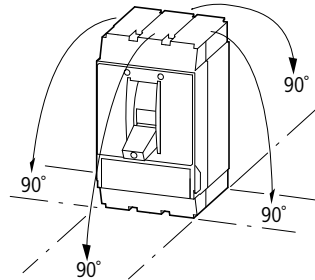




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(AWA1230-1992, AWA1230-2539)

**NZMN(H)(L)3(-4)-AE(VE)(ME)...(-T)**  
**NZMB(C)(N)(S)(H)3(-4)-A(S)**  
**(P)N3-...**  
**+NZM3(-4)-XT**



**NZMN(H)(L)3-AE(AEF)...-NA**  
**NZMN(H)(L)3-VE(VEF)...-NA**  
**NZMN(H)(L)3-SE...-CNA**  
**N(S)3-...-NA**  
**NZMB(N)(H)3-A(-AF)...(-BT)-NA**  
**NZMB(N)(H)3-S...(-BT)-CNA**

**Instruction Leaflet**  
**Montageanweisung**  
**Notice d'installation**  
**Instrucciones de montaje**  
**Istruzioni per il montaggio**  
**安装说明**  
**Инструкция по монтажу**

**⚠️ (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!**

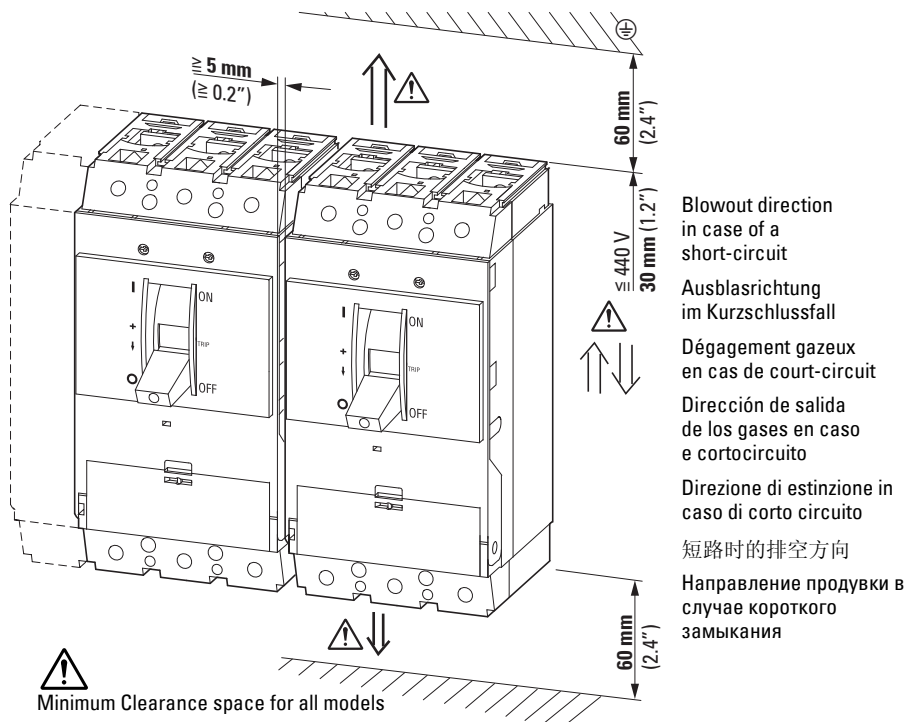
Solo persone abilitate e qualificate possono eseguire le operazioni di seguito riportate.

**(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.



Blowout direction  
in case of a  
short-circuit

Ausblasrichtung  
im Kurzschlussfall

Dégagement gazeux  
en cas de court-circuit

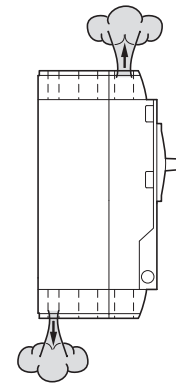
Dirección de salida  
de los gases en caso  
e cortocircuito

Direzione di estinzione in  
caso di corto circuito

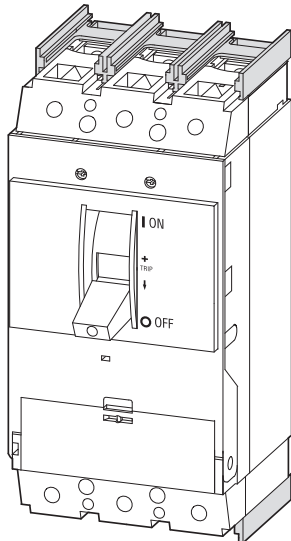
短路时的排空方向

Направление продувки в  
случае короткого  
замыкания

**⚠️**  
Minimum Clearance space for all models



**-NA**  
**-CNA**  
(UL/CSA models)



**⚠️ (en) Caution!**

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

**(de) 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.

**(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) 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 efluvo necesarias tras el montaje.

**(it) Attenzione!**

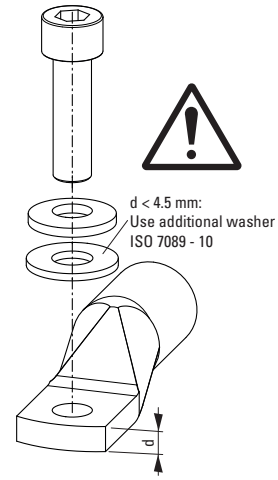
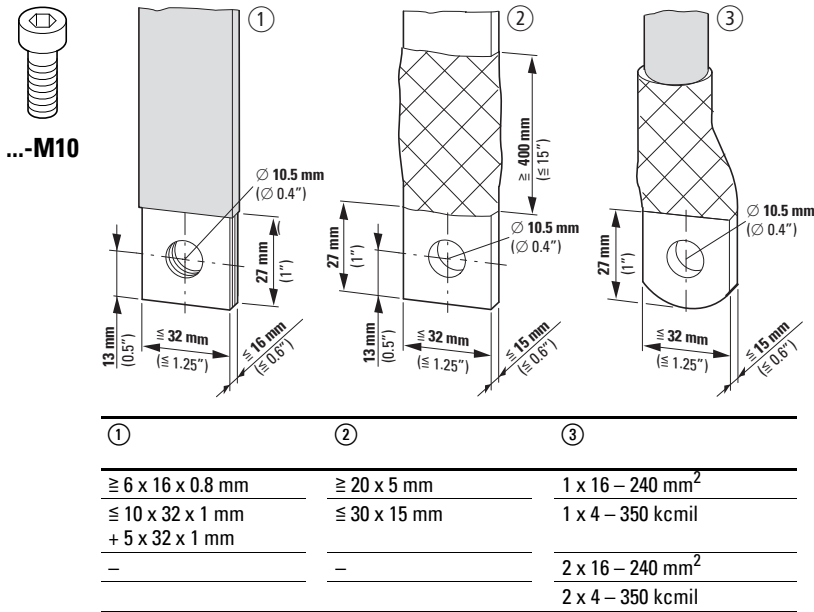
Per l'esecuzione degli interventi descritti potrebbe essere necessaria la rimozione o sostituzione di alcuni pezzi. Attenersi alle istruzioni d'installazione per garantire dopo l'assemblaggio le vie di dispersione necessarie.

**(zh) 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。

**(ru) Внимание!**

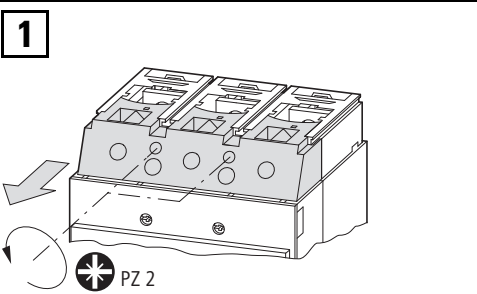
При проведении описанных процедур может возникнуть необходимость демонтировать или заменить детали. Для обеспечения надлежащих зазоров и вывода тока утечки, соблюдайте все инструкции по монтажу.



		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 прессований
2	NZM3-XKS185	
4	NZM3-XKS240	

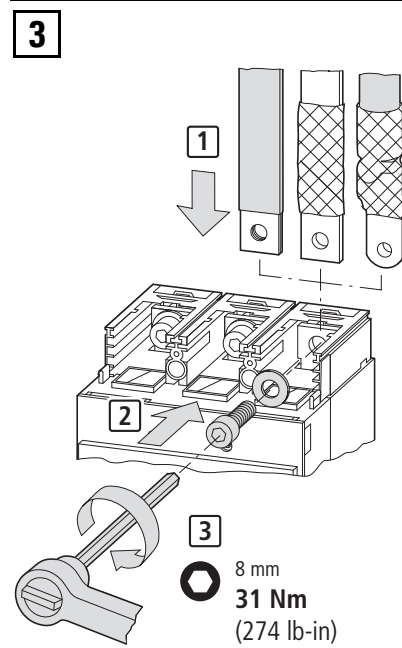
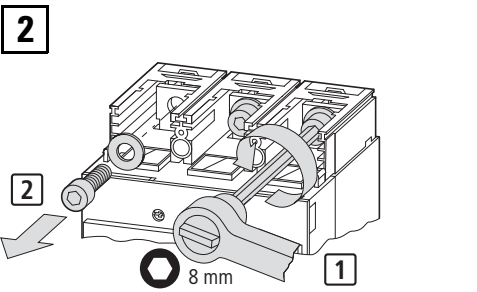
		A
185 mm <sup>2</sup>	NZM3-XKS185	
240 mm <sup>2</sup>	NZM3-XKS240	

		3pol M10 x 35
		4pol



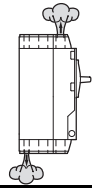
**UL/CSA models:**

Follow diagrams below when making connections using XKS screw terminations for compression crimp lugs:  
 – Always use terminal cover NZM3-XKSA when making connections with bare bus or non-insulated crimp lugs, or when two wires per phase are connected.  
 To mount terminal cover NZM3-XKSA, refer to instruction sheet IL01208010Z (former AWA1230-2048).



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**NZM3(-4)-...630**

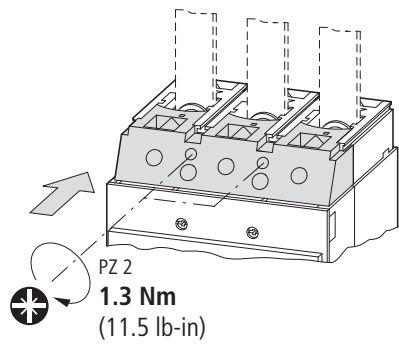


≤ 415 V ① +		①	①	
≤ 525 V ① +		①	① +	
≤ 690 V ① +		① +	① +	
> 690 V ① +		① +	① +	

- ① Basic device – Grundgerät – Appareil de base – Aparato base – Apparechio 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

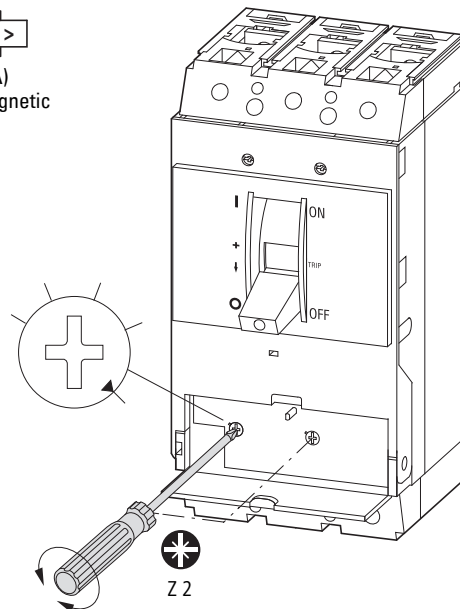
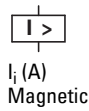
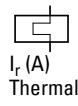
11/18 IL01208009Z

**4**

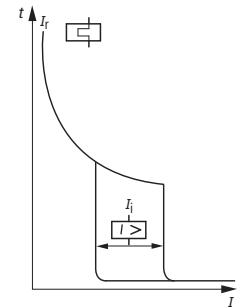


**5**

**NZMB(C)(N)(H)3(-4)-A(S)  
 NZM...3-A(AF)...-NA  
 NZM...3-S...-CNA**

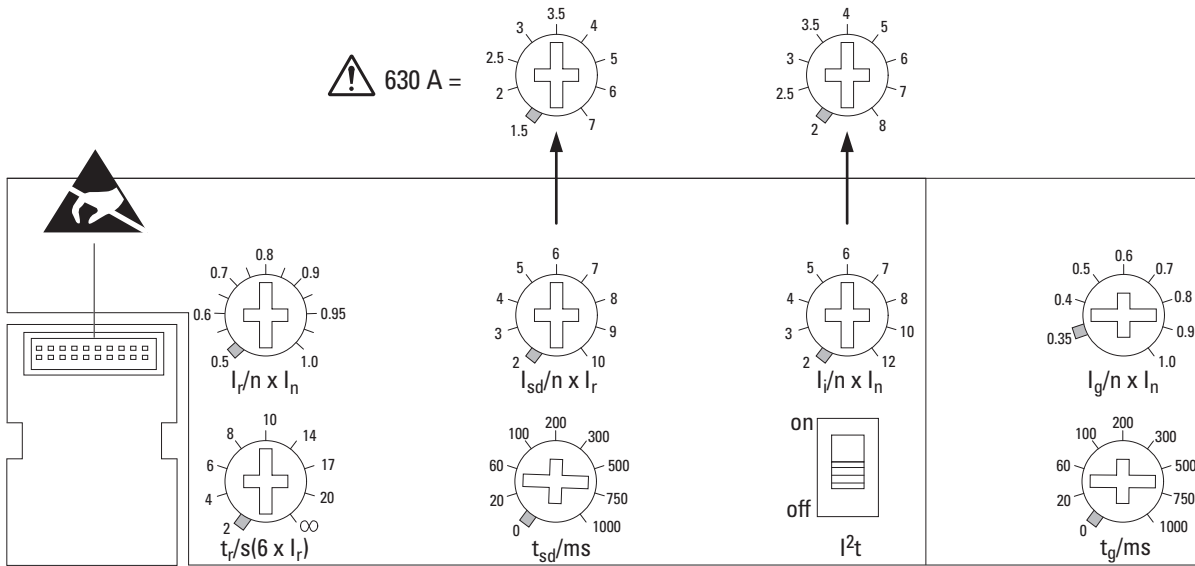


**Note:** On certain models with UL/CSA labeling the thermal trip setting is fixed and only the magnetic trip (instantaneous) setting is adjustable.

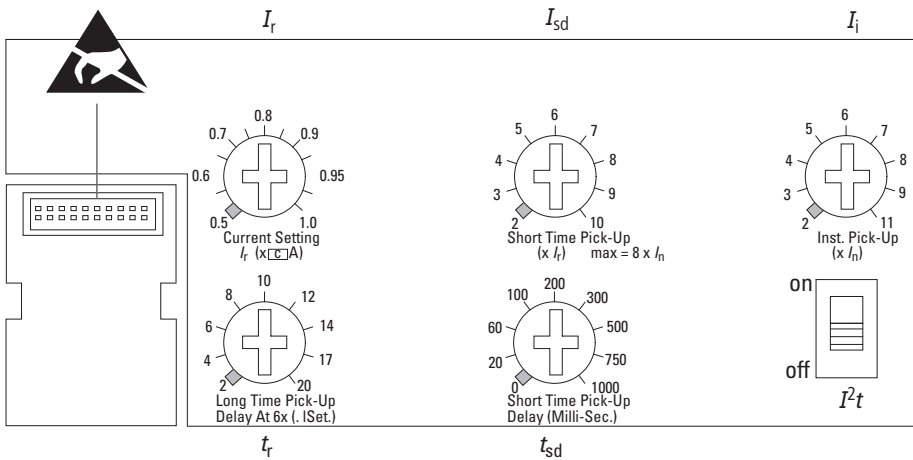


Setting  $I_i$  with DC = setting  $I_i$  AC/1.45  
 Einstellwert  $I_i$  bei DC = Einstellwert  $I_i$  AC/1,45  
 Valeur de réglage  $I_i$  avec DC = valeur de réglage  $I_i$  AC/1,45  
 Valor de respuesta  $I_i$  con DC = valore de respuesta  $I_i$  AC/1,45  
 Valore di regolazione  $I_i$  con DC = valore di regolazione  $I_i$  AC/1,45  
 DC 的设置值  $I_i$  = AC/1.45 的设置值  $I_i$   
 Значение  $I_i$  при постоянном токе =  $I_i$  при переменном токе /1.45

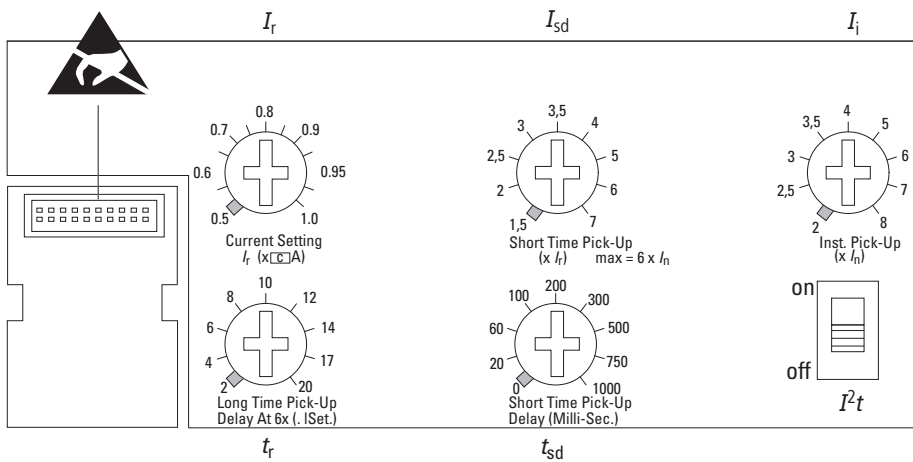
**NZMN(H)(L)3(-4)-AE(VE)(ME)...  
+NZM3(-4)-XT**



**-NA, -CNA Electronic Trip Circuit Breaker Adjustable Settings (UL/CSA models)  
250...400 A**



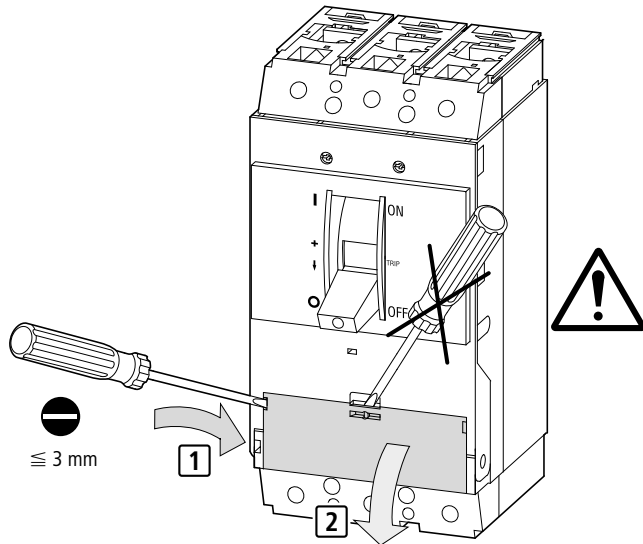
**450...600 A**



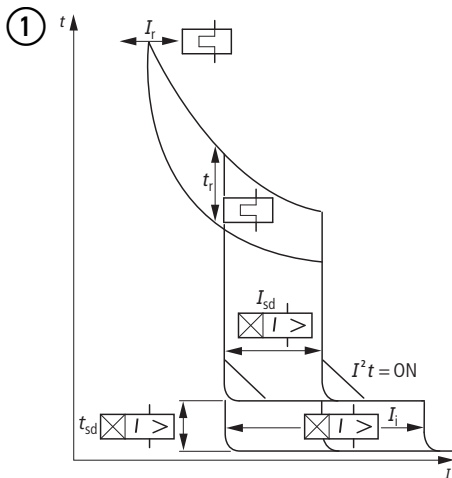
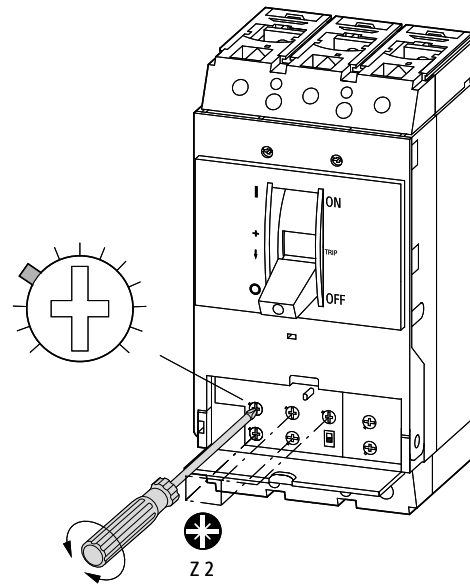
	Current setting $I_r$ (x c A)	Long Time Pick-Up Delay at $6 \times I_r$ (sec)	Short Time Pick-Up (x $I_r$ )	Short Time Pick-Up Delay (milli-sec.)	Inst. Pick-Up (x $I_n$ )	$I^2t$
NZM3-VE...-NA	X	X	X	X	X	X
NZM3-VEF...-NA	Fixed current Rating	X	X	X	X	X
NZM3-AE...-NA	X	-	-	-	X	-
NZM3-AEF...-NA	Fixed current Rating	-	-	-	X	-
NZM3-SE...-CNA	-	-	-	-	X	-

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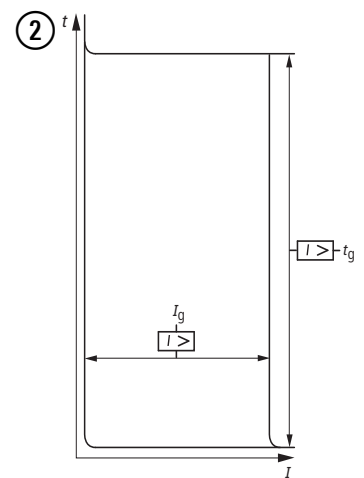
**1** Settings – Einstellung – Réglages – Parámetros – Regolazione – 设置 – Настройка



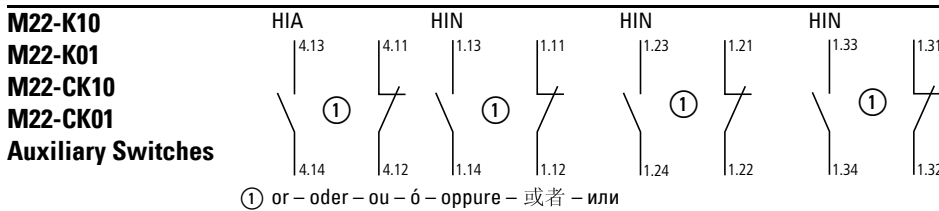
**2**  $I_r$  (A),  $t_r$  (s),  $I_{sd}$  (A),  $t_{sd}$  (ms)  
 $I_i$  (A)  
 $I^2t$  ON/OFF  
 $I_g$  (A),  $t_g$  (ms)



( $I_n$  = 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  $I_r$ .  
 (NZM...3-VE600-NA: 1.5 – 7 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  $I_n$ .  
 NZM3-VE250/400-NA: (2 – 11 x  $I_n$ ) factory set at 11 x  $I_n$ .  
 NZM3-VE600-NA: (2 – 8 x  $I_n$ ) factory set at 8 x  $I_n$ .  
 $I^2t$  function switch = factory set to OFF.



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**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

**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: 1 x HIA and/or 3 x HIN.

**Note:**

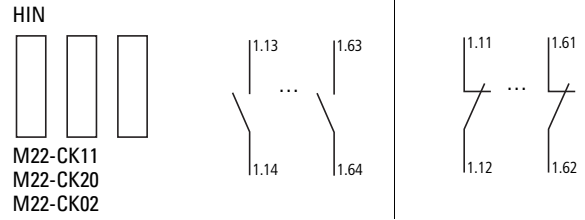
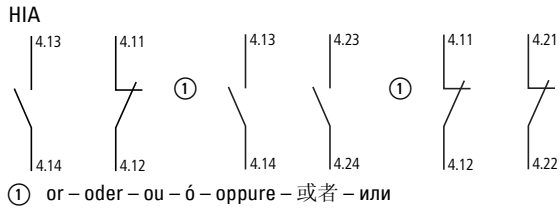
After mounting of the M22... switch is complete, check off the appropriate box on the auxiliary switch label provided on the side of the breaker or switch.

**-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 V AC  
 Same polarity

**M22-CK11  
M22-CK20  
M22-CK02**



**IEC**

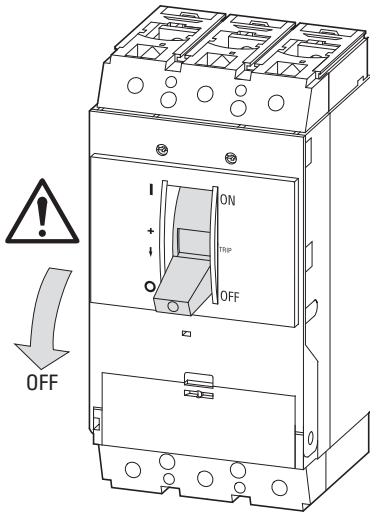


$I_{th} = I_e$

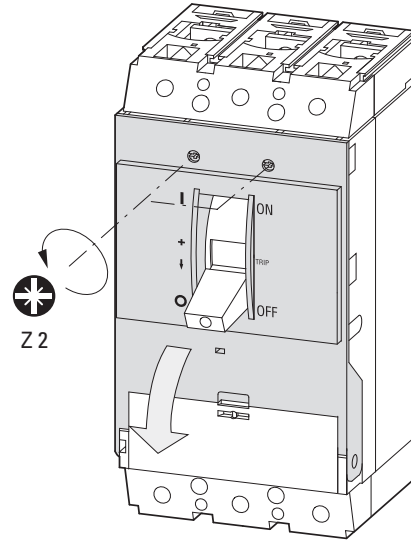
	$U_e$ (V)	$I_e$ (A)
AC-15	115	4
	230	4
DC-13	24	3
	42	1
	60	0.8
	110	0.5
	220	0.2

**Mounting – Montage – Montage – Montaje – Montaggio – 安装 – Монтаж**

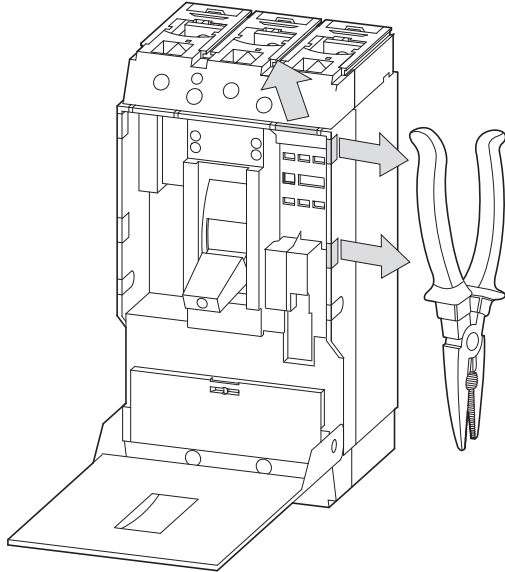
**1**



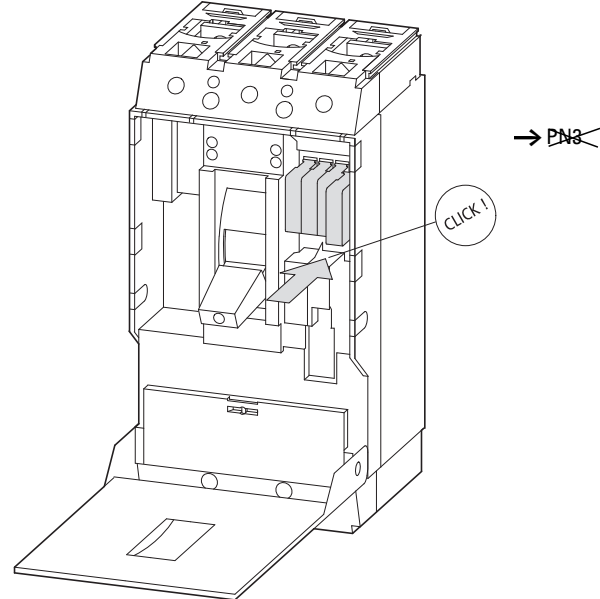
**2**



**3**






**4**

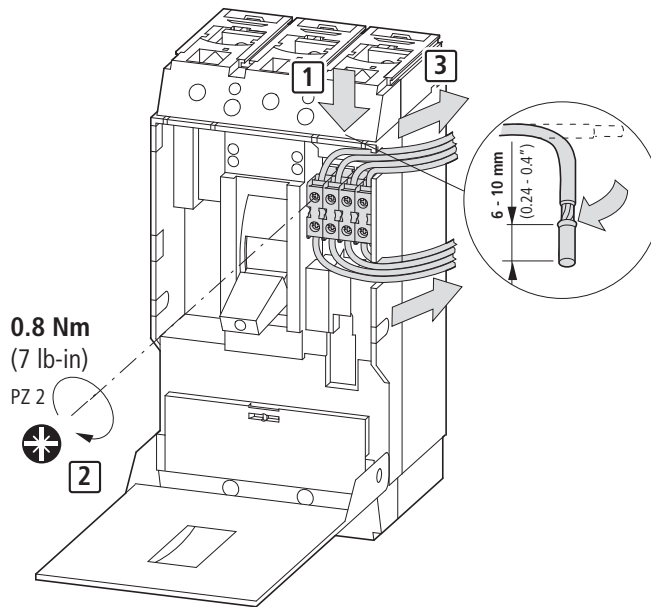


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**5a** M22-K10, M22-K01  
(Screw Terminals)

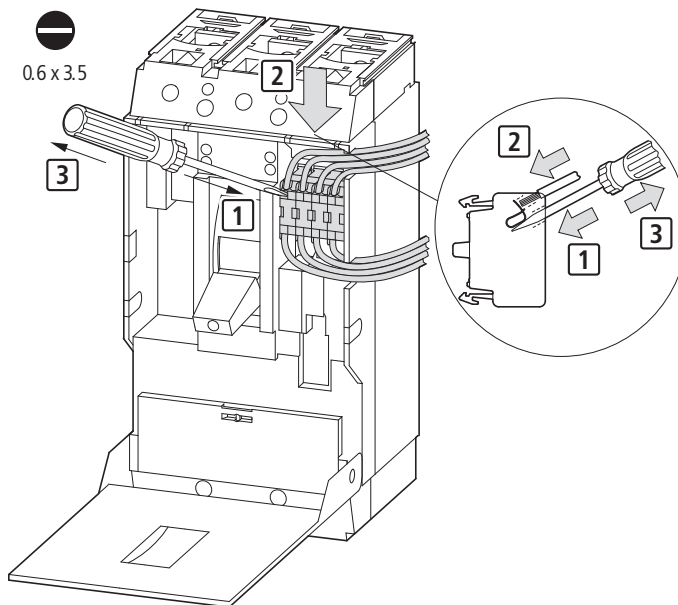
...K10: N. O. Contact  
...K01: N. C. Contact

	2 x 0.75 – 2.5 mm <sup>2</sup>
	2 x AWG 18 – AWG 14
	
UL/CSA = Cu only	








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

	2 x 0.75 – 2.5 mm <sup>2</sup>
	2 x AWG 18 – AWG 14
	
UL/CSA = Cu only	

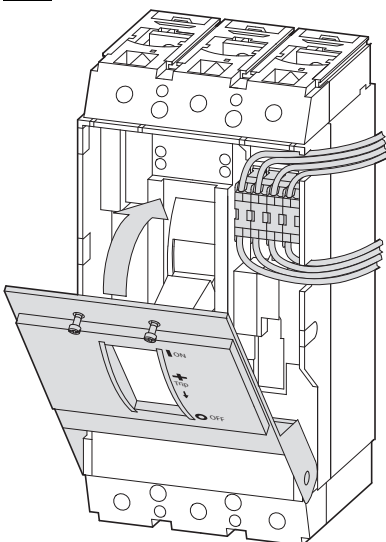


**5c** M22-CK11, M22-CK20, M22-CK02  
(Clamp Terminals)

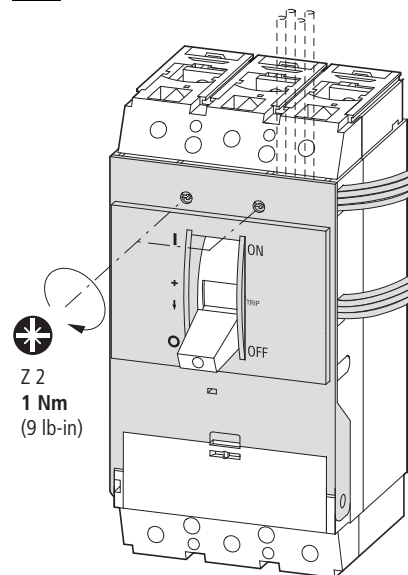
	<b>a = 8 mm</b> (a = 0.32")
	1 x 0.5 – 1.5 mm <sup>2</sup>
	1 x AWG 20 – AWG 16
	2 x 0.5 – 0.75 mm <sup>2</sup>
	2 x AWG 20 – AWG 18

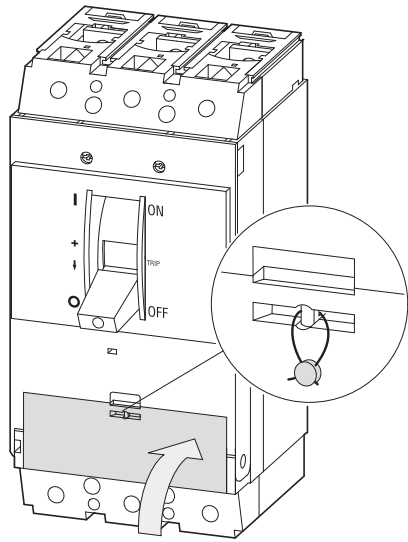
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**6**

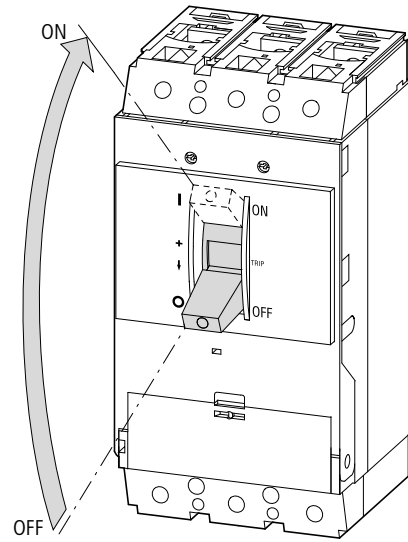


**7**

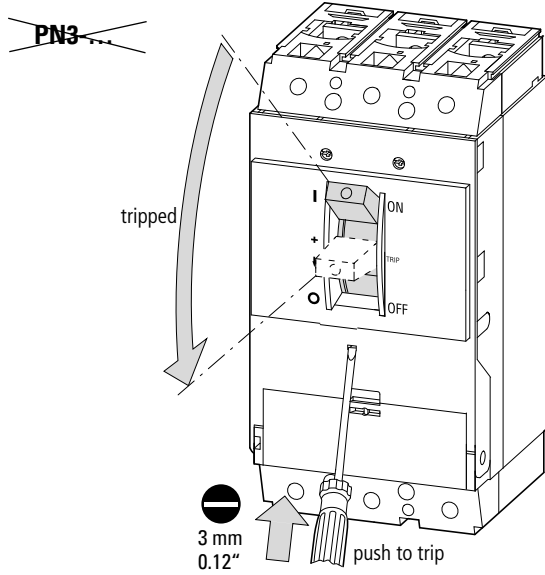




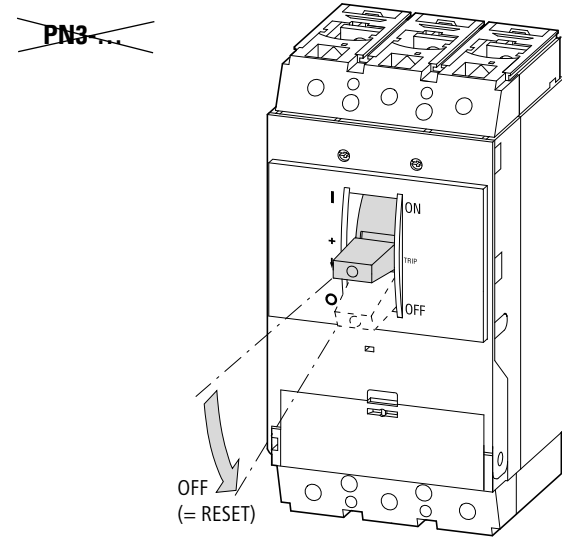
**TEST 1**



**TEST 2**



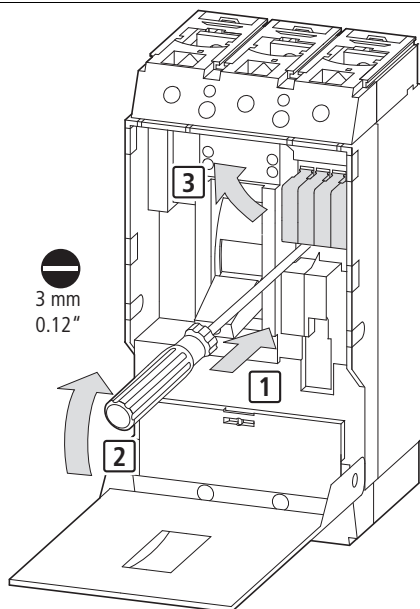
**TEST 3**



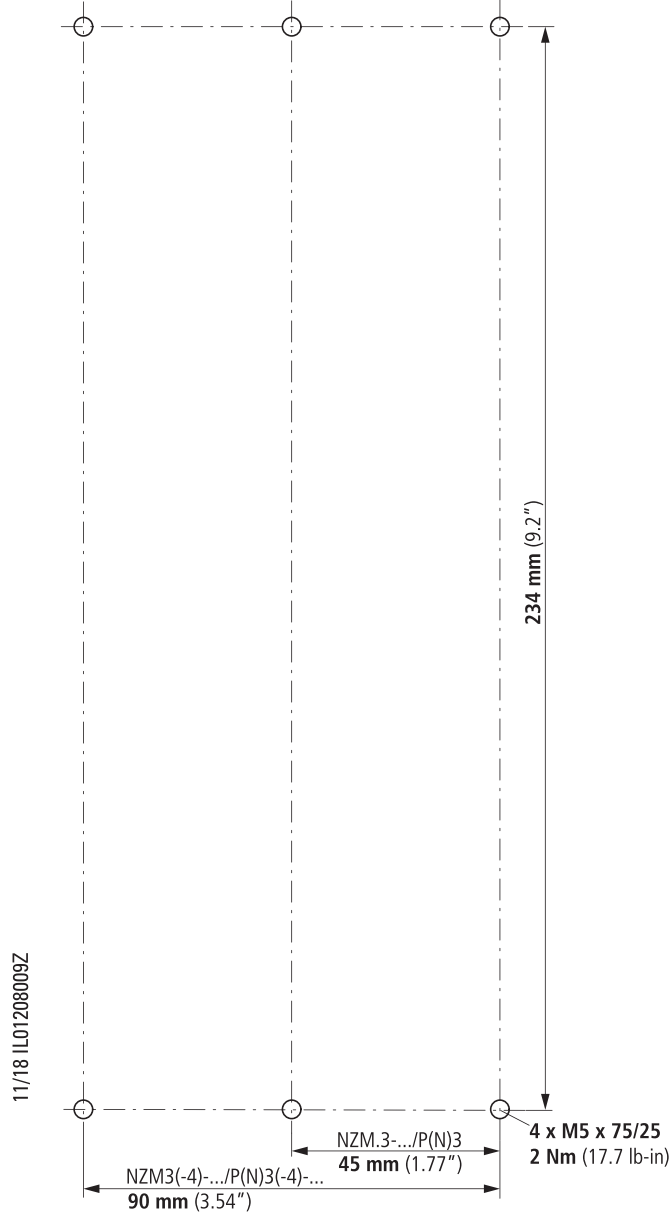
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**Dismounting – Demontage – Démontage – Desmontaje – Smontaggio – 拆卸 – Демонтаж**

**1**







**Wiring terminations circuit breaker type NZM...3...-NA (CNA)**  
**Wiring terminations molded case switch type NS3...-NA**

Connector Type	Wire size	Wire 75° C	Max. A-Rating	Tightening-Torque
1) Bolt on			600	31 Nm (275 lb-in)
NZM3-XKA2	2 x AWG 1/0 – 500 kcmil	Cu only	550	31 Nm (275 lb-in)
NZM3-XKC	1 x AWG 1/0 – 500 kcmil	Cu only	400	19 Nm (168 lb-in)
2) integrated Auxiliary Terminal	1 x AWG 12 – 18	Cu only		1.2 Nm (11 lb-in)

- 1) Connector Pads Type NZM3-XKS for Compression Crimp lugs supplied standard on all NZM3 circuit breakers and switches.
- 2) Integrated Auxiliary Terminal on Barrel (Tunnel) Mechanical lug Connector Type NZM3-XKA(1)(2) only.

