

Instruction Manual for Moulded Case Circuit Breakers

Types:
YA5N, YA5S, YA5H
YA5J, YA5B

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AS10217

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.

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 moderate or slight personal injury and/or property damage.

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 injury and/or property damage in some instances. Because safety notices contain important information, be sure to read and observe them.

Mounting Precautions

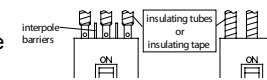
For detailed mounting dimensions, refer to either the Loadline or System Loadbank catalogues.

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.
- 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 electrical shock may result.
- For 4 Pole breakers be sure to connect a neutral conductor to the N-phase pole otherwise an overcurrent 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 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.

Handling Precautions

WARNING

- Never touch terminals otherwise, electric shock may result.

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.

Maintenance Precautions

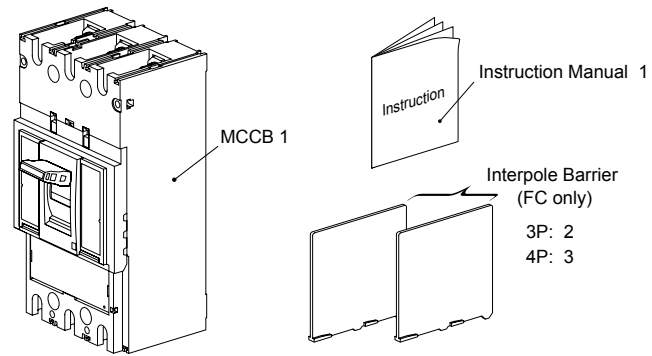
CAUTION

- Service and/or inspection of the product must be done by persons having expert knowledge.
- Before servicing or inspecting the product, open an upstream circuit breaker or the like to isolate all sources of power. Otherwise, electric shock may result.
- Regularly check that the breaker terminal screws are tightened to torque values shown within this manual, failure to do so may result in fire.

Other Precautions

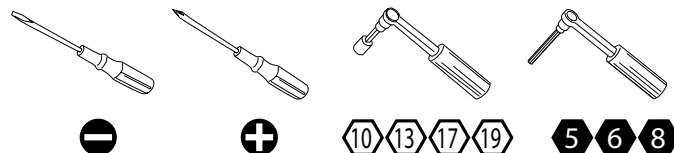
- Do not carry this product by accessory leads, as this may cause damage to the product.
- Unauthorised opening of the breaker cover will invalidate product warranty.
- When installing the product, use wires or conductors, the cross sectional areas of which accommodate the rated current of the product. Using wires or conductors with inadequate cross sectional areas may cause false tripping and overheat.

Packaged Items/Assembly Tools

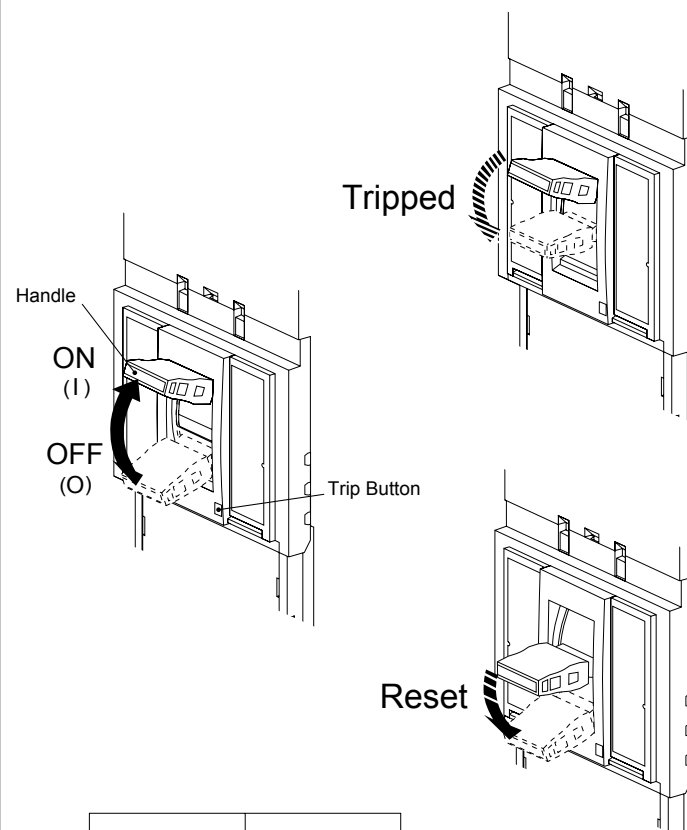


Interpole Barrier (FC only)
3P: 2
4P: 3

		Type		400AF	
		YA5			
Connections/Poles		Qty			
Front Connected	FC	3P	6	(M10x25)	
		4P	8	(M6x100)	
		3P	4		
		4P	4		
Rear Connected	RC	3P	6	(M12x35)	
		4P	8	(M6x100)	
		3P	4		
		4P	4		
Plug-in Connected	PM	3P	4	(M6x120)	
		4P	4		

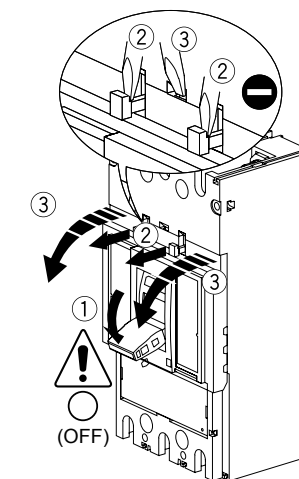


Operating Instructions



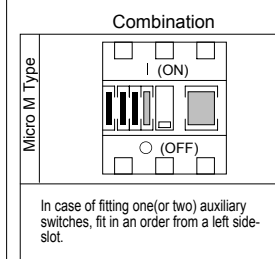
	Operation	Operation effort
YA5	OFF-ON	110N
	ON-OFF	115N
	TRIP-OFF	125N

Fitting Internal Accessories



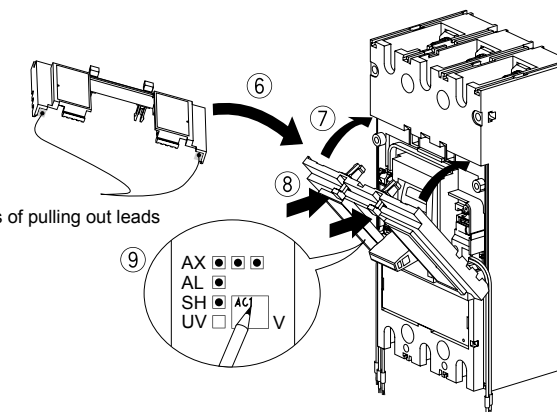
Auxiliary Switch	Micro Type	YAAUX1
Alarm Switch	Micro Type	YAAL
Shunt	Undervoltage	YAST--- YAUVR---

* Symbols of Accessories

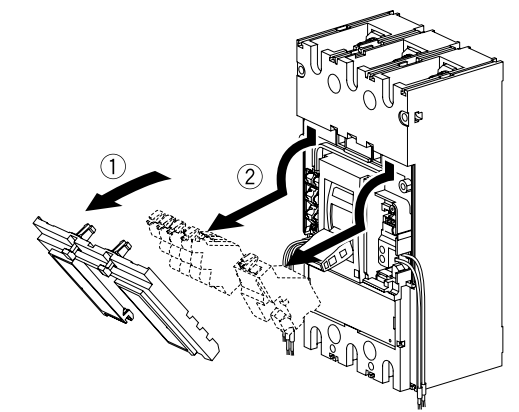


After fitting, verify the function of the Accessory.

Pull Out Leads on Load Side

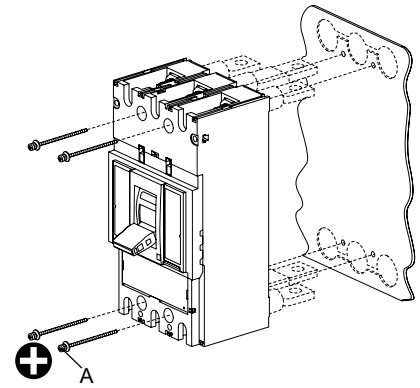


Removal



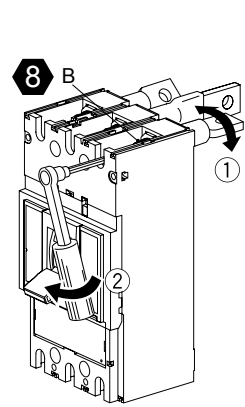
Ring Mark			
Auxiliary Switch		Alarm Switch	
a contact	b contact	a contact	b contact
11/AXc-14/AXa	11/AXc-12/AXb	91/ALc	91/ALc
21/AXc-24/AXa	21/AXc-22/AXb	94/ALa	92/ALb
31/AXc-34/AXa	31/AXc-32/AXb		
Shunt Trip power source C1-C2		Undervoltage Trip power source D1-D2	

Breaker Mounting Procedure for Front Connected & Rear Connected Types



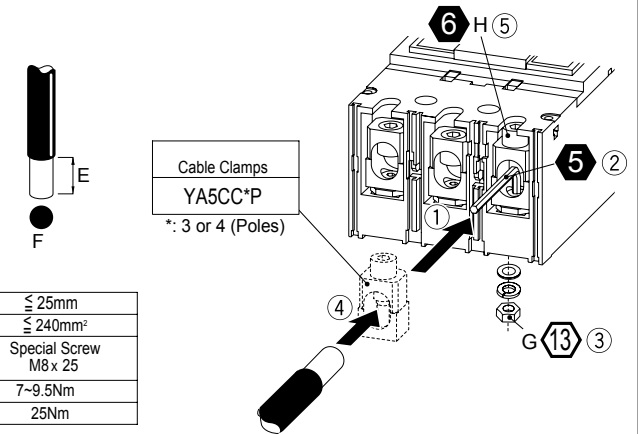
A	M6x100
	6.0-7.4Nm

Conductor Connection Procedure for Rear Terminal Types



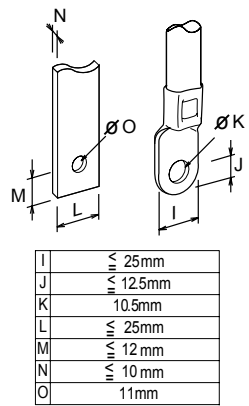
Rear Terminal Stud YA5RT*P	
*: 3 or 4 (Poles)	
B	M10x20
	18.6-29.4 Nm
C	14mm
D	M12x35
	40.2-65.7Nm

Mounting Procedure for Mounting Cable Clamps

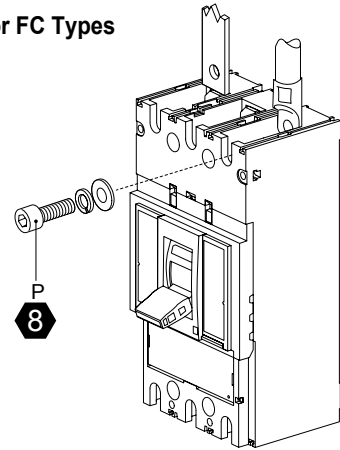


E	≤ 25mm
F	≤ 240mm ²
G	Special Screw M8 x 25
	7-9.5Nm
H	25Nm

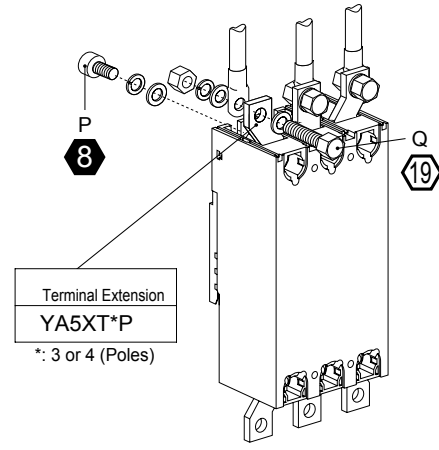
Conductor Connection Procedure for FC Types



I	M/A	25mm
J	M/A	12.5mm
K	M/A	10.5mm
L	M/A	25mm
M	M/A	12mm
N	M/A	10mm
O		11mm



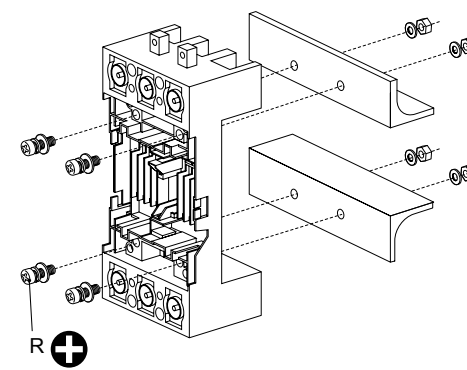
Insulate all bare conductors of the line side until the breaker end.



Terminal Extension YA5XT*P	
*: 3 or 4 (Poles)	

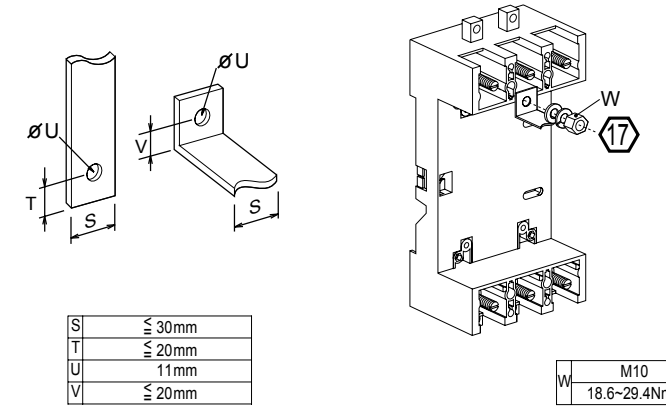
P	M10x25
	13.7-22.5Nm
Q	M12x35
	40.2-65.7Nm

Procedure for Installing Plug-in Mounting Base



R	M5x30
	3.6-4.4Nm

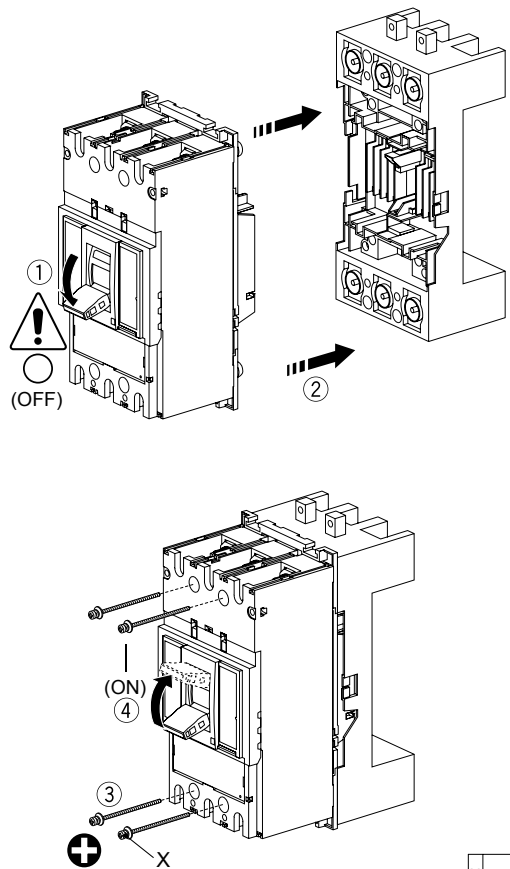
Conductor Preparation for Plug-in Base



S	≤ 30mm
T	≤ 20mm
U	11mm
V	≤ 20mm

W	M10
	18.6-29.4Nm

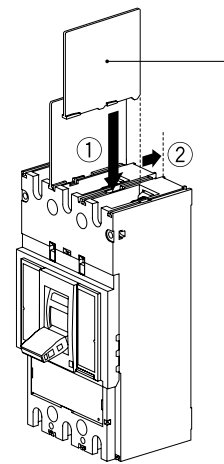
Mounting Procedure for Plug-in Breaker



X	M6x120
	6.0-7.4Nm

When removing, remove the items in reverse order of mounting.

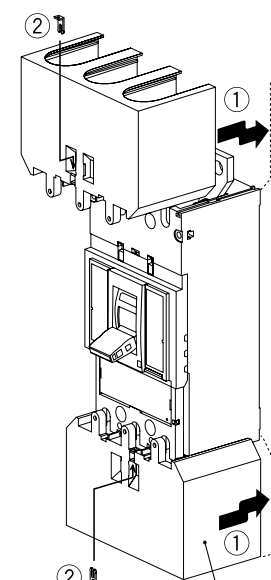
Interphase Barrier Mounting Procedure



Interphase Barrier YA5TB*P	
*: 3 or 4 (Poles)	

When removing, remove the items in reverse order of mounting.

Mounting Procedure for Terminal Cover



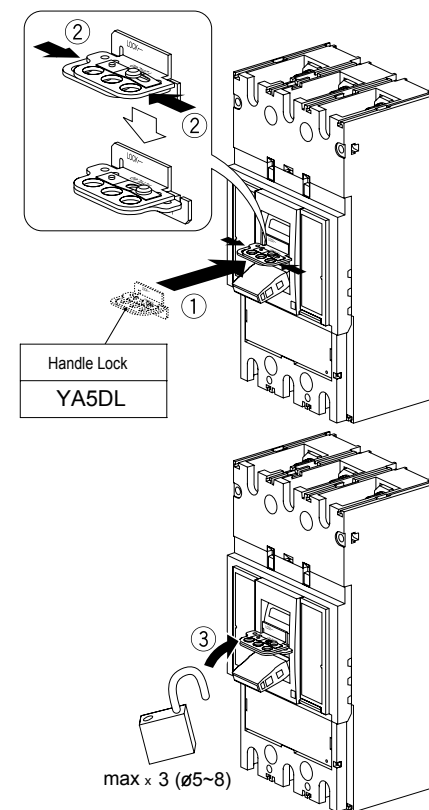
Terminal Cover Lock	
*	

Connection	Terminal Cover
Front Connection	YA5TS*P
Rear Connection/ Plug-in Connection	YA5TR*P
Cable Clamp	YA5TC*P

*: 3 or 4 (Poles)

When removing, remove the items in reverse order of mounting.

Procedure for mounting Handle Lock



Handle Lock YA5DL	
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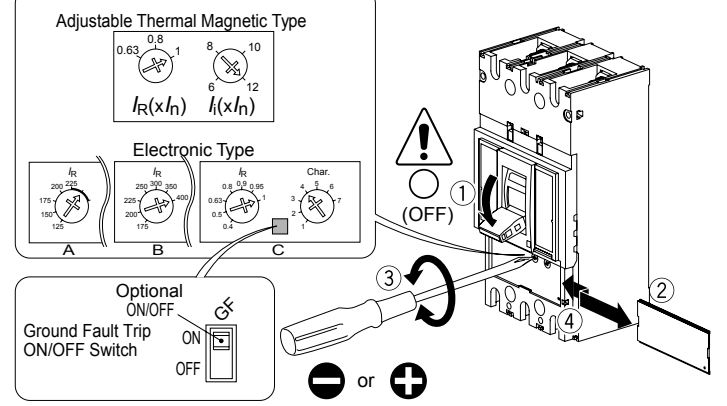
max x 3 (ø5-8)

Handle Lock can be fitted in any position of I (ON) and O (OFF).

When you use this item as the handle lock, please fit padlocks in the procedure of ③.

When removing, remove the items in reverse order of mounting.

Adjustable Thermal Magnetic Type / Electronic Type



Time / Current Characteristic Curves

Under bar is default setting.

