

Important Safety Notice

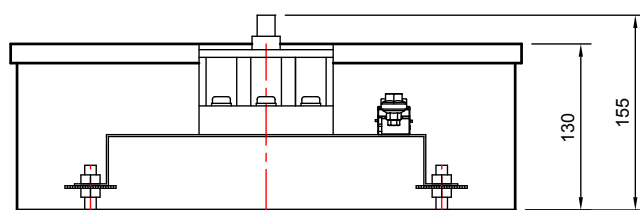
It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to. All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation.

All connections should be checked periodically to ensure correct tightness.

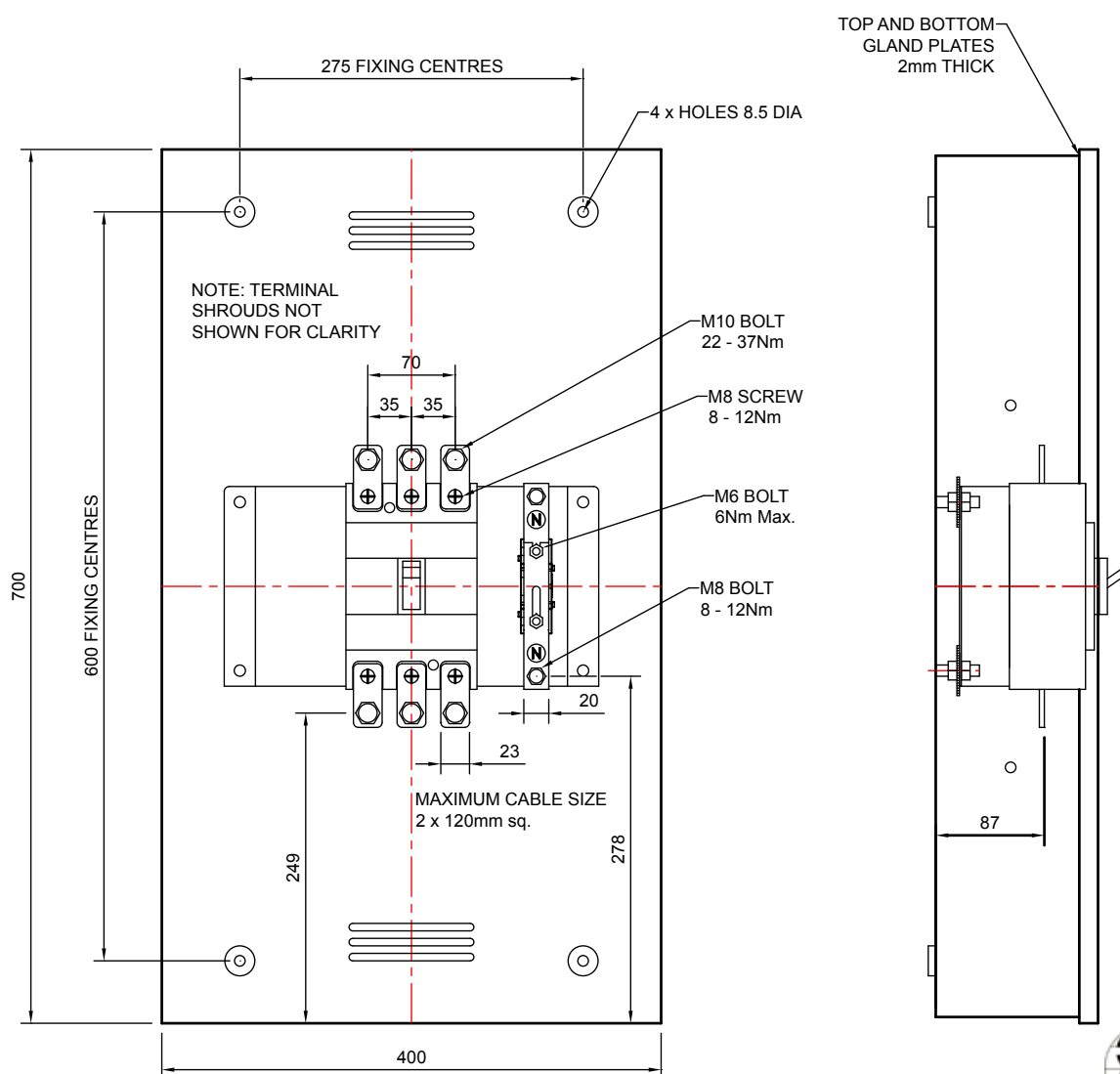
DO NOT USE POWER TOOLS ON THESE PRODUCTS



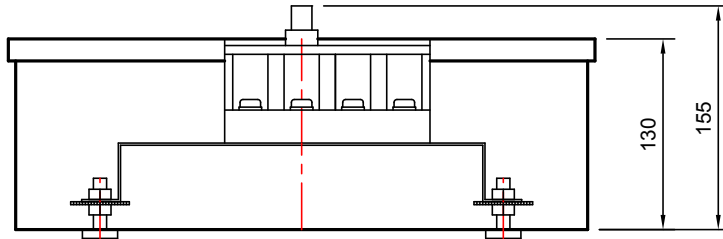
CBR160-3PNL-25AT-MC
CBR250-3PNL-25AT-MC



WARNING: All connections (including factory made) must be checked for the correct tightness prior to the commissioning of the electrical installation

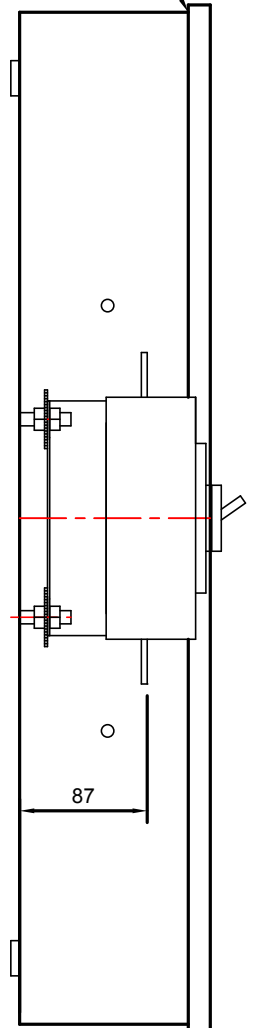
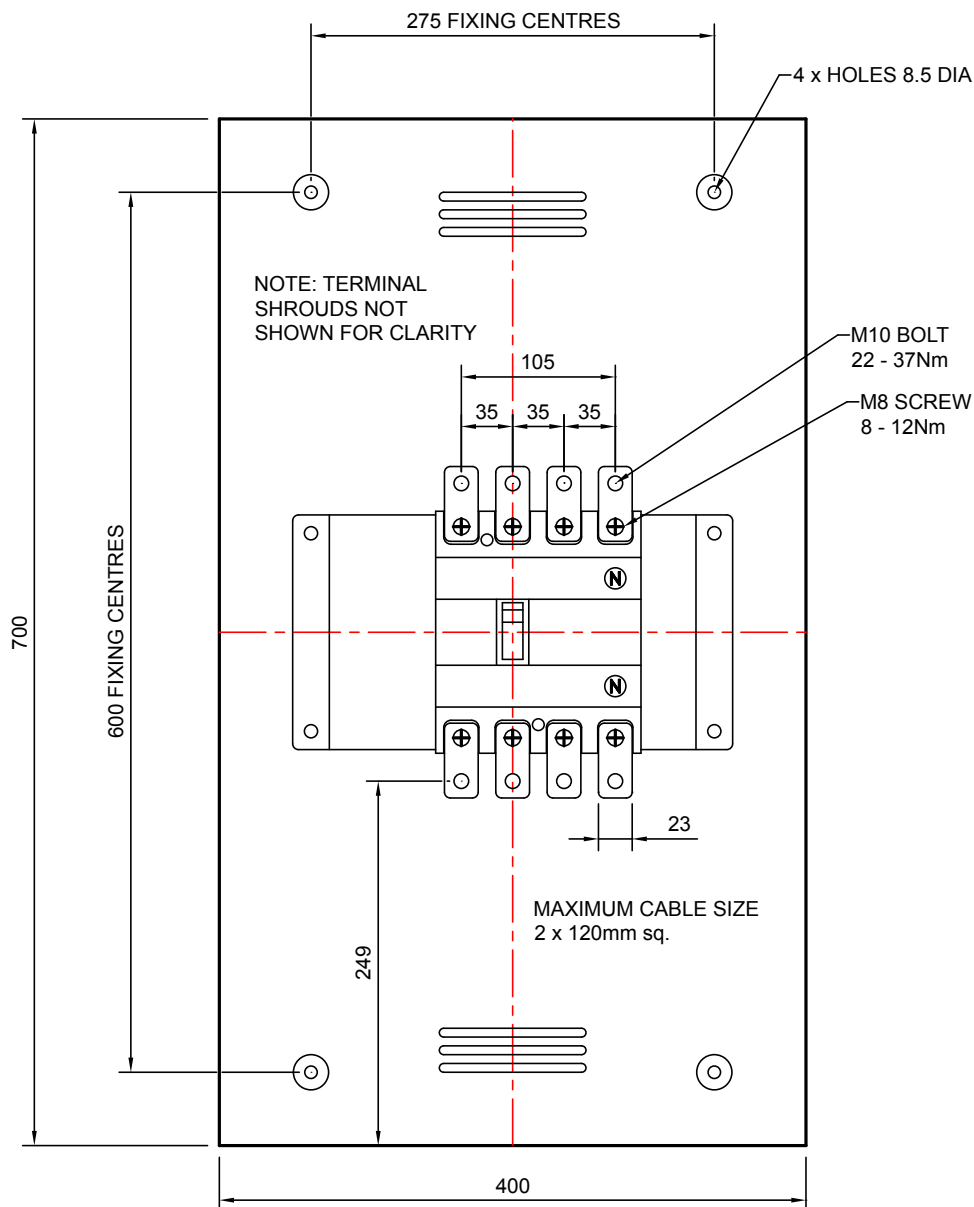


CBR160-4P-25AT-MC
CBR250-4P-25AT-MC



WARNING: All connections (including factory made) must be checked for the correct tightness prior to the commissioning of the electrical installation

TOP AND BOTTOM
GLAND PLATES
2mm THICK



DATA SHEET: TEMBREAK 2 ZE250-NJ MCCB

WITH INTEGRAL RESIDUAL CURRENT PROTECTION (CBR)

Electrical Characteristics to IEC 60947-1, IEC 60947-2, Annex B, IEC 60755

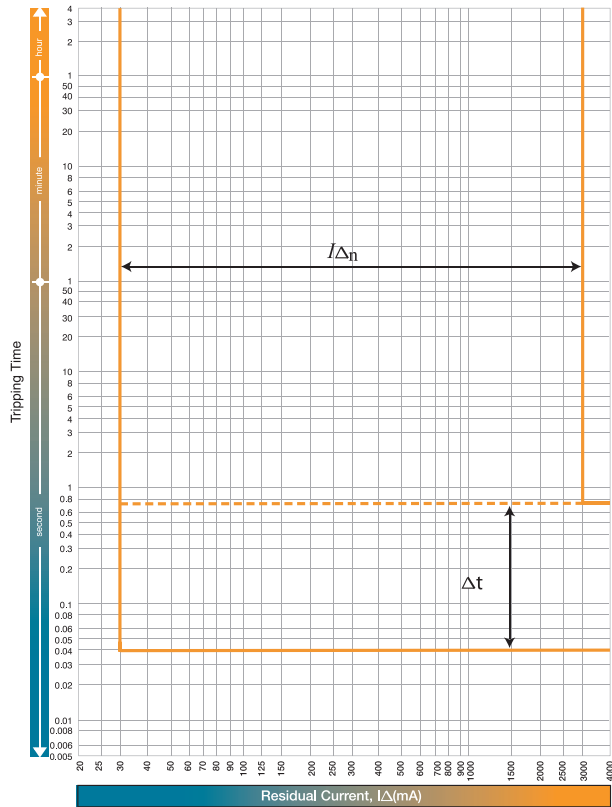
Frame Reference	Quantity	Unit	Condition	TB2 S250
Maximum In (A) of Frame				250
Model				ZE250
Number of Poles				3,4
Type				NJ
Nominal current ratings				
	I_n	(A)	50°C	160,250
Electrical characteristics				
Rated operational voltage	U_e	(V)	AC 50/60 Hz	525
Rated insulation voltage	U_i	(V)		525
Rated impulse voltage	U_{imp}	(kV)		8
Ultimate breaking capacity (IEC, JIS,AS/NZS)	I_{cu}	(kA)	525V AC 440V AC 400/415V AC 220/240V AC	10 15 25 35
Service breaking capacity (IEC, JIS,AS/NZS)	I_{cu}	(kA)	525V AC 440V AC 400/415V AC 220/240V AC	7.5 12 19 27
Energy withstand (EN 61008)	$I^2 t$	(kA ² s)		>22.5
Peak current withstand (EN 61008)	I_{peak}	(A)		> 3.3
Protection				
Adjustable thermal, fixed magnetic Residual current protection, Type A Utilisation Category				■ ■ A
Installation				
Front Connection (FC) Extension Bar (FB) Cable Clamp (FW) Rear Connection (RC) Plug-in (PM) Din Rail Mounting (DA) Dimensions:	height width	(mm) (mm)	3 pole 4 pole	■ • • • - • 165 105
Weight	depth weight	(mm) (kg)	3 pole 4 pole	68 1.5 1.9
Operation				
Direct Opening Action Toggle operation Door mounted (HS)/ Breaker mounted handle (HB) Motor operation Residual Current Monitor and Remote Trip Module				■ ■ • • •
Endurance	Electrical Mechanical	cycles cycles	415V AC	10,000 10,000

■ Standard • Optional - Not Available

RESIDUAL (EARTH LEAKAGE) CURRENT PROTECTION

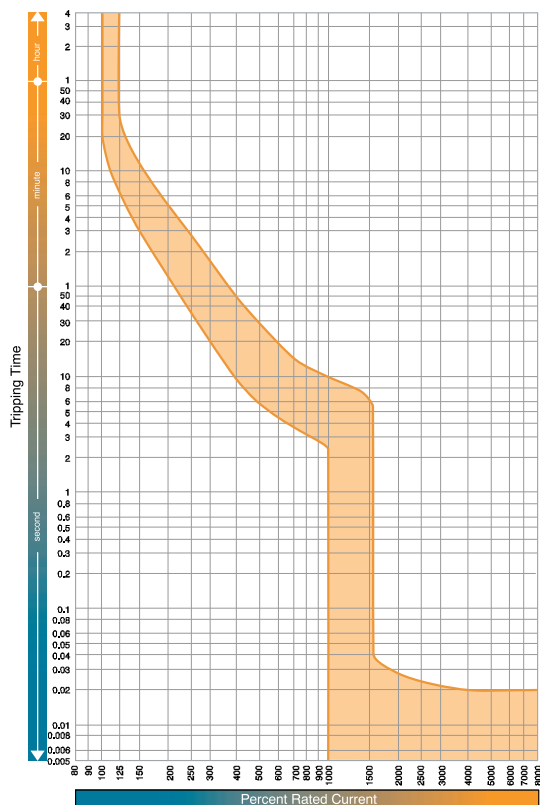
Time/Current Characteristic Curves

ZE250-NJ,



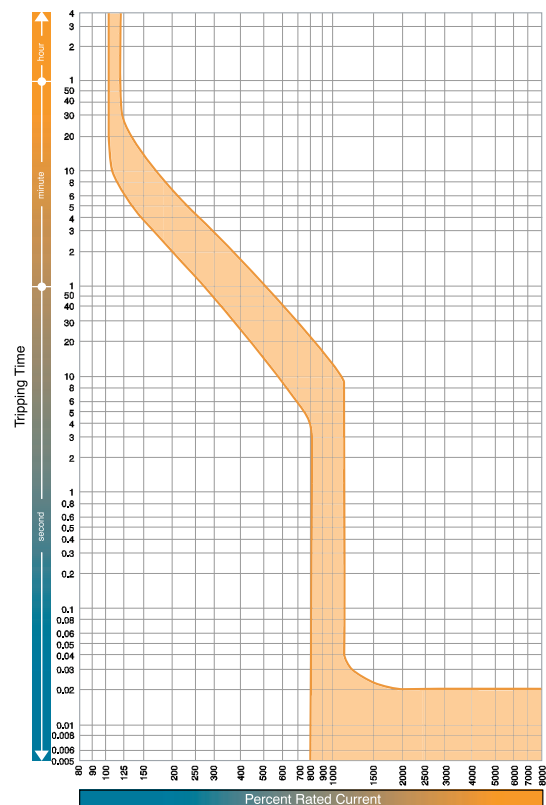
Time/Current Characteristic Curves

ZE250-NJ, 160A



Time/Current Characteristic Curves

ZE250-NJ, 250A



Instruction Manual for
Earth Leakage Circuit
Breaker

Types
ZE125-NJ ZS125-NJ
ZS125-GJ
ZE250-NJ ZS250-NJ
ZS250-GJ

Please retain this manual for future
reference.

The Manufacturer assumes no responsibility for damages resulting from non-application
or incorrect application of the instructions provided herein.

TERASAKI ELECTRIC CO., LTD.

7-2-10 Kamihigashi, Hiranoku, Osaka

547-0002, Japan

TEL: 81-6-6791-9323/ FAX: 81-6-6791-9274

URL : http://www.terasaki.co.jp

E-mail : kiki-osaka@terasaki.co.jp

2G0722SAD (KRB-5326d)

1 Safety Notices

Be sure to read these Instructions and other documents accompanying the product
thoroughly 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.

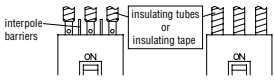
Note that failing to observe **Caution** notices could result in serious results in some cases.
Because safety notices contain important information, be sure to read and observe them.

Mounting Precautions

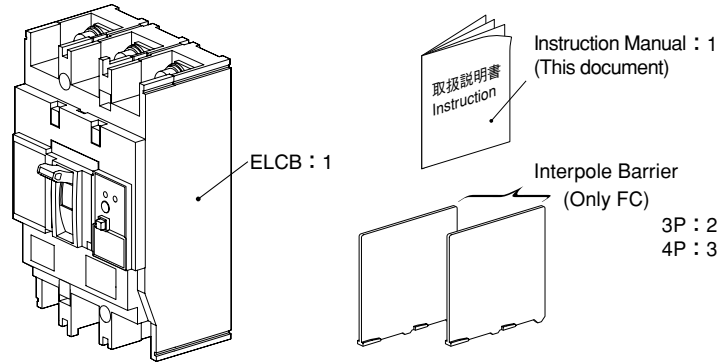
(For detailed mounting dimensions, refer to the TemBreak2 catalogue.)

Caution

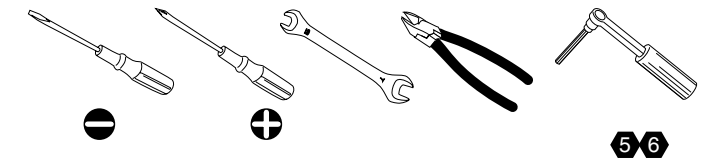
- Electrical work should only be undertaken by suitably qualified persons.
- Do not place the product in an area that is subject to high temperature, high humidity,
excessive dusty air, corrosive gas, strong vibration and shock, or other unusual
conditions. Mounting in such areas could cause a fire or malfunction.
- Be careful to prevent foreign objects (debris, concrete powder, iron powder, etc.) and
rainwater from entering product. These materials inside the product could cause a fire
or malfunction.
- Prior to commencing any work on the product, open an upstream circuit breaker or isolator
to ensure that no voltage is applied to the product. Otherwise, electric shock may result.
- For 4-pole breakers, be sure to connect a neutral conductor to the N-phase pole.
Otherwise, an over-current may hinder the product from tripping, thus resulting in a fire.
- When connecting cable or busbar to the product, tighten terminal screws to the torque
specified in this manual. Otherwise, a fire could result.
- For front-connected circuit breakers having
**interpole barriers between bare conductors on
the line side, insulate the conductors** using
insulating tubes or tape to below the interpole
barriers. Be sure to use supplied interpole barriers.
Insufficient insulation may result in short-circuit.
- Do not block the arc gas vents of the product to ensure adequate arc space. Blocking
these vents could result in failure of circuit interruption.



2 Packaged Items/Assembly tools



Connections/Poles	Qty	Type					
		ZE125-NJ, ZS125-NJ, ZS125-GJ		Qty	ZE250-NJ, ZS250-NJ, ZS250-GJ		
Front Connected (FC)	3P	6	(M8×16)	6	(M8×20)		
	4P	8		8			
	3P	2	(M4×55)	2	(M4×55)		
	4P	4		4			
Rear Connected (RC)	3P	6	(M8×25)	6	(M8×25)		
	4P	8		8			
	3P	2	(M4×55)	2	(M4×55)		
	4P	4		4			

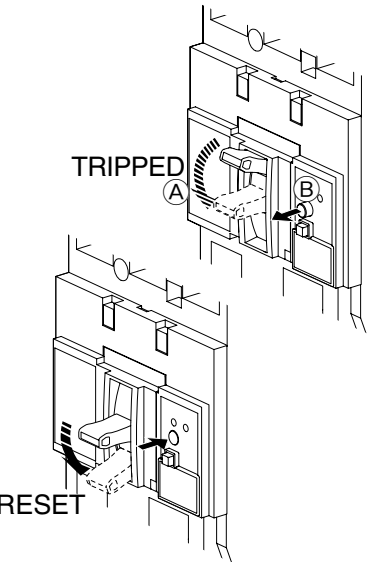


3 Operating Instructions

For Over Current Trip : TRIPPED **A**

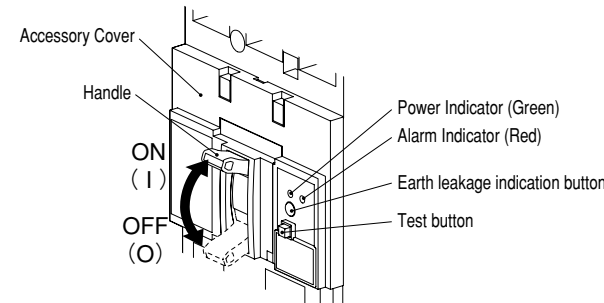
For Earth leakage Trip : TRIPPED **A+B**

Earth leakage indication button will return automatically, if Handle is RESET.



	Type	Operation Effort
ON⇒OFF	ZE125-NJ ZS125-NJ ZS125-GJ	28N
OFF⇒ON	ZE125-NJ ZS125-NJ ZS125-GJ	22N
ON⇒OFF	ZE250-NJ ZS250-NJ ZS250-GJ	36N
OFF⇒ON	ZE250-NJ ZS250-NJ ZS250-GJ	25N

	Type	Operation Effort
TRIP⇒OFF (RESET)	ZE125-NJ ZS125-NJ ZS125-GJ	68N
	ZE250-NJ ZS250-NJ ZS250-GJ	76N

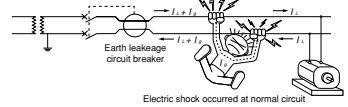


- Using the test button, check the breaker for normal operation.Proceed as follows: After
proper connection, move the handle to the ON position and then (while applying
voltage to the breaker) **press the test button**.The breaker will trip open.If pressing the
test button for 2 or 3 seconds does not cause the breaker to trip open, the breaker is
out of order. Please contact your local agent or our branch office immediately.

Handling Precautions

Warning

- Never touch terminals. Otherwise, electric shock may result.
- The earth leakage circuit breaker trips open just when the difference between
outgoing current and incoming
current exceeds a specified value.
Never touch two or more bare live
parts simultaneously.The breaker
does not respond to electric shock.



Caution

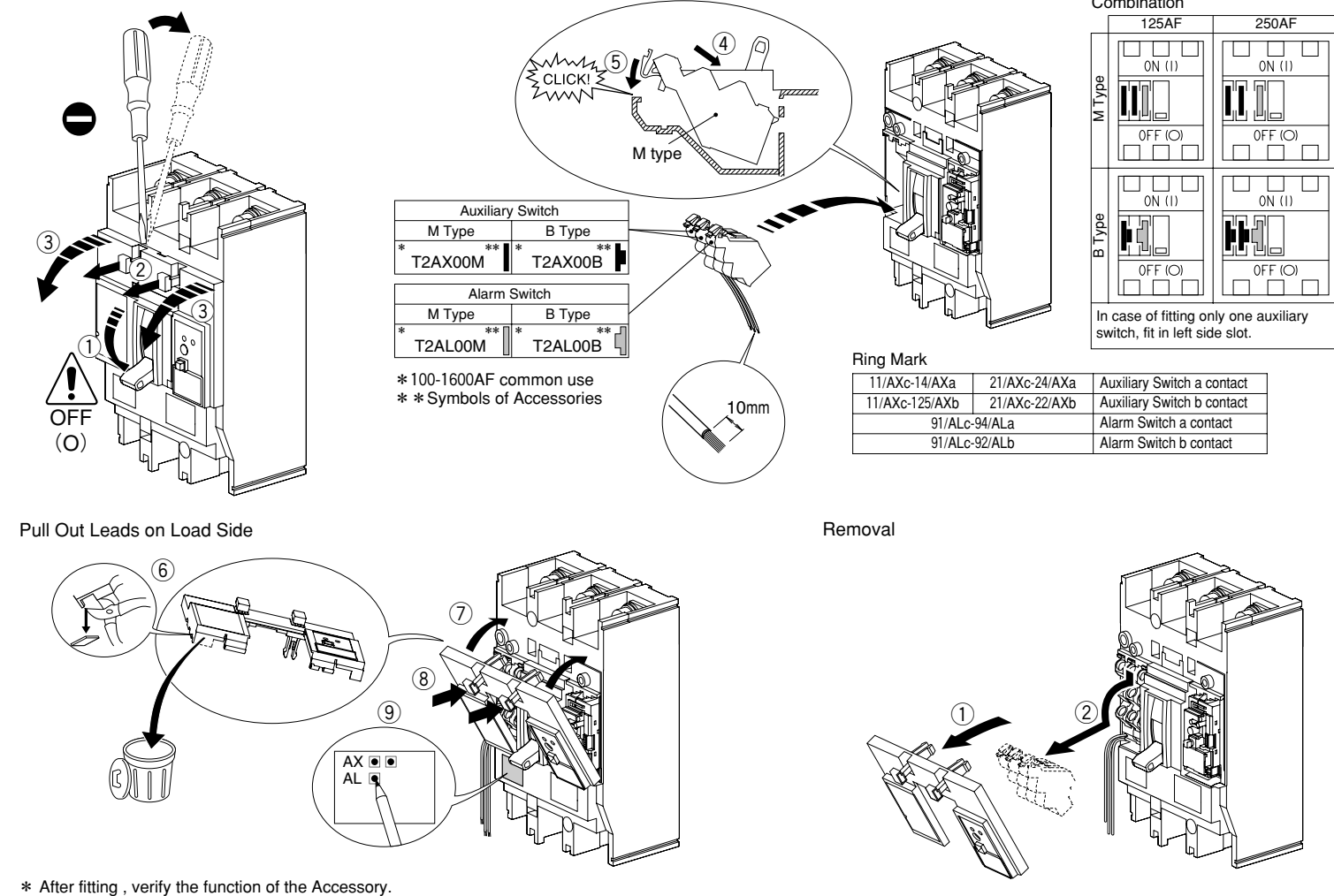
- When the breaker trips open automatically, remove the cause, then return the
handle to the ON position. Should a fault be interrupted, the breaker must be
inspected. Otherwise, a fire may result.
- Be sure to connect the earth terminal of a load device to ground.
- Check the breaker for normal operation by pressing the test button once per
month.** If pressing the test button for 2 or 3 seconds does not cause the breaker to
trip open, the breaker is out of order. Replace it by new one.

Maintenance Precautions

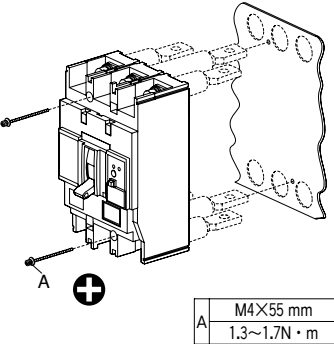
Caution

- Service and/or inspection of the product must be done by persons having expert
knowledge.
- Before service or inspection of this product, please ensure that no voltage is
present on the breaker supply side. Any device upstream of this breaker should be
suitably isolated otherwise electric shock may result.
- Regularly check that the MCCB terminal screws are tightened to torque values
shown within this manual, failure to do so may result in fire.
- Check the breaker for normal operation by pressing the test button while applying
voltage to the breaker.If pressing the test button for 2 or 3 seconds does not cause
the breaker to trip open, the breaker is out of order. Replace it by new one.

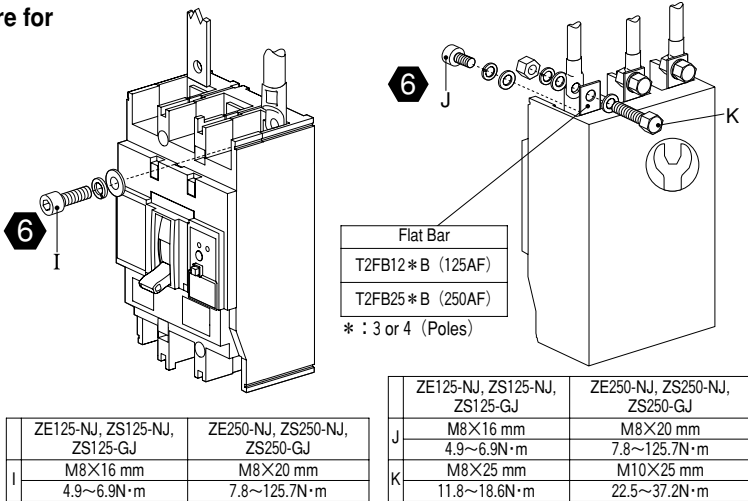
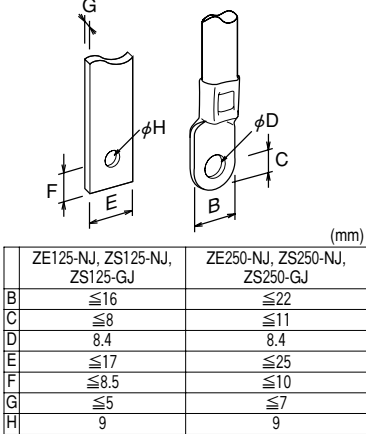
4 Fitting Internal Accessories



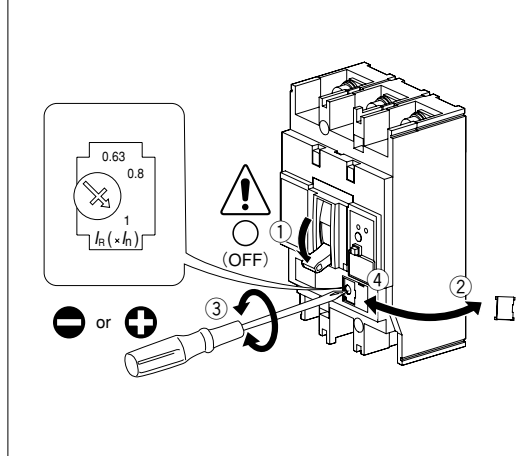
5 Breaker Mounting Procedure for Front Connected (FC) and Rear Connected (RC)



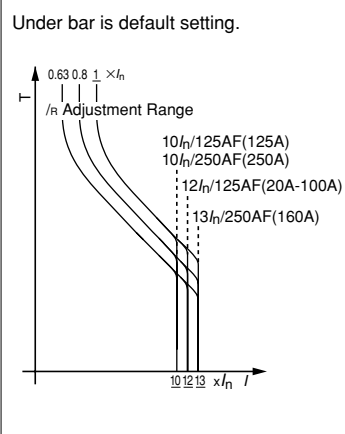
6 Conductor Connection Procedure for Front Connected (FC) Types



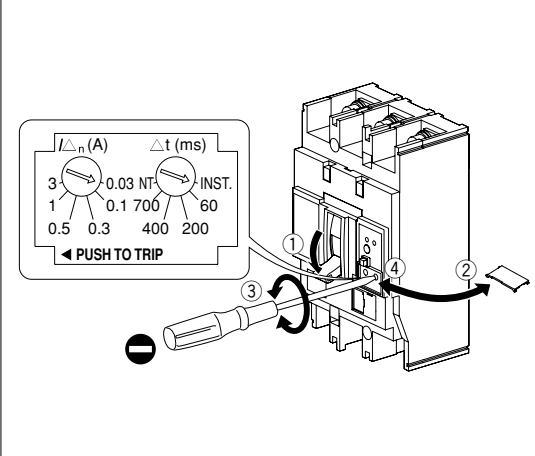
13 Adjustable Thermal Magnetic



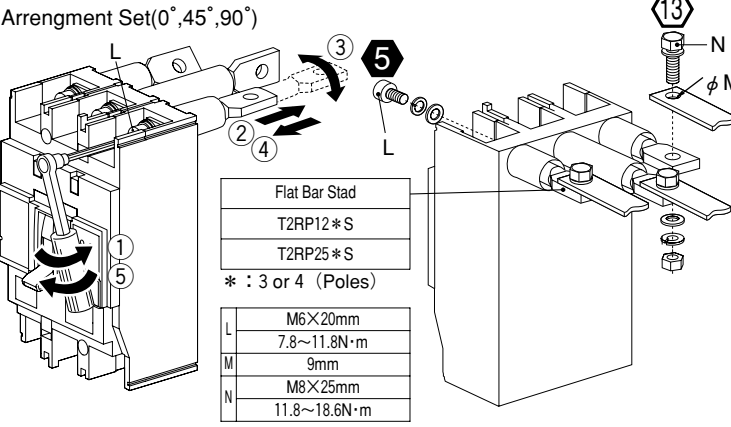
14 Time/Current Characteristic Curves



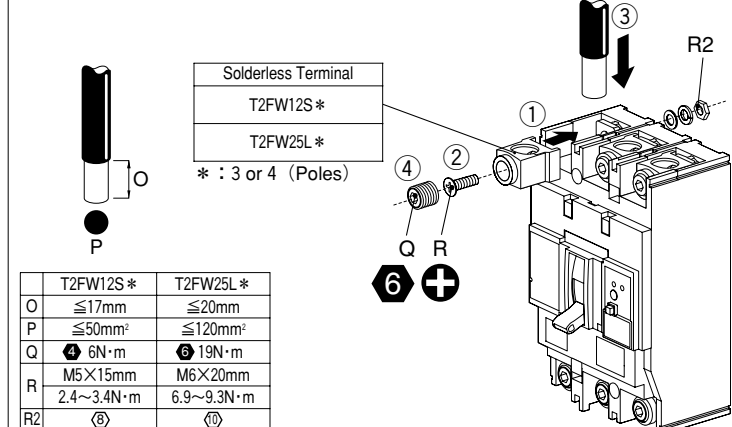
15 Adjustable Rated sensivity current and Trip Time



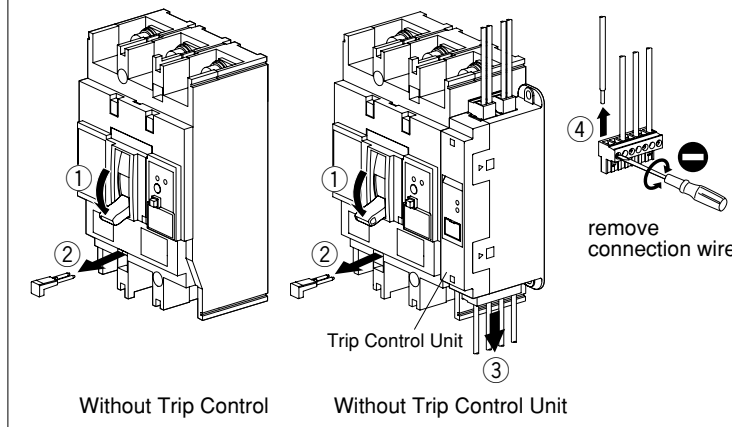
7 Conductor Connection Procedure for RC (Where Applicable)



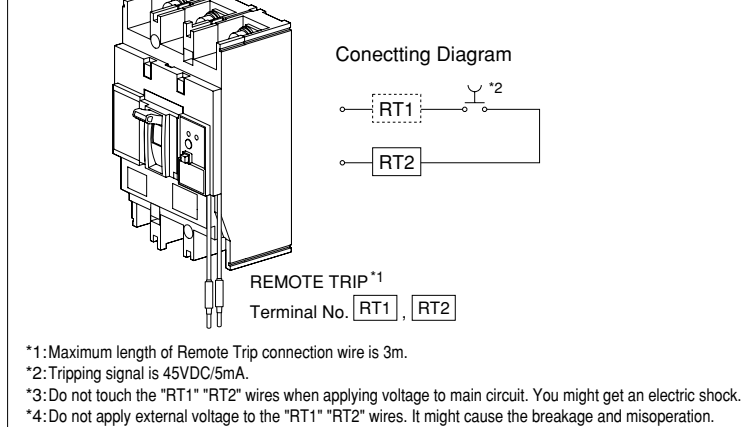
8 Solderless Terminals Mounting Procedure for FC



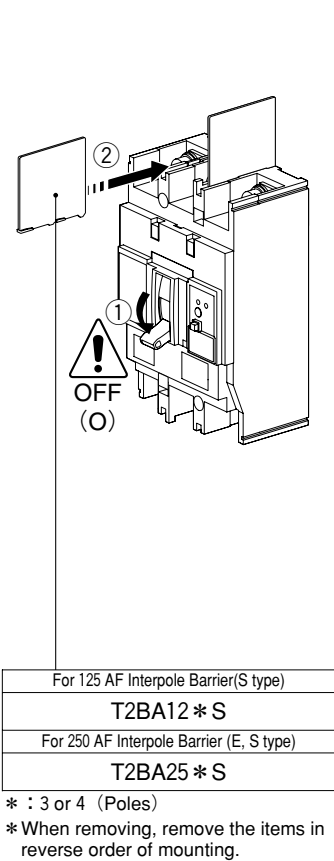
16 Preparation for Dielectric test



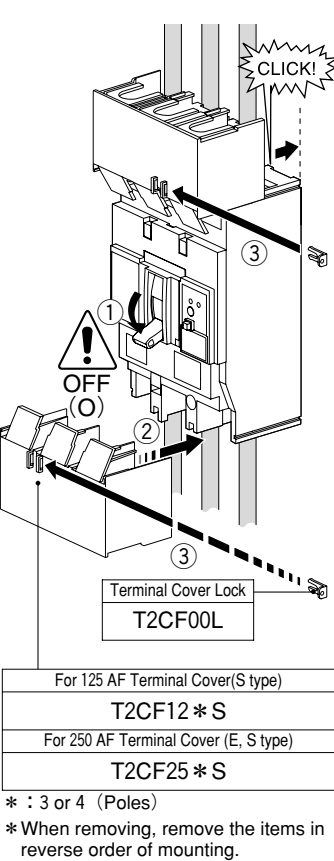
17 Remote Trip (OPTION)



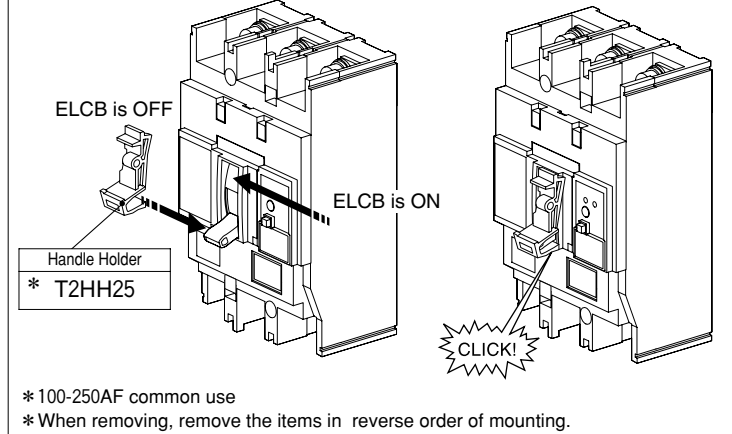
9 Procedure for mounting Interpole Barrier



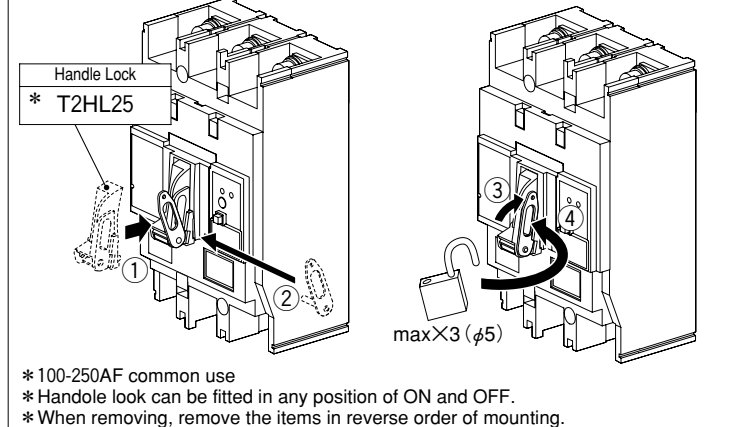
10 Procedure for mounting Terminal Cover



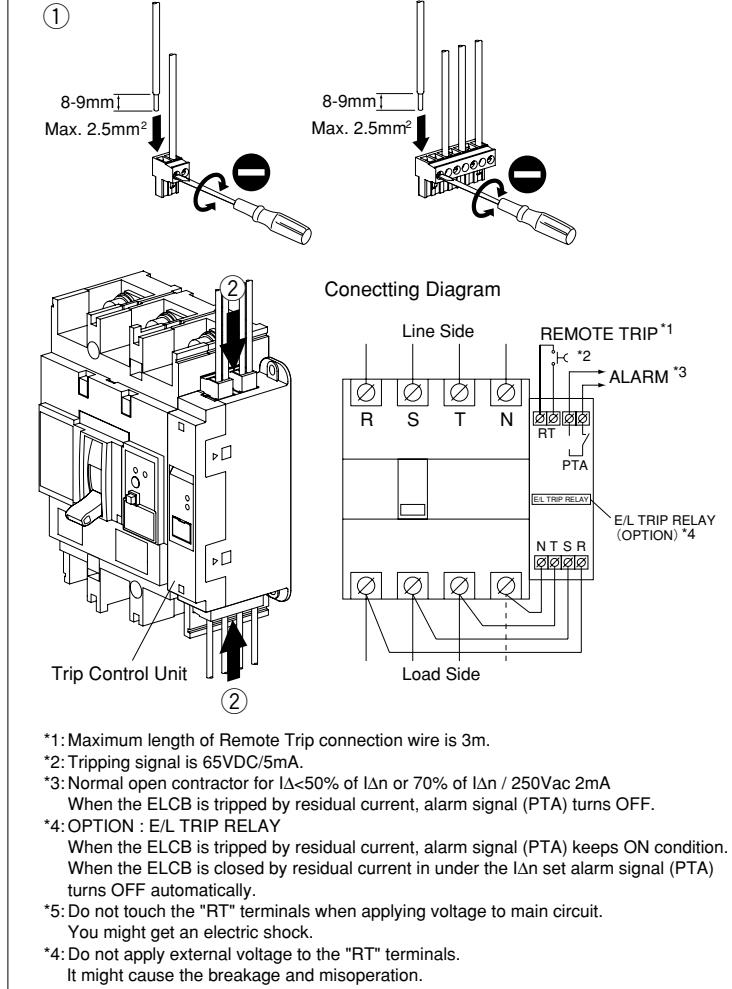
11 Procedure for mounting Handle Holder



12 Procedure for mounting Handle Lock



18 Connecting Procedure of Trip Control Unit (OPTION)



19 Operation indication and settings of Trip Control Unit (OPTION)

