

**MA213-07 (cn\_en)**  
**安装说明**

**CombiTac uniq**  
**(先断后通-LMFB)**

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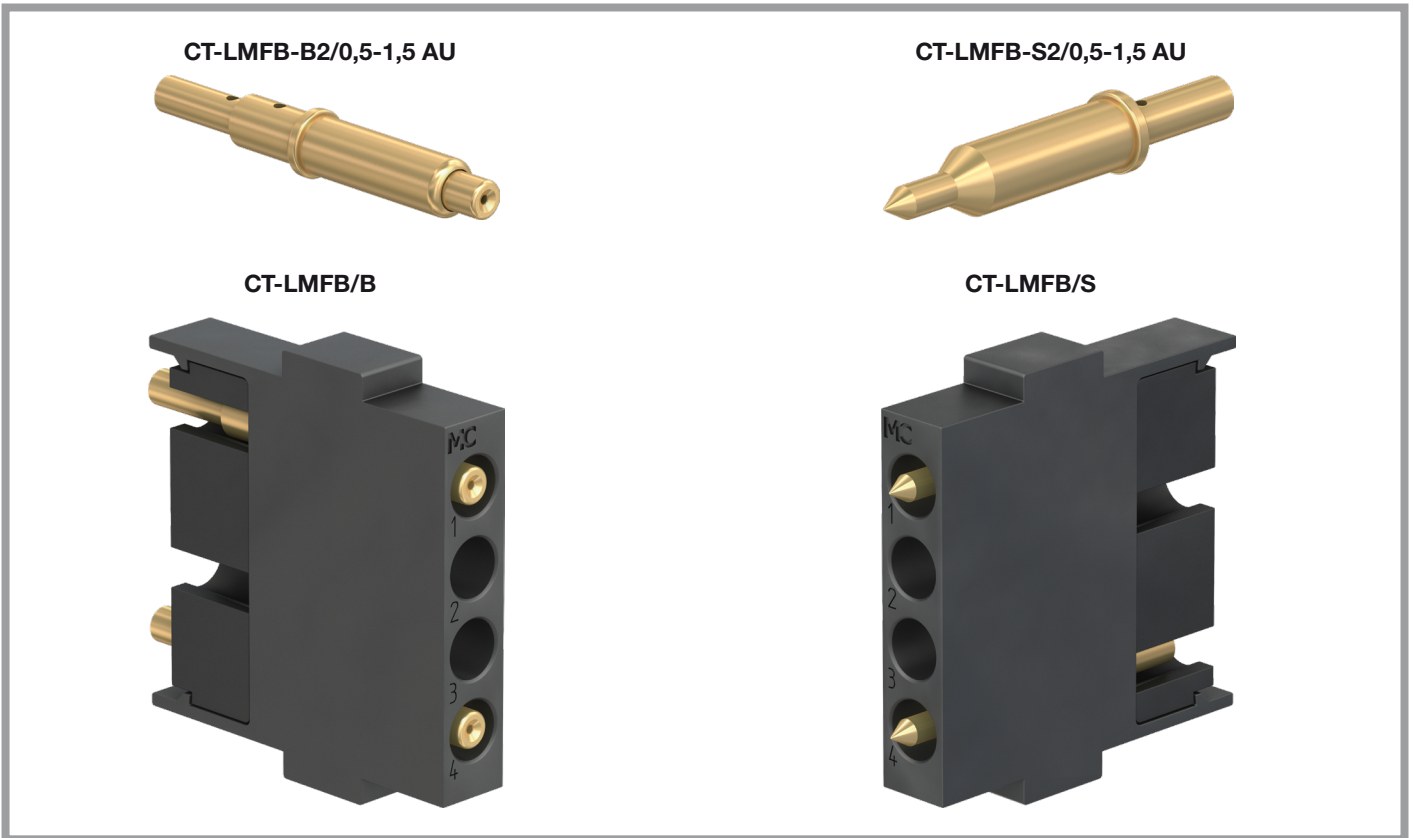
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**MA213-07 (cn\_en)**  
**Assembly instructions**

**CombiTac uniq**  
**(Last Mate First Break-LMFB)**

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## 安全指令

仅可使用 Stäubli 指定的部件和工具。自行装配时,切勿背离本手册所述的制备及装配说明,否则 Stäubli 无法保证产品安全性或性能达到官方技术参数。请勿以任何方式修改产品。

可与 Stäubli 元件插合的非 Stäubli 原厂制造的连接器的,在某些情况下,某些制造商甚至将其描述为“与 Stäubli 兼容”,但该连接器并不符合长期稳定安全的电连接要求,而且出于安全考虑,不得与 Stäubli 元件插合在一起。因此,Stäubli 对因此类连接器(即未经 Stäubli 批准)与 Stäubli 元件插合而造成的任何损失不承担任何责任。

如您未遵守上述警告,则 Stäubli Electrical Connectors (Stäubli) 不承担任何责任。



**IEC 60417-6182**  
安装需电气专业知识

产品可由具备电气技能或受过此方面指导的人员依照适用的安全法规进行装配或安装。



**IEC 60417-6042**  
注意电击风险

请在断电状态下工作

操作电气装置时,请遵守五项安全规定。

各电气装置确定后,应按照规定顺序执行以下五项基本要求(除非另有必要理由):

- 完全分离;
- 确保不会重新连接;
- 确认无工作电压;
- 进行接地和短路保护;
- 针对临近带电部件提供防护。

任何从事此工作活动的人员均应具备电气技能或受过此方面指导,或者由同等能力的人员监督。

来源:EN 50110-1:2013

最终应用时,还应检查电击防护。



**IEC 60417-6070**  
在负载下请勿断开连接

允许带电插拔。

## Safety instructions

Use only the components and tools specified by Stäubli. In case of self-assembly, do not deviate from the preparation and assembly instructions as stated herein, otherwise Stäubli cannot give any guarantee as to safety or conformity with the technical data. Do not modify the product in any way.

Connectors not originally manufactured by Stäubli which can be mated with Stäubli elements and in some cases are even described as "Stäubli-compatible" by certain manufacturers do not conform to the requirements for safe electrical connection with long-term stability, and for safety reasons must not be plugged together with Stäubli elements. Stäubli therefore does not accept any liability for any damages resulting from mating such connectors (i.e. lacking Stäubli approval) with Stäubli elements.

Stäubli Electrical Connectors (Stäubli) does not accept any liability in the event of failure to observe these warnings.

### Installation, electrotechnical expertise

The products may be assembled and installed by electrically skilled or instructed persons duly observing all applicable safety regulations.

### Caution, risk of electric shock

Work in a de-energized state

Follow the five safety rules, when working on electrical installations.

After the respective electrical installations have been identified, the following five essential requirements shall be undertaken in the specified order unless there are essential reasons for doing otherwise:

- disconnect completely;
- secure against re-connection;
- verify absence of operating voltage;
- carry out grounding and short-circuiting;
- provide protection against adjacent live parts.

Any person engaged in this work activity shall be electrically skilled or instructed, or shall be supervised by such a person.

Source: EN 50110-1:2013

Protection against electric shock shall be checked in the end-use applications too.

### Do not disconnect under load

Plugging and unplugging when live is permitted.

**安全指令****Safety instructions****ISO 7000-0434B**  
注意**Caution**

每次使用连接器前,需提前检查外部是否有缺陷(尤其是绝缘层)如有安全疑虑,必须咨询专业人员或更换连接器。

Each time the connector is used, it should previously be inspected for external defects (particularly the insulation). If there are any safety concerns, an electrically skilled person must be consulted or the connector must be replaced.

带外壳应用的连接器的防水功能可参考相关产品的IP保护等级。

The plug connectors are watertight in accordance with the product specific IP protection class.

未插合的连接器必须防潮防尘。被污染的公母连接器不应插合使用。

Unmated plug connectors must be protected from moisture and dirt. The male and female parts must not be plugged together when soiled.

**产品使用说明或技巧****Useful hint or tip**

更多技术参数请见产品目录。

For further technical data please see the product catalog.

### 工具准备

(ill. 1)  
压接钳 CT-M-CZ,  
订货号 33.3800

(ill. 2)  
可调定位器 MES-CZ, (适用导体截面积为 0.14 – 4 mm<sup>2</sup>)  
订货号 18.3801

### 电缆准备

**i 注意事项:**  
确保没有因为安装的电缆(或电缆锁紧头)对触子施加了拉力。

(ill. 3)  
将配件(如格兰头)提前套在电缆上。剥去多芯电缆的外层绝缘和单芯电缆的绝缘层。  
剥线长度 L1 请参考表 1。  
剥线长度 L 请参考安装指导 MA213-01。

### Tools required

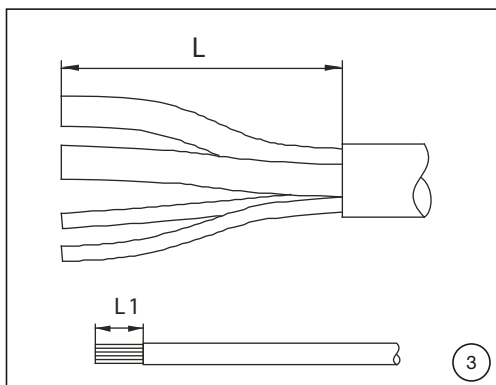
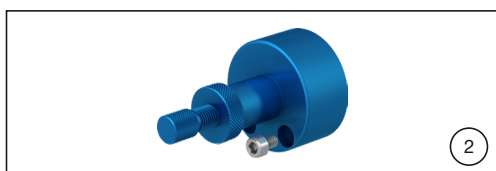
(ill. 1)  
Crimping pliers CT-M-CZ,  
Order No. 33.3800

(ill. 2)  
Adjustable locator MES-CZ, (for conductor cross section 0,14 – 4 mm<sup>2</sup>)  
Order No. 18.3801

### Cable preparation

**i Note:**  
Make sure that no pulling forces are present at the contacts through the assembled leads (Cable strain relief).

(ill. 3)  
Place accessories (e.g. cable gland) on the cable. Strip cable and single conductors.  
Length L1 for single conductors, see Tab. 1.



Tab. 1

导体横截面 Conductor cross section		压接钳 / Crimping pliers CT-M-CZ			L1
mm <sup>2</sup>	AWG	Selector AWG-N°	Selector SEL-N°	Locator	mm
0,5	20	20	4	MES-CZ	8
0,75	18	18	5		
1	18	18	5		
1,5	16	16	6		

### 电缆组装

#### 线缆压接

压接钳和定位器, 参照图 1 和图 2

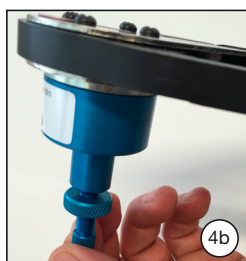
(ill. 4a, 4b, 4c)  
如图 4a 将触子放入压接钳压接孔位。  
如图 4b 调节定位器高度, 确保触子压接套端面与压接钳的压接孔位 V 型槽底齐平(图 4a), 然后如图 4c 调节锁死定位器的定位高度。

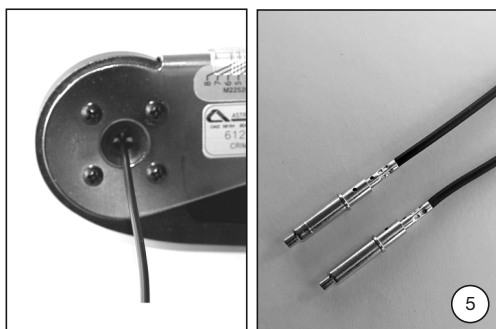
### Cable assembly

#### Crimp connection

Crimping pliers and locator according to ill. 1 and 2.

(ill. 4a, 4b, 4c)  
Insert contact as shown (ill. 4a).  
Adjust locator as shown (ill. 4b) to ensure contact is at same level as hole (ill. 4a), then lock adjustable locator into position (ill. 4c).



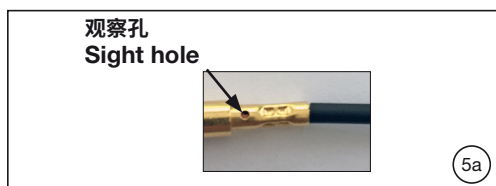


**(ill. 5)**  
将电线尽可能深地插入触子压接套筒，然后继续进行压接 (图 5)。

**(ill. 5)**  
Insert wire into the contact crimping sleeve as far as possible, and proceed with crimping (ill. 5).

**注意事项:**  
**i** 压接前后，必须能在观察孔中看到导线 (图 5a)。

**Note:**  
**i** Wires must be visible in the sight hole before and after crimping (ill. 5a).



## 装配

**注意事项:**  
**i** LMFB 触子的组装必须由技术人员使用适当设备进行。

## Assembly

**Note:**  
**i** The assembly of LMFB contacts must be carried out by a skilled person using appropriate equipment.

**注意**  
LMFB 触子在触子支撑块中的位置非常重要。

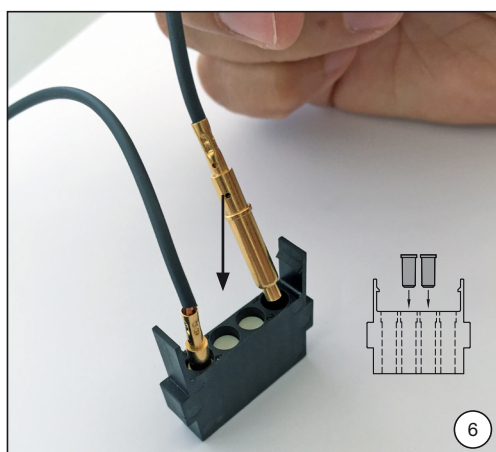
两个 LMFB 触子只能放在边缘插槽 (插槽编号 1 和 4) 中。  
LMFB 触子放置不正确，将导致 LMFB 无法正常运行。

我们建议使用堵头 CT-BSGOF, 33.4080 填充空插槽位置 2 和 3。  
确保堵头正确插入，如图 6 所示。

**Attention**  
The positioning of the LMFB contacts in the contact carrier is very important.

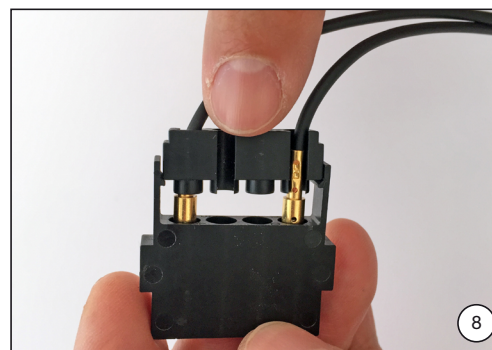
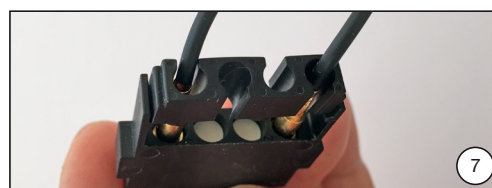
The two LMFB contacts should only be placed in the edge slots (slot number 1 and 4). Failure to place the LMFB contacts in the correct position, will lead to incorrect LMFB functionality.

We recommend using blind plugs CT-BSGOF, 33.4080 to fill empty slot positions 2 and 3. Ensure blind plugs are inserted correctly, as seen in ill. 6.



**(ill. 6)**  
将压接触子放入触子支撑块插槽 1 和 4 中。

**(ill. 7 - 8)**  
将固定板放入触子支撑块。

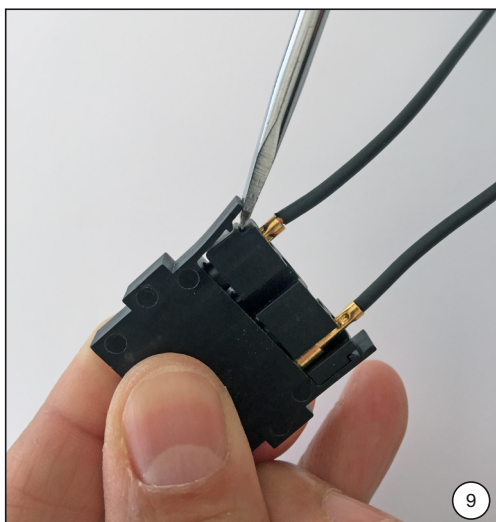


**(ill. 6)**  
Place crimped contacts in the contact carrier slots 1 and 4.

**(ill. 7 - 8)**  
Place the holding plate into the contact carrier.

**注意**  
检查是否正确锁止

**Attention**  
Check correct latching

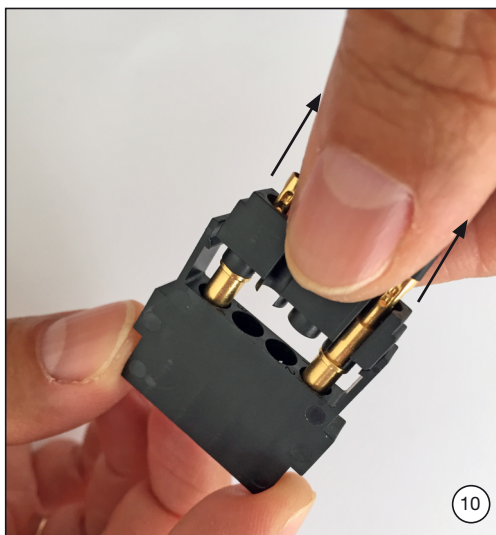


### 拆卸

**(ill. 9)**  
向外拉动固定闩以松开固定板。  
根据安装位置的不同,可能会用到螺丝刀。

### Disassembly

**(ill. 9)**  
Pull the retaining latch outwards to release holding plate.  
Depending on the installation position, a screwdriver may be used.



**(ill. 10)**  
将带有触子的固定板从触子支撑块中拉出。

**(ill. 10)**  
Pull holding plate with the contacts out of the contact carrier.

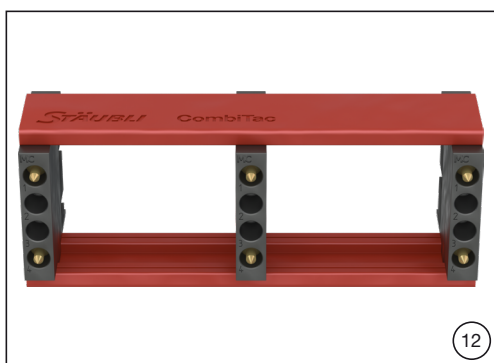
### LMFB 模块在 CombiTac 上的定位和布线



**(ill. 11)**  
对于单列 Combitac, 需要两个 LMFB 模块。必须将它们放置在边缘位置 (第一个和最后一个)。

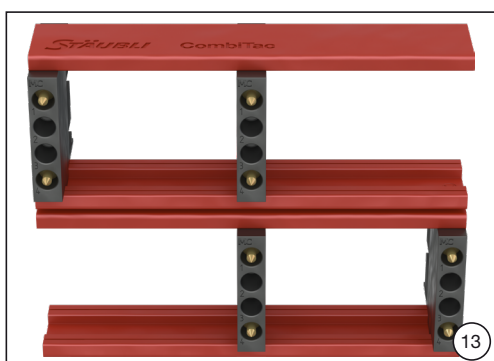
### Positioning and wiring of LMFB modules on CombiTac

**(ill. 11)**  
For a single row Combitac, two LMFB modules are required. They must be placed at the edge positions (first and last).



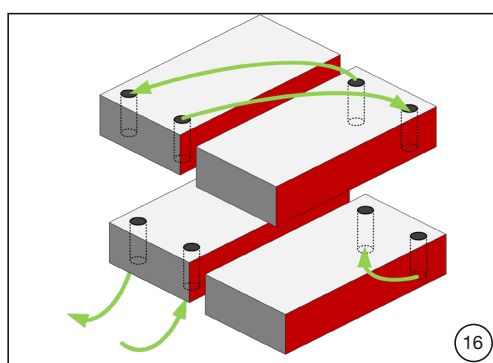
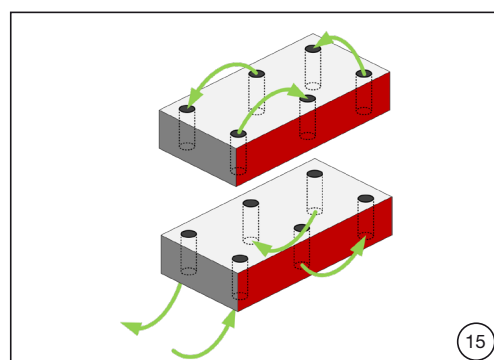
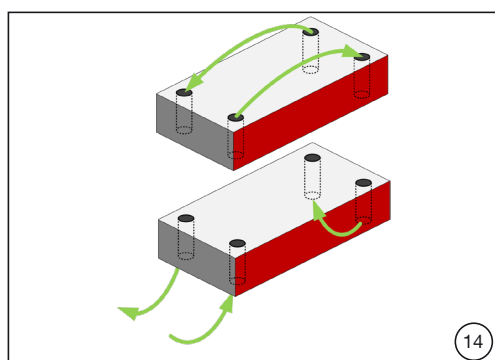
**(ill. 12)**  
对于大于 90 mm 的 CombiTac 导轨，如果需要使用三个 LMFB 模块，则必须在边缘位置（第一个和最后一个）放置两个，中央放置一个。

**(ill. 12)**  
For CombiTac rails > 90 mm, if a third LMFB module is needed, two must be placed at the edge positions (first and last), and one in the center.



**ⓘ 注意事项:**  
双列 CombiTac 需要两个 LMFB 模块，如图 13 所示。

**ⓘ Note:**  
A double row CombiTac requires two LMFB modules as shown in ill. 13.



**(ill. 14 – 16)**  
为确保 LMFB 触子正常运行，必须根据 CombiTac 的配置将触子串联（如图 14 – 16）。

**(ill. 14 – 16)**  
Depending on the CombiTac configuration, and to ensure correct functionality of LMFB contacts, the contacts must be connected in series as shown (ill. 14 – 16).

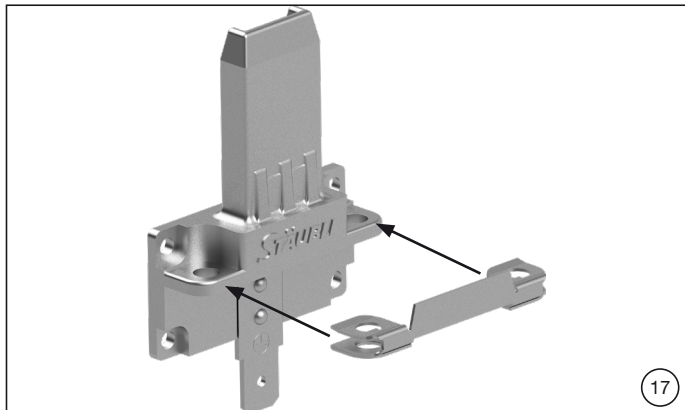
## 间隔夹

(ill. 17 – 18)

对于尺寸为1和6的外壳以及尺寸为5的基座外壳, 需要提高公差标准时可使用间隔夹。间隔夹不与产品一起供应, 若有需求可以单独订购。

CT-SC0,8

订货号 33.4157



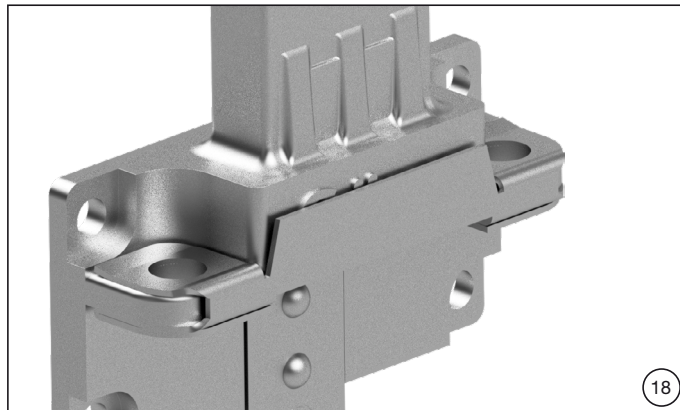
## Spacer clamp

(ill. 17 – 18)

For housing size 1, 6 and pedestal housing size 5, a spacer clamp is used if improvement of tolerance levels is required. The space clamp is not included in the delivery and can be ordered separately if needed.

CT-SC0,8

Order No. 33.4157



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