GB **JN2**B**

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

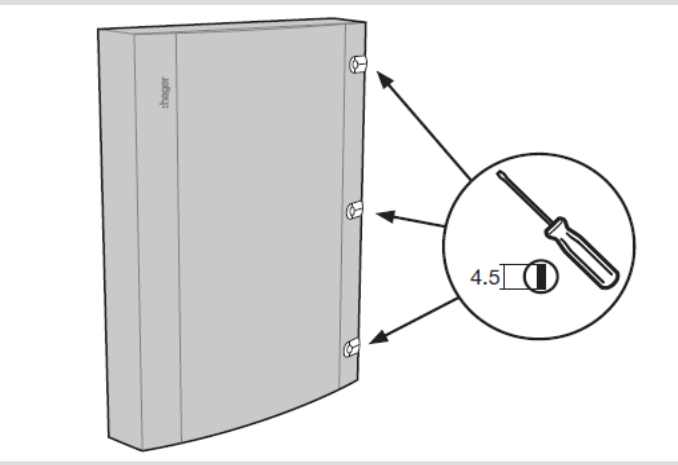
Invicta 3 Panelboard

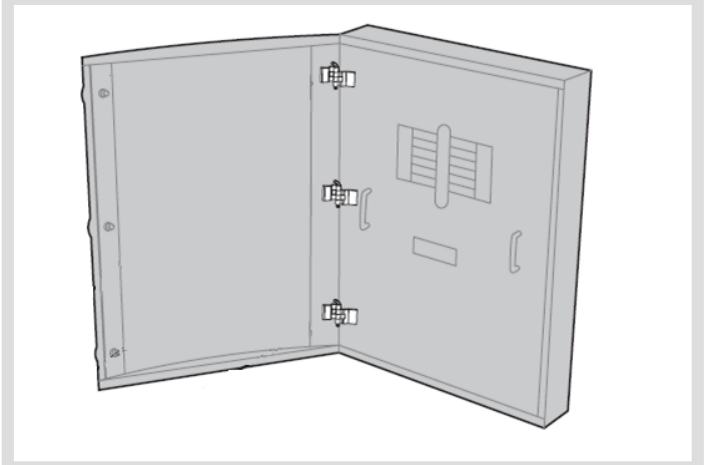
All product(s) must be installed by a suitably competent electrician giving consideration to their intended use and in accordance with the current edition of BS 7671 (IET Wiring Regulations).

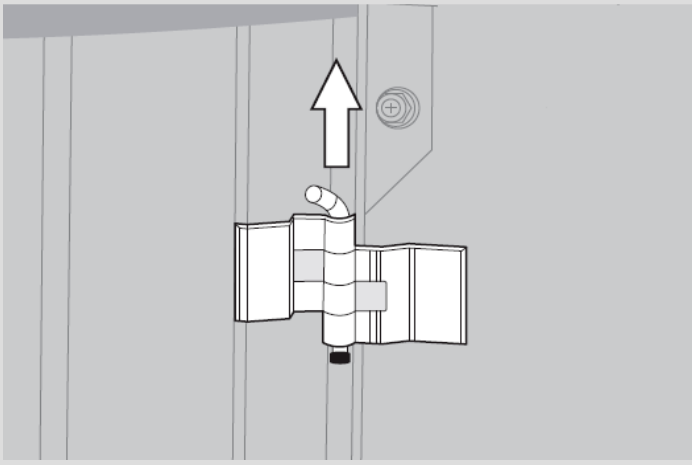
The Electricity at Work regulations and the Health and Safety at Work Act shall be complied with.
Only equipment and arrangements specified in Hager's technical documentation / catalogue shall be used

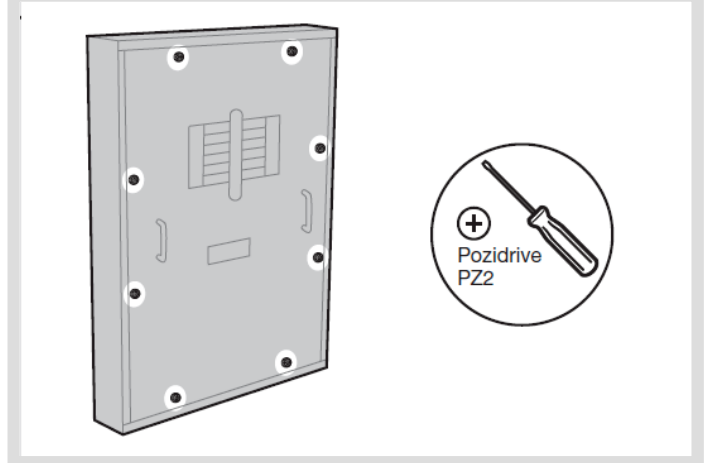
Install in the vertical plane only.

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 or as a result of.

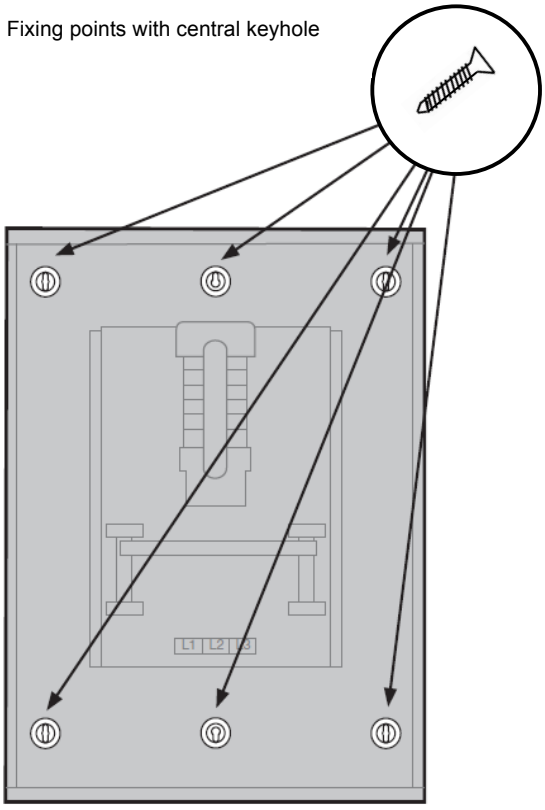




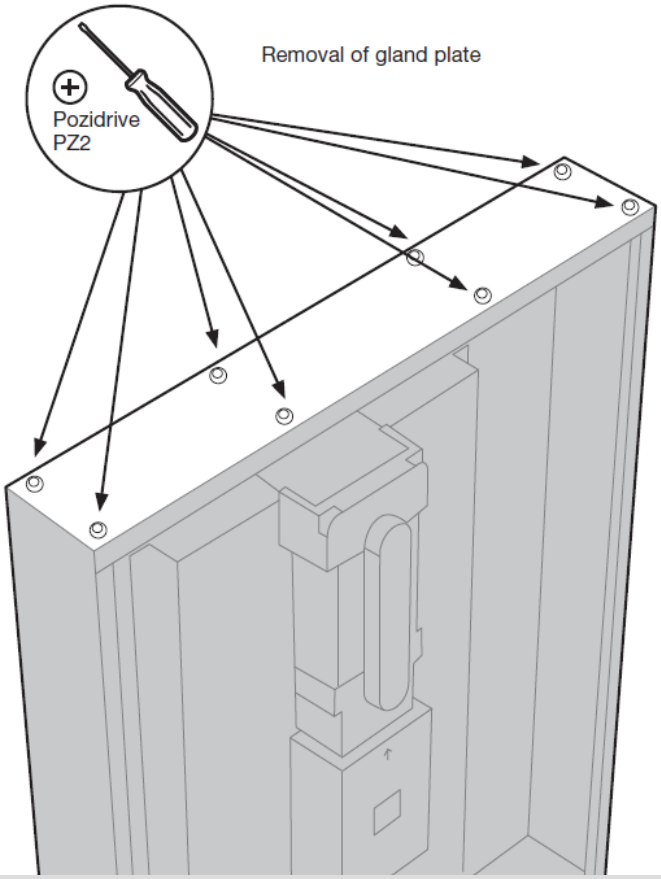


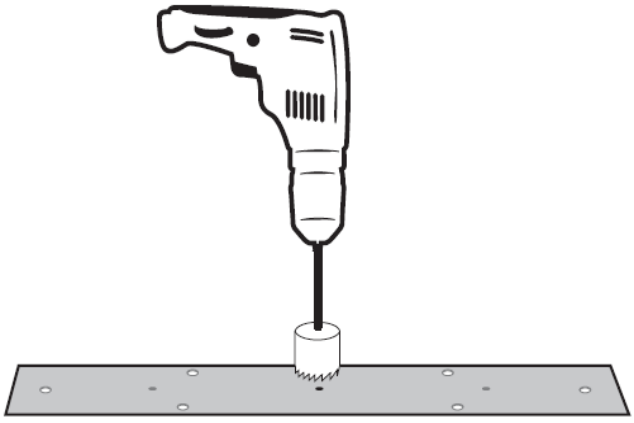


Fixing points with central keyhole

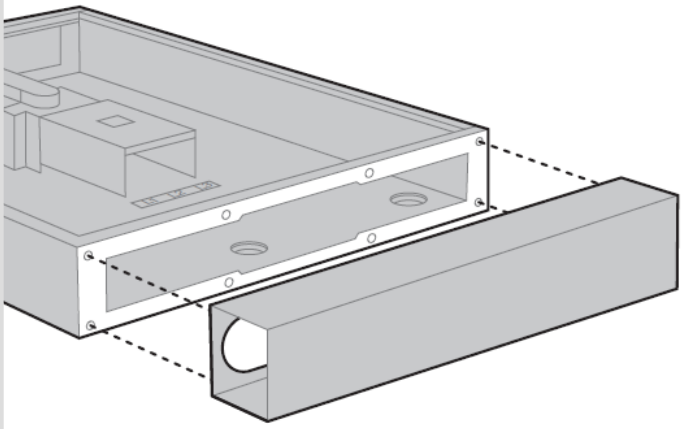


Removal of gland plate





Drill centre mark provided when fitting SWA or conduit



Remove gland plate when fitting trunking

JN2 3 Pole MCCB/MCS incomer kit

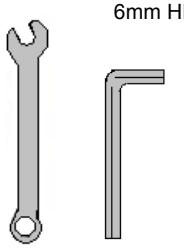
250A 3 pole incomer kit contains:

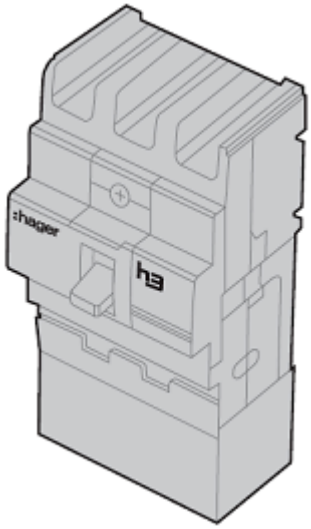
- 1 x 3 pole MCCB/MCS
- 3 x line extension links
- 6 phase link Allen key bolts and washers
- 2 x long MCCB fixing screws
- 3 x M8 120mm lugs

Ensure terminal shrouds are removed before fitting

13mm A/F

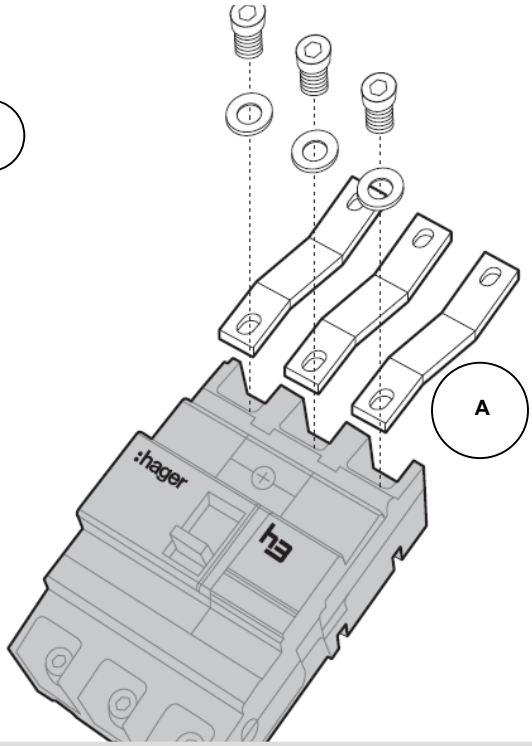
6mm HEX



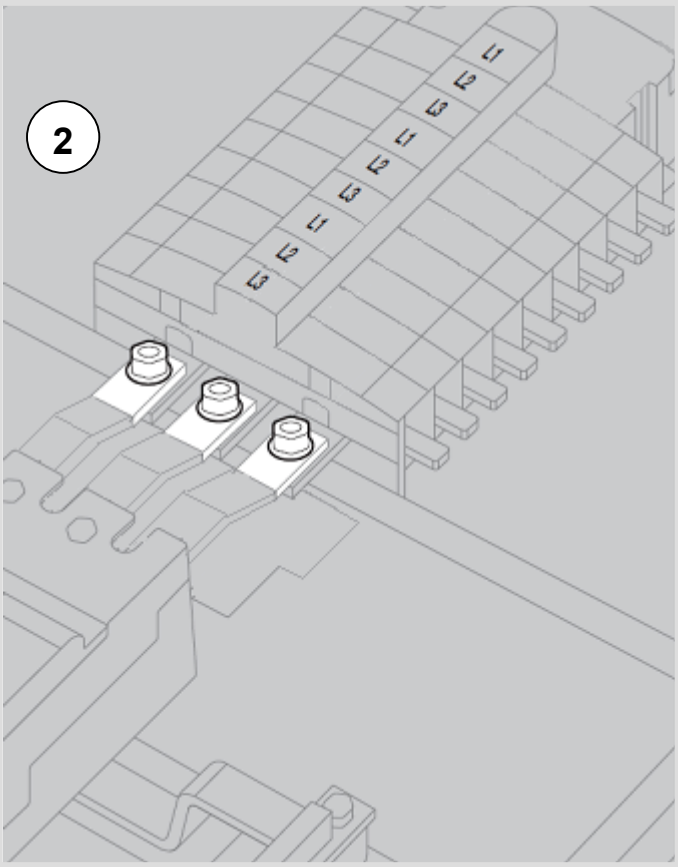


Fit the MCCB to the pan assembly with the fixings provided (do not tighten at this stage). Remove the 3 x M8 coach bolts from the L1, L2 and L3 busbar. Fit the extension links (note the orientation of the links (**A**)**.** Fit the 3 x M8 Allen bolts (6mm Allen key). Do not tighten at this stage.

1



2

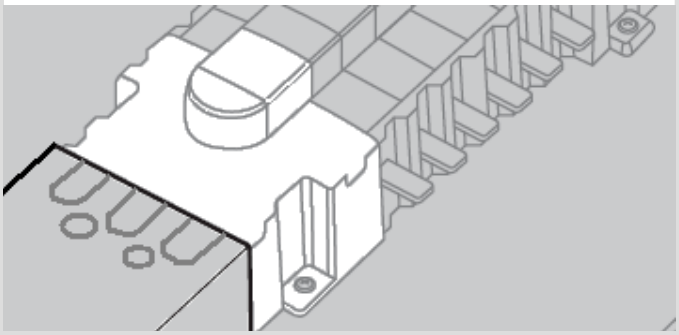


Connect the extension links to the busbar with the 3 x M8 coach bolts. Hand tighten at this stage.

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

Once the MCCB is in place tighten all electrical M8 connections to **13Nm**

Fit the terminal shroud

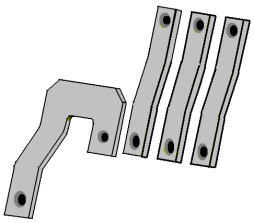


JN2 4 Pole MCCB/MCS incomer kit

250A 4 pole incomer kit contains:

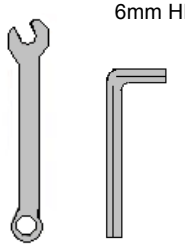
- 3 x line extension links
- 1 x neutral link
- 8 phase link Allen key bolts and washers
- 2 x long MCCB fixing screws
- 4 x M8 120mm lugs

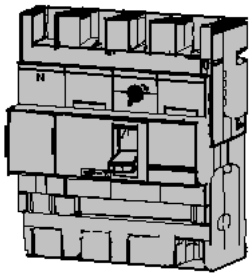
Ensure terminal shrouds are removed before fitting

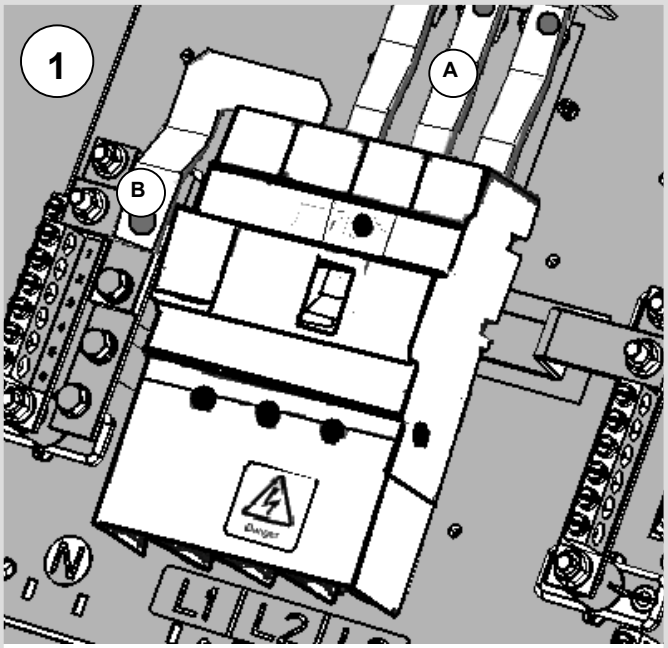


13mm A/F

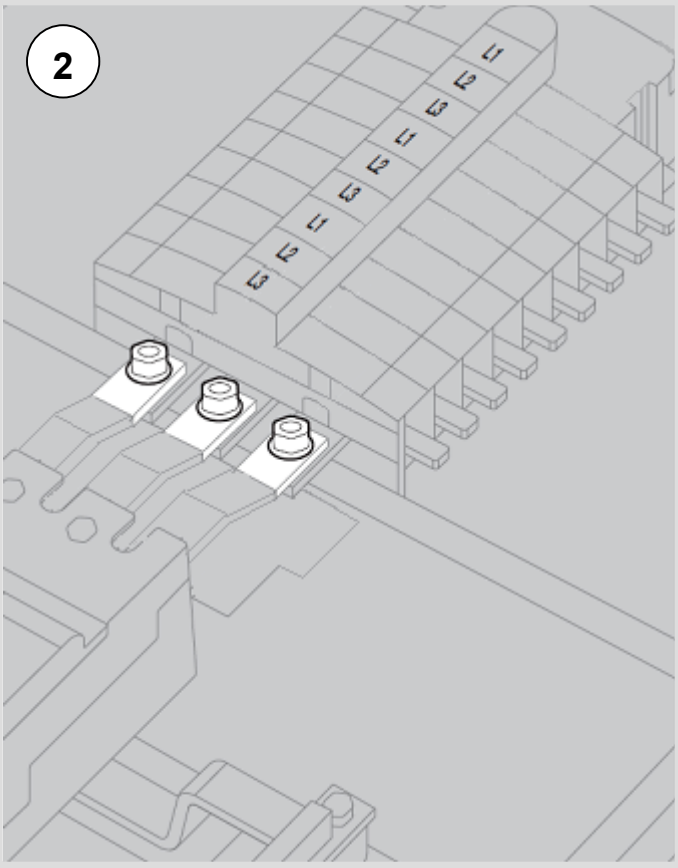
6mm HEX







Fit the MCCB to the pan assembly with the fixings provided (do not tighten at this stage). Remove the 3 x M8 coach bolts from the L1, L2 and L3 busbar. Fit the extension links (note the orientation of the links (**A**)**.** Fit the 3 x M8 Allen bolts (6mm Allen key). Do not tighten at this stage. Remove the neutral swing link from the board and fit the neutral connection between the MCCB and the neutral connection point **(B)**.

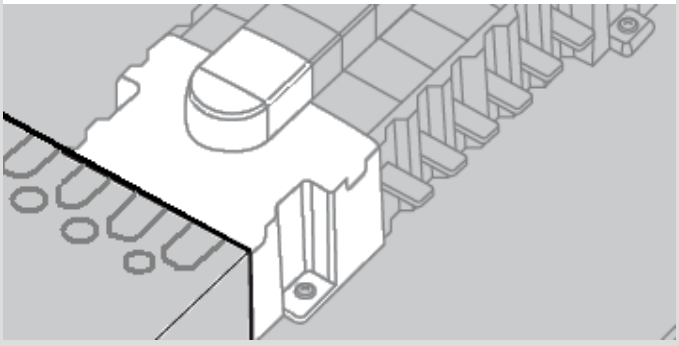


Connect the extension links to the busbar with the 3 x M8 coach bolts and the neutral connect using 1 x M8 coach bolt. Hand tighten at this stage.

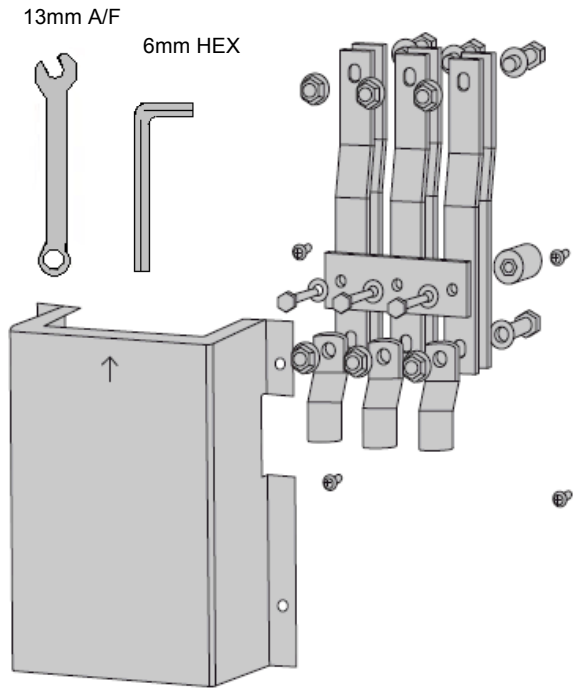
Now tighten the MCCB fixing screws to secure the MCCB to the pan assembly.

Once the MCCB is in place tighten all M8 electrical connections to **13Nm**

Fit the terminal shroud

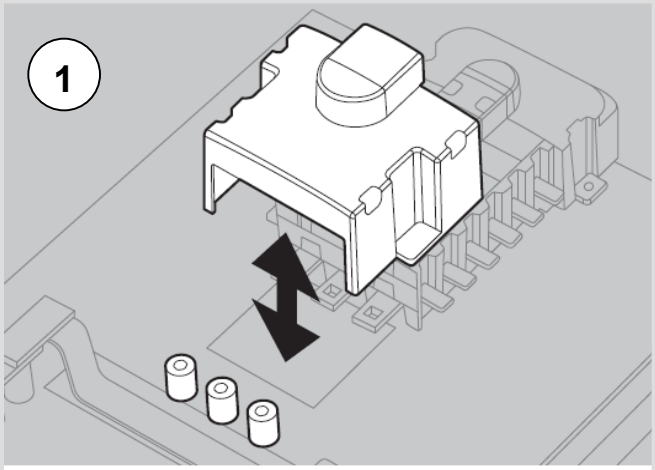


JN2 3 Pole Direct Connection incomer kit



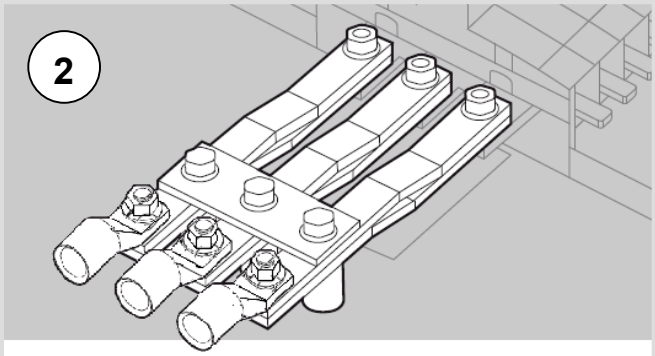
Direct connect kits should contain:

- 3 x Direct connect phase link (upper)
- 3 x Direct connect phase link (lower)
- 3 x Nylon pillar
- 3 x Cable lugs
- 1 x Direct connection strap
- 1 x Direct connection shield
- 3 x M6 bolt, spring washer, flat washer
- 6 x M8 bolt, flat washer, carp nut
- 4 x M4 bolt



Remove busbar shield

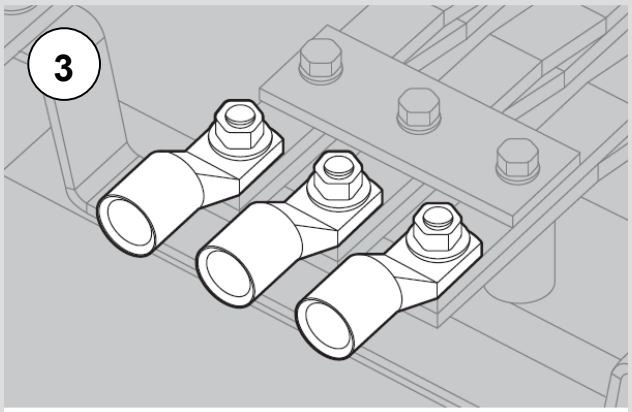
Place 3 x Nylon pillars and hand tighten



Locate phase link sub assembly onto the nylon pillars.

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

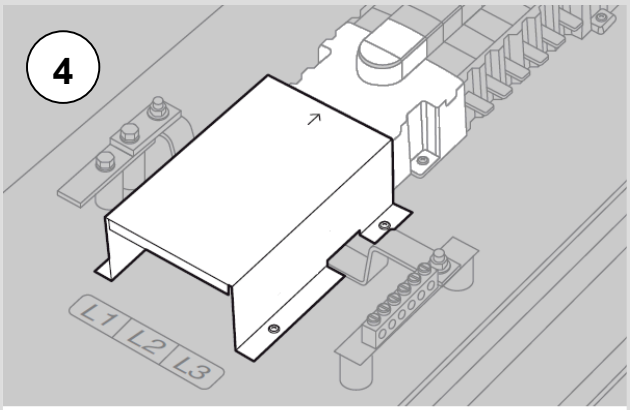
Use 3 x M8 bolts and washers to fix at busbar end.



Attach cable lugs to incoming cables

Remove the M8 nuts and bolts and use to fix incoming cables onto direct connect links

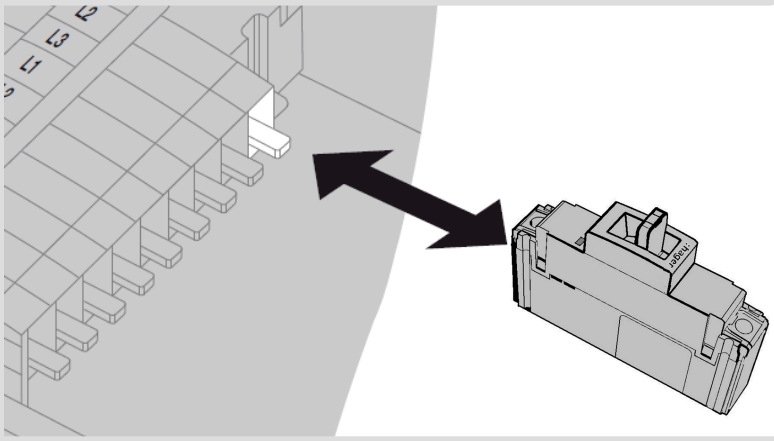
Ensure all electrical connections are tightened down to 13Nm



Refit the busbar shield and fit the direct connect shield

Use the 4 x M4 fixings to mount the direct connect shield over the direct connect kit

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

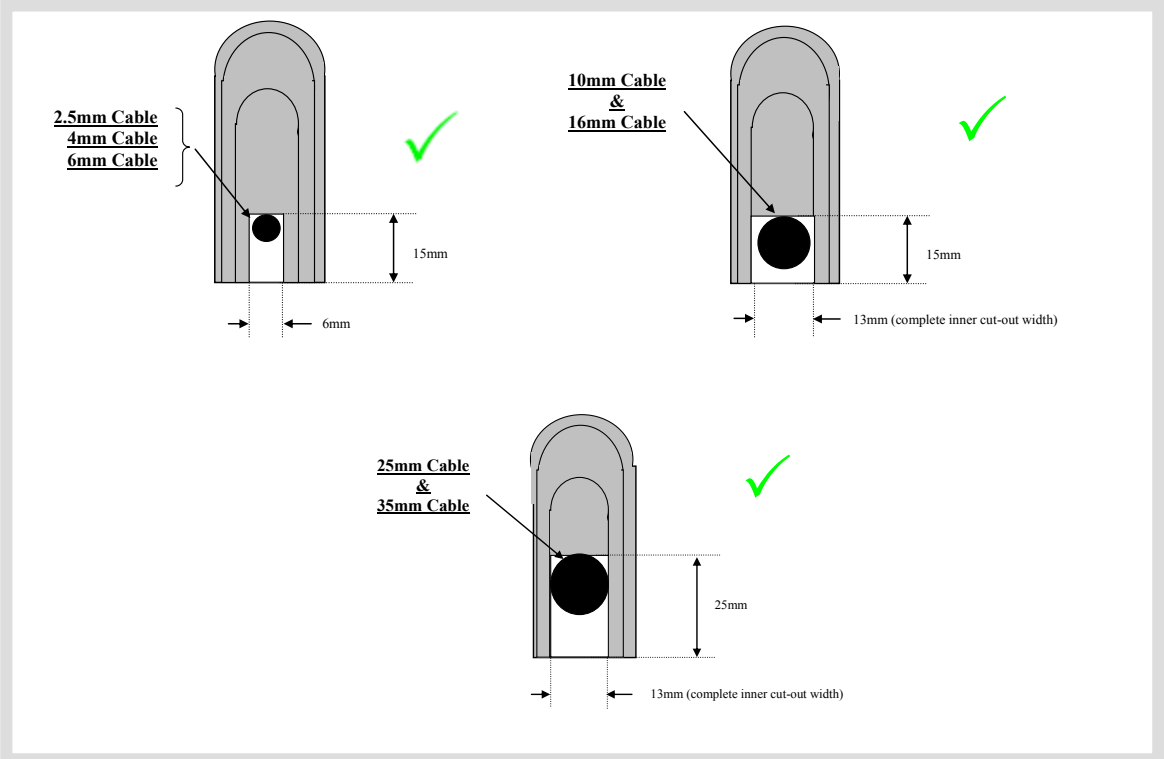
Mount the MCCB on to the busbar finger with the red trip button facing inwards. Fix the device to the pan assembly using the fixings provided

See single pole instructions for more information

Tighten electrical connections to 6.6Nm

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_e)
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})
JN2xxx 250A[1]
[1]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})
25kA/1 sec[1] with equipment and arrangements specified in Hager's technical documentation / catalogue

[1]Current limitation characteristics specified in Hager's technical documentation / catalogue
Rated conditional short-circuit current of the PSC-ASSEMBLY (I_{cc})
25kA[1] with equipment and arrangements specified in Hager's technical documentation / catalogue

[1]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
4 way = 0.8
6 way - 8 way = 0.7
10 way - 16 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)
JN204B(G)	950	710	178	40
JN206B(G)	1100	710	178	45
JN208B(G)	1100	710	178	47
JN212B(G)	1250	710	178	55
JN216B(G)	1550	710	178	60

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.

JN2 Incomer Kits

Cat Ref.	No of Poles	Description + Rated Current of Incoming Circuit
JN213BM	3	MCCB Incomer Kit 125A
JN214BM	4	MCCB Incomer Kit 125A
JN223BM	3	MCCB Incomer Kit 250A
JN224BM	4	MCCB Incomer Kit 250A
JN223BS	3	Isolator Incomer Kit 250A
JN224BS	4	Isolator Incomer Kit 250A
JN224BD	4	Direct Connection Kit 250A

JN2 Accessories

Cat Ref.	Description + Rated Current of Incoming Circuit
JN001BP	1P BLANKING PLATE 125A FRAME
JN2PLATE	JN ENDPLATE
JN201BA	MF Digital Meter Pack (Pulsed)
JN201MJ	MF Digital Meter Pack (Modbus)
JN201BE	SMALL DIN RAIL BOX, PLAIN DOOR
JN201BEG	SMALL DIN RAIL BOX, GLAZED DOOR
JN203BE	LARGE DIN RAIL BOX, PLAIN DOOR
JN203BEG	LARGE DIN RAIL BOX, GLAZED DOOR
JN205BE	SMALL SPREADER BOX (NO DOOR)
JN205DK	DOOR KIT FOR SMALL SPREADER BOX
JN206BE	LARGE SPREADER BOX (NO DOOR)
JN206DK	DOOR KIT FOR LARGE SPREADER BOX

Panel board circuit designation chart

D.B No:	Voltage:	Supplied From:

Supply cable mm:	Incoming Isolator:	Ze:	P.S.C.

CIR	AMPS	TYPE	CABLE MM	C.P.C MM	LOCATION DESCRIPTION

Hager Ltd.
Hortonwood 50
Telford
Shropshire
TF1 7FT

National Sales Hotline 01952 675612
National Tech Support helpline 01952 675689

ZD0695 issue 4a