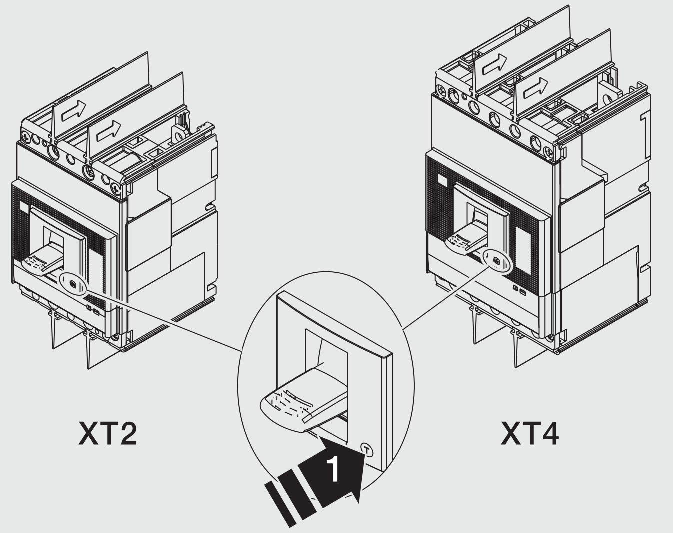
Doc. N.° 1SDH000721R0509 - ECN000084121 - Rev. B

SACE Tmax XT

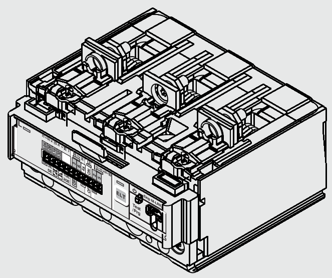
1SDH000721R0509

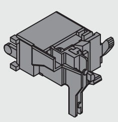
Ekip M-LRIU e connettori per PR212/CI e PTC, XT2 - XT4.
Ekip M-LRIU and connectors for PR212/CI e PTC, XT2 - XT4.
Ekip M-LRIU und Anschlüsse für PR212/CI e PTC, XT2 - XT4.
Ekip M-LRIU et connecteurs pour PR212/CI e PTC, XT2 - XT4.
Ekip M-LRIU y conectores para PR212/CI e PTC, XT2 - XT4.
电子脱扣器 Ekip M-LRIU 及用于PR212/CI和PTC的连接器, XT2 - XT4.

XT2 - XT4/III - IV

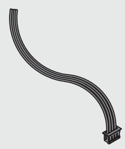
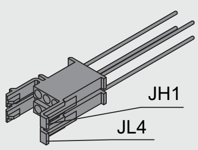
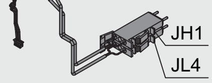


EKIP M-LRIU



	F-P	W
	1	1

OPTIONAL FOR PR212/CI

	F-P	W
	1	-
	-	1
	-	1

OPTIONAL FOR PTC

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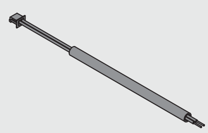
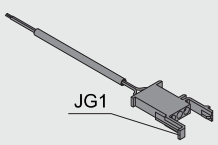
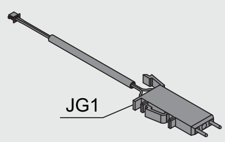
	1	-
	-	1
	-	1

** fold this paper with barcode on the outer side*

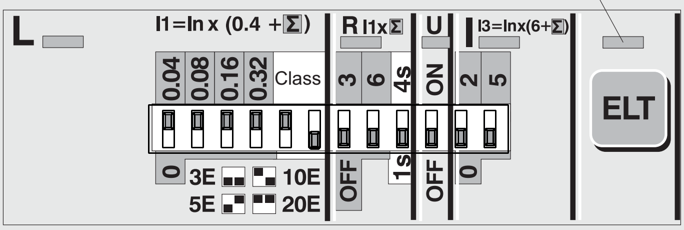
1

LED	Color	CONDITION Run time	
⏻	Green	LED Fixed = Device active	
L	Red	LED Fixed = L pre alarm (0,9 * I1 < I < 1,2 * I1)	LED Blinking = L alarm (I > 1,2 * I1)
R	Red	LED Blinking = R alarm (I > I5)	
U	Red	LED Blinking = U alarm	
L | R | I | U	Red	LED Blinking = Parameters inconsistency - L = I.	
ELT	Green	Led Fixed = Electronic setting	OFF = Manual setting

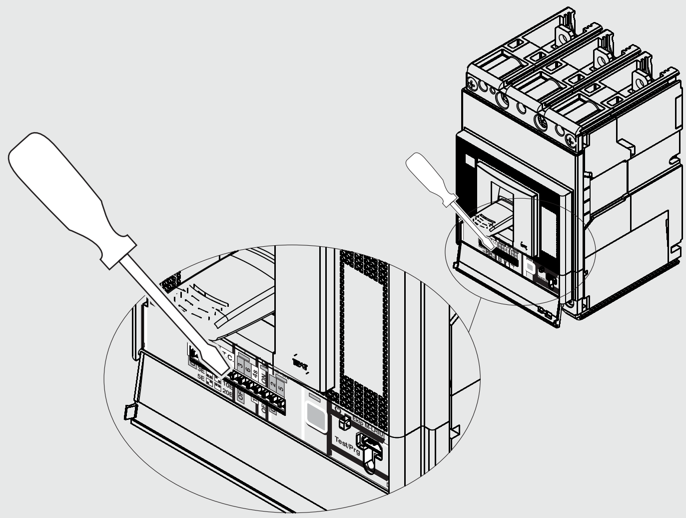
2

Settaggio di default manuale
Manual default setting
Manuelle Default-Einstellung
Configuration par défault manuelle
Ajuste de default manual
默认手动设置

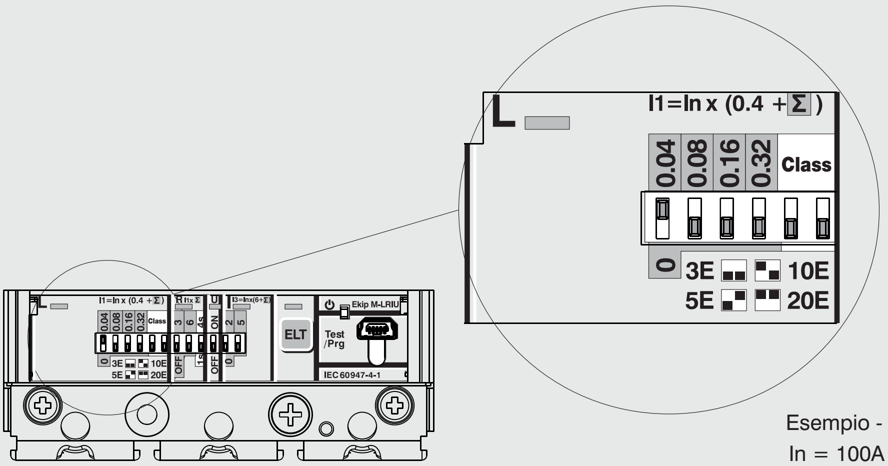
Self-powered or with AUX and LED OFF = MANUAL

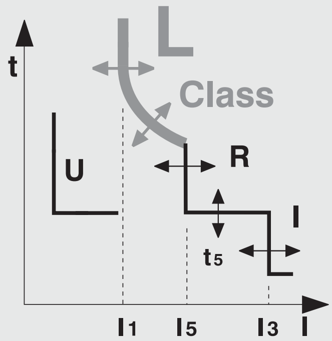


3



4





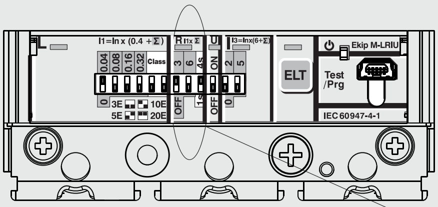
Esempio - Example - Beispiel - Exemple - Ejemplo - 例如
In = 100A
I1 = 100x(0.4+0.04)=44A
CLASS = 3E @ (7.2 x I1) = 2s<t_i<3s @ 316.8A (7.2 x 44A)

	In(A)	I1(A)						
		0.4	0.44	0.48	...	0.92	0.96	1
XT2	25	10	11	12	...	23	24	25
	63	25.2	27.7	30.2	...	58	60.5	63
	100	40	44	48	...	92	96	100
XT4	40	16	17.6	19.2	...	36.8	38.4	40
	63	25.2	27.7	30.2	...	58	60.5	63
	100	40	44	48	...	92	96	100
	160	64	70.4	76.8	...	147.2	153.6	160

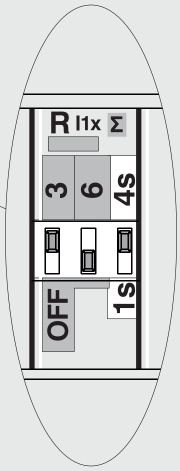
3E	2s<t_i≤3s	@ (7.2 x I1)
5E	3s<t_i≤5s	
10E	5s<t_i≤10s	
20E	10s<t_i≤20s	

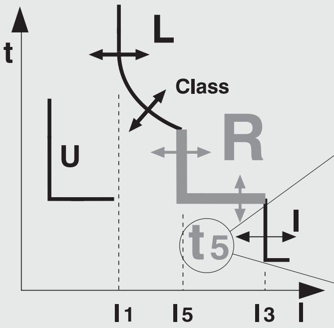
5

R



	In(A)	I5(A)		
		3	6	9
XT2	25	75	150	225
	63	189	378	567
	100	300	600	900
XT4	40	120	240	360
	63	189	378	567
	100	300	600	900
	160	480	960	1440





- A regime
- Steady situation
- Eingeschwungener Zustand
- En régime
- En condiciones de régimen
- 稳定状态

t5 =1s | 4s

- Start up con rotore bloccato
- Start up with rotor blocked
- Anlauf mit blockiertem Läufer
- Start-up avec rotor bloqué
- Arranque con rotor bloqueado
- 启动时转子堵转

t5 = $CLASS_{min}$ + 1s/4s

Esempio - Example - Beispiel - Exemple - Ejemplo - 例如

In = 100A

I1 = 0.44 x In (see previous example) = 44A

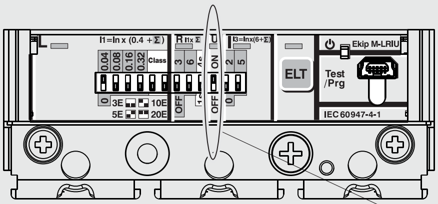
I5 = I1 x 3= 44A x 3 = 132A

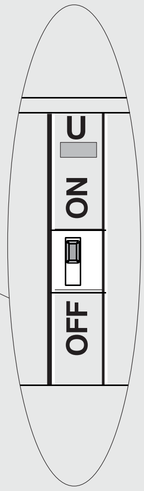
CLASS = 3E (see previous example) = 2s < t_i <3s = $CLASS_{min}$ = 2s

t5 Start up = $CLASS_{min}$ + 4s = 2s + 4s= 6s

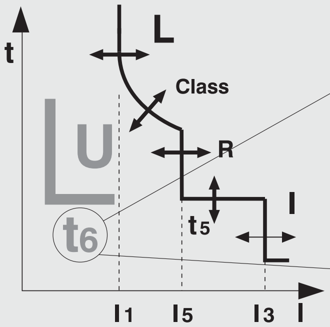
6

U





$$I_6 = \begin{cases} \min(L1, L2, L3) < 0.1In \\ \quad \text{and} \\ \max(L1, L2, L3) \geq 0.25In \end{cases}$$



- A regime
- Steady situation
- Eingeschwungener Zustand
- En régime
- En condiciones de régimen
- 稳定状态

I6 = ON

t6 = 2s

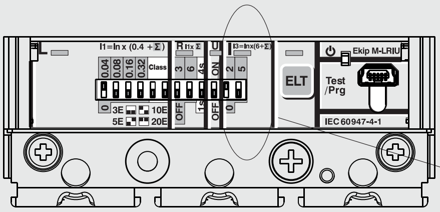
- Start up
- Anlauf
- Arranque
- 开始设定

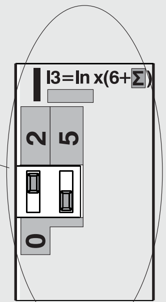
I6 = ON

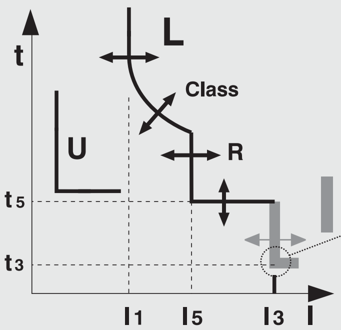
t6 = min(2s, ($CLASS_{min}$/2))

7

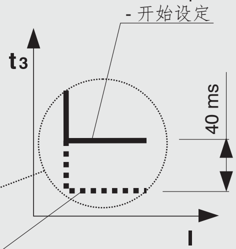
I







t3 - Start up
- Anlauf
- Arranque
- 开始设定



t3 - A regime
- Steady situation
- Eingeschwungener Zustand
- En régime
- En condiciones de régimen
- 稳定状态

	In(A)	I3(A)			
		6	8	11	13
XT2	25	150	200	275	325
	63	378	504	693	819
	100	600	800	1100	1300
XT4	40	240	320	440	520
	63	378	504	693	819
	100	600	800	1100	1300
	160	960	1280	1760	2080

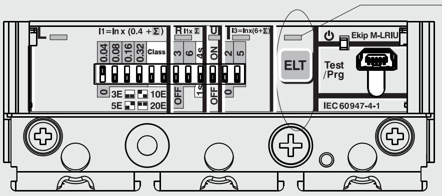
Esempio - Example - Beispiel - Exemple - Ejemplo - 例如

In = 100A

I3 = In x (6+2)= 100 x 8 = 800A

ELT by default setting

LED ON = ELT

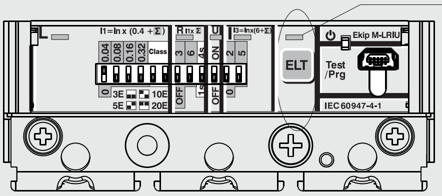


Ekip M-LRIU		Default
L	I1	1 In
	Class	20E
I	I3	6 In
G	I4	Off
Rj (Jam)	I5	Off
Rs (Stall)	I8	Off
UN (Unbalance)	I6	Off
Upl (Phase loss)	I7	Off
UC (Undercurrent)	I9	Off
PTC	I10	On
	t10	1 s
Normal / Heavy		Normal
Auto Reclosure		Off
Backup Protection		100 ms

Settaggio di default elettronico
Electronic default setting
Elektronische Standardeinstellung
Réglage par défaut électronique
Configuración electrónica predeterminada
默认电子设置

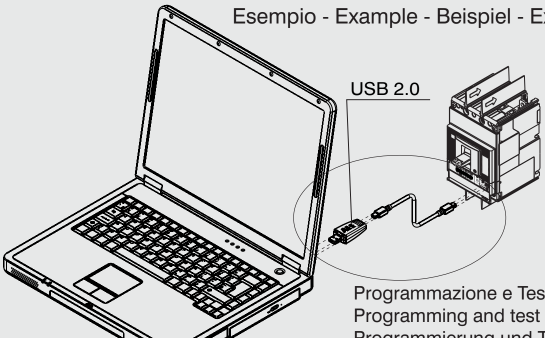
ELT by communication system

LED ON = ELT



Settaggio tramite sist. di comunicazione
Setting by communication system
Einstellung über Kommunikationssystem
Réglage par syst. de communication
Configuración mediante sist. de comunicación
通过通讯系统设置

Esempio - Example - Beispiel - Exemple - Ejemplo - 例如



Programmazione e Test con Unità EKIP T&P
Programming and test with EKIP T&P
Programmierung und Test mit Einheit EKIP T&P
Programmation et Test avec Unité EKIP T&P
Programación y prueba con Unidad EKIP T&P
通过EKIP T&P烧录程序和测试

Ekip M-LRIU		Range	Default
L	I1	0.4 … 1 In step 0.01 In	1 In
	Class	3E 5E 10E 20E	20E
G	I4	0.2 ... 1 in step 0.1 In	Off - 1 In
	t4	0.1 ... 0.8 s step 0.1 s	Off - 0.8 s
I	I3	1 .. 13 In step 0.5 In	6 In
Rj (Jam)	I5	Off – 2 … 10 I1 step 1 I1	Off - 2 I1
	t5	1s ... 10 s step 0.5 s	1 s
Rs (Stall)	I8	Off – 1 … 10 I1 step 1 I1	Off - 1 I1
	t8	2 ... 10 s step 0.5 s	2 s
Upl (Phase loss)	I7	Off – On	Off
	t7	1 ... 10 s step 0.5 s	1 s
UN (Unbalance)	I6	Off – 20 ... 50% step 10%	Off - 20%
	t6	1 ... 10 s step 0.5 s	1 s
UC (Undercurrent)	I9	Off – 50 ... 90% I1 step 10%	Off - 50% I1
	t9	1 ... 20 s step 0.5 s	1 s
PTC	I10	Off – On	On
	t10	1 s	1 s
Normal / Heavy		Normal / Heavy	Normal
Auto Reclosure		Off-1 … 1000s	Off - 60s
Backup Protection		100ms…1s	100ms

Trip Test with Ekip TT

1

PROCEDURA DI CONTROLLO
- CONTROLLO LED:
  tutti i led del relè si devono accendere
- ULTIMA INDICAZIONE DI TRIP:
  se presente nella memoria del relè
- LED: ⏻
  resta acceso finchè l'unità TT e' connessa al relè
- PRONTO PER TRIP

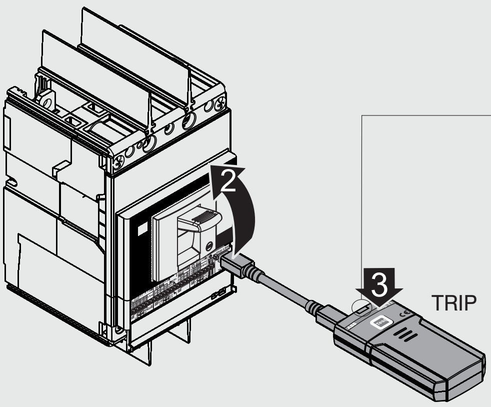
DIAGNOSTIC PROCEED
- UNIT CHECK LED:
  all the leds in the relay must come on
- LAST TRIP INDICATION:
  if present in the relay's data store
- LED: ⏻ remains on for as long as the TT is connected to the relay
- READY TO TRIP

DIAGISTIKABLAUF
- EINEITHSPRUF-LED:
  Alle LEDs des Relais müssen aufleuchten
- ANGABE DER LETZTEN AUSLOSUNG:
  Wenn im Speicher des Relais vorhanden.
- LED: ⏻ Bleibt angeschaltet, bis die Einheit TT an die Relais angeschlossen ist.
- AUSLOSEBEREIT

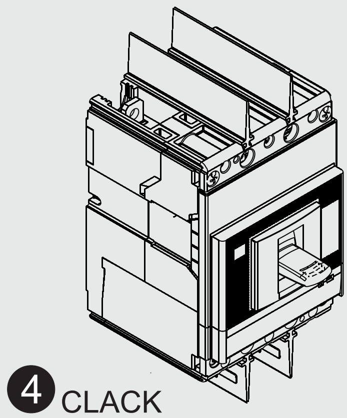
PROCÉDURE DE DIAGNOSTIC
- UNIT CHECK LED : toutes les diodes du relais doivent s'allumer
- LAST TRIP INDICATION :
  si présente dans la mémoire du relais
- LED: ⏻ la DIODE reste allumée tant que l'unité TT est connectée au relais
- READY TO TRIP

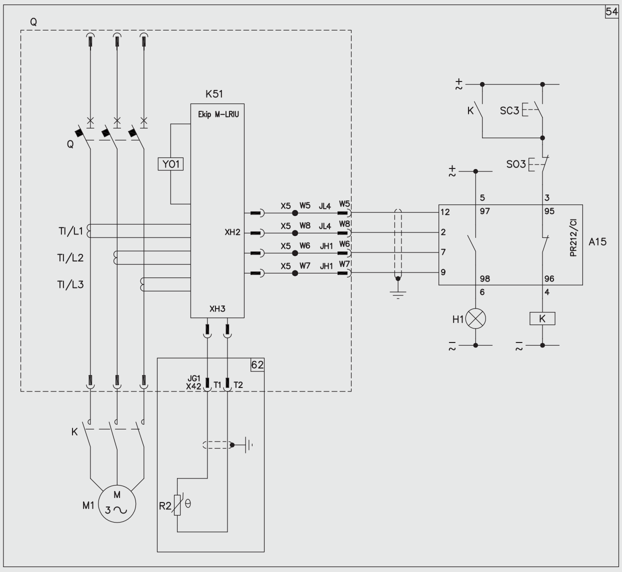
PROCEDIMIENTO DIAGNOSTICO
- LED CONTROL UNIDAD: todos los led del relé se deben encender
- INDICACION ULTIMA ACTUACION:
  si está presente en la memoria del relé
- LED: ⏻ queda encendido mientras la unidad TT permanezca conectada con el relé
- LISTO PARA LA ACTUACION

自诊断流程
- 脱扣器功能指示灯：各功能指示灯依次闪烁
- 前次脱扣指示 如果在脱扣器内有存储
- LED指示灯⏻ TT连接到脱扣器后保持常亮
- 诊断就绪



LED Ekip TT	
Verde Green Grün Vert Verde 绿	Rosso Red Rot Rouge Rojo 红
Dispositivo acceso Device ON Einrichtung eingeschaltet Dispositif allumé Dispositivo encendido 设备运行	Sostituire batterie Change battery Batterie ersetzen Remplacer batteries Sustituir baterías 更换电池

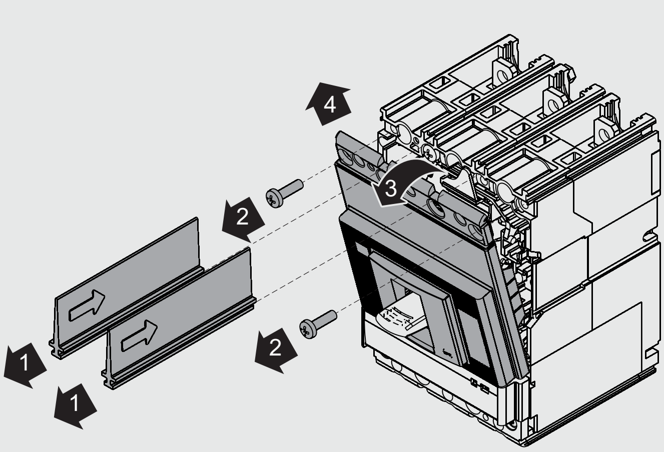




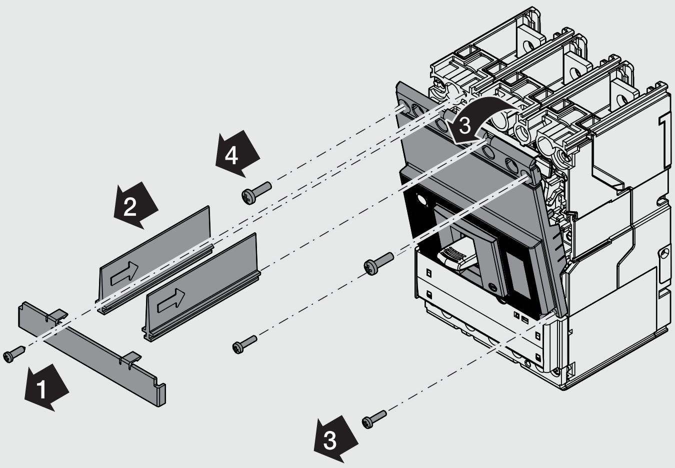
- Per tutte le connessioni con cavo schermato utilizzare ad esempio il tipo Belden 3106 A, provvedendo a connettere lo schermo a terra in prossimità del dispositivo/ accessorio esterno.
- For all shielded connections use, for example, Belden 3106 A cable. The shield must be connected to earth near external devices/accessories.
- Für alle Anschlüsse mit abgeschirmtem Kabel zum Beispiel Kabel vom Typ Belden 3106 A verwenden und den Schirm in der Nähe des Geräts/externen Zubehörs mit Erde verbinden.
- Pour toutes les connexions par câble blindé, utiliser par exemple le type Belden 3106 A, en raccordant le blindage à la terre à proximité du dispositif / accessoire extérieur.
- Para todos los conexionados con cable apantallado utilizar, por ejemplo el tipo Belden 3106 A, conectando la pantalla a tierra en proximidad del dispositivo/accesorio exterior.
- 所有如Benlden 3106A等屏蔽线的屏蔽层，必须接到与外置设备或附件相近的地线上。

-PTC mod. Siemens/Matsushita B59355-M130-A70 o equivalente. Lunghezza massima del collegamento 50 mt. Protezione con intervento 1 s.
-Temperature dependent resistor (PTC) type Siemens/Matsushita B59355-M130-A70 or similar. Max connection length = 50 mt. C.B. tripping time 1 s.
- PTC-Halbleiterfühler Mod. Siemens/Matsushita B59355-M130-A70 oder an einen gleichwertigen Fühler. Maximale Länge der Verbindung 50 m. Auslösezeit der Schutzfunktion: 1 s.
-PTC mod. Siemens/Matsushita B59355-M130-A70 ou équivalente. Longueur maxi du raccordement 50 m. Protection avec temps de déclenchement 1 s.
-PTC mod. Siemens/Matsushita B59355-M130-A70 o equivalente. Longitud máxima del conexionado 50 m. Protección con tiempo de actuación interruptor 1 s
-连接Siemens/Matsushita B59355-M130-A70或其它类似的温度探测器（PTC)。最大连接长度为50m(米)。断路器跳扣时间为 1s。

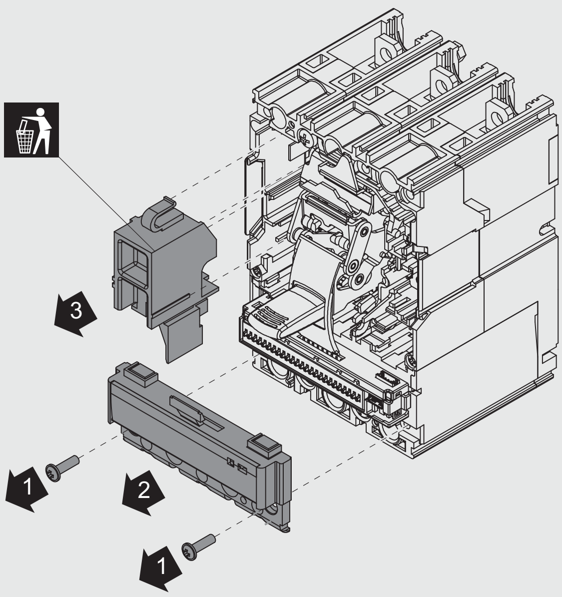
12 XT2 - XT4 F - P PTC - PR212/CI



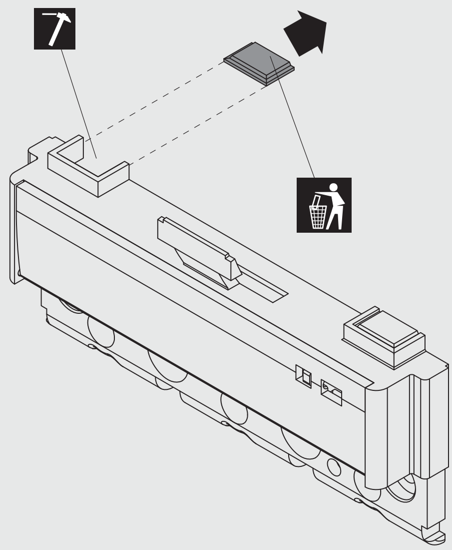
13 XT4 V - X ONLY



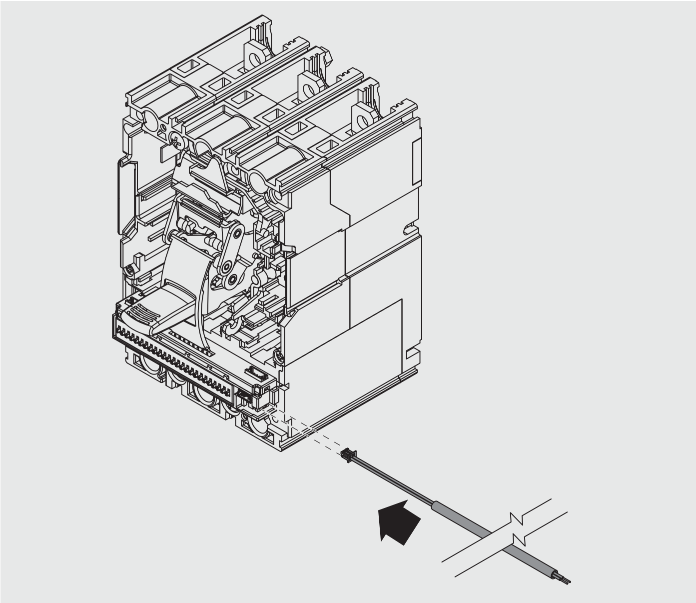
14 XT2 - XT4 F - P PTC - PR212/CI



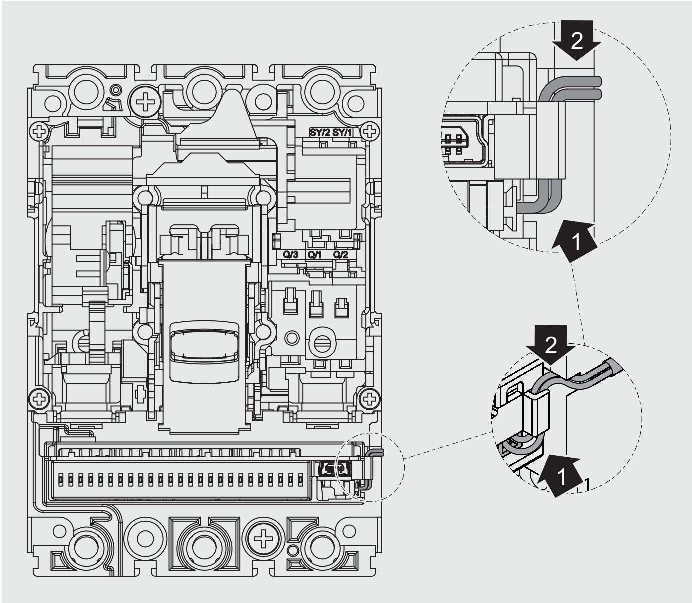
15 XT2 - XT4 F - P PR212/CI ONLY



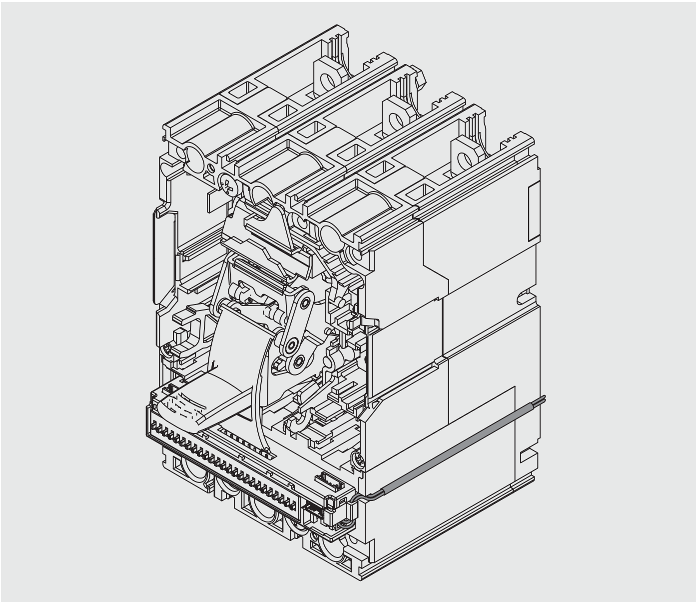
16 XT2 - XT4 F - P PTC ONLY



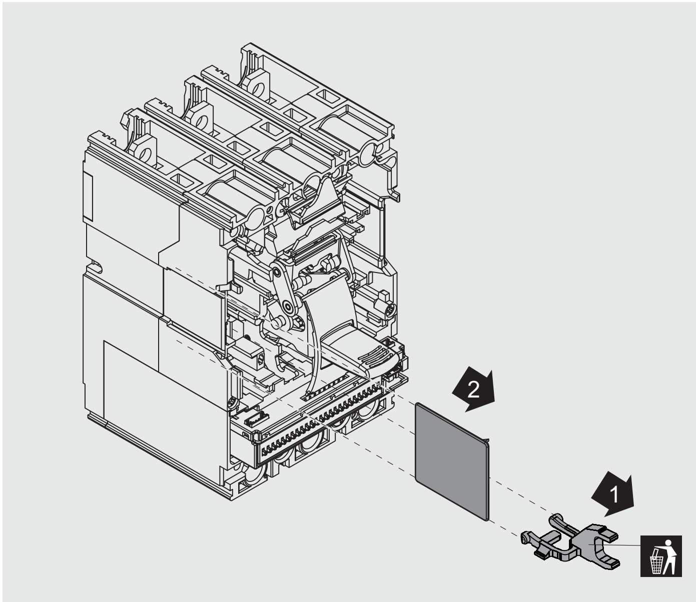
17 XT2 - XT4 F - P PTC ONLY



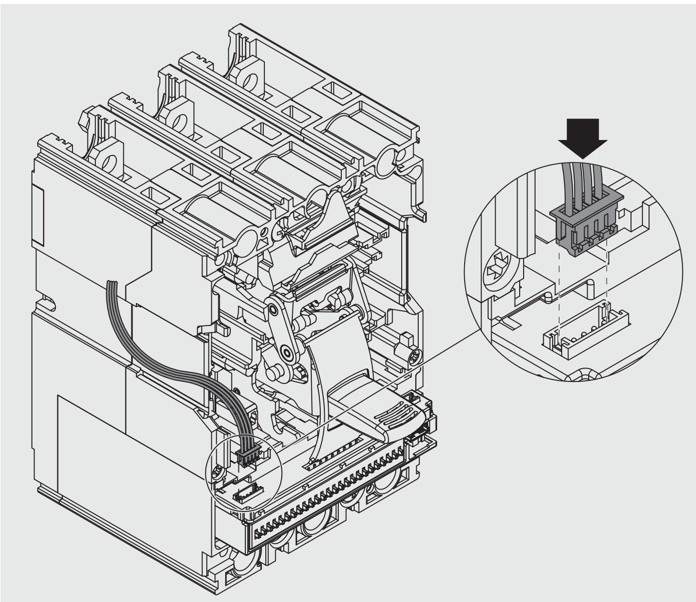
18 XT2 - XT4 F - P PTC ONLY



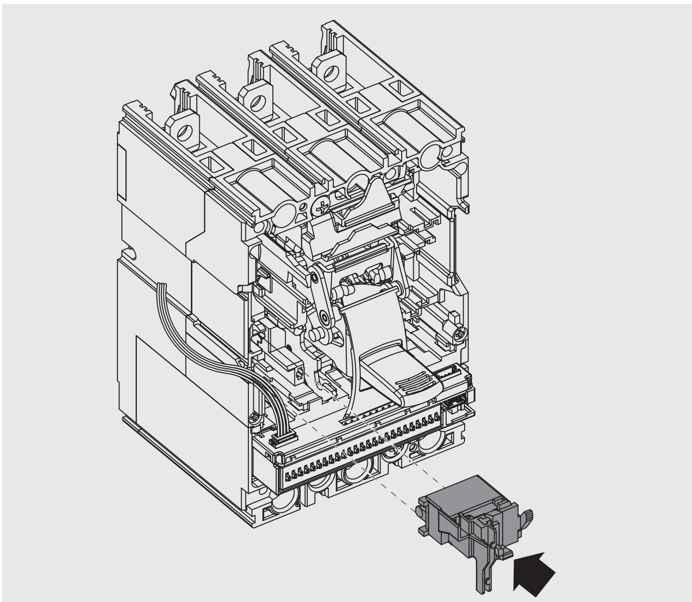
19 XT2 - XT4 F - P PR 212/CI ONLY



20 XT2 - XT4 F - P PR 212/CI ONLY

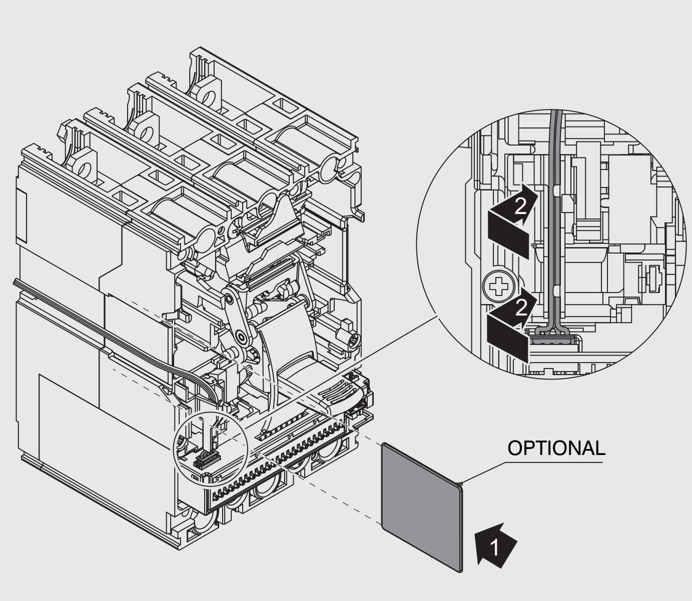


21 XT2 - XT4 PR 212/CI ONLY

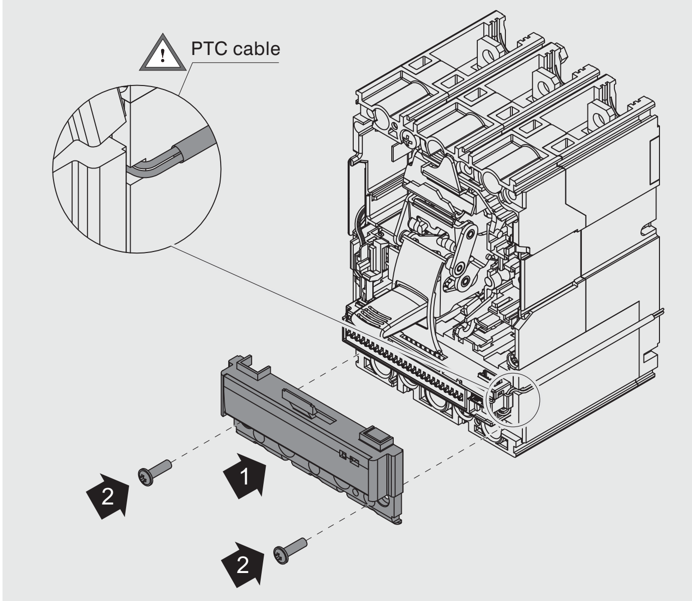


22

XT2 - XT4 F - P PR 212/CI ONLY

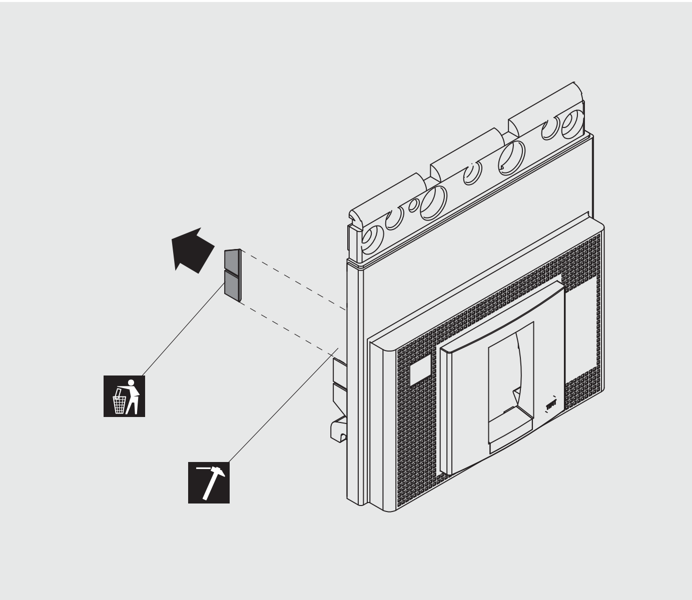


23



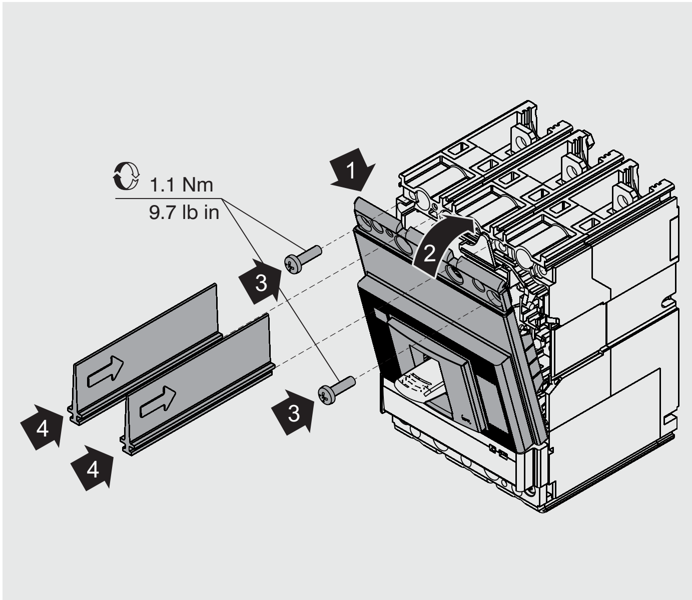
24

XT2 - XT4 F - P PR 212/CI ONLY



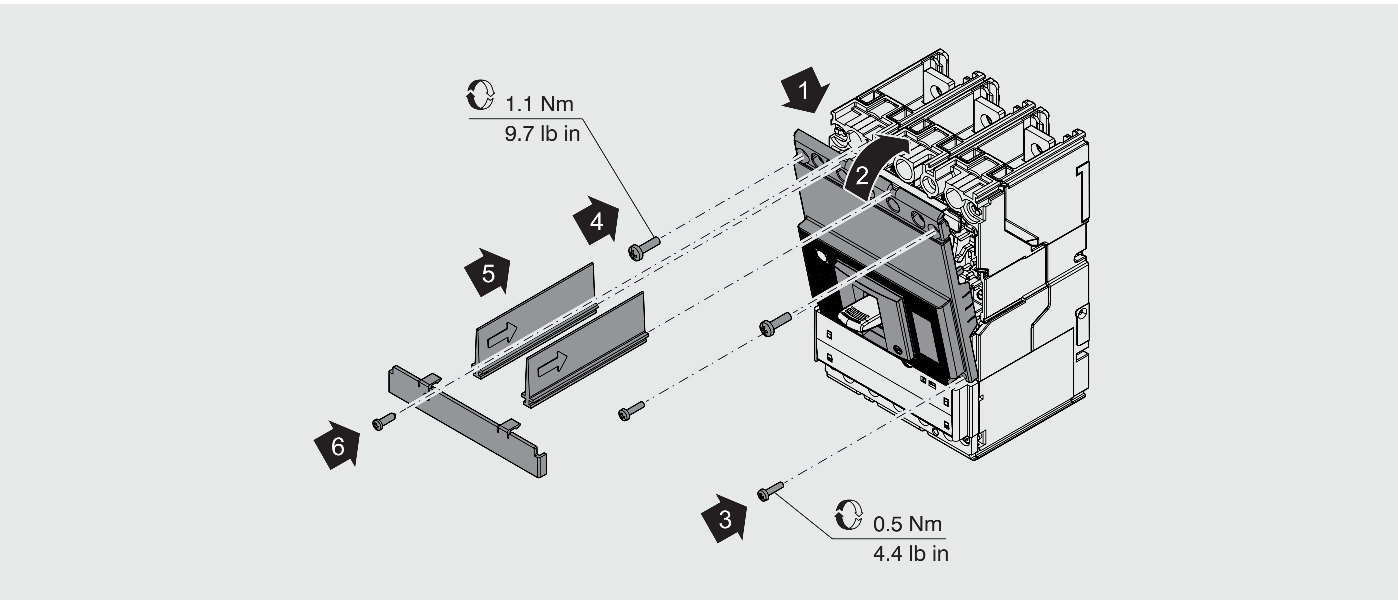
25

XT2 - XT4 F - P

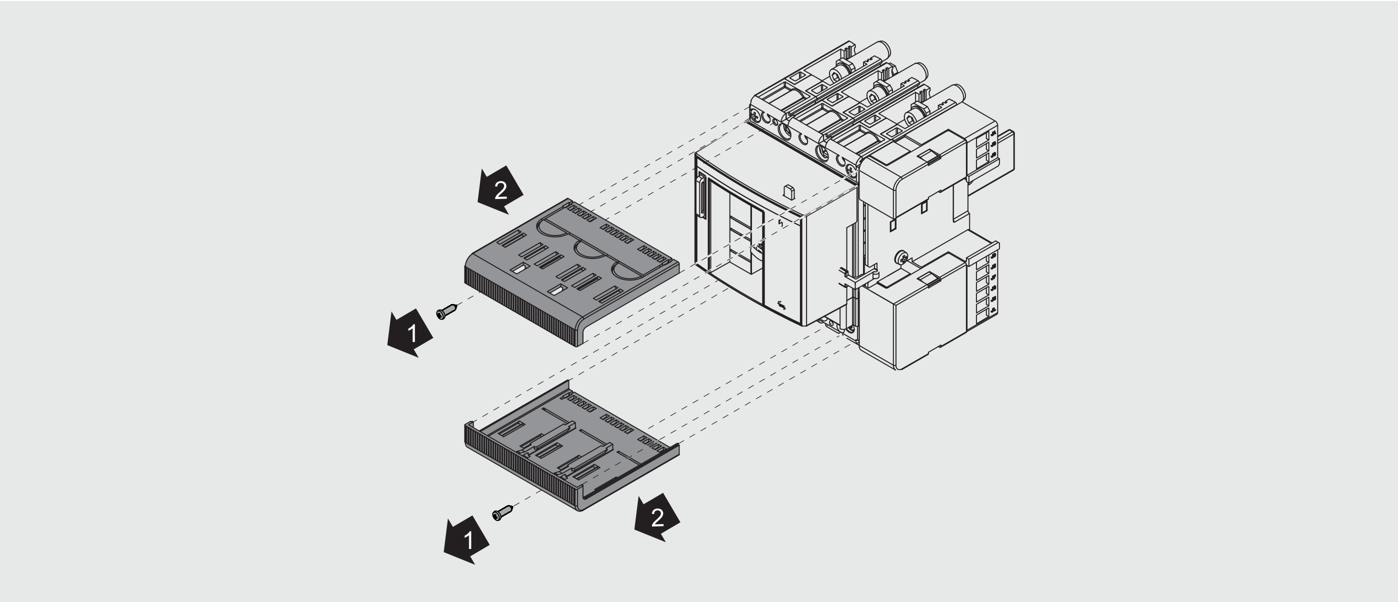


26

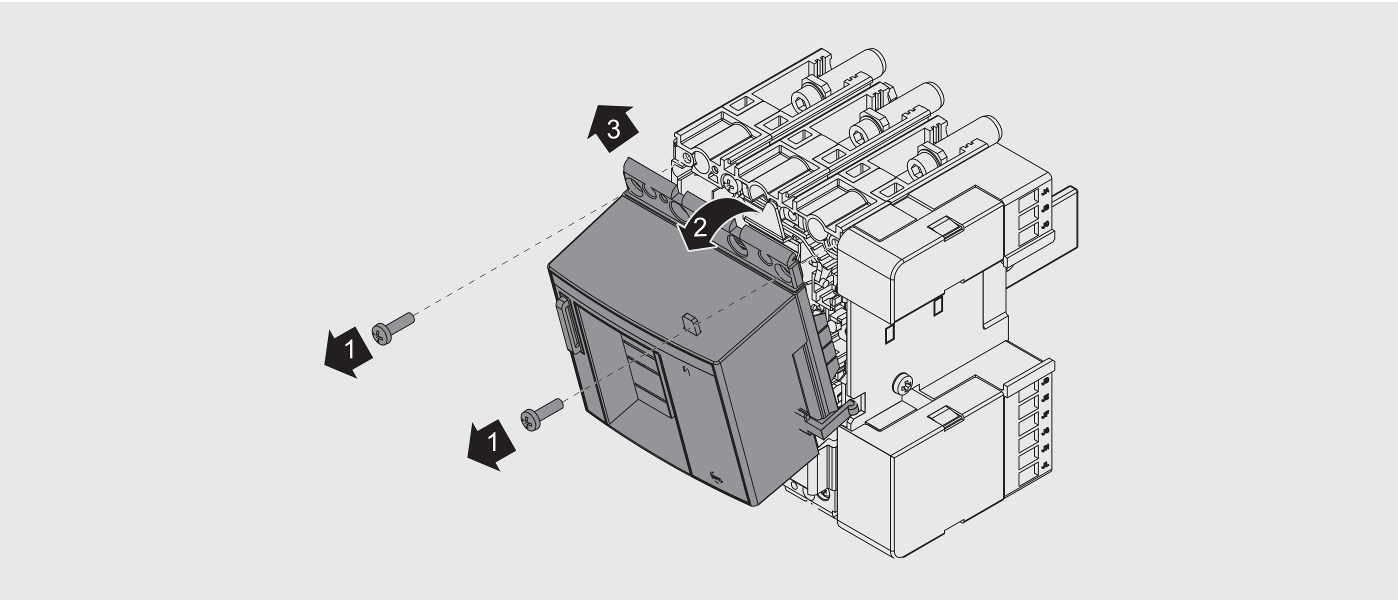
XT4 V - X ONLY



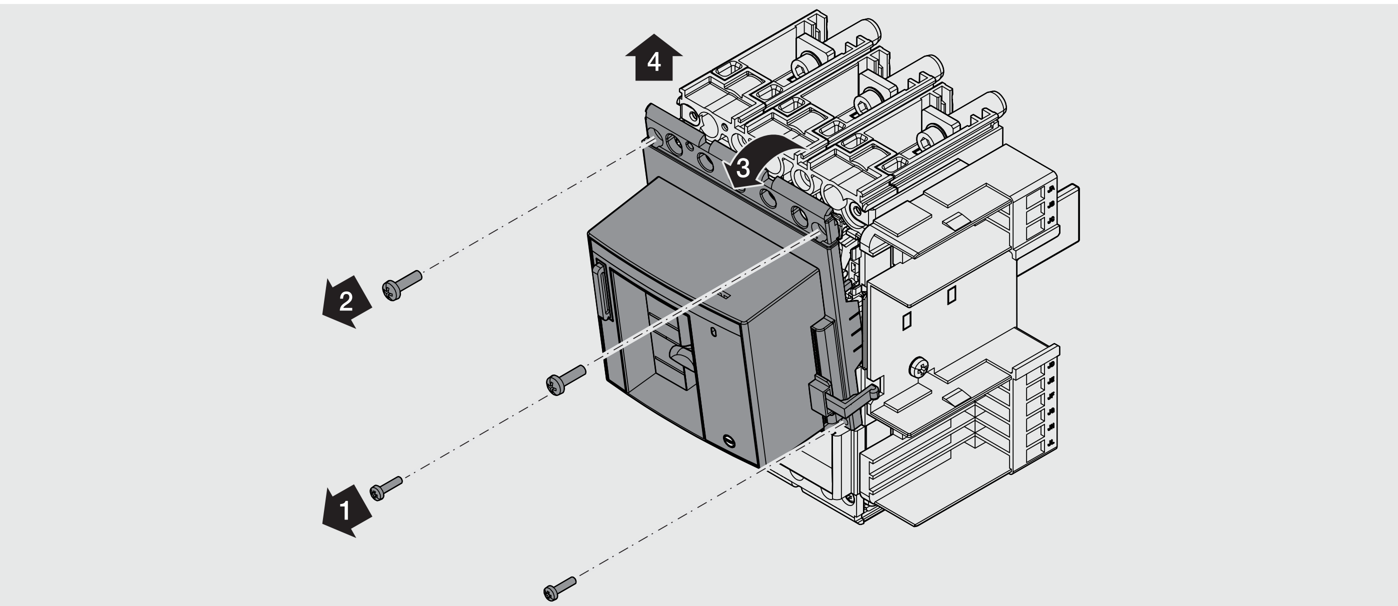
27 XT2 - XT4 W



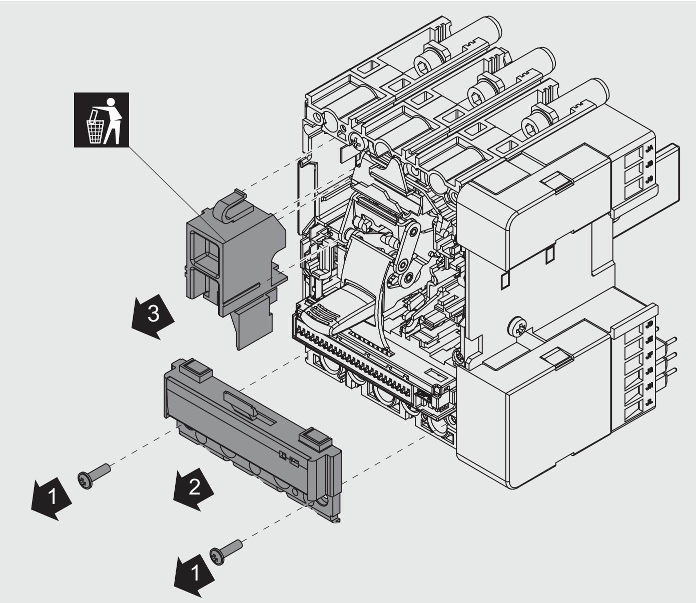
28 XT2 - XT4 W



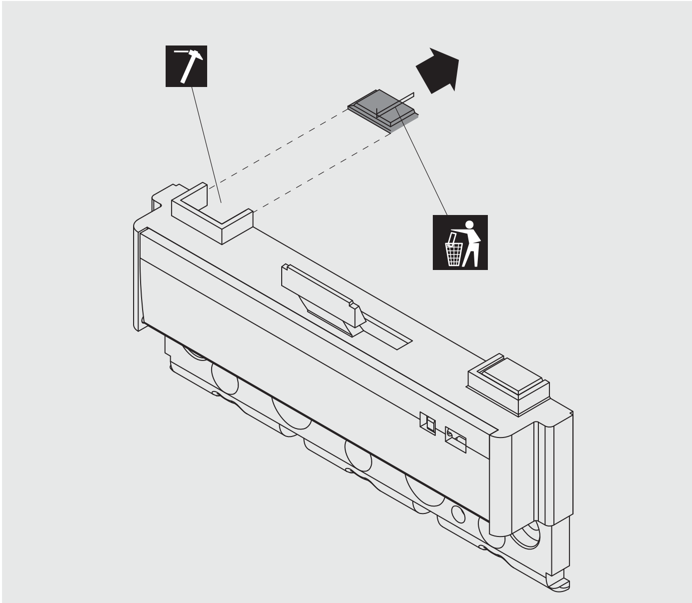
29 XT4 V - X ONLY



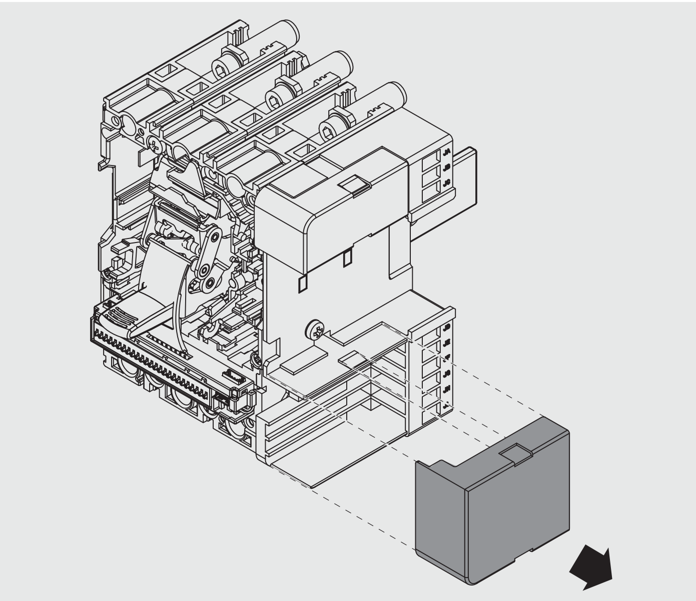
30 XT2 - XT4 W



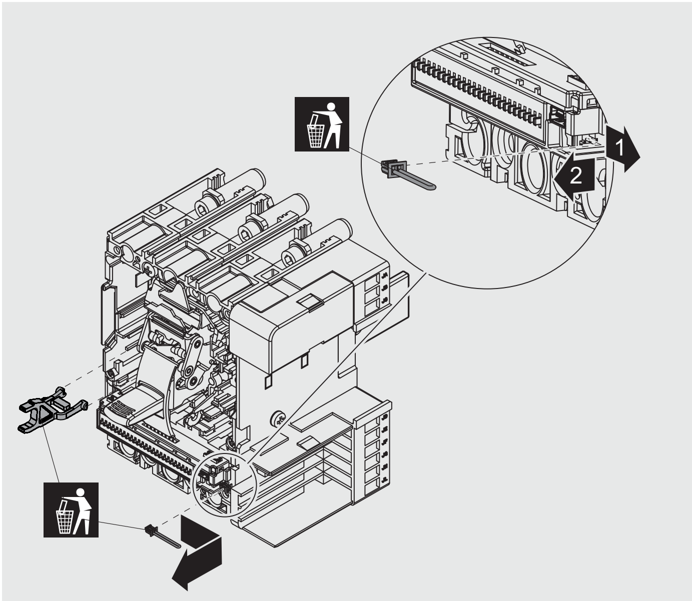
31 XT2 - XT4 W PR 212/CI ONLY



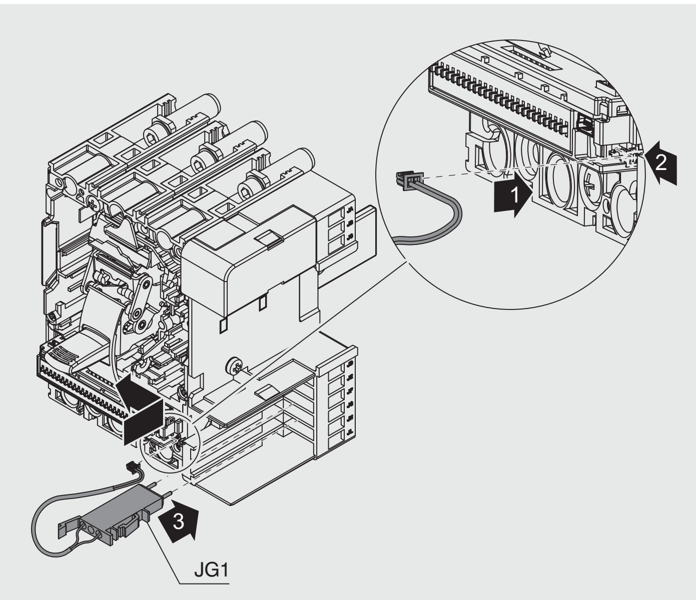
32 XT2 - XT4 W



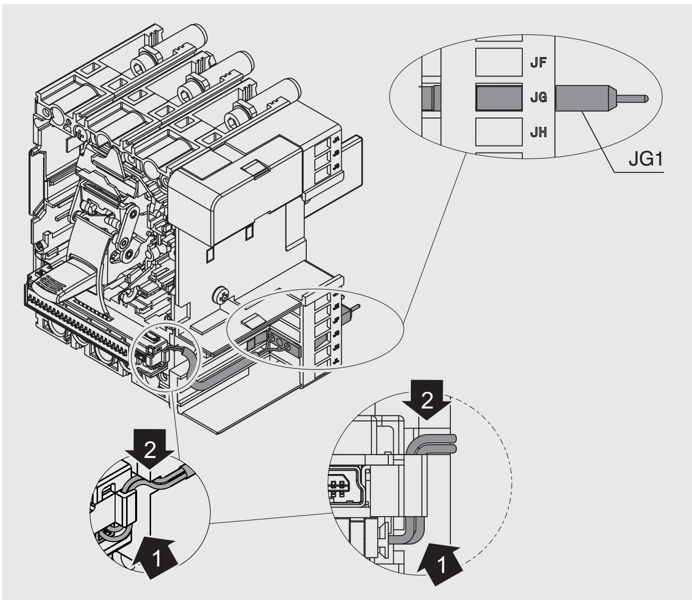
33 XT2 - XT4 W PTC ONLY



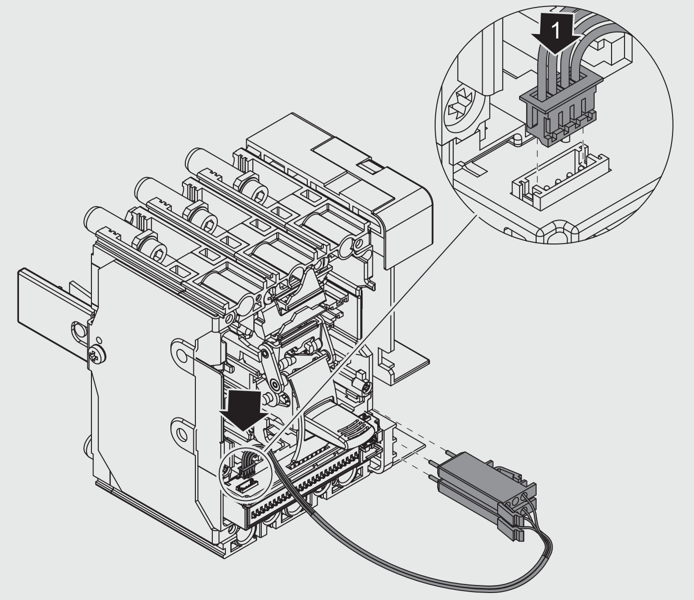
34 XT2 - XT4 W PTC ONLY



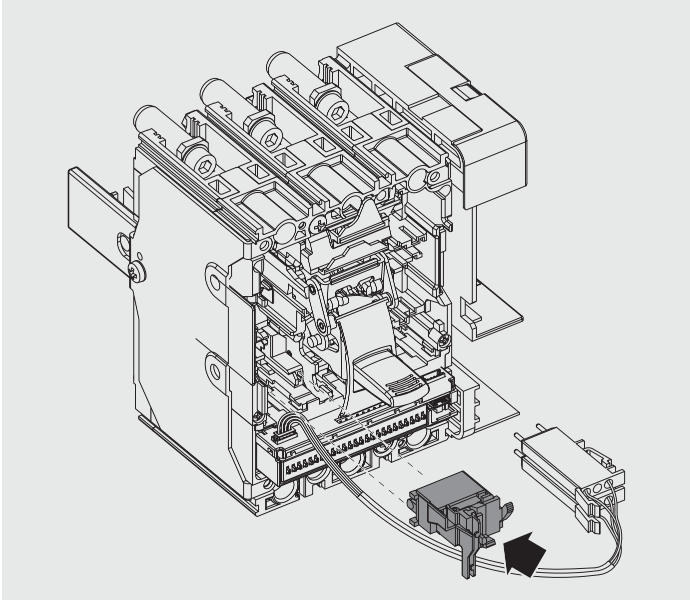
35 XT2 - XT4 W PTC ONLY



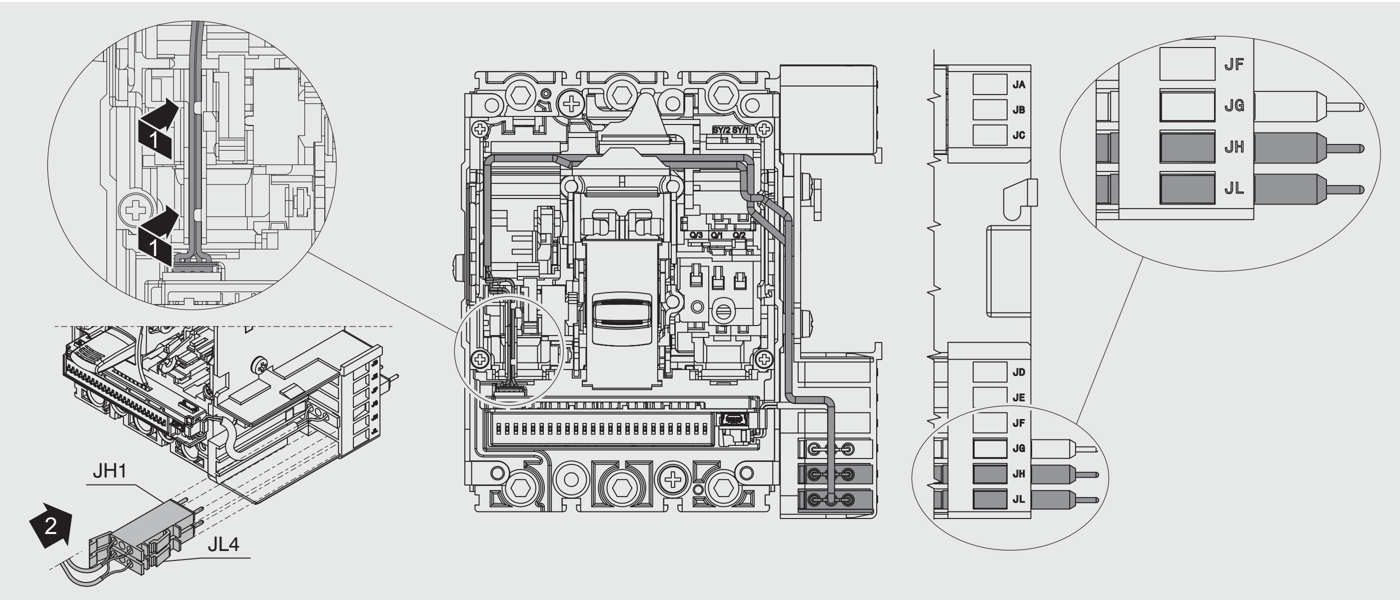
36 XT2 - XT4 W PR 212/CI ONLY



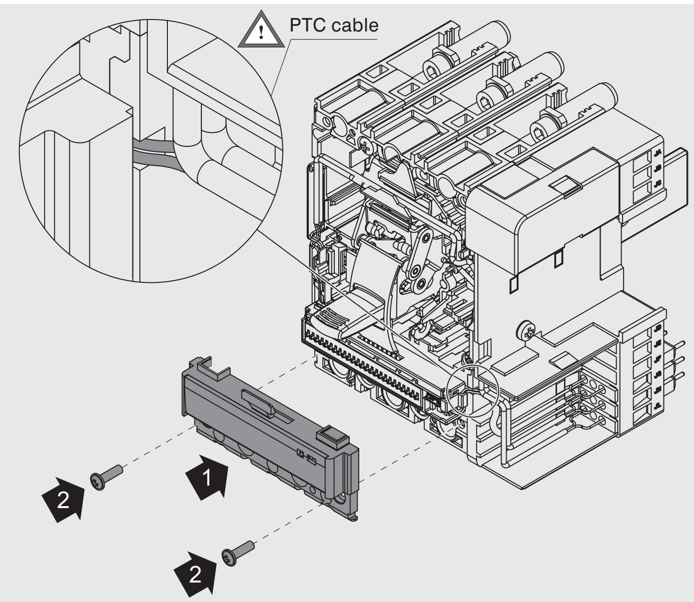
37 XT2 - XT4 W PR 212/CI ONLY



38 XT2 - XT4 W PR 212/CI ONLY



39 XT2 - XT4 W PR 212/CI ONLY



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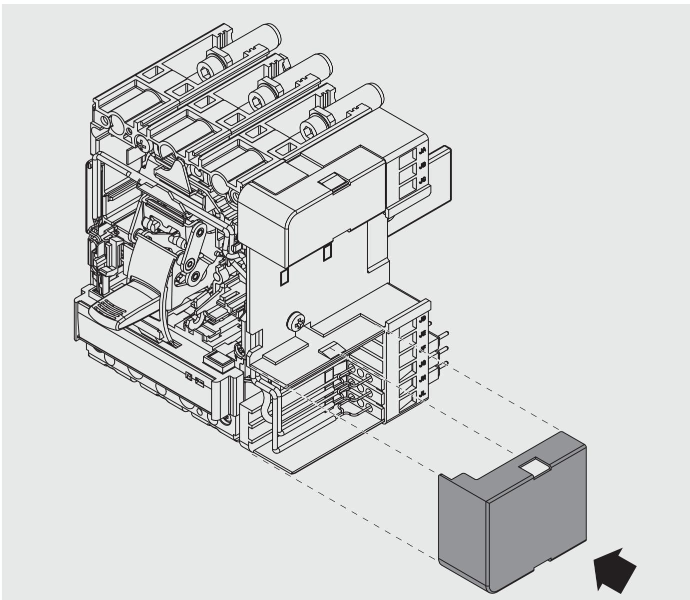
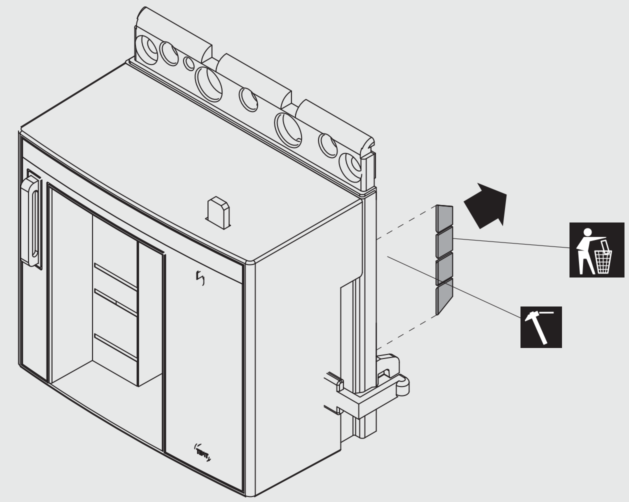


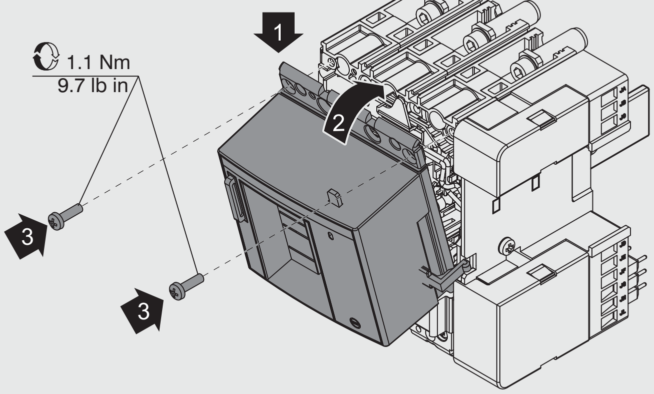
41

XT2 - XT4 W



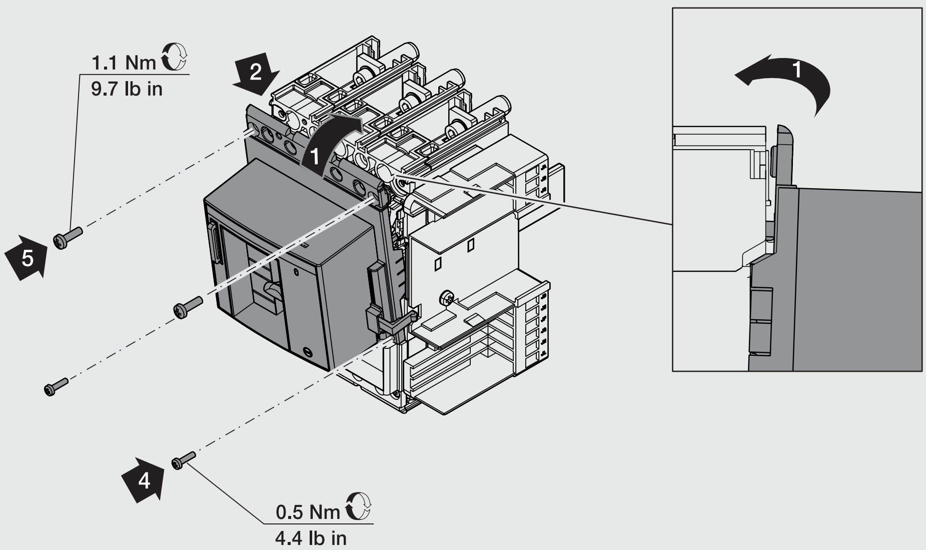
42

XT2 - XT4 W

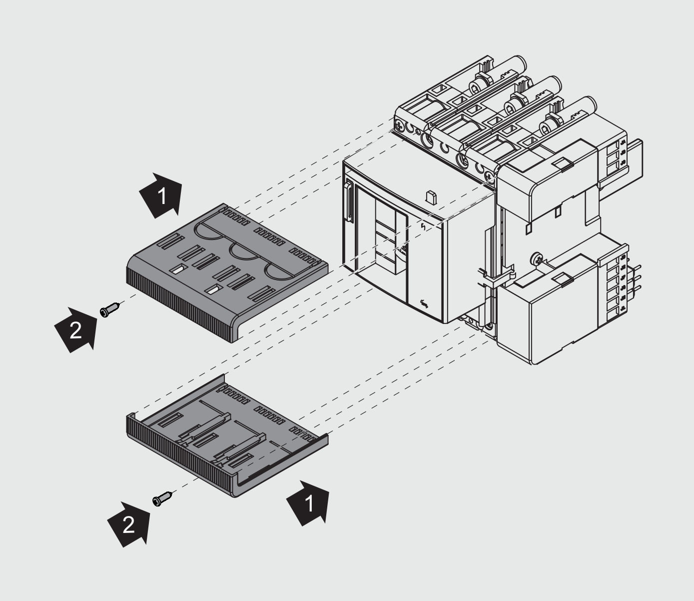


43

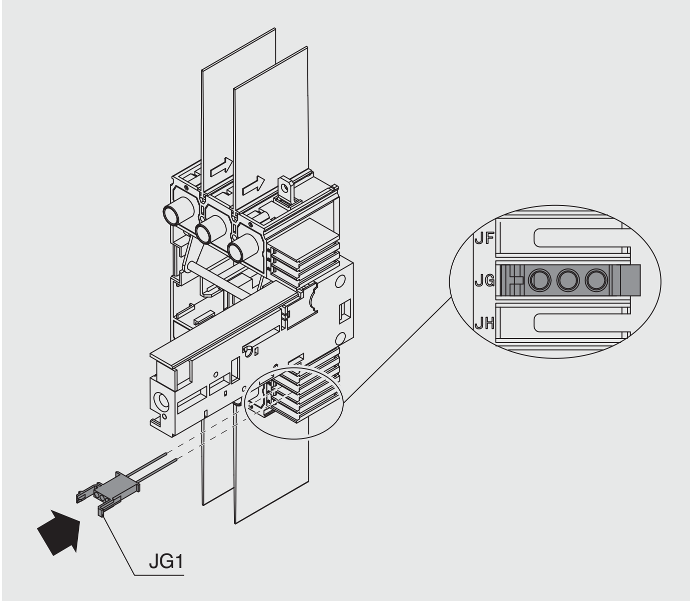
XT4 V - X ONLY



44 XT2 - XT4 W



45 XT2 - XT4 W - WITH PTC ONLY



46 XT2 - XT4 W - WITH PR212/CI ONLY