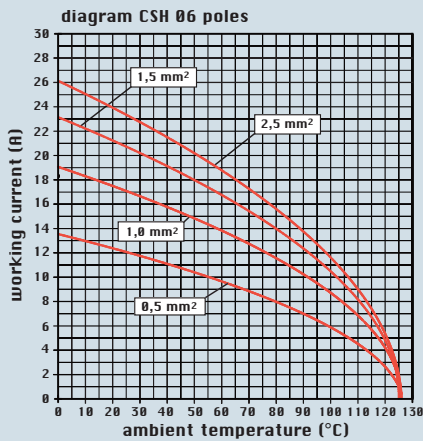
dimensions in mm



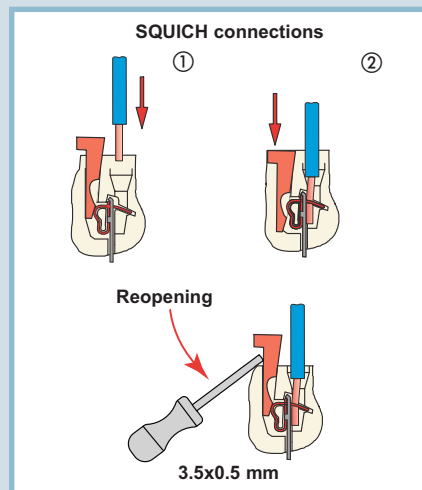
contacts side (front view)



- 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

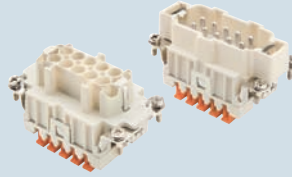


enclosures:  
size "57.27" page:

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,  
spring terminal connections

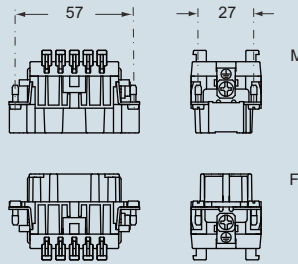


**NEW**

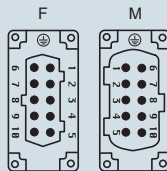
description	part No.
spring terminals with actuator button	CSHF 10
female inserts with female contacts	CSHM 10
male inserts with male contacts	

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

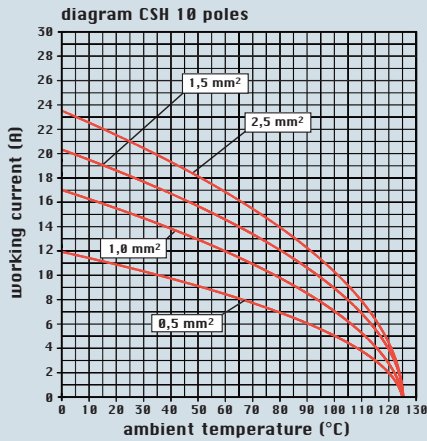
dimensions in mm



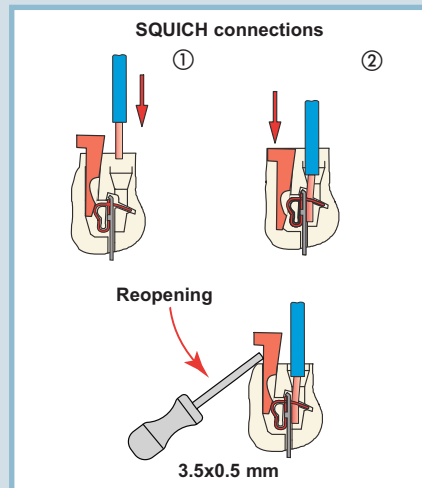
contacts side (front view)



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

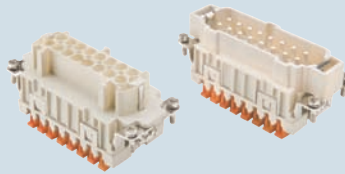


dimensions shown are not binding and may be changed without notice



enclosures: size "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**

description

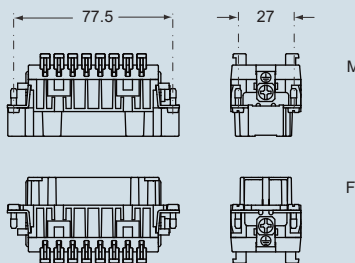
part No.

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

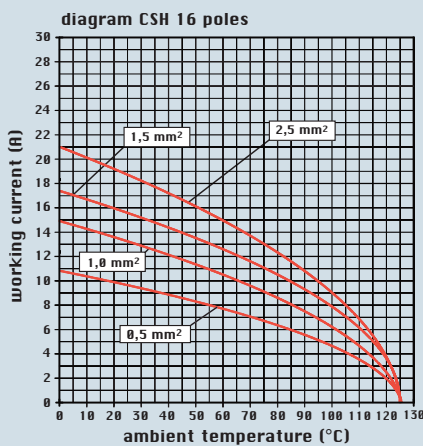
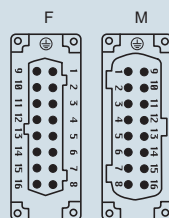
CSHF 16  
CSHM 16

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

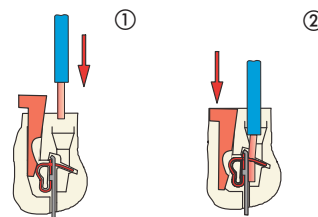


contacts side (front view)

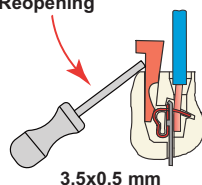


- inserts for connectors with the following sections:  
0.14 - 2.5 mm<sup>2</sup> - AWG 26 - 14
- conductors stripping length: 9...11 mm

SQUICH connections



Reopening



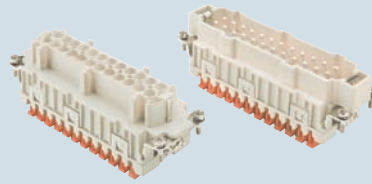
dimensions shown are not binding  
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enclosures:  
 size "104.27" page:

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: page:  
 COB ..... 410 - 411

inserts,  
 spring terminal connections



**NEW**

description

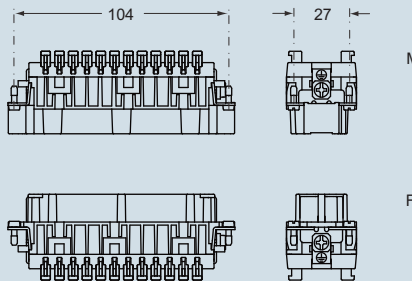
spring terminals with actuator button  
 female inserts with female contacts  
 male inserts with male contacts

part No.

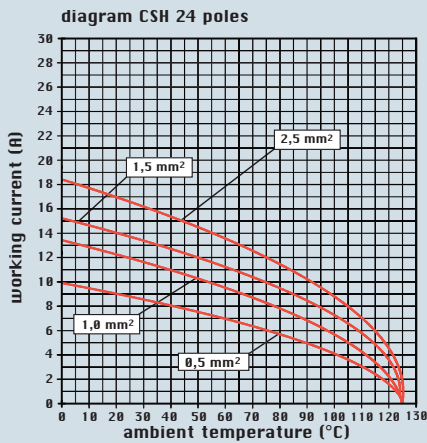
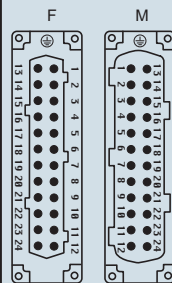
CSHF 24  
 CSHM 24

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

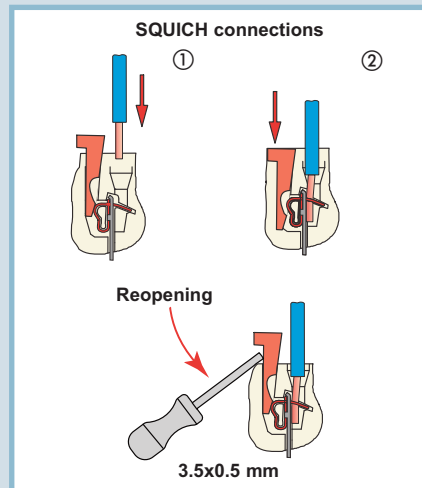
dimensions in mm



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



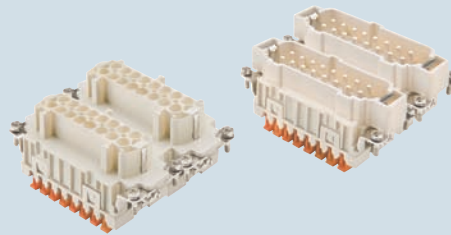
dimensions shown are not binding  
 and may be changed without notice

enclosures:  
size "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)

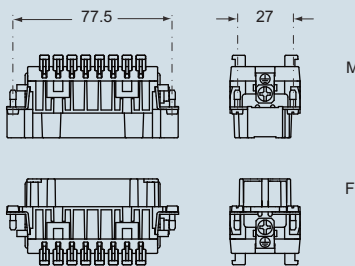
**CSHF 16**  
**CSHM 16**

**CSHF 16 N**  
**CSHM 16 N**

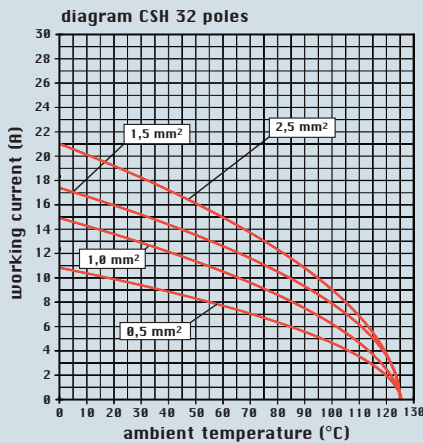
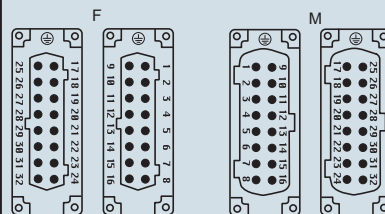
- characteristics according to EN 61984:

- 16A 500V 6kV 3**
- 16A 400/690V 6kV 2**
- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
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dimensions in mm

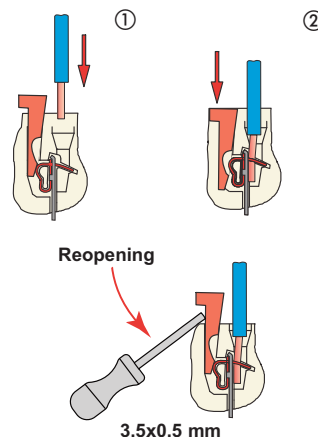


contacts side (front view)



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

**SQUICH connections**



dimensions shown are not binding  
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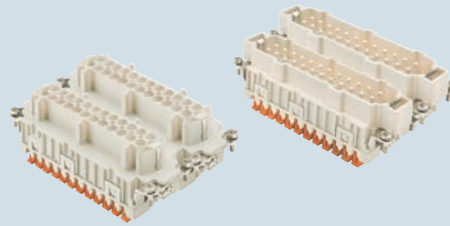
CSH

enclosures:  
size "104.62"

page:

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

inserts,  
spring terminal connections



**NEW**

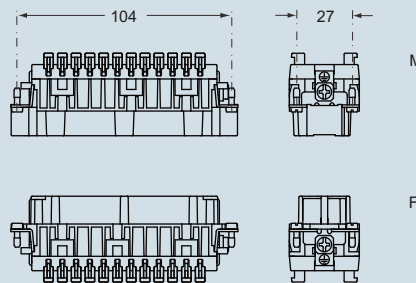
description	part No.	part No.
spring terminals with actuator button	<b>CSHF 24</b>	<b>CSHF 24 N</b>
female inserts with female contacts, No. (1-24) and (25-48)	<b>CSHM 24</b>	<b>CSHM 24 N</b>
male inserts with male contacts, No. (1-24) and (25-48)		

- characteristics according to EN 61984:

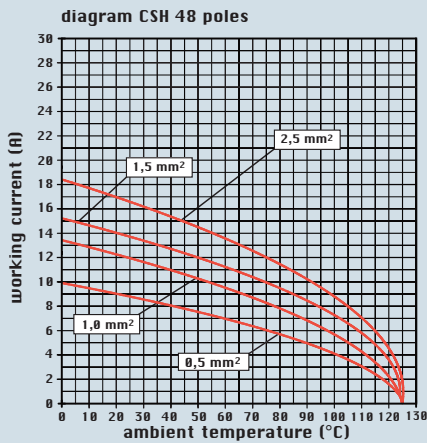
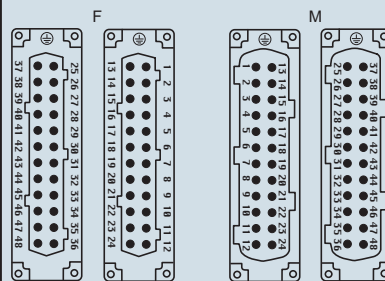
**16A 500V 6kV 3**  
**16A 400/690V 6kV 2**

- UL, CSA, CCC, GOST certified
- rated voltage according to UL/CSA: 600V
- insulation resistance:  $\geq 10 \text{ G}\Omega$
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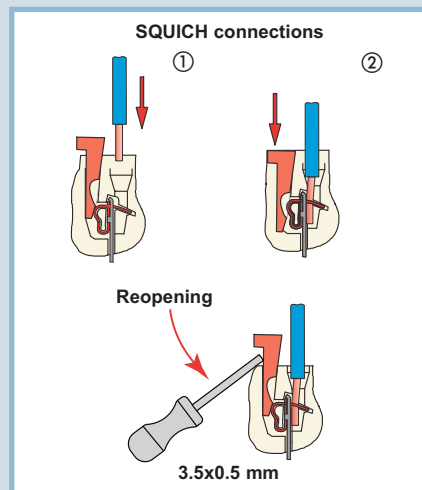
dimensions in mm



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