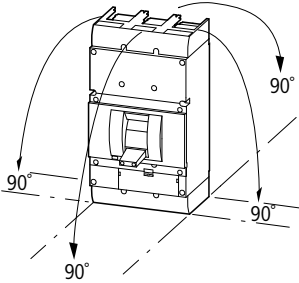


NZMN(H)(L)4(-4)-AE(VE)(ME)... NZMN(H)(L)4-AE(AEF)...-NA N4(-4)-... NZMN(H)(L)4-VE(VEF)...-NA +NZM4(-4)-XT N(S)4-...-NA

(UL/CSA models)



⚠️ (en) Electric current! Danger to life!

Only skilled or instructed persons may carry out the following operations.

(de) Lebensgefahr durch elektrischen Strom!

Nur Elektrofachkräfte und elektrotechnisch unterwiesene Personen dürfen die im Folgenden beschriebenen Arbeiten ausführen.

(fr) Tension électrique dangereuse !

Seules les personnes qualifiées et averties doivent exécuter les travaux ci-après.

(es) ¡Corriente eléctrica! ¡Peligro de muerte!

El trabajo a continuación descrito debe ser realizado por personas cualificadas y advertidas.

(it) Tensione elettrica: Pericolo di morte!

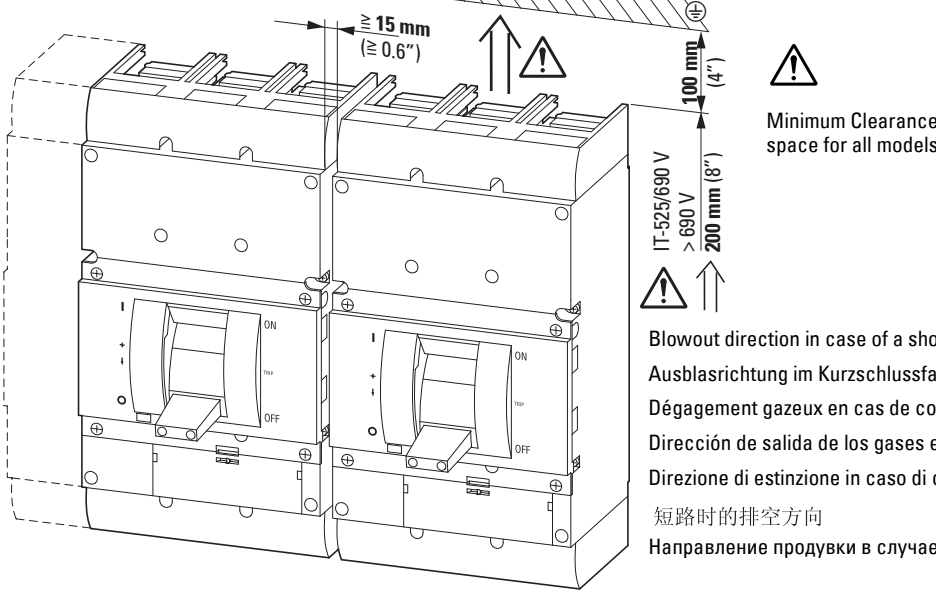
Solo persone abilitate e qualificate possono eseguire le operazioni di seguito riportate.

(zh) 触电危险!

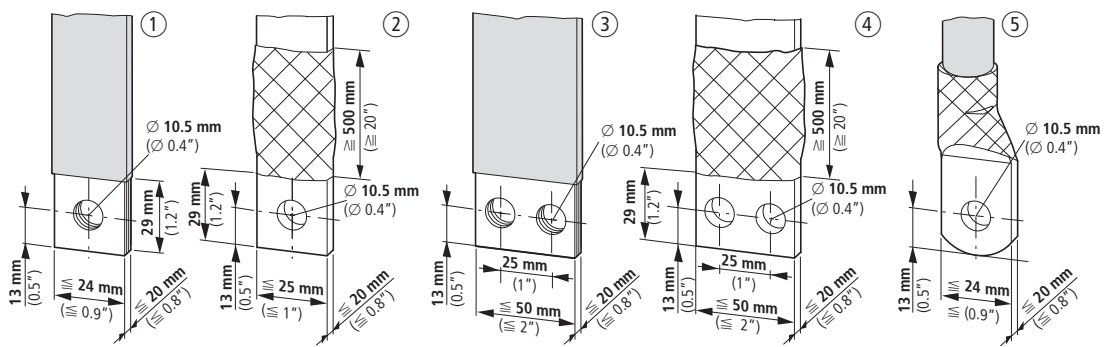
只允许专业人员和受过专业训练的人员进行下列工作。

(ru) Электрический ток! Опасно для жизни!

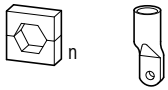
Только специалисты или проинструктированные лица могут выполнять следующие операции.



M10
metric size hardware



①	②	③	④	⑤
≅ (2 x) 10 x 24 x 1 mm ≅ (2 x) 10 x 0.9" x 0.04"	≅ (2 x) 25 x 10 mm ≅ (2 x) 1" x 0.4"	(2 x) 10 x 50 x 1 mm (2 x) 10 x 2" x 0.04"	(2 x) 50 x 10 mm (2 x) 2" x 0.4"	1 x 120 - 185 mm ² 4 x 50 - 185 mm ²
→ XKB ≅ (2 x) 10 x 32 x 1 mm ≅ (2 x) 10 x 1.25" x 0.04"	→ XKM1 ≅ (2 x) 50 x 10 mm ≅ (2 x) 2" x 0.4"			1 x 250 - 350 kcmil 4 x AWG 0 - 350 kcmil
→ XKM1 ≅ (2 x) 10 x 50 x 1 mm ≅ (2 x) 10 x 2" x 0.04"				→ NZM-XKV 6 x 95 - 240 mm ² 4 x 300 mm ² 4 x AWG 000 - 500 kcmil 2 x 600 kcmil



n = Number of crimps
 n = Anzahl der Pressungen
 n = Nombre de sertissages
 n = Número de compresiones
 n = Numero delle crimpature
 n = 压制数量
 n = Число пресований

2	KS120-NZM7
2	KS150-NZM7
2	NZM3-XKS185
4	NZM3-XKS240 → XKM1



120 mm ²	KS120-NZM7
150 mm ²	KS150-NZM7
185 mm ²	NZM3-XKS185
240 mm ²	NZM3-XKS240 → XKM1

en ATTENTION

The removal or exchange of parts during mounting may become necessary. Refer to installation instructions for proper assembly and to maintain electrical clearances.

de ACHTUNG

Für die Durchführung der beschriebenen Arbeiten kann das Entfernen oder der Austausch von Teilen notwendig sein. Bitte alle Installations-Anweisungen beachten, um die erforderlichen Luft- und Kriechstrecken nach dem Zusammenbau zu gewährleisten.

fr ATTENTION

L'enlèvement ou l'échange de certaines pièces pendant le montage est parfois nécessaire. Consultez l'instruction d'assemblage pour assurer une installation conforme aux normes.

es CUIDADO

Con el fin de llevar a cabo los trabajos descritos, puede ser necesario eliminar o cambiar alguna pieza. Le rogamos tenga en cuenta todas las instrucciones de instalación para así garantizar las líneas de fuga y eflujo necesarias tras el montaje.

it AVVISO

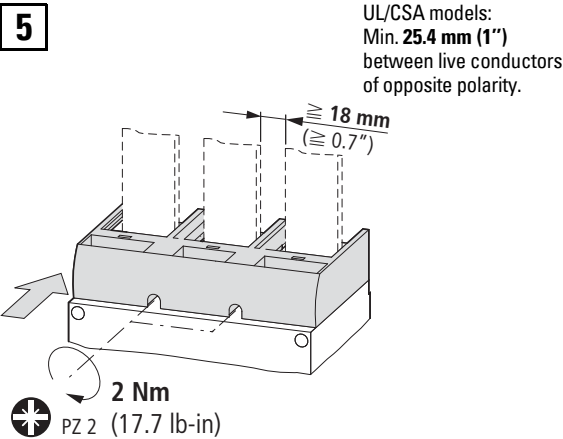
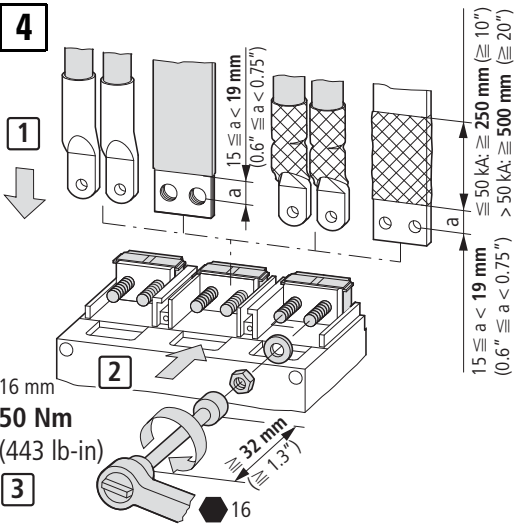
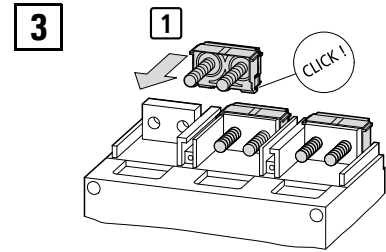
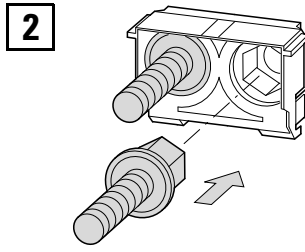
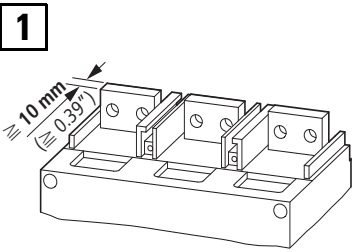
Per l'esecuzione degli interventi descritti potrebbe essere necessaria la rimozione o sostituzione di alcuni pezzi. Attenersi alle istruzioni d'installazione per garantire dopo l'assemblaggio le vie di dispersione necessarie.

zh 注意

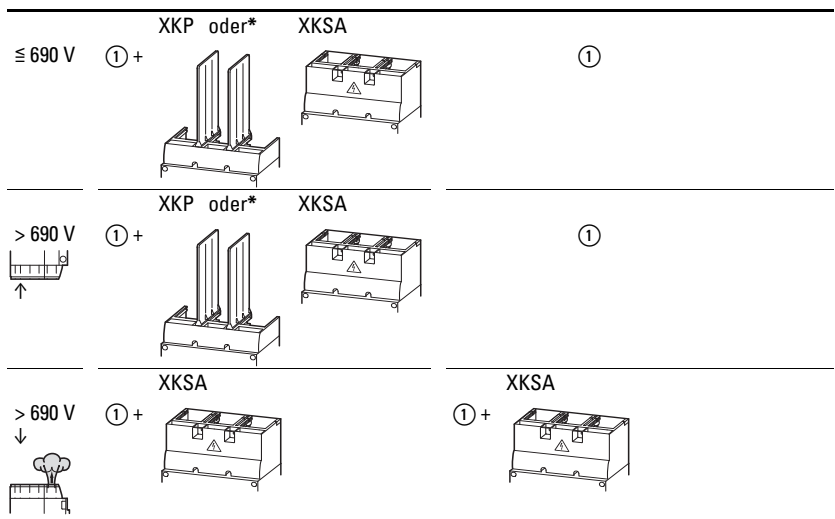
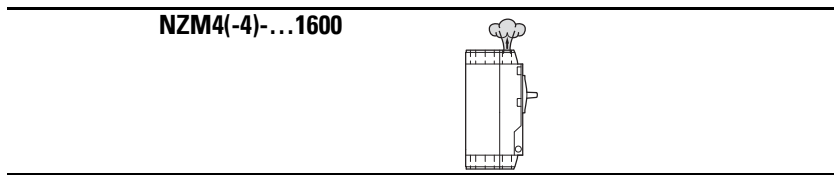
执行所描述的操作时可能需要拆除或更换零部件。请遵守所有相关的安装说明，以确保在组装后能获得需要的空间距离或爬电距离。

ru ВНИМАНИЕ

При проведении описанных процедур может возникнуть необходимость демонтировать или заменить детали. Для обеспечения надлежащих зазоров и вывода тока утечки, соблюдайте все инструкции по монтажу.



UL/CSA models:
 Min. 25.4 mm (1")
 between live conductors
 of opposite polarity.



① Basic device – Grundgerät – Appareil de base – Aparato base – Apparecchio base – 基础设备 – Основное устройство
 + Combination options – Kombinationsmöglichkeiten – Combinaisons possibles – Combinaciones posibles – Combinazioni possibili – 组合方法 – Комбинационные возможности
 * or – oder – ou – ó – oppure – 或者 – или
 ↓ Supply from above – Einspeisung von oben – Alimentation par le haut – Alimentación desde arriba – Alimentazione dall'alto – 由上部供给 – Подача сверху
 ↑ Supply from below – Einspeisung von unten – Alimentation par le bas – Alimentación desde abajo – Alimentazione dal basso – 由下部供给 – Подача снизу

03/20 IL01210010Z



$I_{cc} \geq 50$ kA.

I_{cc} = Available fault in kiloamps. (RMS sym.)

(en) At higher fault levels ($I_{cc} \geq 50$ kA) appropriate bracing of the incoming and outgoing supply conductors is necessary. Location of bracing is not to exceed **200 mm (8")** from the Circuit-Breaker housing as shown. Bracing material must be non-conductive.

(de) Leiter mit einem nichtleitenden Material verbinden, das Kurzschlusskräfte von $I_{cc} \geq 50$ kA aufnehmen kann.

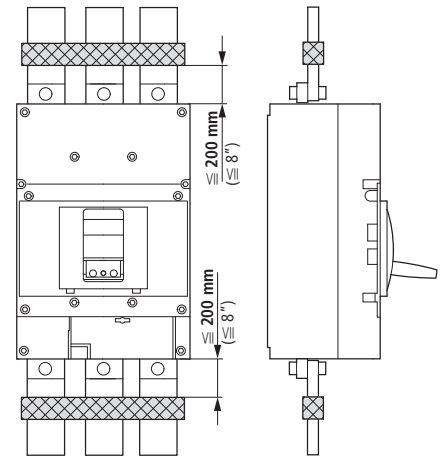
(fr) Raccorder les conducteurs avec un matériau non conducteur pouvant supporter des courts-circuits de $I_{cc} \geq 50$ kA.

(es) Conectar el cable con material no conductor, el cual puede resistir fuerzas de cortocircuito de $I_{cc} \geq 50$ kA.

(it) Ancorare i cavi con materiale non conduttivo che possa sopportare sollecitazioni di $I_{cc} \geq 50$ kA.

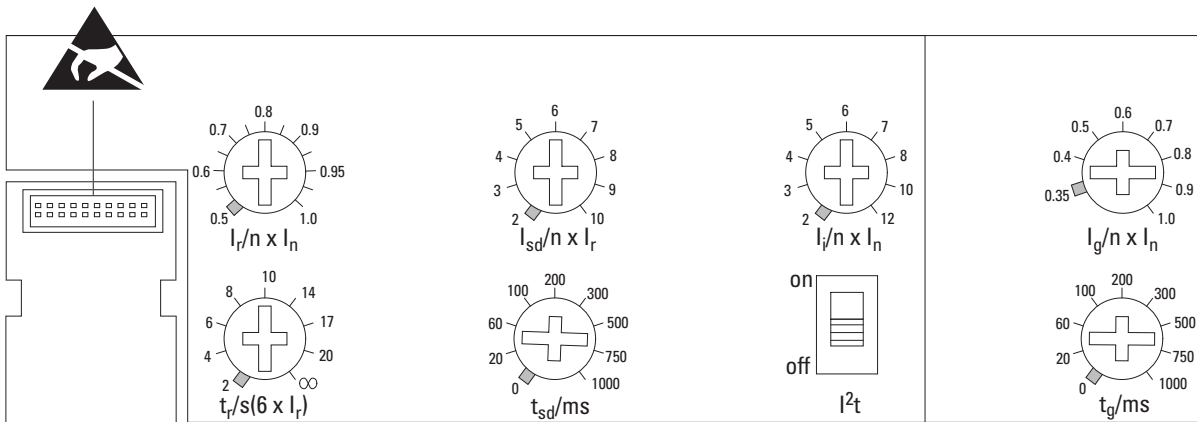
(zh) 将导线与能够承受 $I_{cc} \geq 50$ kA 断路能力的不导电的材料连接。

(ru) Провод соединить с непроводящим материалом, могущим воспринимать усилия при коротком замыкании I_{cc} f 50 kA.



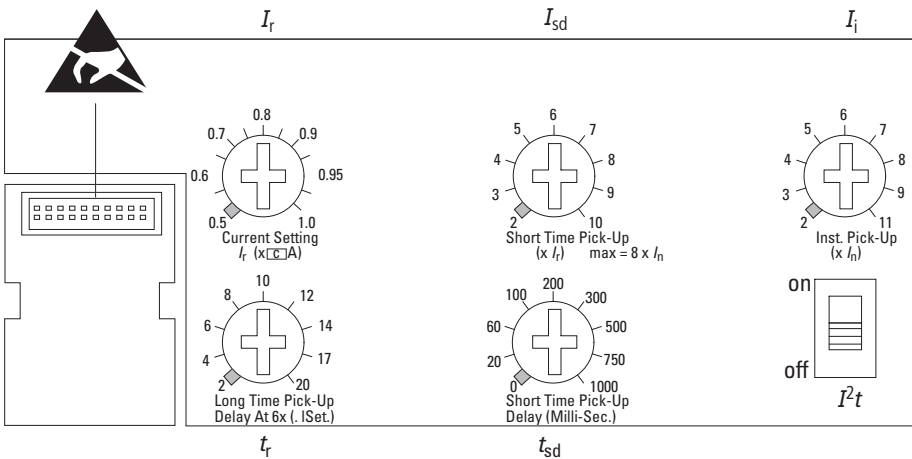
NZMN(H)(L)4(-4)-(AE)(VE)(ME)...

+NZM4(-4)-XT



03/20 IL01210010Z

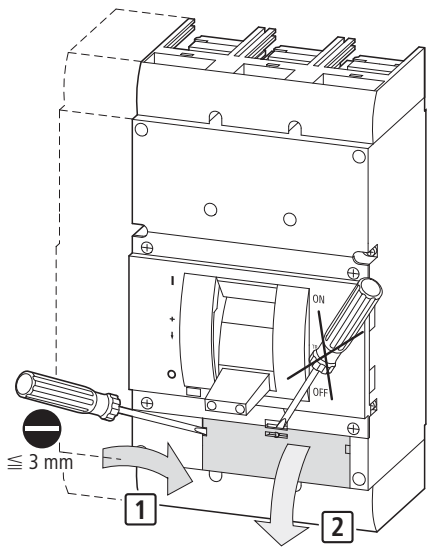
-NA, -CNA Electronic Trip Circuit-Breaker Adjustable Settings (UL/GSA models)



	Current setting I_r (x c A)	Long Time Pick-Up Delay at 6 x I_r (sec)	Short Time Pick-Up (x I_r)	Short Time Pick-Up Delay (milli-sec.)	Inst. Pick-Up (x I_n)	I^2_t
NZM4-VE...-NA	X	X	X	X	X	X
NZM4-VEF...-NA	Fixed current Rating	X	X	X	X	X
NZM4-AE...-NA	X	—	—	—	X	—
NZM4-AEF...-NA	Fixed current Rating	—	—	—	X	—

1

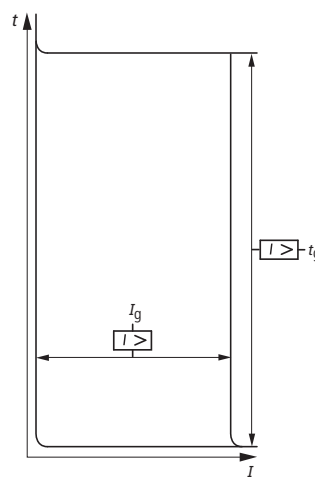
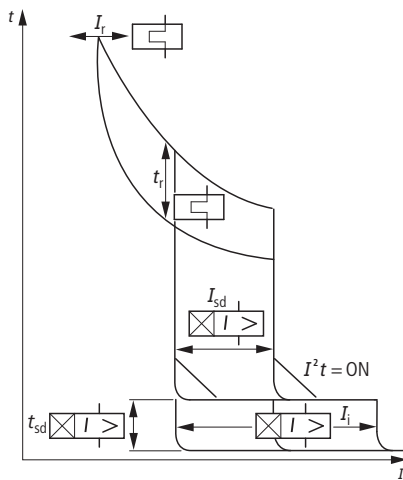
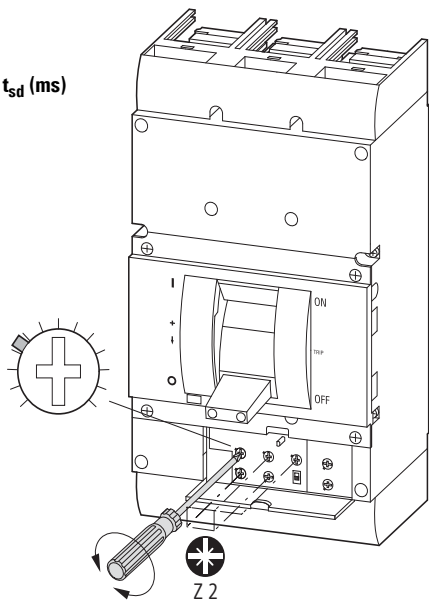
Settings
Einstellung
Réglages
Parámetros
Regolazione
设置
Настройка



(I_n = Max. current rating)
 I_r = Adjustable current setting (0.5 - 1.0 x I_n) for Long Time Pick-up.
 t_r = Adjustable Long Time Pick-up Delay (2 - 20 sec.) factory set at 10 seconds.
 I_{sd} = Adjustable Short Time Pick-up (2 - 10 x I_r) factory set at 6 x I_r .
 t_{sd} = Short-Time Pick-up Delay (0 - 1000 ms) factory set at 0 ms.
 I_i = Instantaneous Pick-up (2 - 12 x I_n) factory set at 12 x I_n .
 I^2t function switch = factory set to OFF.

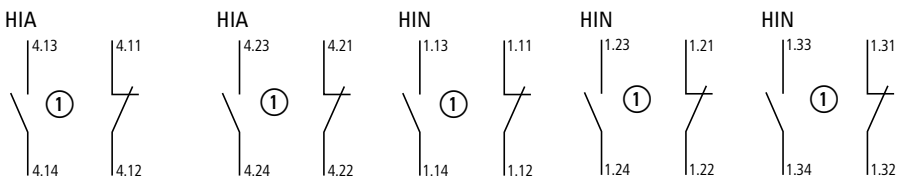
2

I_r (A), t_r (s), I_{sd} (A), t_{sd} (ms)
 I_i (A)
 I^2t ON/OFF
 I_g (A), t_g (ms)



03/20 IL01210010Z

M22-K10 M22-K01 M22-CK10 M22-CK01 Auxiliary Switches



① or – oder – ou – ó – oppure – 或者 – или

Notes on mounting and wiring Auxiliary Switches for UL/CSA labeled models:

- M22-K(10)(01) have screw terminals. M22-CK(10)(01) have clamp terminals.
- Switch modules are snapped into place at the locations shown in the diagrams that follow.
- Switches will function as either „standard“ or „trip/alarm“ contacts depending on their mounting location.
- Location „HIN“ refers to standard operation. Location „HIA“ refers to „trip/alarm“ operation.
- Follow the numbering and wiring scheme provided above depending on the contact location and function. (N.O. or N.C.)

Permissible contact configuration: 2 x HIA and/or 3 x HIN.

Note:

After mounting of the M22... switch is complete, check off the appropriate box on the auxiliary switch label provided on the side of the breaker or switch.

IEC



$I_{th} = I_e$

	U_e (V)	I_e (A)
AC-15	115	4
	230	4
	400	2
	500	1
DC-13	24	3
	42	1.7
	60	1.2
	110	0.6
	220	0.3

-NA, -CNA (UL/CSA)



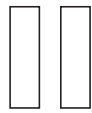
$I_{th} = I_e$

U_e (V)	I_e (A)
600 AC	5
250 DC	1

Pilot Duty Ratings:
 B 600, Q 300
 Above 300 VAC
 Same polarity

M22-CK11
M22-CK20
M22-CK02

HIA



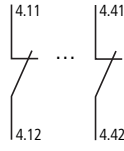
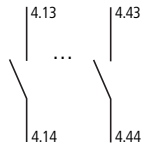
M22-CK11

①

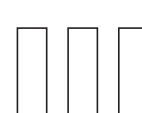
M22-CK20

①

M22-CK02



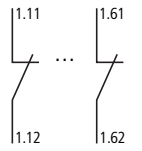
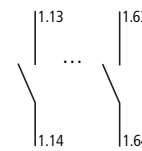
HIN



M22-CK11

M22-CK11

M22-CK02



① or – oder – ou – ó – oppure – 或者 – или

IEC



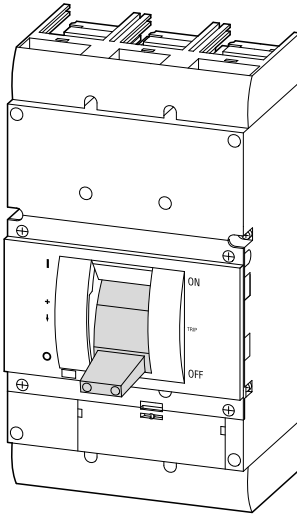
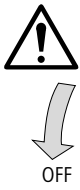
$$I_{th} = I_e$$

	U_e (V)	I_e (A)
AC-15	115	4
	230	4
DC-13	24	3
	42	1
	60	0.8
	110	0.5
	220	0.2

03/20 IL01210010Z

1

Mounting
Montage
Montaje
Montaggio
安装
Монтаж

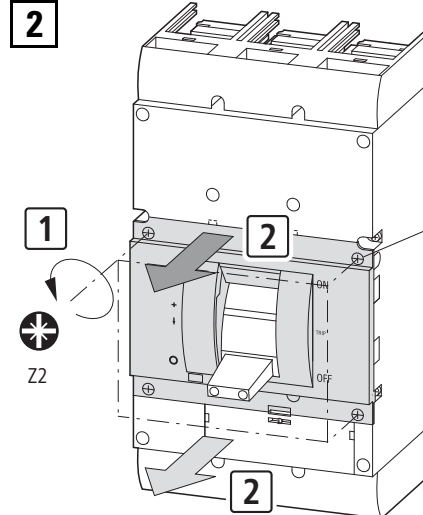
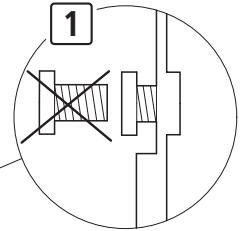


2

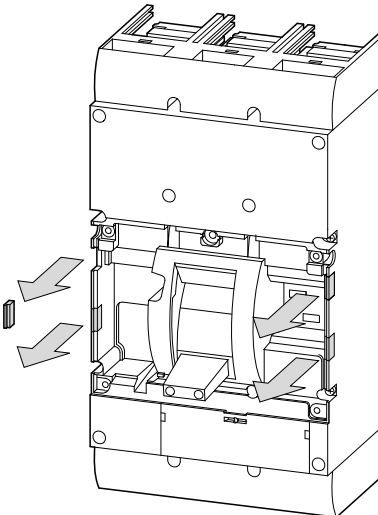
1



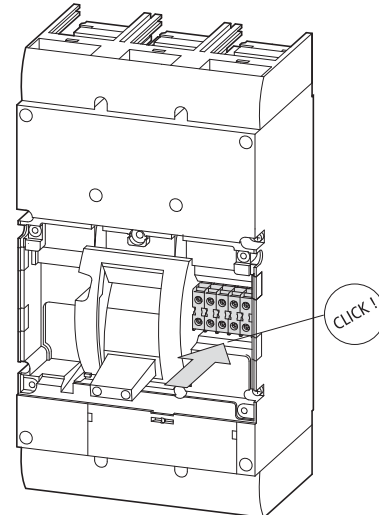
2



3



4



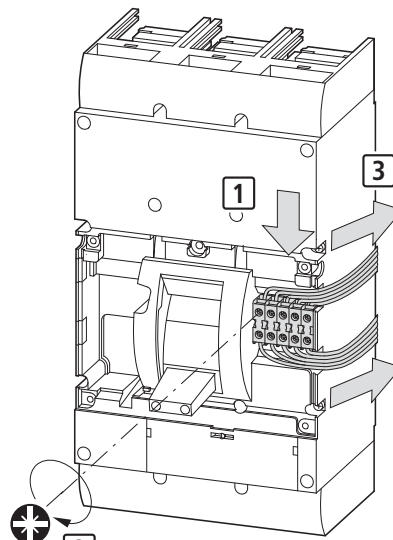
5a M22-K10, M22-K01
(Screw Terminals)

...K10: N. O. Contact
...K01: N. C. Contact

$a = 6 - 10\text{mm}$
($a = 0.32 - 0.4''$)

2 x 0.75 - 2.5 mm²
2 x AWG 18 - AWG 14

UL/CSA = Cu only

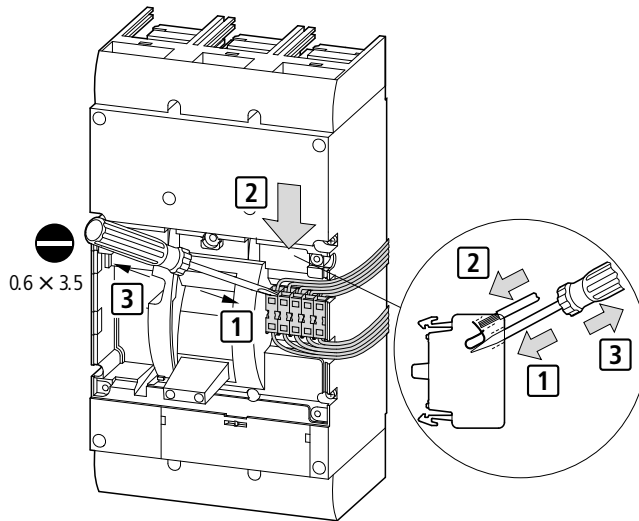


PZ 2 **2**
1 Nm (9 lb-in)

5b M22-CK10, M22-CK01
(Clamp Terminals)

2 x 0.75 - 2.5 mm²
2 x AWG 18 - AWG 14

UL/CSA = Cu only



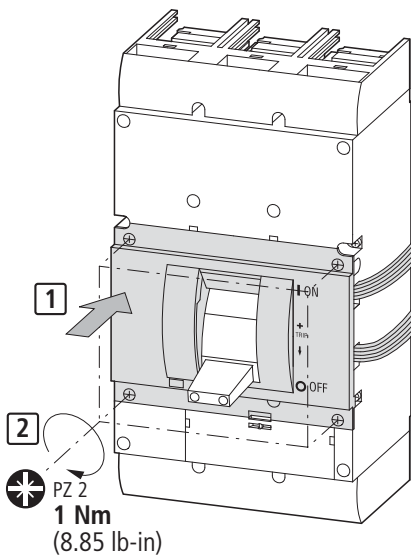
0.6 x 3.5

5c M22-CK11, M22-CK20, M22-CK02
(Clamp Terminals)

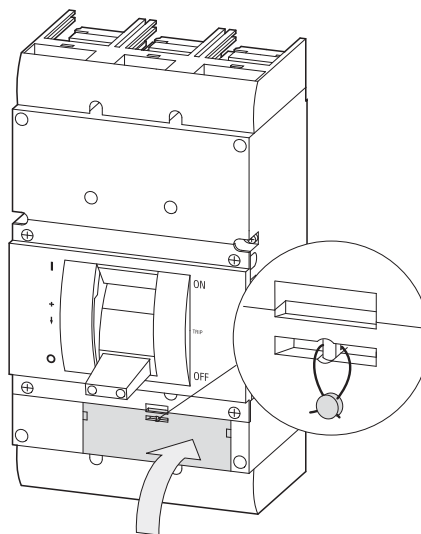
$a = 8\text{mm}$
($a = 0.32''$)

1 x 0.5 - 1.5 mm²
2 x 0.5 - 0.75 mm²
1 x AWG20 - AWG16
2 x AWG20 - AWG18

6

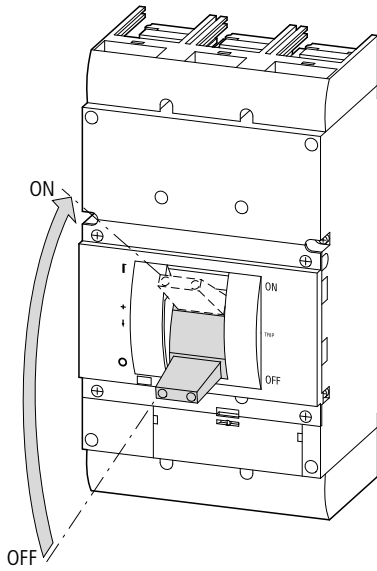


PZ 2 **2**
1 Nm
(8.85 lb-in)

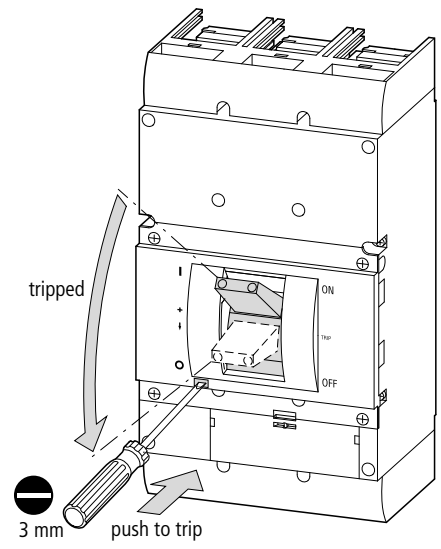


03/20 IL01210010Z

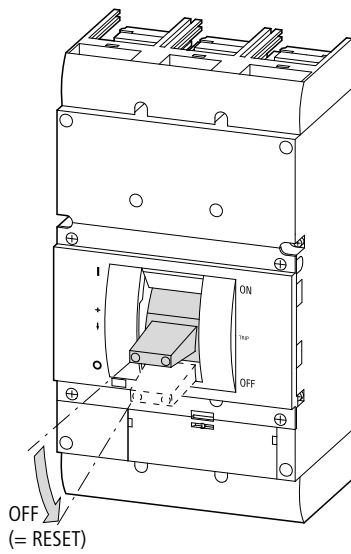
TEST 1



TEST 2

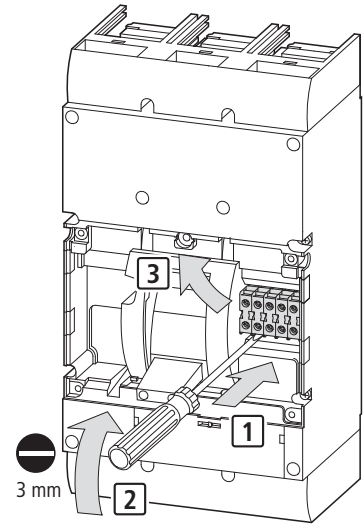


TEST 3



1

Dismounting
Démontage
Demontage
Smontaggio
拆卸
Демонтаж



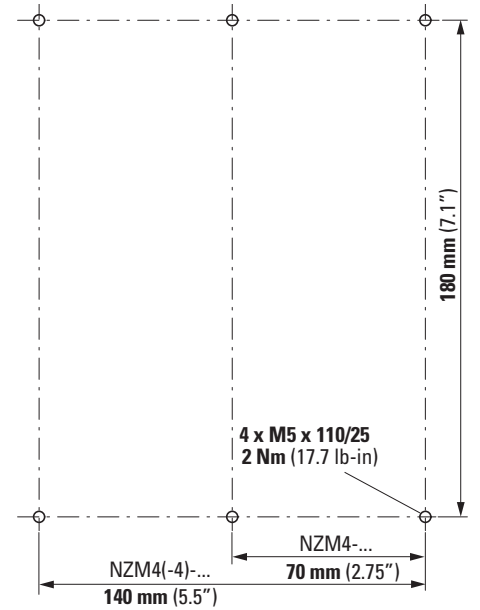
03/20 IL01210010Z

Wiring terminations Circuit-Breaker type NZM...4...-NA (CNA)
Wiring terminations molded case switch type NS4...-NA

Connector Type	Wire size	Wire 75° C	Max. A-Rating	Tightening-Torque
1) Bolt on			1200	50 Nm (443 lb-in)
NZM4-XKA	4 x AWG 1/0 – 500 kcmil	Cu only	1100	31 Nm (275 lb-in)
2) integrated Auxiliary Terminal	1 x AWG 12 - 18	Cu only		1.2 Nm (11 lb-in)

Wiring terminations molded case switch type N4...-NA

Connector Type	Wire size	Wire 75° C	Max. A-Rating	Tightening-Torque
1) Bolt on			1100	50 Nm (443 lb-in)
NZM4-XKA	4 x AWG 1/0 – 500 kcmil	Cu only	1100	31 Nm (275 lb-in)
2) integrated Auxiliary Terminal	1 x AWG 12 - 18	Cu only		1.2 Nm (11 lb-in)



- 1) 2 holes per phase, suitable for metric size 10 (M10) hardware.
- 2) Integrated Auxiliary Terminal supplied standard on Barrel (Tunnel) Mechanical lug Connector Type NZM4-XKA only.