Operating Instructions

400A & 250A Panelboard System
Wall or Floor Mounted Panelboard
BS EN 61439-2

Installation Instructions
(Please read carefully before installation)

Safety Note

This unit should be installed by a qualified competent person in accordance with all relevant legislation and regulations including the Building Regulations, the latest edition of the IET Wiring Regulations and accepted practise within the industry. If in doubt contact a qualified competent person.

Turn off all power supplying this equipment before commencing work on, or inside, the panel board.
Test with appropriately rated test equipment to ensure power is off.
Replace all devices, blanks, doors and covers before turning the power on.
To avoid swarf and other foreign objects entering the enclosure always remove gland plates to cut cable / trunking entries.

These units are designed for use with VM type MCCB's ONLY

Recommended Panelboard Combinations

System	TP Incomer					
	6 Way	12 Way	18 Way	6 Way	12 Way	18 Way
Panel board 250A Pt No	17VM32506	17VM32512	17VM32518	17VM32506	17VM32512	17VM32518
Panel board 400A Pt No	17VM34006	17VM34012	17VM34018	17VM34006	17VM34012	17VM34018
Incomer and Inter-conn kits	**Switch Disconnector**			**MCCB**		
Connection Kit 250A	17VL3250CK			17VL3250CK		
Connection Kit 400A	17VL3400CK			17VL3400CK		
250A	17VL3250SW			17VL3250MCCB		
400A	17VL3400SW			17VL3400MCCB		

System	4P Incomer					
	6 Way	12 Way	18 Way	6 Way	12 Way	18 Way
Panel board 250A Pt No	17VM32506	17VM32512	17VM32518	17VM32506	17VM32512	17VM32518
Panel board 400A Pt No	17VM34006	17VM34012	17VM34018	17VM34006	17VM34012	17VM34018
Incomer and Inter-conn kits	**Switch Disconnector**			**MCCB**		
Connection Kit 250A	17VL4250CK			17VL4250CK		
Connection Kit 400A	17VL4400CK			17VL4400CK		
250A	17VL4250SW			17VL4250MCCB		
400A	17VL4400SW			17VL4400MCCB		

Terminals for External Conductors

Neutral
250A Panelboard
Incoming – 3VL Incomer (M10 Fastener)
Outgoing – VM Outgoing MCCB (Box Terminal)
400A Panelboard
Incoming - 3VL Incomer (M10 Fastener)
Outgoing – VM Outgoing MCCB (Box Terminal)

Earth
250A Panelboard
Incoming - Earth Terminal M10 Fastener
Outgoing – Terminal Bar
400A Panelboard
Incoming - Earth Terminal M10 Fastener
Outgoing – Terminal Bar

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For information on the recommended maximum cable sizes to terminate onto the incoming and outgoing devices please refer to table 1.

Note: - It is good engineering practice to apply generous derating factors or make provision for free air between devices. In these situations, and in common with other manufacturers, we recommend a 55% diversity factor is applied to the MCCB nominal rated current where it is intended to load the MCCB continuously (in excess of 1 hour).

Incoming Device
The incoming device & interconnection kits are supplied separately from the panelboard. Details of what combinations are recommended can be seen in the table on page 1.

We recommend the fitting of the phase barriers supplied as standard with the incomer switching unit. Fully tighten the electrical connections to the recommended torque detailed in Table 1.

Internal accessories can be mounted in the incoming 3VL devices. Please refer to the installation instructions supplied with the accessories for guidance.

Outgoing Devices
VM type MCCBs only, to be fitted as outgoing devices.
Ensure the supply is switched off.
These instructions are to be read in conjunction with the installation instructions supplied with the MCCBs.
Care must be taken when positioning the MCCB. The terminals 2, 4, & 6 are used for the busbar connections, i.e. with the 'OFF' position towards the busbar.
Fully tighten the electrical connections to the recommended torque detailed in Table 1.

If using the screws supplied with the MCCB please note that these screws are for lateral location purposes only, as shown in Fig 1, and should not be overly tightened. The recommended torque for the mounting screws can be found in the manufacturers leaflets provided with the device. Mechanical strength of the assembly remains even when the screws are not fully tightened.

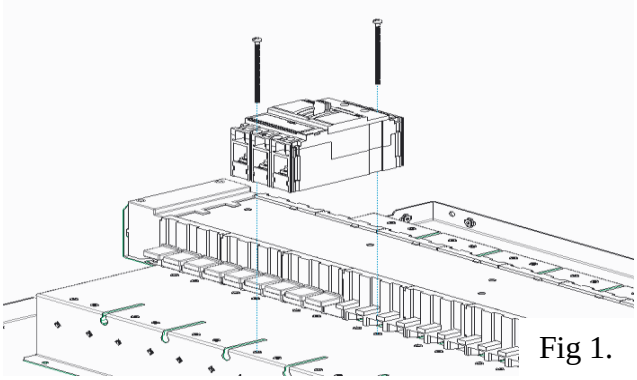

Fig 1.

DO NOT USE POWER TOOL SCREWDRIVERS ON ELECTRICAL CONNECTIONS

Outgoing Way Numbering
The outgoing ways must be identified. If the busbar is not pre-numbered then the installer must number the outgoing ways. Odd numbered ways on the left of the board, way 1 being either at the top or bottom of the busbar assembly. Even numbered ways on the right of the board ascending in the same direction as the odd numbers. Way 1 must be opposite way 2, both either at the top, or the bottom, of the busbar.

Fitting Cableways
See table 2 for cableway catalogue numbers.
Remove the side plates from the main unit and/or extension unit.
Couple the cableways to the main unit/extension unit(s) using the fasteners provided with the cableway(s).

Testing & Commissioning
Before the panelboard and the installation, of which it forms a part, are commissioned they must be tested, in accordance with the requirements of the latest edition of the Requirements for Electrical Installations (BS 7671) published jointly by the British Standards Institution (BSI) and the Institution of Engineering and Technology.

Note: Before fitting the front cover, check the tightness of all connections, including the factory made connections. Also ensure that all shrouds are correctly located and secured in place.
Unused ways must be fitted with busbar blanks and door blanks.

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Table 1 - Torques – Electrical Conns

Connection Type	Max Cable Capacity	Recommended Torque
Incoming Earth	120mm²	40 Nm
Neutral/Earth Bar	35mm²	6 Nm
Neutral Crossbar	-	6 Nm
Note: - Refer to individual kit leaflets for all other recommended torque settings.		

Table 2 - Available Units

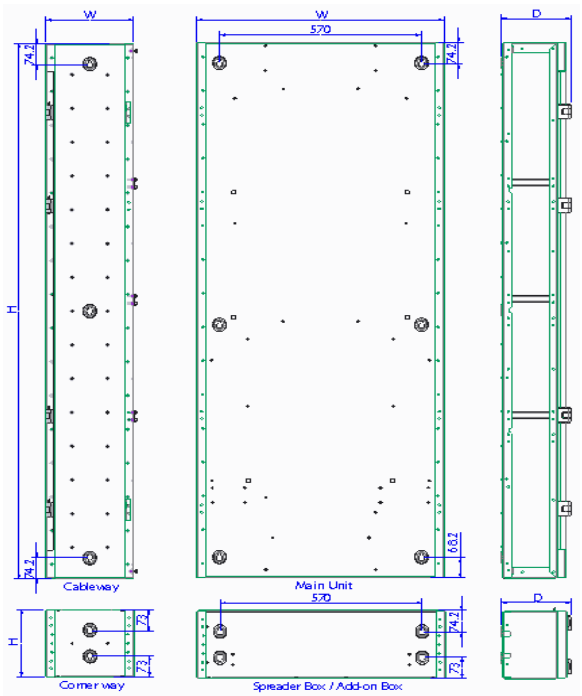
Order No	Description
17VM32506	Main Unit 6 Way (250A)
17VM32512	Main Unit 12 Way (250A)
17VM32518	Main Unit 18 Way (250A)
17VM34006	Main Unit 6 Way (400A)
17VM34012	Main Unit 12 Way (400A)
17VM34018	Main Unit 18 Way (400A)
17VMCU	Cable Way - Corner
17VM1MCW	Cable Way – Size 1 (Four Knockouts)
17VM2MCW	Cable Way – Size 2 (Six Knockouts)
17VM3MCW	Cable Way – Size 3 (Seven Knockouts)
17VM4MCW	Cable Way – Size 4 (Nine Knockouts)
17VM24CME	Add-on Control Module Enclosure – 24 mod
17VMSPNDB	Add-on SPN Distribution Board - 19 mod
17VMTPNDB	Add-on TPN Distribution Board - 19 mod
17VM1CSB	Add-on Cable Spreader Box

Note:
Maximum number of adjacent outgoing single pole devices is 8

Table 3 - Dimensions for the main unit and cableways

Order No		Dimensions (mm)		
Main Units		H	W	D
17VM32506	6 way (250A)	902	700	198
17VM32512	12 way (250A)	1132	700	198
17VM32518	18 way (250A)	1361	700	198
17VM34006	6 way (400A)	1132	700	198
17VM34012	12 way (400A)	1361	700	198
17VM34018	18 way (400A)	1591	700	198
Cable Ways				
17VMCU	Cable Way - Corner	300	249	184
17VM1MCW	Cable Way – Size 1 (Four Knockouts)	902	249	198
17VM2MCW	Cable Way – Size 2 (Six Knockouts)	1132	249	198
17VM3MCW	Cable Way – Size 3 (Seven Knockouts)	1361	249	198
17VM4MCW	Cable Way – Size 4 (Nine Knockouts)	1591	249	198
Extension Units				
17VM24CME	CM Add-on	230	700	198
17VMSPNDB	SPN Add-on	230	700	198
17VMTPNDB	TPN Add-on	230	700	198
17VM1CSB	SP box	230	700	184

Diagram of the Units available



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