

# 無熔線斷路器使用說明書

感謝您選用本公司無熔線斷路器,在此請詳細閱讀說明書,

以確保能正確使用此項產品。

## 安全注意事項

在進行施工、使用、檢查、維修的動作前,請務必熟讀此說明書,在此說明書中,將安全注意事項分成「危險」「注意」兩個等級。

**△危險**：在錯誤的操作下有可能導致受到嚴重的傷害甚至死亡。

**△注意**：在錯誤的操作下有可能受到傷害或造成故障。

在標示 **△注意** 之表內記載的重要事項及可能產生的結果請務必熟讀及遵行。

## 使用注意事項

### △危險

端子部切勿觸摸以免遭受電擊。

### △注意

無熔線斷路器自己跳脫時,要先排除故障原因,再投入(ON)。當無熔線斷路器有啟動大電流(短路電流)時,需更換新品。

## 維護、檢修注意事項

### △注意

- (1)維護、檢修的工作需由具有專業知識的人實施。
- (2)在維護、檢修的工作進行前,需確認上位的電源開關在OFF狀態。
- (3)鎖線(或鎖導板)的螺絲要按表1的扭力值鎖緊,並且在開始使用後也要定期檢查,以免因螺絲鬆動造成火災。

表1.端子螺絲的標準扭力

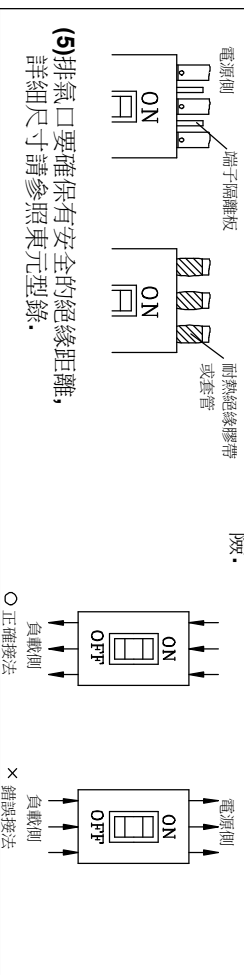
端子螺絲 (種類及規格)	扭力值N.m(kgf.cm)
汎用型 (M5)	2.3 ~ 3.4 (23 ~ 35)
汎用型 (M8)	4.9 ~ 6.9 (50 ~ 70)
內六角 (M8)	7.8 ~ 12.7 (80 ~ 130)
內六角 (M10)	13.7 ~ 22.5 (140 ~ 230)
六角M10 (六角頭)	22.5 ~ 37.2 (230 ~ 380)
六角M12 (六角頭)	40.2 ~ 65.7 (410 ~ 670)

## 施工注意事項

- 施工時各部份之詳細必要尺寸,請參照東元型錄。

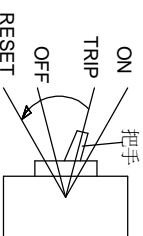
### △注意

- (1)電氣施工要由電氣專業人員負責。
- (2)配線作業時,要確定在無電狀態下工作。
- (3)端子螺絲鎖電線或銅導板時,需按表1之扭力值作業,以免因未鎖緊而造成火災。
- (4)正面接線之無熔線斷路器,其裸露之帶電導體間要加裝端子隔離板,裝針對部分機種僅附2片時,則請安裝於電源側端,若未附端子隔離板時,請自行加上耐熱絕緣膠帶或是套管,以減少相間短路的可能。
- (5)排氣口要確保有安全的絕緣距離,詳細尺寸請參照東元型錄。
- (6)高溫、潮溼、塵埃、腐蝕性氣體、振動、衝擊或其它異常環境下使用,有可能會使無熔線斷路器無法跳脫而導致火災或是在負載正常下跳脫。
- (7)無熔線斷路器內部若有異物侵入時,有可能在發生線路故障時,因此無法正常跳脫而引起火災,故在流工中應避免木泥粉屑、鐵屑等粉屑掉入或雨水噴濺。
- (8)無熔線斷路器之電源側及負載側不宜反接使用,若反接使用將造成短路故障能力降低,且電源側和負載側和平時相反,維護人員易因誤判產生危險。



## 其它注意事項

- 1.無熔線斷路器之把手在「ON」位置和「OFF」位置中間時顯示TRIP(跳脫)狀態,若要恢復ON狀態要先切到RESET(復歸)位置才能再投入ON位置。



- 2.無熔線斷路器有安裝內部附屬裝置時,不可直接抓取其引出電線當作提把來提,此種動作將造成機能故障。

## 產品ROHS資訊

- 請到網站 <https://tecoie.teco.com.tw/download/rohs>

- 3.無熔線斷路器的上蓋請勿拆下,若側邊封籤破損則本公司不負此品質責任。
- 4.無熔線斷路器的背面絕緣板請勿取下,若取下;有發生接地故障的可能。
- 5.無熔線斷路器上的跳脫按鈕,是為了確認跳脫機構或加裝的警報開關動作功能,是否能正常使用,在平時要切斷電源時請使用把手,以免減低無熔線斷路器的壽命。
- 6.電線及導板規格要依額定電流選用,若使用低於標準的規格,將使無熔線斷路器發生誤跳脫或過熱的現象。

**東元電機股份有限公司**

新竹縣新竹工業區中華路15號

TEL:(03)5981711

# MOLDED CASE CIRCUIT BREAKER

Thank you for purchasing the TECO Molded Case Circuit Breaker. Please read these instructions carefully to ensure correct use of the product.

## Safety Notices

Be sure to read these instructions and other documents accompanying the product thoroughly to be familiar with the product handling, safety information, and all other precautions before mounting, using, servicing, or inspecting the product. In these instructions, safety notices are divided into "Warning" and "Caution" according to the hazard level:

**Warning** A warning notice with this symbol indicates that neglecting the suggested procedure or practice could result in lethal or serious personal injury.

**Caution** A caution notice with this symbol indicates that neglecting the suggested procedure or practice could result in moderate or slight personal injury and/or property damage. Note that failing to observe caution notices could result in serious results under some situation. Because safety notices contain important information, be sure to read and observe them.

## Handling Precautions

- Never touch terminals.
- Otherwise, electric shock may result.

## Warning

- When the breaker trips open automatically, remove the cause, then return the handle to the ON position. When the breaker interrupts a large current(short-circuit current), replace it by new one.

## Caution

## Maintenance Precautions

- Service and/or inspection of the product must be done by persons having expert knowledge.
  - Before Servicing and/or inspecting the product, open an upstream circuit breaker or the like to ensure that no voltage is applied to the product.
  - Otherwise, electric shock may result.
- Regularly retighten terminal screws to the torque specified in Table 1 on the right. Loose terminal screws could cause a fire.

**Table 1:**  
**Terminal Screws and Tightening Torque (for Front-Connected Breaker)**

Terminal Screws (Type and nominal diameter)	Tightening torque N · m[kgf · cm]
Pan head screw M5	2.3 ~ 3.4[23 ~ 35]
Pan head screw M8	4.9 ~ 6.9[50 ~ 70]
Hex socket head screw M8	7.8 ~ 12.7[80 ~ 130]
Hex socket head screw M10	13.7 ~ 22.5[140 ~ 230]
Hex head screw M10 (with terminal bar)	22.5 ~ 37.2[230 ~ 380]
Hex head screw M12 (with terminal bar)	40.2 ~ 65.7[410 ~ 670]

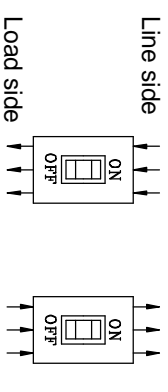
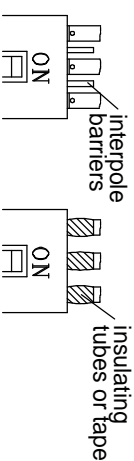
## Mounting Precautions

- For detailed mounting dimensions, refer to the TECO catalogue.

## Caution

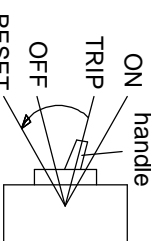
- Electric work must be performed by persons who are qualified for electric work.
- Before doing electric wiring work on the product, open an upstream circuit breaker or the like to ensure that no voltage is applied to the product. Otherwise, electric shock may result.
- When connecting wires or a busbar to the product, tighten terminal screws to the torque specified in Table 1. Otherwise, a fire could result.
- For front-connected circuit breaker, be sure to insulate bare conductors using interpole barriers, insulating tubes, insulating tape, or the like. Otherwise, short-circuit may result.
- Do not block the arc gas vents of the product to ensure adequate arc space(insulation distance). Blocking these vents could result in failure of current interruption.
- Do not place the product in such a area that is subject to high temperature, high humidity, dusty air, corrosive gas, strong vibration and shock, or other unusual conditions. Mounting in such areas could cause a fire or false tripping.
- Be careful to prevent foreign objects (debris, concrete powder iron powder, etc.) and rainwater from entering the product. These materials inside the product could cause a fire or malfunction.
- Reversing connection of line side and load side of a MCCB is not suggested, because it will lower the rated Breaking Capacity of the MCCB. Such operation which is different from usual way might also cause danger to maintenance person owing to misjudgment.

**PS: As for item 4, enclosed 2 pcs of interpole barriers for certain molds, please mount them on the Line side.**



## Other Precautions

- The operating handle being between the ON and OFF positions indicates the tripped state. To close the breaker, move the handle to the RESET position, then to the ON position.
- Do not open the breaker cover. Doing so could make our product quality assurance invalid.
- Do not remove the rear cover. Doing so could cause a ground fault.
- The trip button should be pressed for the sole purpose of checking the tripping mechanism and alarm switch(optional)for normal operation. Do not use this button to open the breaker. Doing so will shorten the breaker's service life.
- When mounting the product, use wires or copper strips, the cross sectional areas of which accommodate the rated current of the product. Using them with smaller cross sectional areas may cause false tripping and overheal.



- Do not carry the product by the lead wire for accessories. Doing so may cause a trouble.

## Product RoHS Information

Download from the site  
<https://teco.teco.com.tw/download/rohs>

# TECO ELECTRIC & MACHINERY CO., LTD.

15 Chung-hwa Rd., Hsinchu Industrial Park, Taiwan, R. O. C.  
TEL:886-3-5981711 W/ [www.teco.com.tw](http://www.teco.com.tw)