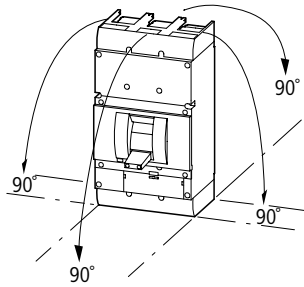


**NZMN(H)(L)4(-4)-AE(VE)(ME)...  
N4(-4)-...  
+NZM4(-4)-XT  
NZMN(H)(L)4-AE(VE)...-AP  
N4-...-AP**



**NZMN(H)(L)4-AE(AEF)...-NA  
NZMN(H)(L)4-VE(VEF)...-NA  
N(S)4-...-NA**  
(UL/CSA models)



**Lebensgefahr durch elektrischen Strom!**  
Nur Elektrofachkräfte und elektrotechnisch unterwiesene Personen dürfen die im Folgenden beschriebenen Arbeiten ausführen.

**Electric current! Danger to life!**

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

**Tension électrique dangereuse !**

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

**Tensione elettrica: Pericolo di morte!**

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

**¡Corriente eléctrica! ¡Peligro de muerte!**

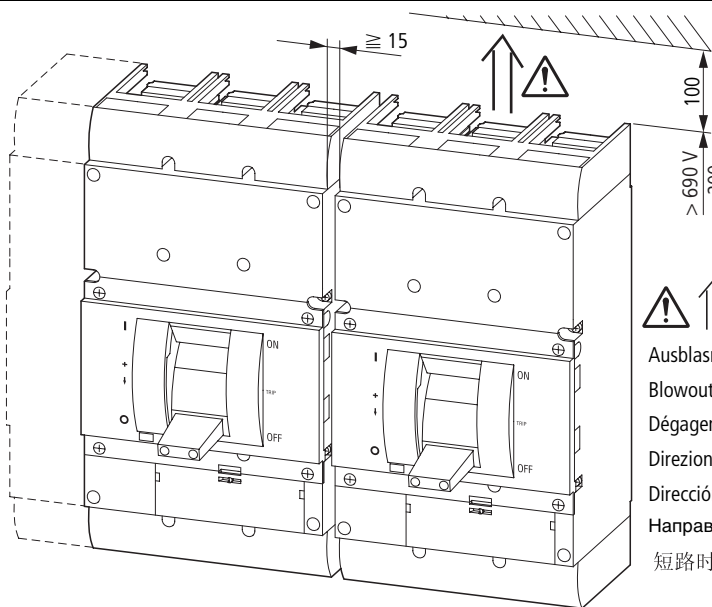
El trabajo a continuación descrito debe ser realizado por personas cualificadas y advertidas.

**Электрический ток! Опасно для жизни!**

Только специалисты или проинструктированные лица могут выполнять следующие операции.

**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。



Ausblasrichtung im Kurzschlussfall

Blowout direction in case of a short-circuit

Dégagement gazeux en cas de court-circuit.

Direzione di estinzione in caso di corto circuito

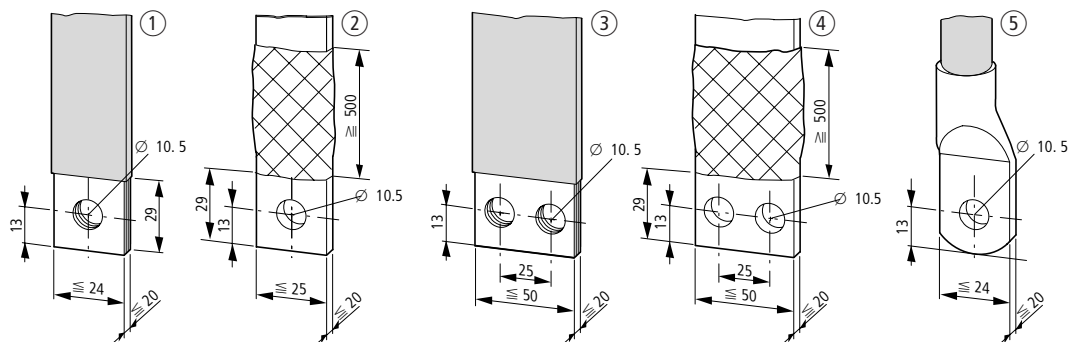
Dirección de salida de los gases en caso de cortocircuito

Направление продувки в случае короткого замыкания

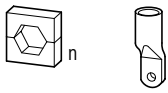
短路时的排空方向



**M10**  
metric size hardware



①	②	③	④	⑤
≅ (2 ×) 10 × 24 × 1 mm	≅ (2 ×) 25 × 10 mm	(2 ×) 10 × 50 × 1 mm	(2 ×) 50 × 10 mm	4 × 50 – 185 mm <sup>2</sup>
→ XKB	→ XKM1			4 × AWG 0 – 350 kcmil
≅ (2 ×) 10 × 32 × 1 mm	≅ (2 ×) 50 × 10 mm			→ NZM-XKV
→ XKM1				6 × 95 – 240 mm <sup>2</sup>
≅ (2 ×) 10 × 50 × 1 mm				4 × 300 mm <sup>2</sup>
				4 × AWG 000 – 500 kcmil
				2 × 600 kcmil



n

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

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



A

120 mm <sup>2</sup>	KS120-NZM7
150 mm <sup>2</sup>	KS150-NZM7
185 mm <sup>2</sup>	NZM3-XKS185
240 mm <sup>2</sup>	NZM3-XKS240 → XKM1



**Vorsicht!**

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.

**Caution!**

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

**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.

**Attenzione!**

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.

**Atención!**

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 efluvio necesarias tras el montaje.

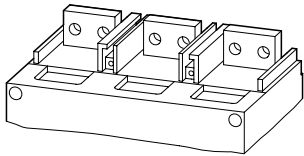
**Осторожно!**

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

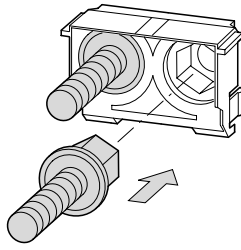
**小心!**

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。

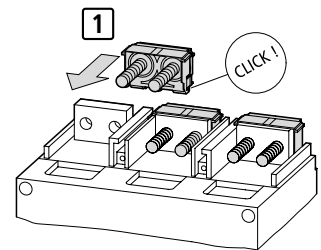
1



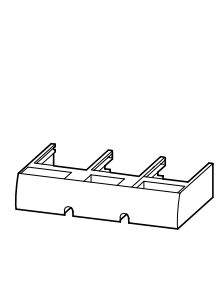
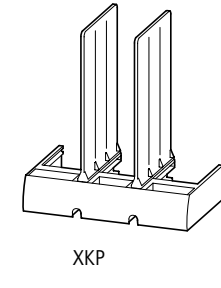
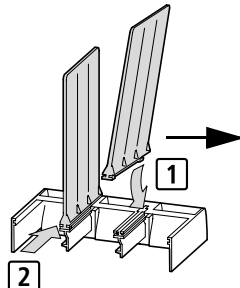
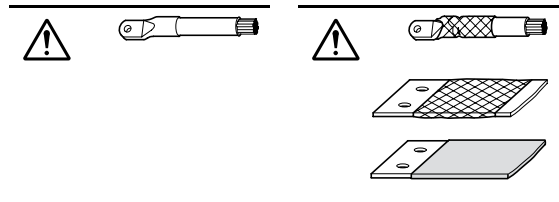
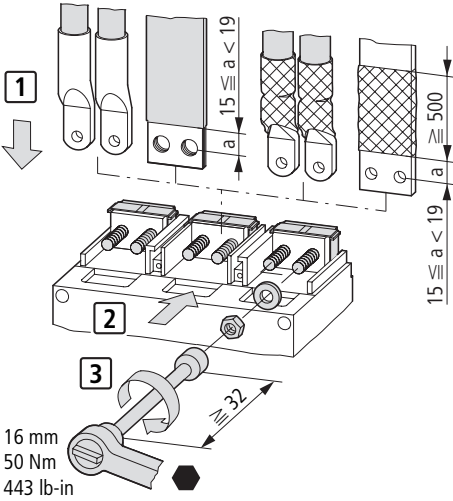
2



3

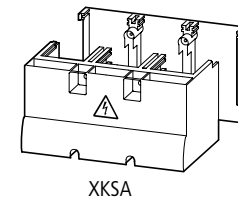
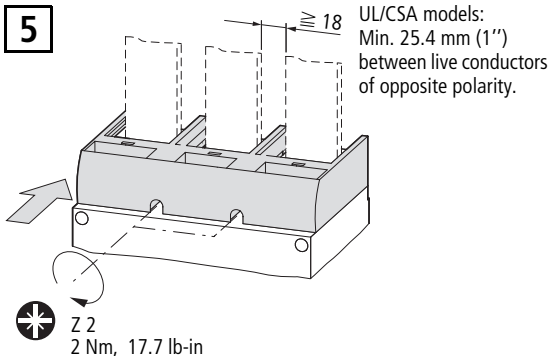


4



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

5



Phase barriers and terminal covers used with NZM4 Molded Case Circuit Breakers and Switches to maintain electrical clearances. Consult respective Connector kit instruction sheets.

**!**  $I_{cc} \geq 50 \text{ kA}$ .

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

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

At higher fault levels ( $I_{cc} \geq 50 \text{ kA}$ ) 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.

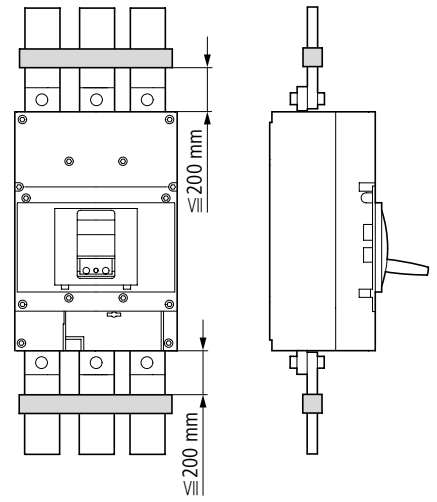
Raccorder les conducteurs avec un matériau non conducteur pouvant supporter des courts-circuits de  $I_{cc} \geq 50 \text{ kA}$ .

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

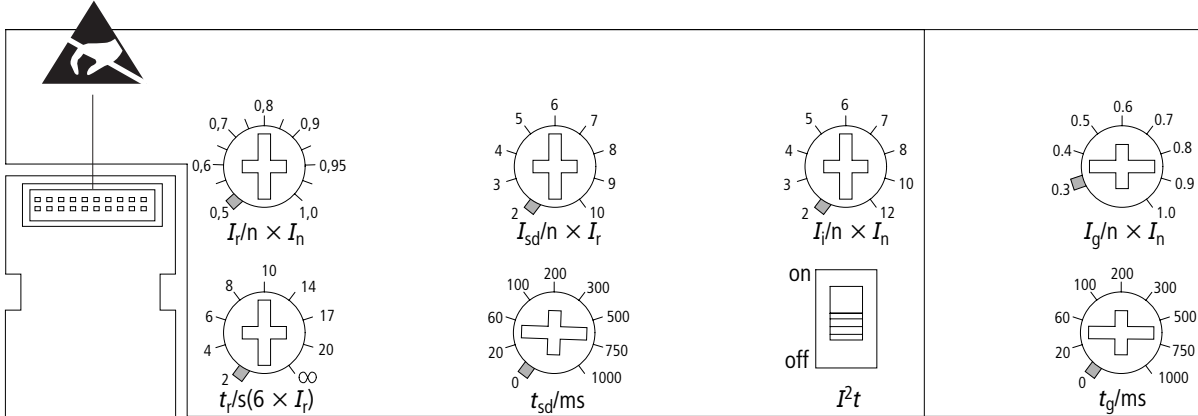
Conectar el cable con material no conductor, el cual puede resistir fuerzas de cortocircuito de  $I_{cc} \geq 50 \text{ kA}$ .

Провод соединить с непроводящим материалом, могущим воспринимать усилия при коротком замыкании  $I_{cc} \geq 50 \text{ kA}$ .

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

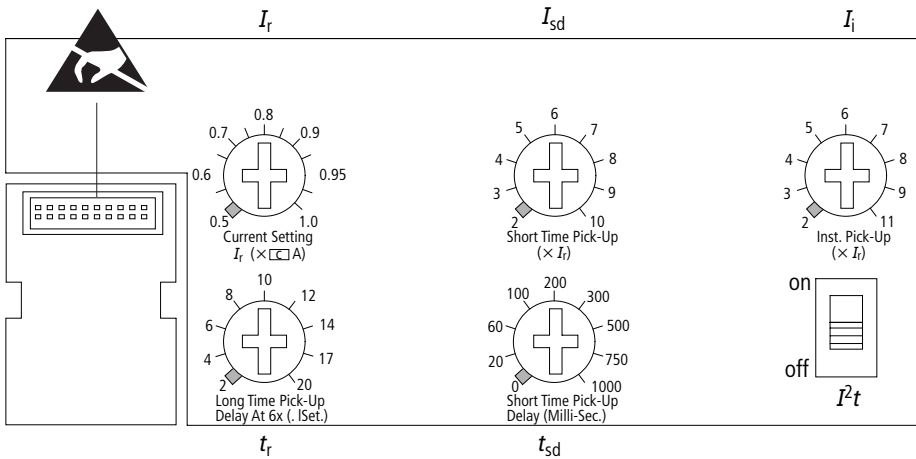


**NZMN(H)(L)4(-4)-(AE)(VE)(ME)...(-AP)  
+NZM4(-4)-XT**



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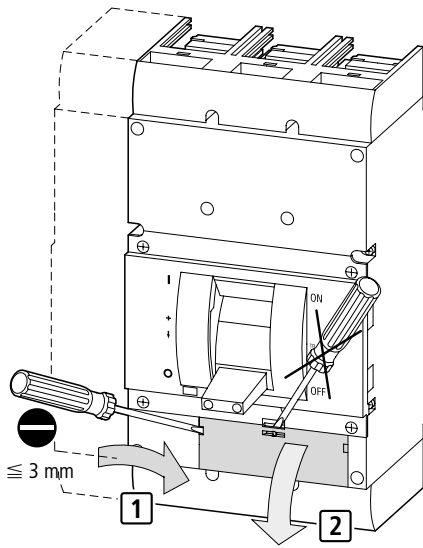
**-NA, -CNA Electronic Trip Circuit Breaker Adjustable Settings (UL/CSA models)**



	Current setting $I_r (\times c A)$	Long Time Pick-Up Delay at $6 \times I_r$ (sec)	Short Time Pick-Up ( $\times I_r$ )	Short Time Pick-Up Delay (milli-sec.)	Inst. Pick-Up ( $\times I_n$ )	$I^2t$
NZM4-VE...-NA	×	×	×	×	×	×
NZM4-VEF...-NA	Fixed current Rating	×	×	×	×	×
NZM4-AE...-NA	×	-	-	-	×	-
NZM4-AEF...-NA	Fixed current Rating	-	-	-	×	-

1

Einstellung  
Settings  
Réglages  
Regolazione  
Parámetros  
Настройка  
設置



( $I_n$  = Max. current rating)

$I_r$  = Adjustable current setting ( $0.5 - 1.0 \times I_n$ ) 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 ( $2 - 10 \times I_r$ ) factory set at  $6 \times I_r$ .

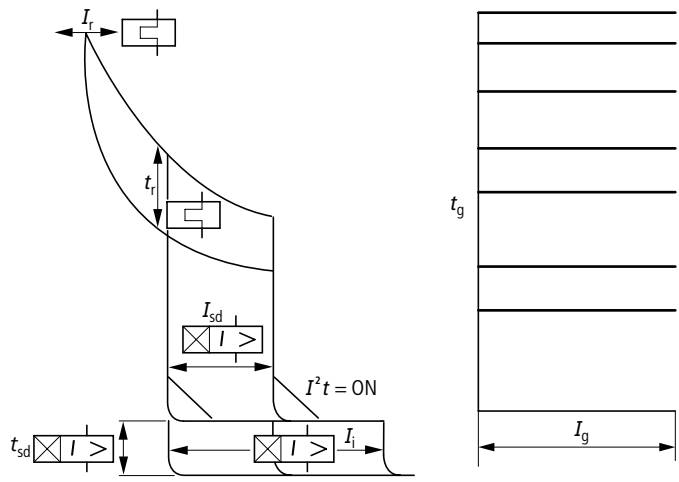
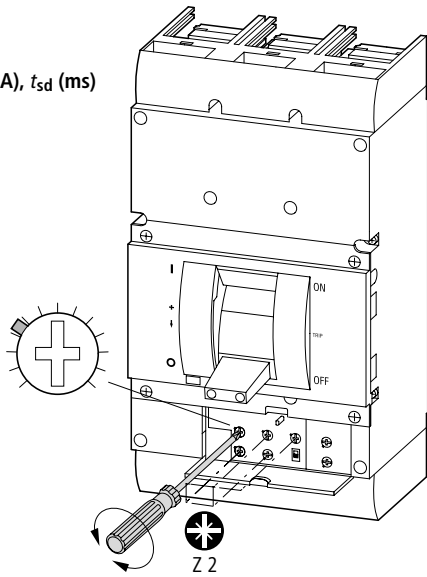
$t_{sd}$  = Short-Time Pick-up Delay (0 – 1000 ms) factory set at 0 ms.

$I_i$  = Instantaneous Pick-up ( $2 - 12 \times I_n$ ) factory set at  $12 \times I_n$ .

$I^2t$  function switch = factory set to OFF.

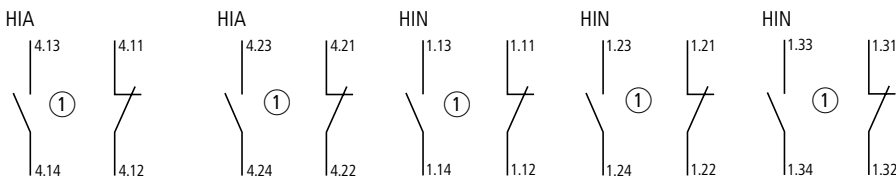
2

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



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



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

**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 × HIA and/or 3 × 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.

-NA, -CNA (UL/CSA)



$I_{th} = I_e$

$U_e$ (V)	$I_e$ (A)
600 AC	10
250 DC	1

Pilot Duty Ratings:  
A 600, P 300  
Above 300 VAC  
Same polarity

IEC

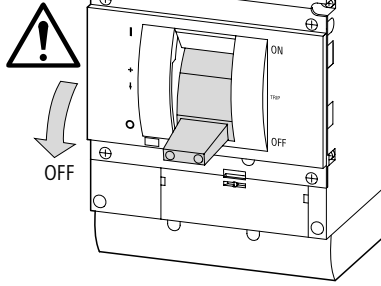


$I_{th} = I_e$

	$U_e$ (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	0.8
	220	0.3

1

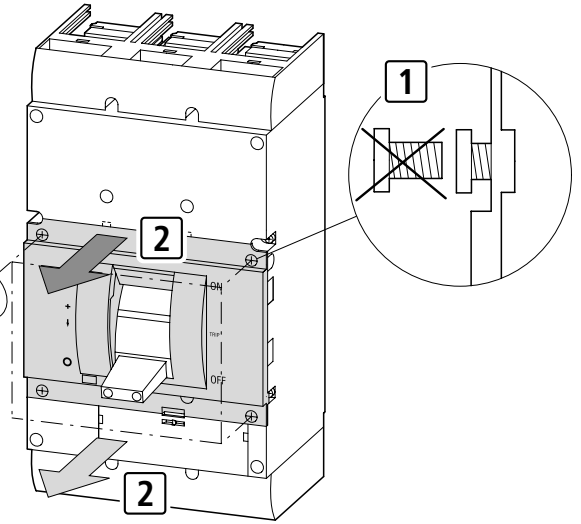
Montage  
Mounting  
Montaggio  
Montaje  
Монтаж  
安装



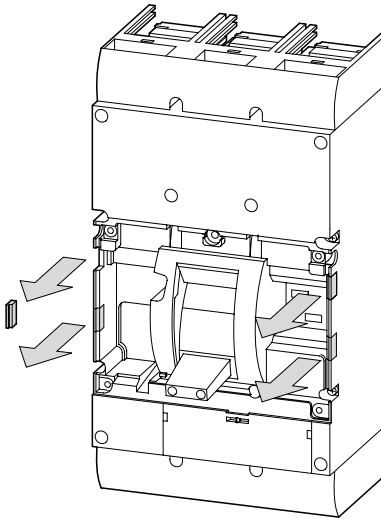
2

1

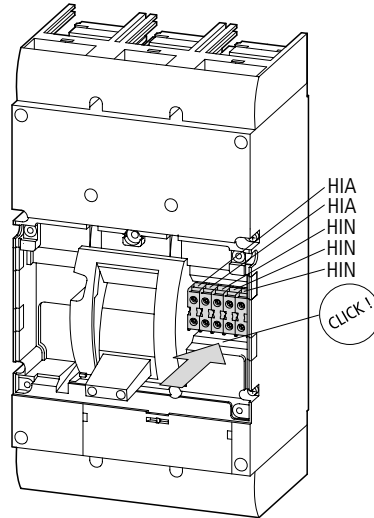
Z 2



3



4



5a

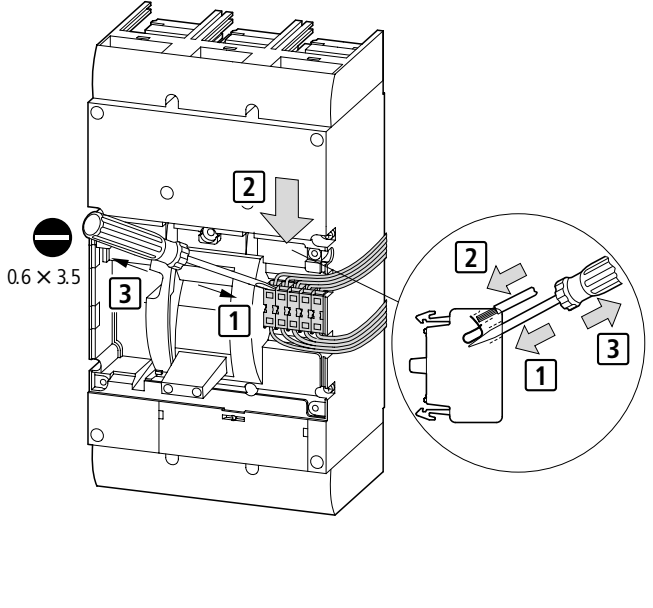
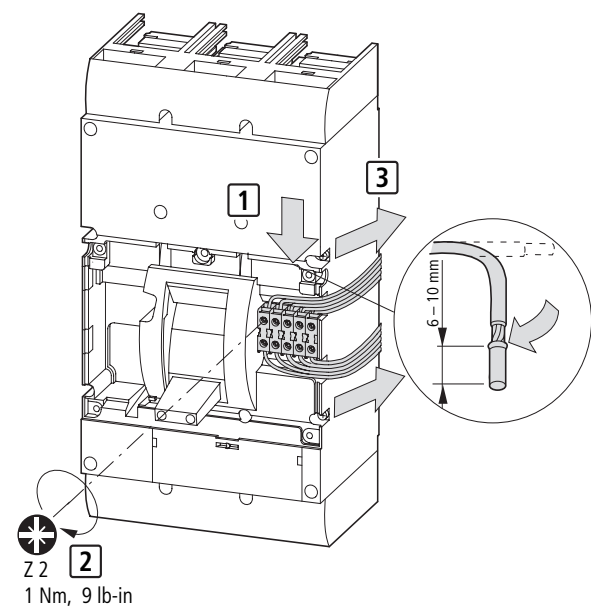
M22-K10, M22-K01  
(Screw Terminals)

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

	2 × 0.75 – 2.5 mm <sup>2</sup>
	2 × AWG18 – AWG14
	2 × 0.75 – 2.5 mm <sup>2</sup>
	2 × AWG18 – AWG14
	2 × 0.75 – 2.5 mm <sup>2</sup>
	2 × AWG18 – AWG14
UL/CSA = Cu only	

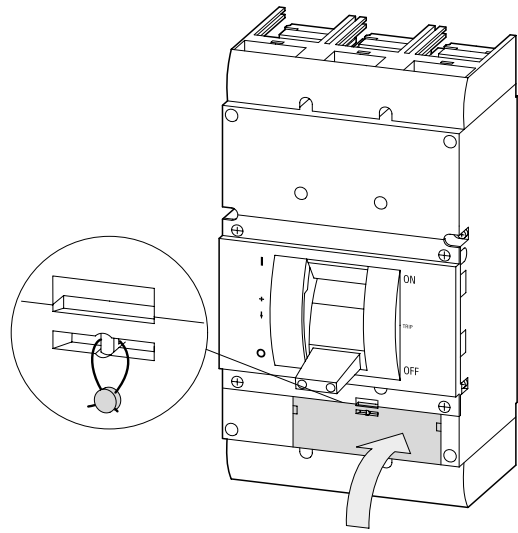
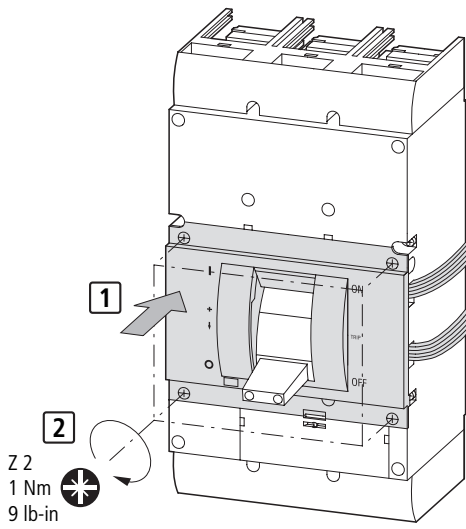
5b

M22-CK10, M22-CK01  
(Clamp Terminals)

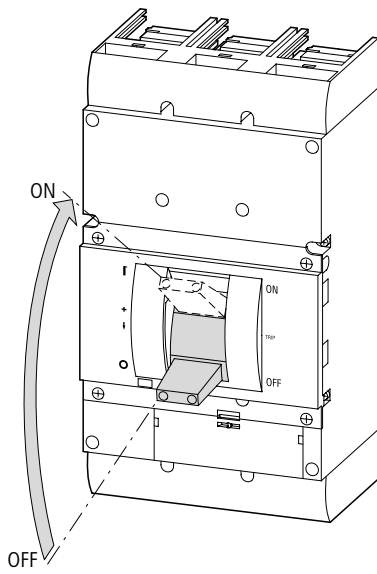


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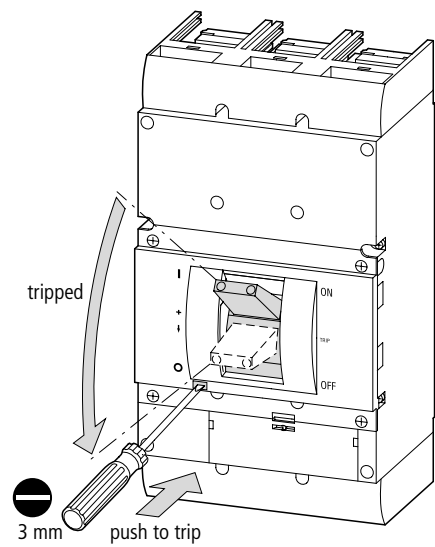
6



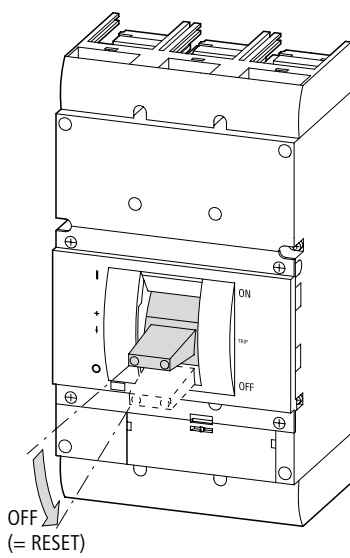
TEST 1



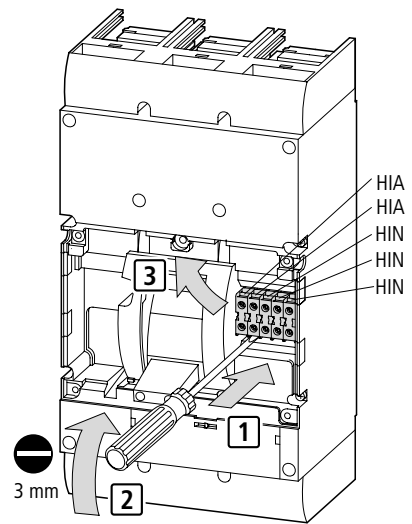
TEST 2



TEST 3



1 Demontage  
Dismantling  
Démontage  
Smontaggio  
Desmontaje  
Разборка  
拆卸



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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
<b>NZM4-XKA</b>	4 × AWG 1/0 – 500 kcmil	Cu only	1100	31 Nm, 275 lb-in
2) integrated Auxiliary Terminal	1 × 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
<b>NZM4-XKA</b>	4 × AWG 1/0 – 500 kcmil	Cu only	1100	31 Nm, 275 lb-in
2) integrated Auxiliary Terminal	1 × 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.

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