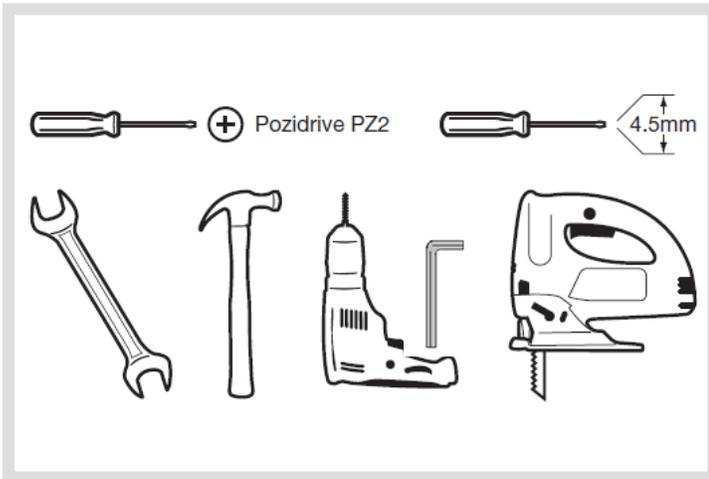


**Installation instructions**  
**Notice d'instructions**  
**Bedienungsanleitung**  
**Instrucciones de uso**  
**Instruções**  
**Bruksanvisning**  
**Gebruiksaanwijzing**

## Invicta 3 Panelboard



All product(s) must be installed by a suitably competent electrician giving consideration to their intended use and in accordance with the current edition of BS 7671 (IET Wiring Regulations).

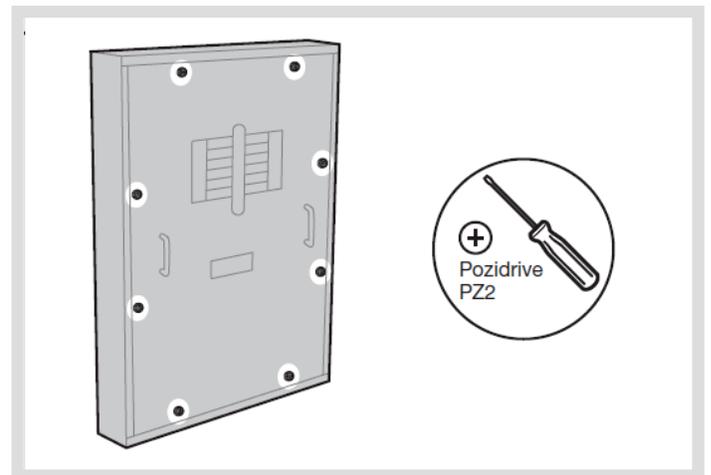
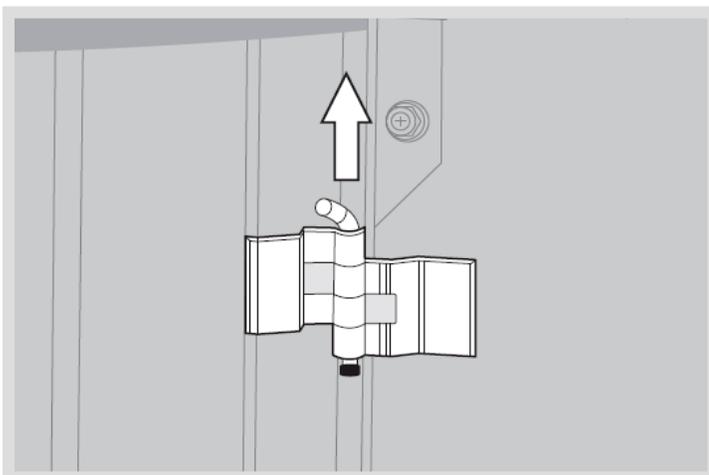
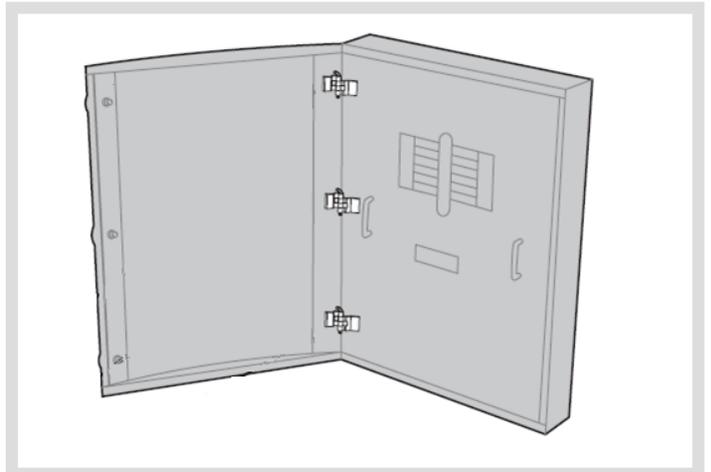
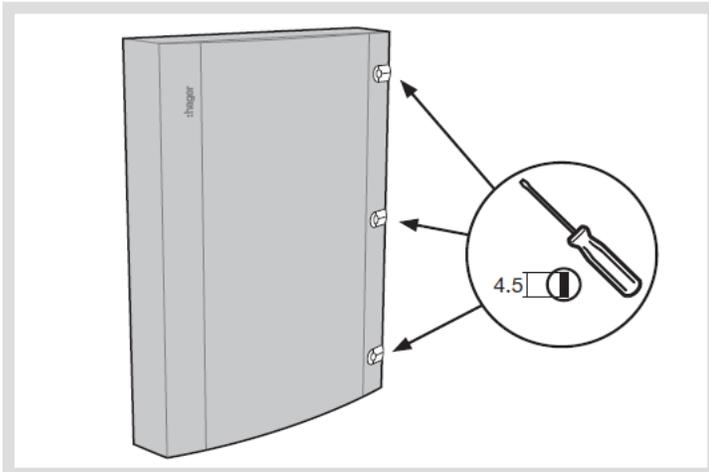
The Electricity at Work regulations and the Health and Safety at Work Act shall be complied with.

Only equipment and arrangements specified in Hager's technical documentation / catalogue shall be used

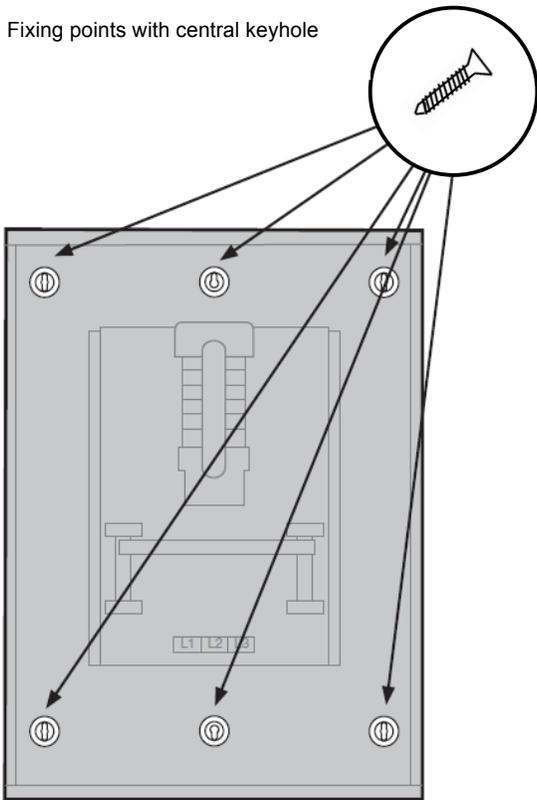
Install in the vertical plane only.

**Notice:**

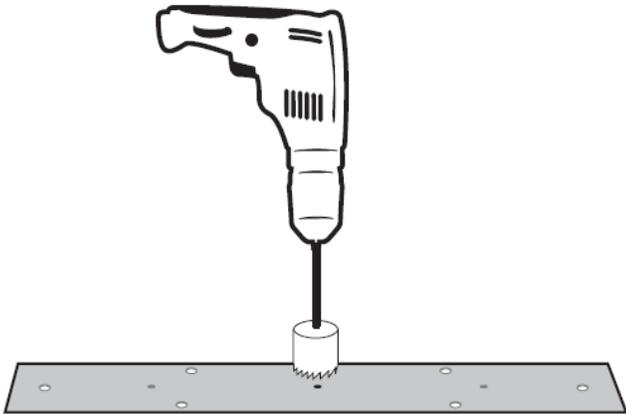
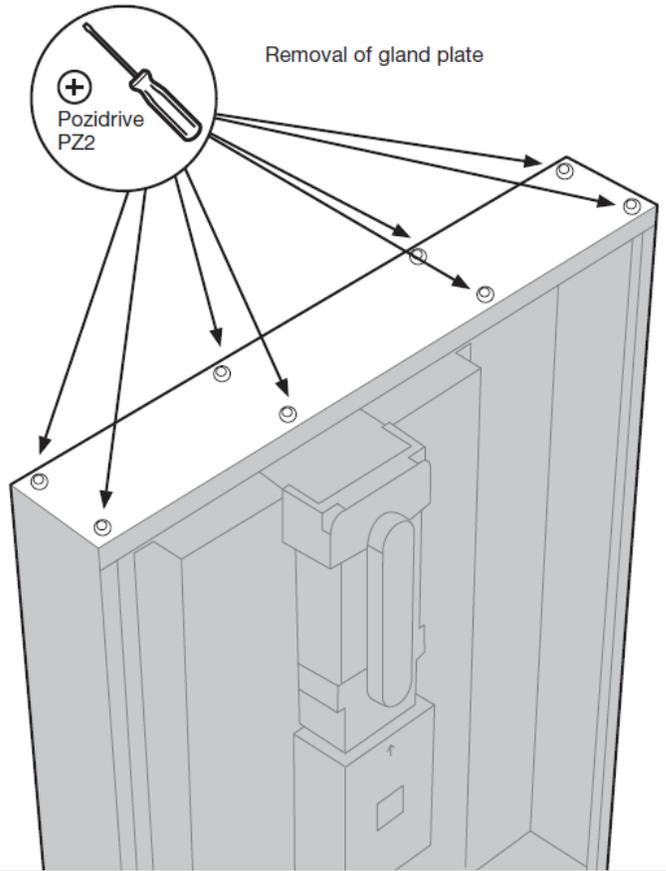
To prevent potential overheating from loose connections the installer shall check connections are tightened to the torque levels stated in these instructions prior to energising this board. This check should include factory made connections which may have loosened in transit.



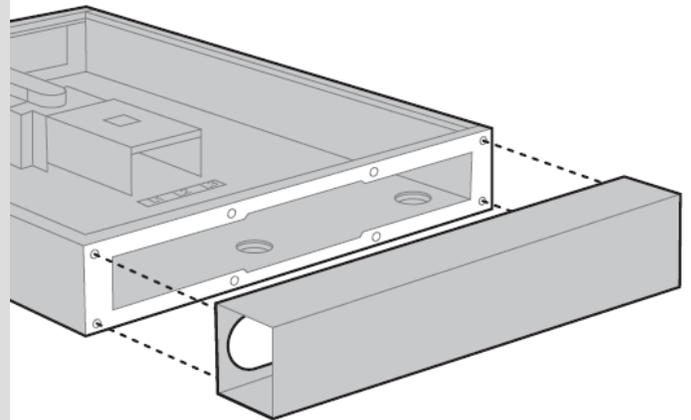
Fixing points with central keyhole



Removal of gland plate



Drill centre mark provided when fitting SWA or conduit



Remove gland plate when fitting trunking

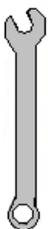
## JF4 3 Pole 400A MCCB/MCS incomer kit

400A Incomer kits contain:

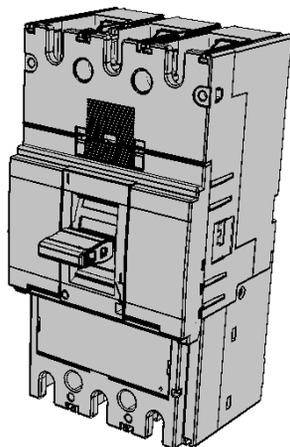
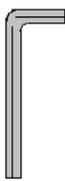
- 3 x Phase extension links
- 3 x spreader links
- 6 x Phase link Allen fixing bolts and washers (M10)
- 4 x Long fixing screws
- 1 x MCCB/ MCS
- Terminal covers

Ensure terminal shrouds are removed before fitting.

17 mm A/F



8 mm HEX

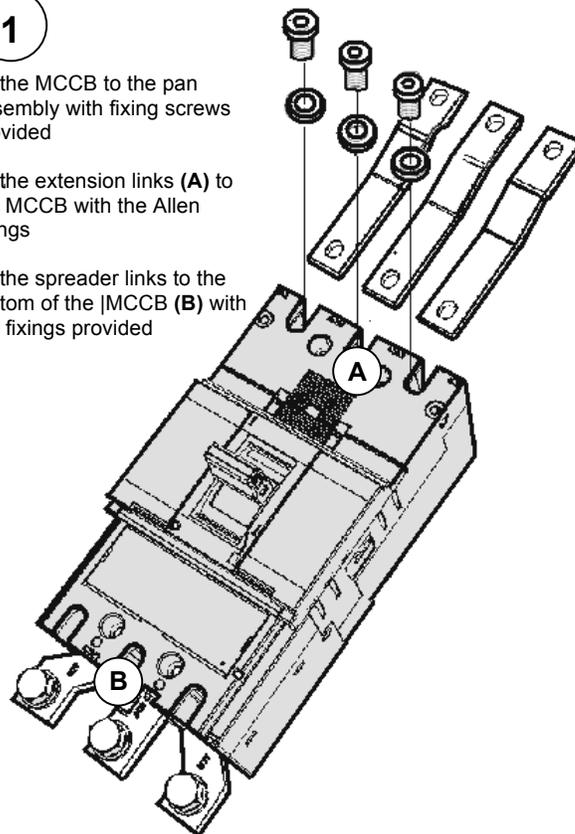


1

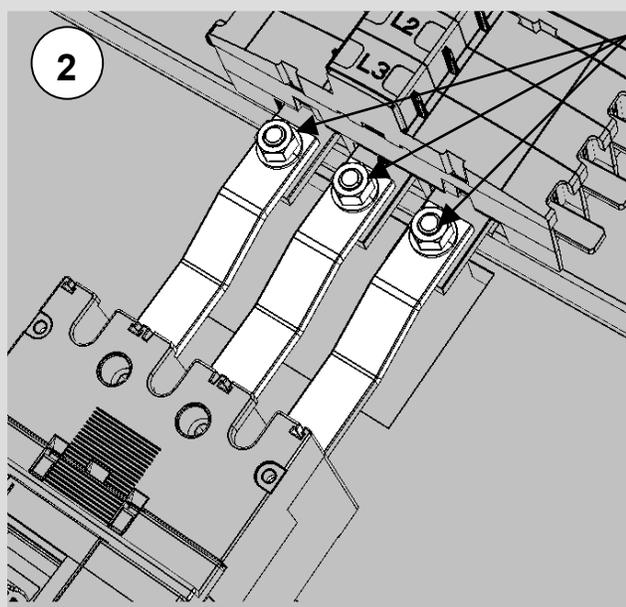
Fit the MCCB to the pan assembly with fixing screws provided

Fit the extension links (A) to the MCCB with the Allen fixings

Fit the spreader links to the bottom of the MCCB (B) with the fixings provided

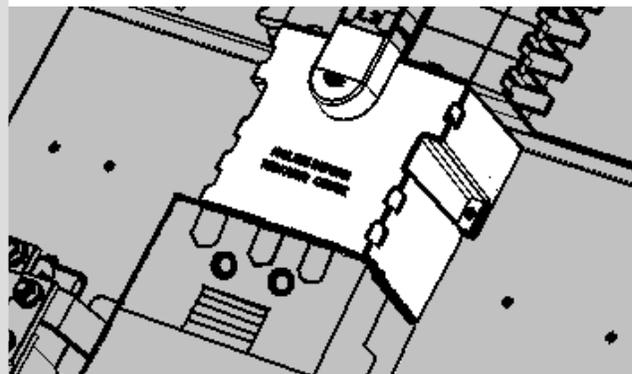


2



Connect the extension links to the busbar with the 3 x M10 coach bolts. Hand tighten at this stage. Now tighten the MCCB fixing screws to secure the MCCB to the pan assembly.

Once the MCCB is in place tighten all M10 electrical connections to **22Nm**  
Fit the terminal shrouds



## JF4 4 Pole 400A MCCB/MCS incomer kit

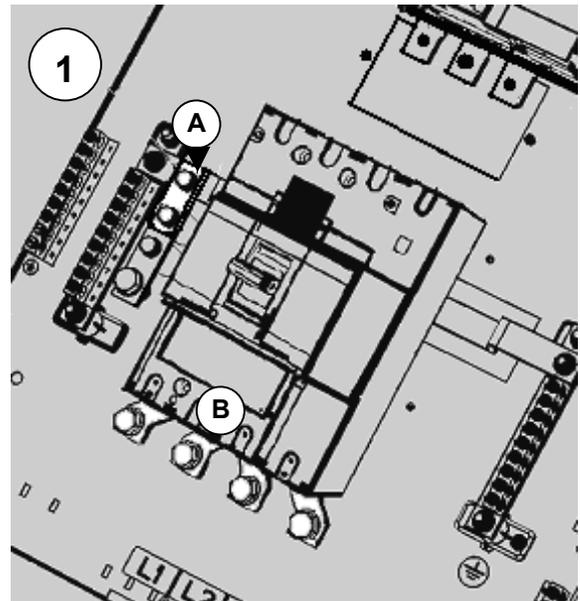
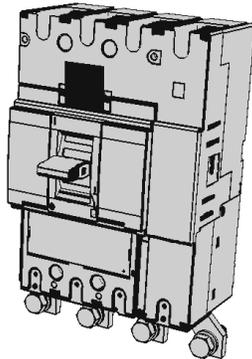
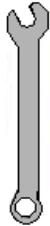
400A 4 pole incomer kits contain:

- 3 x Line extension links
- 1 x Neutral link
- 4 x spreader links
- 8 x Phase link Allen fixing bolts and washers (M8)
- 4 x Long fixing screws
- 1 x MCCB/ MCS
- Terminal covers

Ensure terminal shrouds are removed before fitting.

13mm A/F

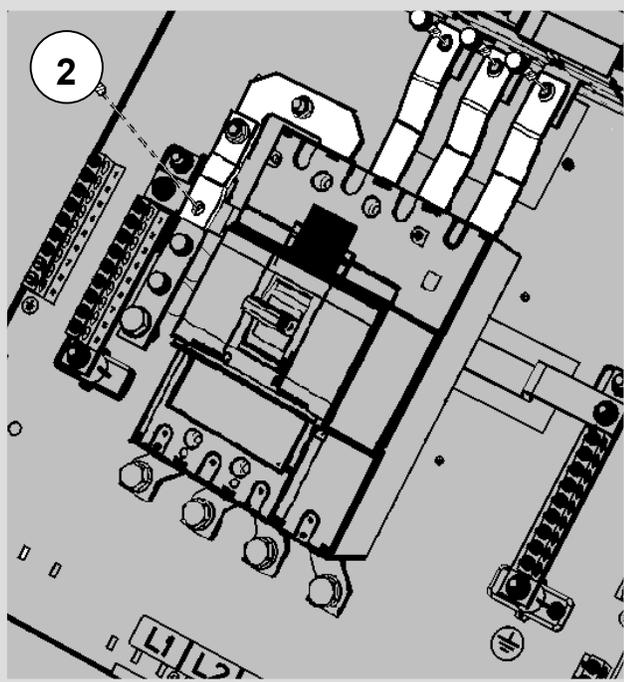
6mm HEX



Remove the busbar shield. Remove the two M8 bolts that secure the neutral swing link (A). Replace the bottom M8 bolt. The top bolt is used to connect the 4 pole neutral link. The swing link is not required for the 4 pole incomer.

Fit the MCCB to the pan assembly with the fixings provided

Fit the spreader links to the bottom of the MCCB (B) with the fixings provided



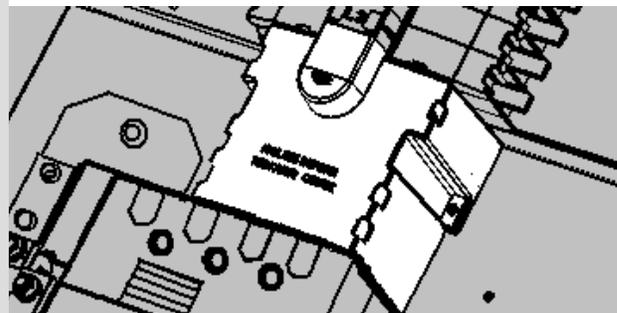
Connect the extension links to the busbar with the 3 x M10 coach bolts the M8 coach bolts. Hand tighten at this stage.

Connect the neutral link with the M8 coach bolts. Hand tighten at this stage

Now tighten the MCCB fixing screws to secure the MCCB to the pan assembly.

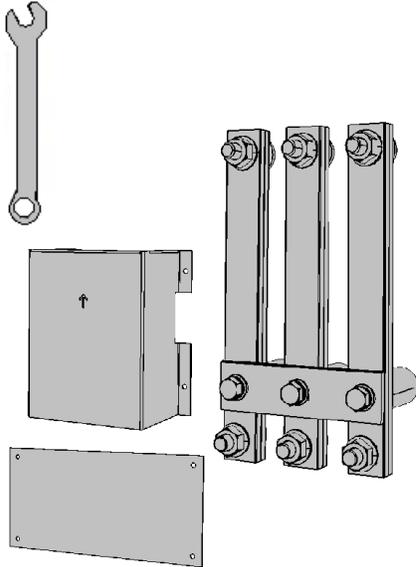
Once the MCCB is in place tighten all M10 electrical connections to **22Nm**. Tighten all **M8** connections to **13Nm**

Fit the terminal shrouds



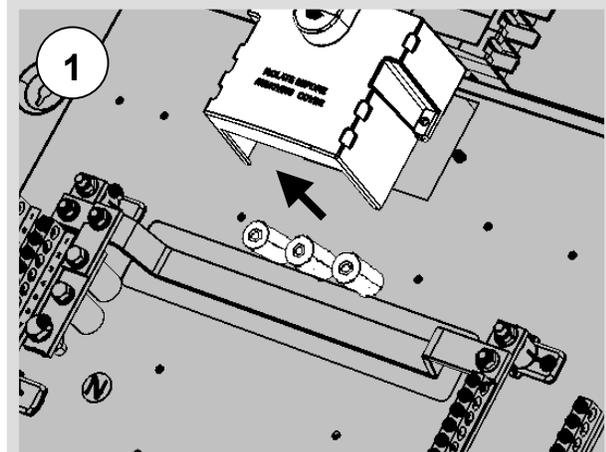
## JF4 3 Pole direct connect incomer kit

17mm A/F



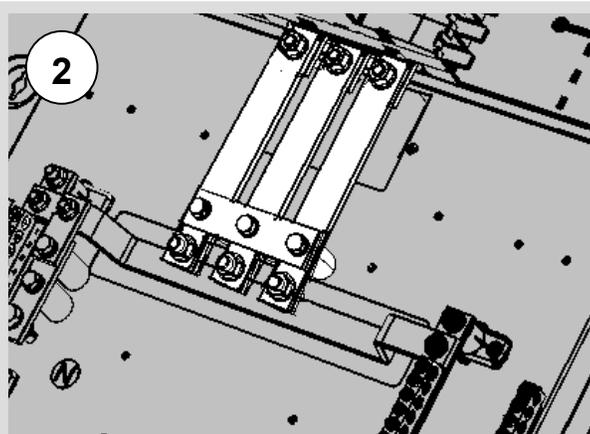
Direct connect kit includes:

- 3 phase link assembly
  - 3 x nylon pillar
  - 1 x direct connect strap
  - 3 x M6 bolt, spring washer, flat washer
  - 6 x M10 bolt, flat washer, carp nut
  - 4 x M4 fixing bolts (for shield)
- Lower direct connection shield
- Front cover adapter plate



Remove busbar shield

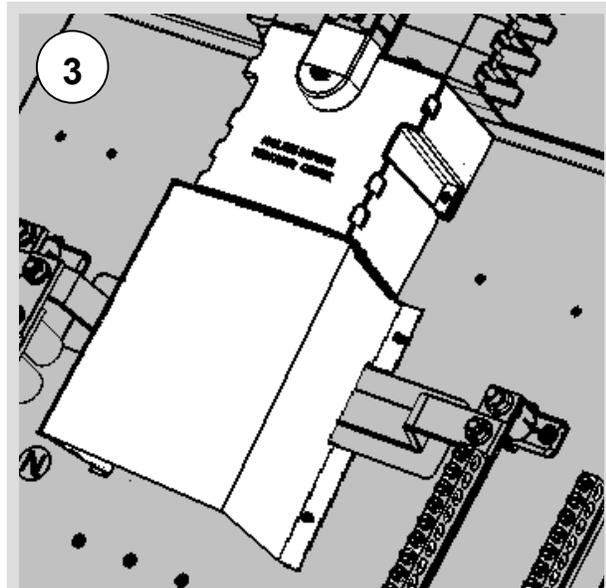
Place 3 x nylon pillars and hand tighten



Locate the link sub assembly onto the nylon pillars

Use 3 x M6 bolts and washers to fix the links to the pillars

Use the 3 x M10 bolts and washers to fix at busbar.  
Tighten M10 connections to 22 Nm.

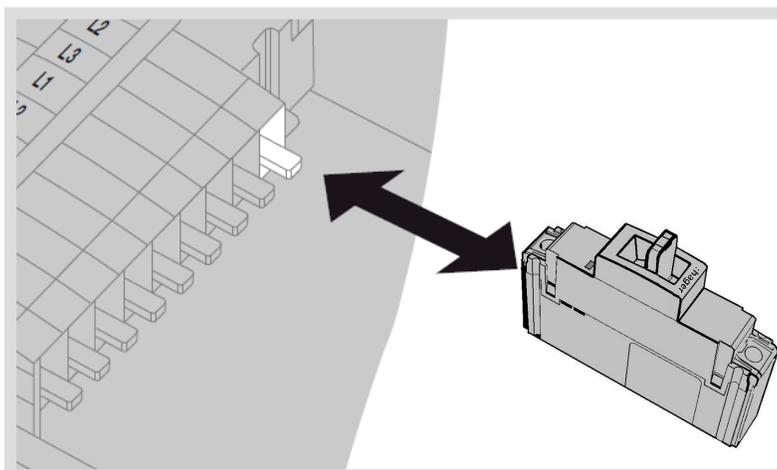


Refit the busbar shield

Use the 4 x M4 fixings to fit the lower direct connection shield

Fit the cover plate to the front cover.

Only equipment and arrangements specified in Hager's technical documentation / catalogue shall be used.



### Fitting Single Pole MCCBs

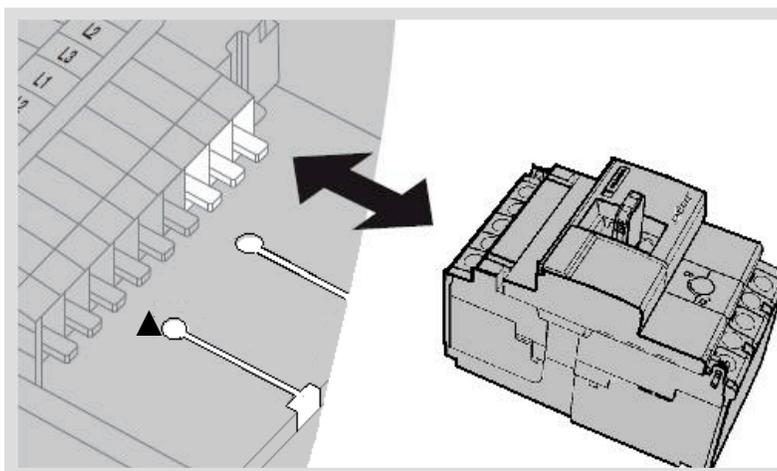
Single pole MCCB contains:

- 2 x Fixing bolts
- 2 x Spring washers
- 2 x Single fixing plates
- 2 x Double fixing plates

Mount the MCCB on to the busbar finger with the red trip button facing inwards. Fix the device to the pan assembly using the fixings provided

See single pole instructions for more information

Tighten electrical connections to 6.6Nm



### Fitting Three Pole MCCBs

Three pole MCCB contains:

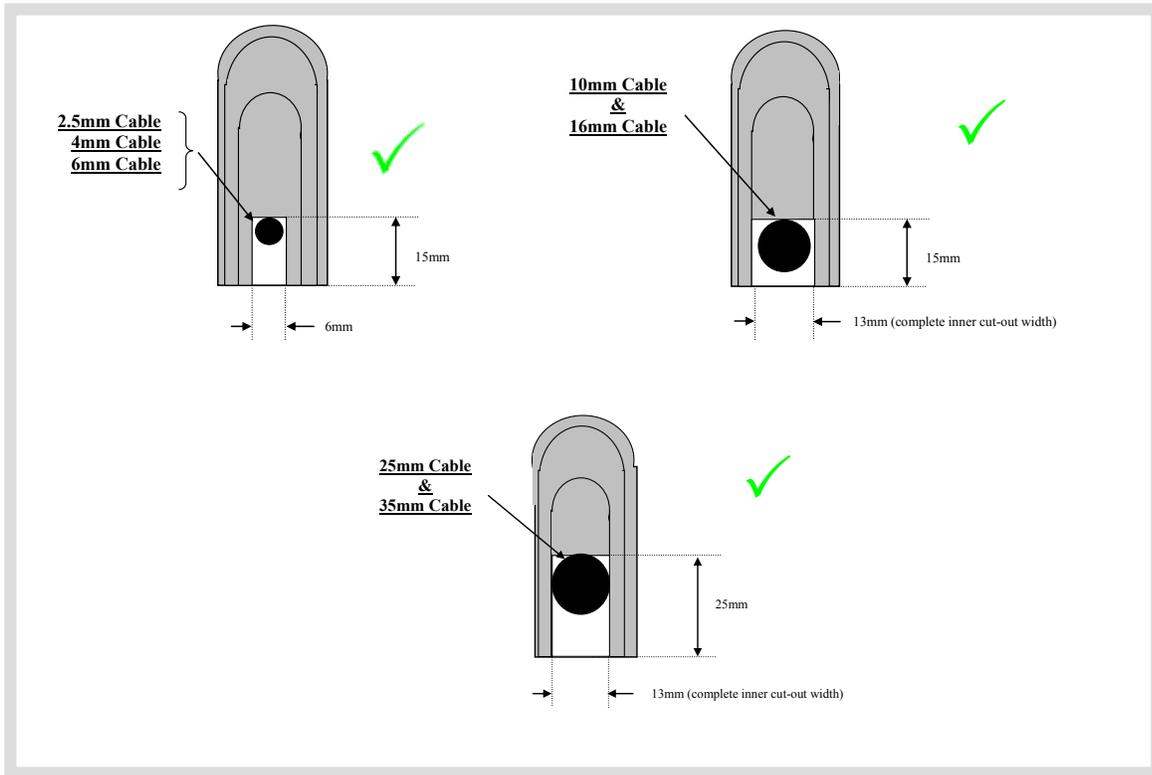
- 2 x Fixing bolts
- 2 x Spring washers
- 2 x Flat washers

Mount the MCCB on to the busbar finger with the red trip button facing inwards. Fix the device to the pan assembly using the fixings provided.

Use the Auxiliary/Shunt trip accessory channel (▲) to dress cables from these accessories

See three pole instructions for more information

Tighten electrical connections to 6.6Nm



**Achieving Form 3b type 2 on x160 frame MCCB outgoing**

Using HYA021H Terminal cover: Outgoing Devices x160 Frame only (125A)  
 Cut Out Dimensions are shown below to achieve IPXXB (Form 3b type 2)

## Interface characteristics

### Rated & operational voltage ( $U_n / U_o$ )

415V a.c. 50Hz

### Rated insulation voltage ( $U_i$ )

690V a.c. 50Hz

### Rated impulse withstand voltage ( $U_{imp}$ )

6kV

### Rated current of the Assembly ( $I_{nA}$ )

JF4xxx 400A<sup>1</sup>

<sup>1</sup>or rating of incoming circuit / incomer kit whichever is lower

### Rated current of an Outgoing circuit ( $I_{nc}$ )

MCCB 16A - 125A (marked rated current on device)

### Rated short-time withstand current of the main busbars ( $I_{cw}$ )

35kA/1 sec<sup>1</sup> with equipment and arrangements specified in Hager's technical documentation / catalogue.

<sup>1</sup>Current limitation characteristics specified in Hager's technical documentation / catalogue

### Rated conditional short-circuit current of the PSC-ASSEMBLY ( $I_{cc}$ )

25kA<sup>1</sup> with equipment and arrangements specified in Hager's technical documentation / catalogue.

<sup>1</sup>Current limitation characteristics specified in Hager's technical documentation / catalogue

### Protection against electric shock

PSC-ASSEMBLY shall be installed in an electrical system conforming to IEC 60364 / BS 7671

### Rated diversity factor (RDF) / Values of assumed loading

6 way - 8 way = 0.7

12 way - 18 way = 0.6

Note: RDF only applies to continuously and simultaneously loaded circuits.

### Rated frequency ( $f_n$ )

50 Hz

### Pollution degree

3

### Types of system earthing for which the PSC-ASSEMBLY is designed

TNC-S, TN-S and TT when installed in an electrical system conforming to BS 7671

### Indoor use only

### Stationary PSC-ASSEMBLY

### Degree of protection

IP30 with Door Closed

IP2XC with Door Open and compliment of outgoing devices and or blanks fitted.

### Intended use

Not Intended to be operated by ordinary persons.

### Electromagnetic compatibility (EMC) classification

EMC Environment B

### External design

Wall-mounted, surface type, enclosed assembly.

### Mechanical impact protection

IK05

### The type of construction

Fixed parts

### The type of Electrical connections of functional units

FF = Fixed connections

### Forms of separation

Form 3b when outgoing shrouds are fitted. A competent person must always complete a risk assessment and appropriate test to confirm that, the un-shrouded neutral within the Panelboard is not a hazardous live part. In particular, The Electricity at Work Regulations 1989 including any amendments must be complied with.

Designation	H	W	D	Weight (Kg)
JF406B(G)	1250	900	220	55
JF408B(G)	1250	900	220	56
JF412B(G)	1400	900	220	64
JF416B(G)	1550	900	220	72
JF418B(G)	1700	900	220	78

## Warranty

This distribution board is offered with a 24 month warranty against defective material or manufacture. If a warranty claim is necessary, please call the technical support number given at the bottom of the page and we will be pleased to help.

## JF4 Incomer Kits

Cat Ref.	No of Poles	Description + Rated Current of Incoming Circuit
JF443BM	3	MCCB Incomer Kit 400A
JF444BM	4	MCCB Incomer Kit 400A
JF443BS	3	Isolator Incomer Kit 400A
JF444BS	4	Isolator Incomer Kit 400A
JF444BD	4	Direct Connection Kit 400A

## JF4 Accessories

Cat Ref.	Description
JF003BP	3P BLANKING PLATE 250A FRAME
JN001BP	1P BLANKING PLATE 125A FRAME
JFPLATE	JF4 & 8 ENDPLATE
JF403BA	MULTI FUNCT DIGITAL METER PACK
JF801E	SMALL DIN RAIL BOX, PLAIN DOOR
JF801EG	SMALL DIN RAIL BOX GLAZED DOOR
JF803E	LARGE DIN RAIL BOX, PLAIN DOOR
JF803EG	LARGE DIN RAIL BOX, GLAZED DOOR
JF805E	SMALL SPREADER BOX (NO DOOR)
JF805DK	DOOR KIT FOR SMALL SPREADER BOX
JF806E	LARGE SPREADER BOX (NO DOOR)
JF806DK	DOOR KIT FOR LARGE SPREADER BOX



