

MEMSHIELD 4 INSTALLATION INSTRUCTIONS FOR INCOMING AND OUTGOING METERING - 400A to 800A

Instruction leaflet LT1224 (01/19)

IMPORTANT NOTES

1. This product should be installed, commissioned and maintained by or under the supervision of a competent electrician in accordance with current electrical engineering Codes of Practice, Requirements for the Electrical Installations (IET Wiring Regulations BS7671), Construction (Design and Management) Regulations, HSG150 - Health and Safety in Construction, Statutory requirements and any Specific instruction issued by the Company.
2. After completing the installation and testing of this product it is essential that this leaflet is drawn to the attention of the person responsible for its future operation and maintenance, and is at all times available for ready reference.
3. These notes assume throughout that the product is disconnected from the supply. It is essential that this is done before any work is carried out.
4. These Panelboards are only designed for use with Eaton MCCBs. Failure to comply will result in invalid warranty and certification.

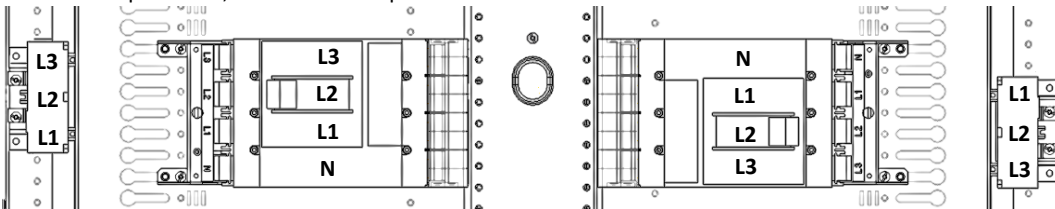
METER SETTINGS

Basic Meter Setup:- For detailed meter settings see Meter Operating Instructions.

Press: "E" for 3 seconds to toggle from Auto to Manual mode. (Stops screen scrolling).

IMPORTANT- Do NOT perform 'Left Hand CT Mounting Phase Correction' in Meter Operating Instructions.

The meter phases L1, L2 & L3 are setup for the CT to be mounted on both the RH and LH side of the board.



Meter/CT Ratio Setup - The meter default CT setting is 160A. To change the meter CT setting follow instructions below.

1. Press ▲+▼ keys together for 3 seconds to enter configuration menu.
2. To enter default password 1000 - Press ► then press ▲. Press 4 ◀ times to move on and to enter CT primary page 04.
3. Press ► to select the digit to change and press ▲ or ▼ to raise or lower the CT value. Set to 250, 400, or 800 to match CT.
4. Press ◀ to save settings and move on.
5. Press ▲+▼ keys together for 3 seconds to exit configuration menu.

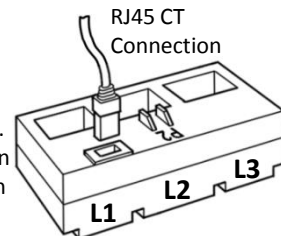
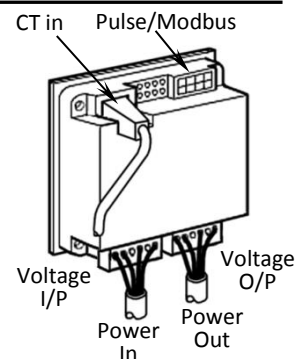
METER TYPES

EPBMETER1 – Modbus/Pulse.

EMC3PP2P1 – Multi function MID with Modbus/Pulse.

Note:

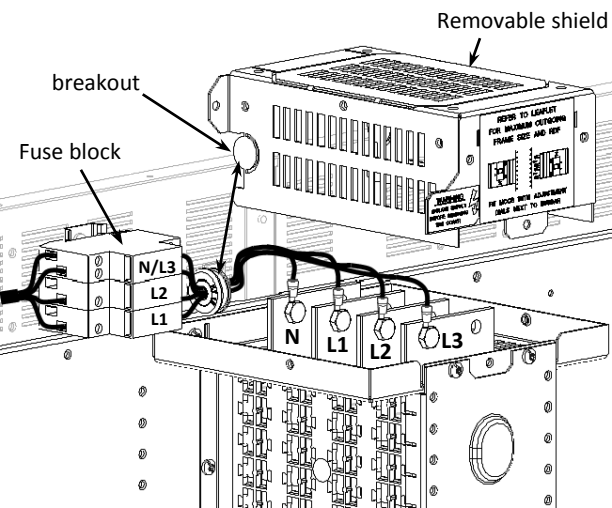
1. Ensure wire seal is fitted to MID Meter.
2. MID Meter will time out and **lock**, when setting CT ratio, if meter setup instruction are not followed.



POWER SUPPLY TAP OFF FITTING EM4PBVT

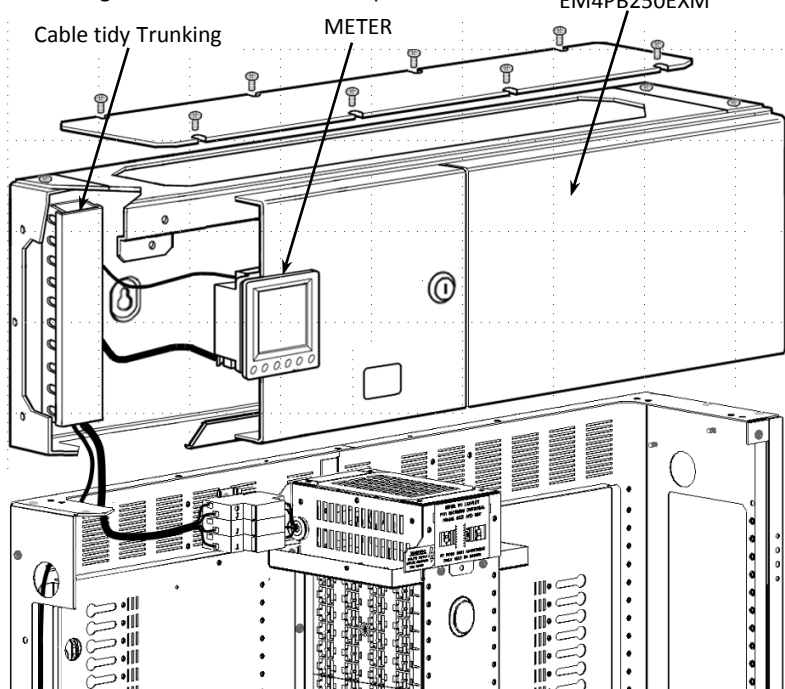
Fit the DIN rail before mounting the fuse block.

For Incoming Meter Pack always fit the fuse block on the LH side, otherwise the fuse block can be fitted on either side of the pan. Feed the cables through the grommet and position to suit the breakout in the top busbar removable shield. Replace the shield and ensure the grommet is captured in the breakout.

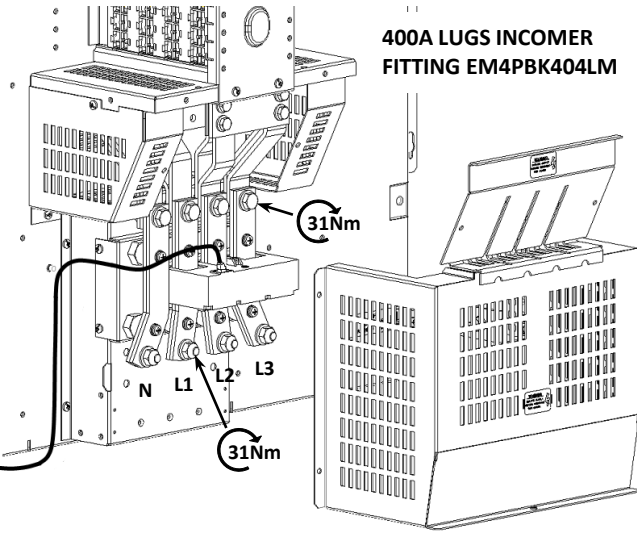


INCOMING METER BOX ASSEMBLY - EM4PB250EXM AND METER

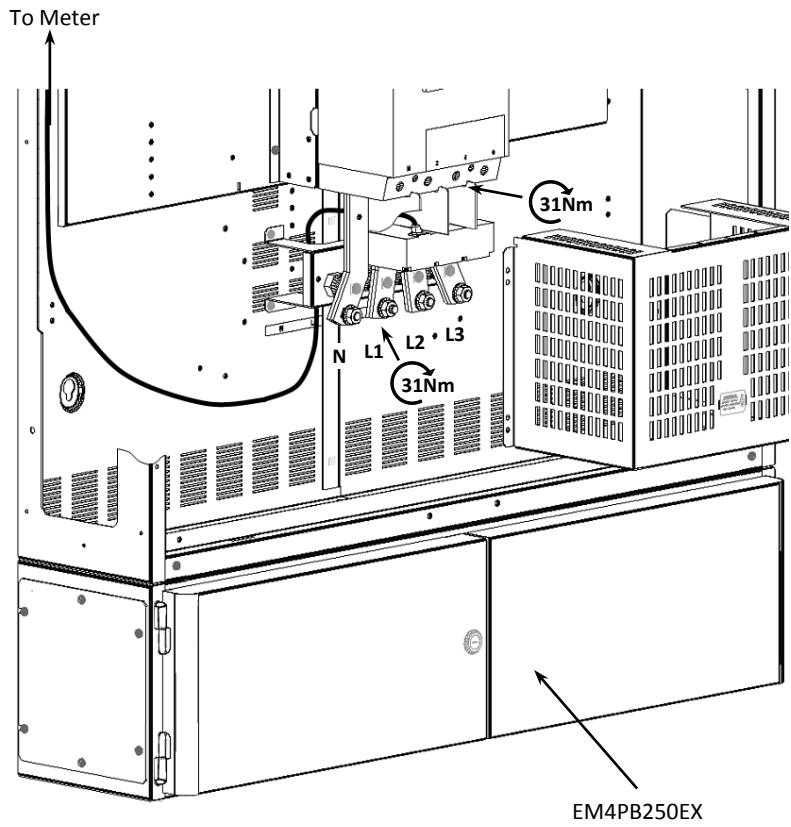
Incoming Meter Box can be fitted top or bottom.



400A LUGS INCOMER FITTING EM4PBK404LM



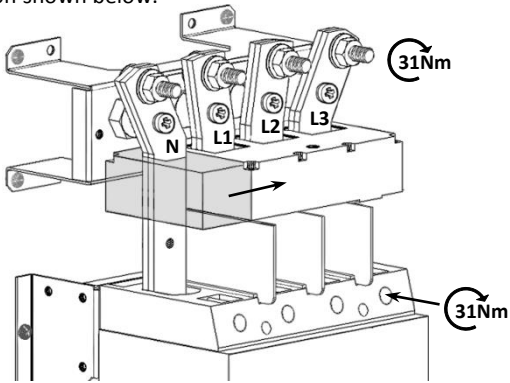
400A MCCB INCOMER FITTING EM4PBK404M



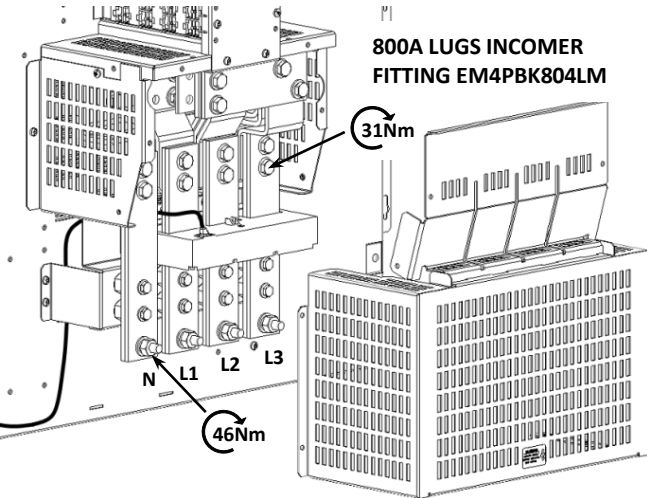
EM4PB250EX

TOP ENTRY FITTING EM4PBK404M

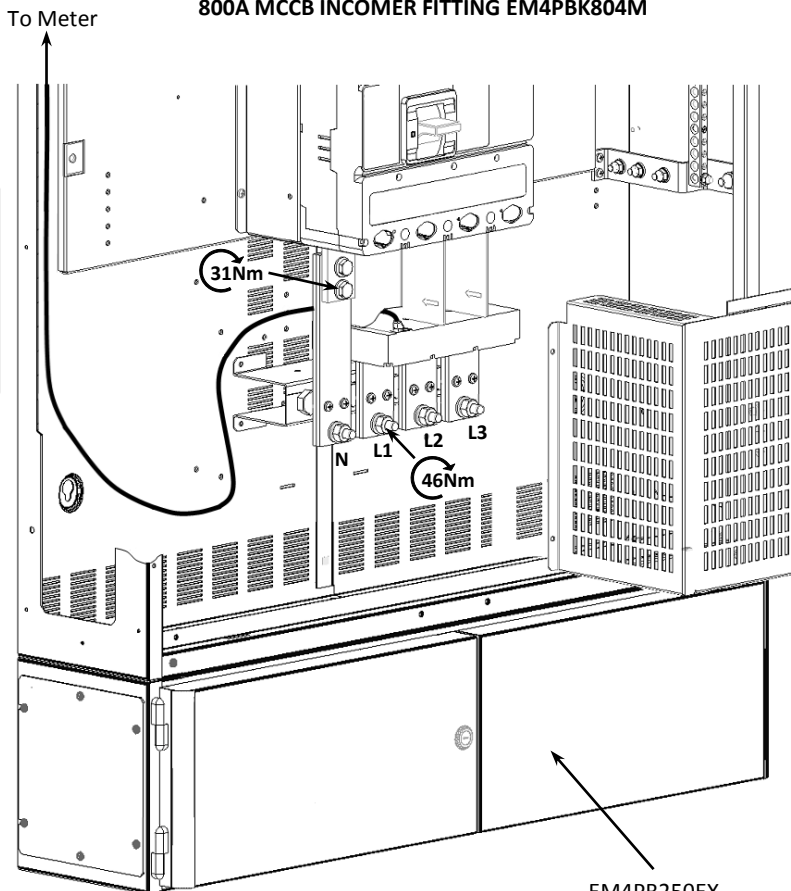
CT needs to be moved from delivered position (shown shaded) to position shown below.



800A LUGS INCOMER FITTING EM4PBK804LM



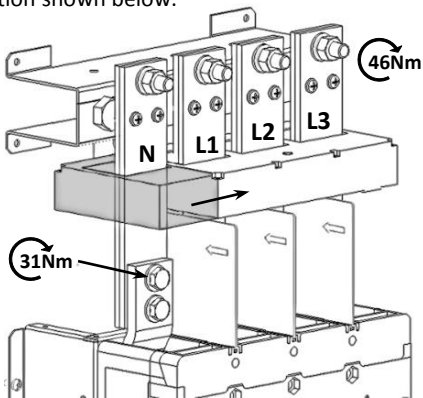
800A MCCB INCOMER FITTING EM4PBK804M



EM4PB250EX

TOP ENTRY FITTING EM4PBK804M

CT needs to be moved from delivered position (shown shaded) to position shown below.

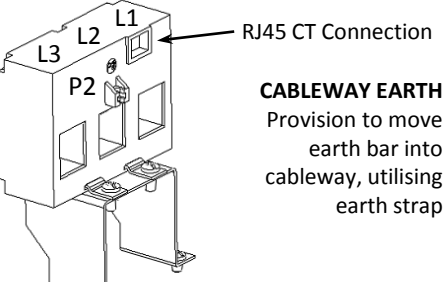


OUTGOING METER ASSEMBLY - CT KIT FITTING
EPBCTMT160, EPBCTMT250 AND EPBCTMT400

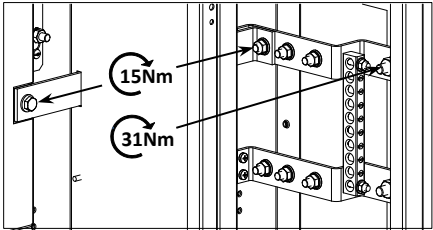
The CT can be fitted in the panelboard or cableway for both group or compartmentalised except in the following instances:

- NZM3 CT must be fitted in the Cableway for compartmentalised form4 type6.
- Single pole CT must be fitted in the Cableway for compartmentalised form4 type2 & 6

Ensure that P1 side of the CT is facing the MCCB. Connect the RJ45 cable from the CT to the Meter. Cable tie across hinge. Coil excess cable in trunking.

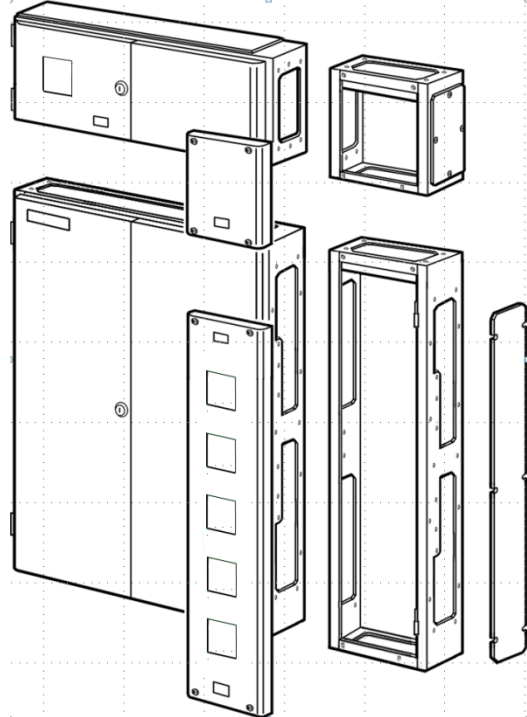
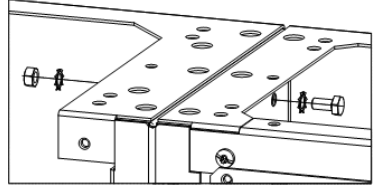


CABLEWAY EARTH
 Provision to move earth bar into cableway, utilising earth strap



OUTGOING METER CABLEWAYS
 EM4PB68SXM, EPN21240SXM,
 EM4PB1214SXM, EM4PB1618SXM
CORNER FILLER - EM4PB300CX

Box fixing, ensure scratch washers are fitted both sides



SINGLE POLE CT SPLITTER BOX EPBCTMT3P

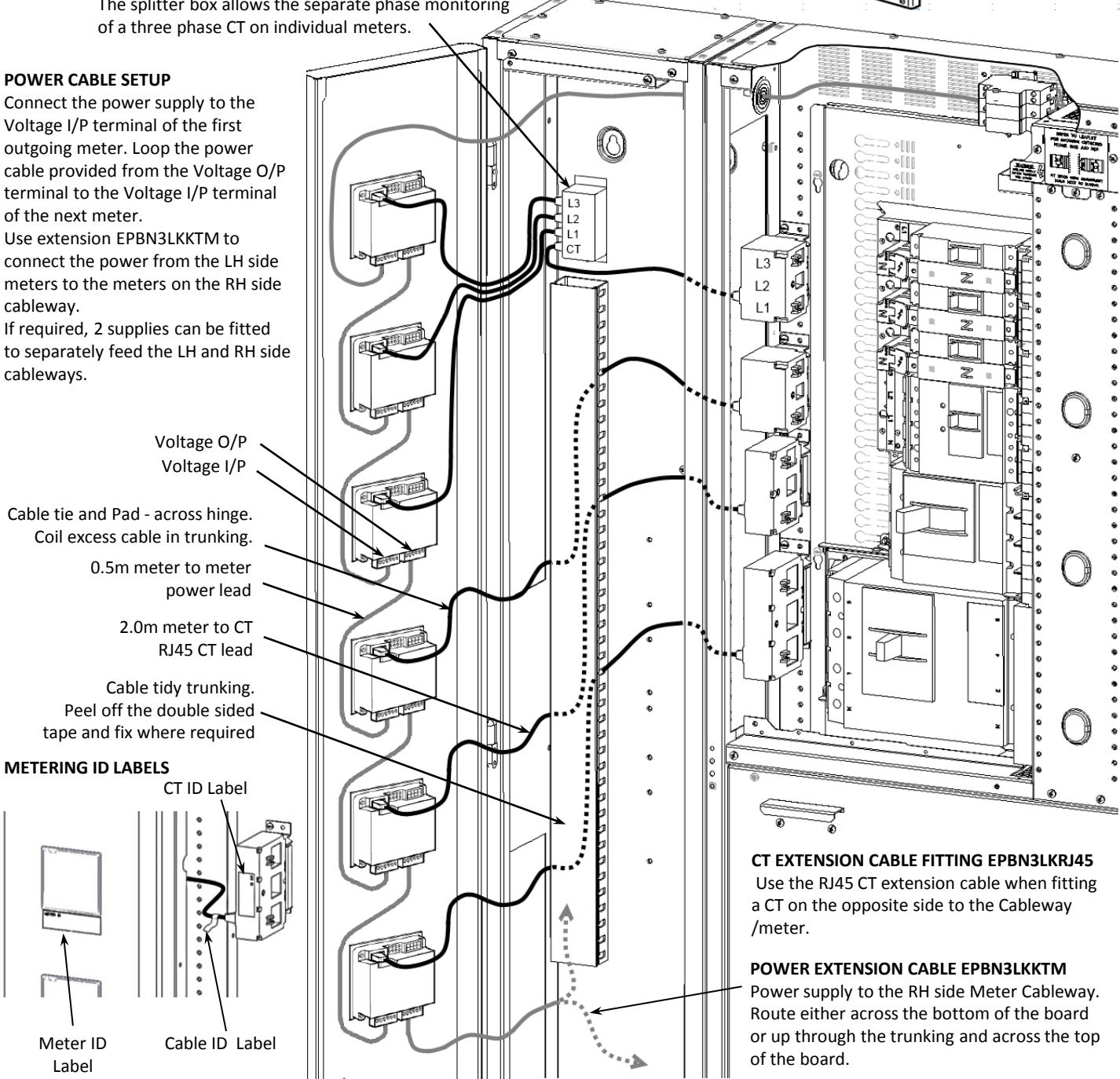
The splitter box allows the separate phase monitoring of a three phase CT on individual meters.

POWER CABLE SETUP

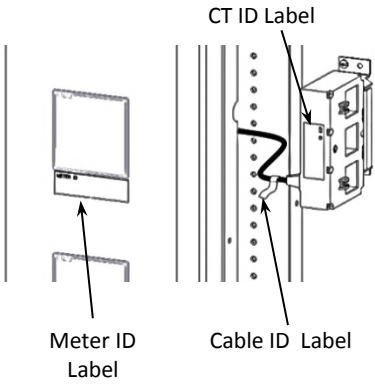
Connect the power supply to the Voltage I/P terminal of the first outgoing meter. Loop the power cable provided from the Voltage O/P terminal to the Voltage I/P terminal of the next meter.

Use extension EPBN3LKKTM to connect the power from the LH side meters to the meters on the RH side cableway.

If required, 2 supplies can be fitted to separately feed the LH and RH side cableways.



METERING ID LABELS



CT EXTENSION CABLE FITTING EPBN3LKRJ45

Use the RJ45 CT extension cable when fitting a CT on the opposite side to the Cableway /meter.

POWER EXTENSION CABLE EPBN3LKKTM

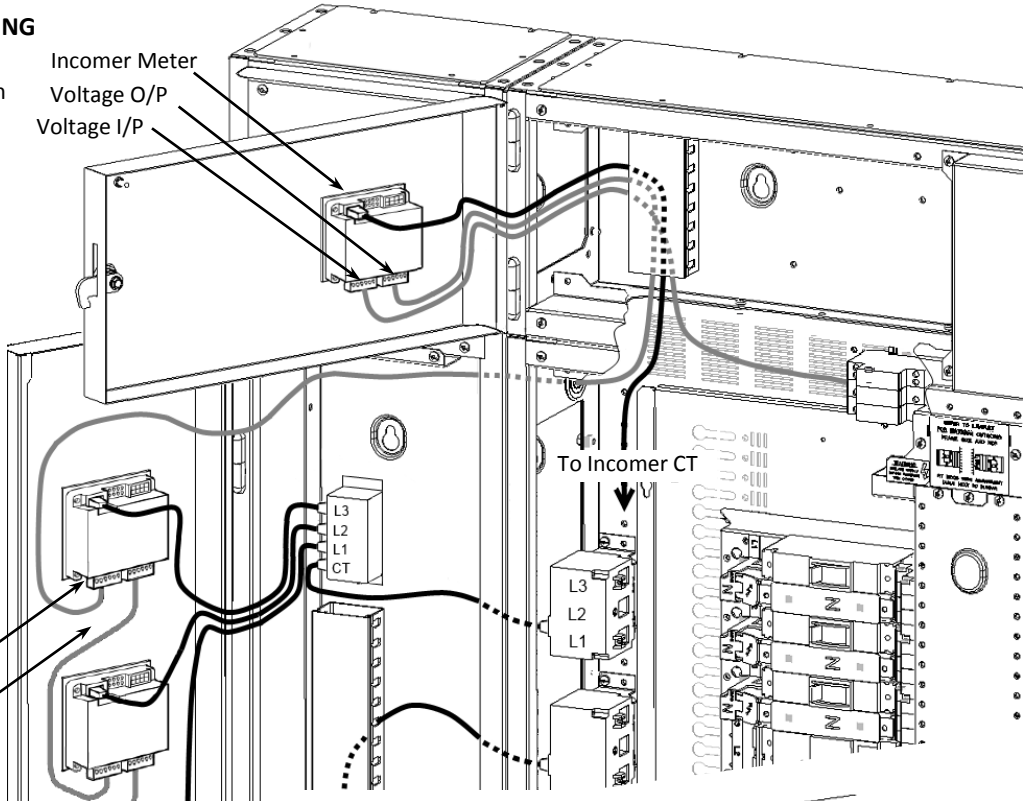
Power supply to the RH side Meter Cableway. Route either across the bottom of the board or up through the trunking and across the top of the board.

OUTGOING AND INCOMING METERING

The Top Meter extension box is not required if the Incoming meter is fitted in the side cableway.

Connect the power supply to the Voltage I/P terminal of the incomer meter. Use extension EPBN3LKKTM to connect from the Voltage O/P terminal of the incomer meter to the Voltage I/P terminal of the first outgoing meter. Use the 0.5m power cable to connect the power to the subsequent meters.

Incomer Meter
Voltage O/P
Voltage I/P



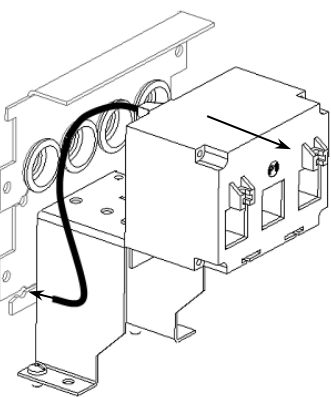
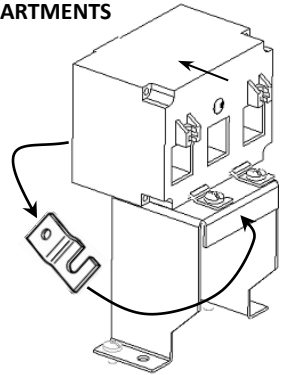
2.0m POWER CABLE EXTENSION FITTING - EPBN3LKKTM

Use the extension cable to connect power from the LH side meters to the RH side cableway meters and for fitting the incoming and outgoing metering together.

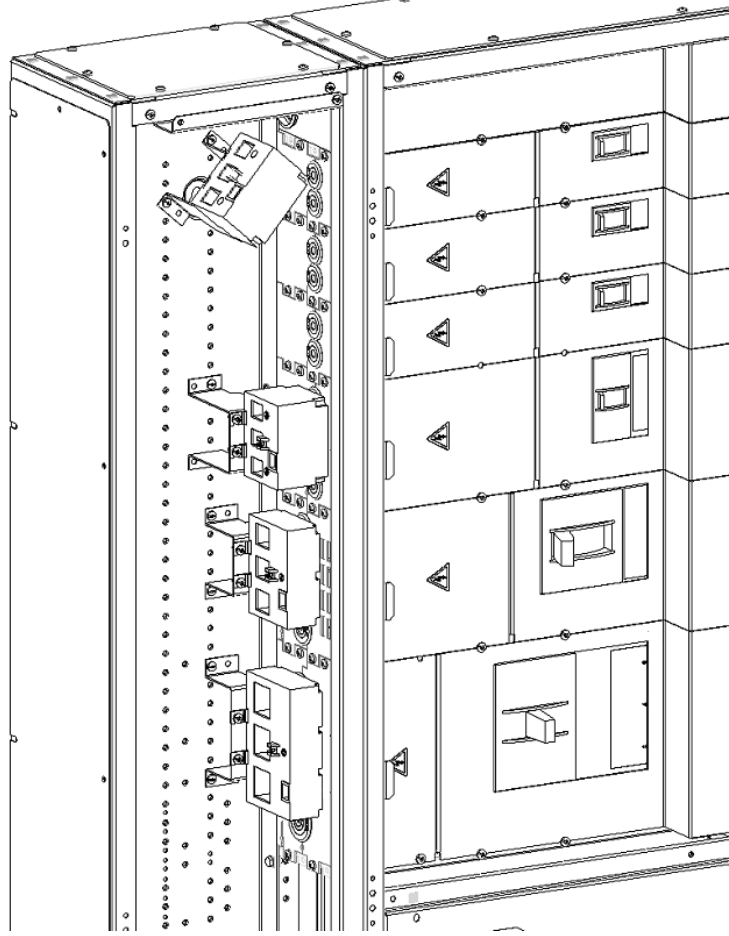
First Outgoing CT
Voltage I/P

SINGLE POLE CT OUTSIDE MCCB COMPARTMENTS

The CT needs to be moved backward on the mounting bracket (move the fixing feet to opposite side) and mounted the assembly in the cableway at 45° to allow room for the sweep of the live cables from the 3 single pole compartments.



CT IN MCCB COMPARTMENT
The CT needs to be moved forward on the mounting bracket to allow room to sweep the RJ45 cable through the exit point in the gland plate.



General Note: Torque all M5 fixings to 3.8Nm Max.

Warning - Intellectual Property Rights

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No responsibility can be accepted by us if these instructions are disregarded. Further copies of these instructions and information concerning the installation and proper use of this product can be obtained by contacting the:

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