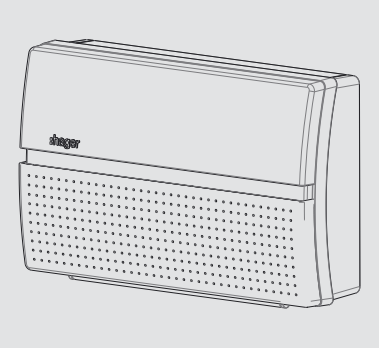


ZD0632

GB VC & VH Consumer Unit
Instructions/Data Sheet

This Consumer Unit and Hager devices conform with the following standards:
Consumer Unit: BS EN 61439-3 including Annex ZB.
Switch-disconnectors: BS EN 60947-3.
Residual Current Circuit Breaker (RCCB): BS EN 61008-1
Residual current operated circuit breaker with integral overload (RCBO): BS EN 61009-1
Miniature Circuit Breaker (MCB): BS EN 60898-1

Installation Instructions:
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.

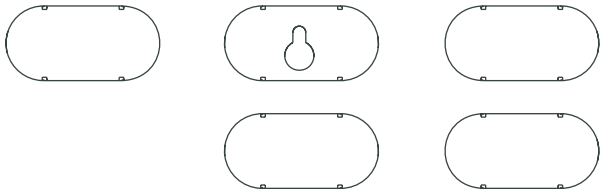
Install in the horizontal plane only.

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

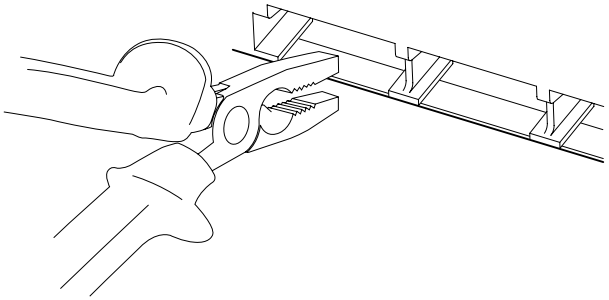
Tightening torque values to be applied (Nm)
Switch-disconnector's: 40A & 63A: 2.8 Nm
Switch-disconnector's: 100A: 3.3 Nm
RCCB's 40A & 63A: 2.8 Nm
RCCB's 80A & 100A: 3.3 Nm
MCBs: 2.8 Nm
RCBO's: 2.8 Nm
Earth & Neutral terminal bar connections: 2.0 Nm
Single conductors below 1.5mm² need to be doubled back in the terminal bar
Front metal cover fixing screws: 2.0 Nm

Good workmanship and proper materials must be applied by the installer.

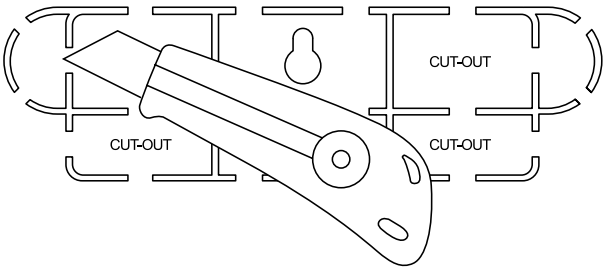
Cable entry facilities:



Metalclad units are provided with knockouts for standard 20, 25, and 32mm conduit and large rear knockouts.

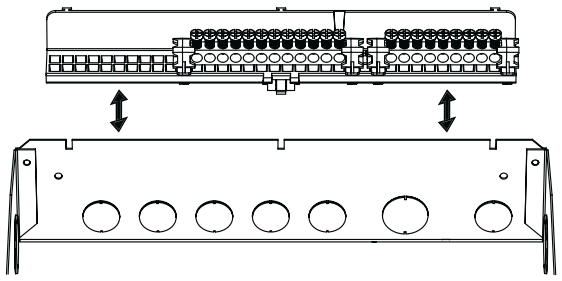


Insulated units are provided with breakouts for standard mini trunking.



Rear cable entries should be scored along the weak point with a sharp knife, and tapped sharply to remove.

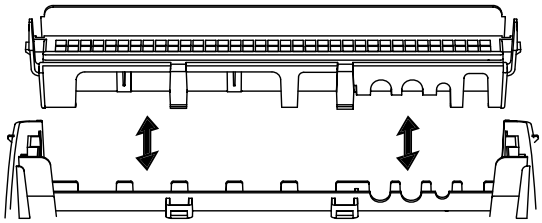
Metal Unit - Removing and replacing the terminal rail for cabling:



Pull and lift the terminal bar support away from the unit resting the rail supported by the earth strap. After fixing conduit/ cable glands, locate the rail support and press down.

ZD0632

Note: Only BASEC approved cable should be used
1.0mm² to 16mm² for outgoing cables
up to 35.0mm² for incoming live cables
Single conductors below 1.5mm² need to be doubled back in the terminal bar.



Insulated Unit - Removing and replacing the top wall for top surface cabling (IP4X using foam inserts; 1mm² - 10mm² conductors BS6004)

1. Press in with index finger on one end release clip while pressing in with thumb on the inner release clip repeat on the other and lifting the wall away from the unit.
2. After fixing the unit, to replace and reseal, place one of the foam seal strips in the underside of the wall feature and the other in the base (behind the cables). Locate the wall and press down. Additional fixing points are provided.

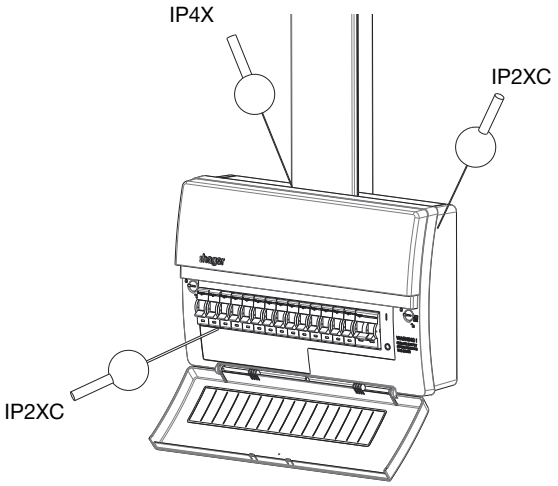
Max outgoing top entry cable size 10mm² CSA.
Max incoming Main tails top entry cable size 25mm² CSA.
If larger cables are needed, then enter from any other cable entry point other than top.

ZD0632

Guidance Notes:
The total load must not exceed the rating of the incoming device or the assigned assembly rating (InA) whichever is the lower. Each neutral and earth connection must correspond numerically to its outgoing way. Additional blanks (ref. JK01B) are available to cover spare ways.

A pack is provided to label this consumer unit, please consult us for spares or replacements.
Operating Instruction leaflet is provided overleaf. This leaflet should be left for the end user.
Single conductors below 1.5mm² need to be doubled back in the terminal bar.
Consumer Units incorporating RCDs in TT systems should incorporate an S type (time Delayed) RCCB, e.g. 100 mA s-type RCCB . Alternatively a main switch with RCBO protection on all outgoing circuits should be used.
Precautions need to be taken to prevent faults to earth on the supply side of the RCD (as per BS7671 regulation 531.4.1)

IP Ratings:
Cable access into the consumer unit must maintain the integrity so far as reasonably practicable. In essence, for surfaces accessible after installation, this means maintaining the requirement for the horizontal top surface of the enclosure to provide a degree of protection of at least IP4X and elsewhere, IP 2XC. For rear cable access, the minimum number of knockout(s) shall be removed.



IP Code	Description
IP2XC	Protection against access with a tool (2.5mm diameter, 100mm long) making contact with live hazardous parts
IP4X	A probe of 1mm diameter shall not enter the enclosure

Fitting Hager MCBs and RCBOs:
Only equipment and arrangements specified in Hager's technical documentation / catalogue shall be used.
Isolate the electrical supply from the consumer unit.
1. Isolate the electrical supply from the consumer unit.
2. Remove the front cover.
3. Fully slacken the lower terminal of the device.
4. Fully open the bottom device clip (fig 1.)

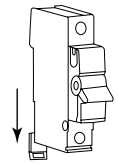


fig 1.

5. Locate the device onto the din rail, and busbar. Ensure that the busbar tooth is within the device terminal cage.
6. Close the bottom device clip.
7. While holding the device firmly onto the busbar, fully tighten the lower terminal screw.
8. After fitting all outgoing devices and connecting all outgoing cables, please check the tightness of all cable connections. This should include all factory made connections, which may have loosened during installation or transit.

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.

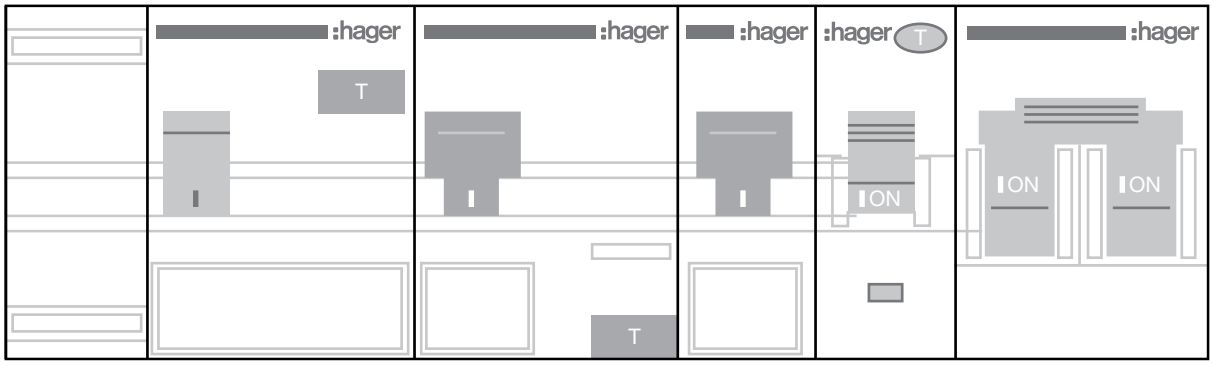
For dimensional information and weights please consult the Hager catalogue.

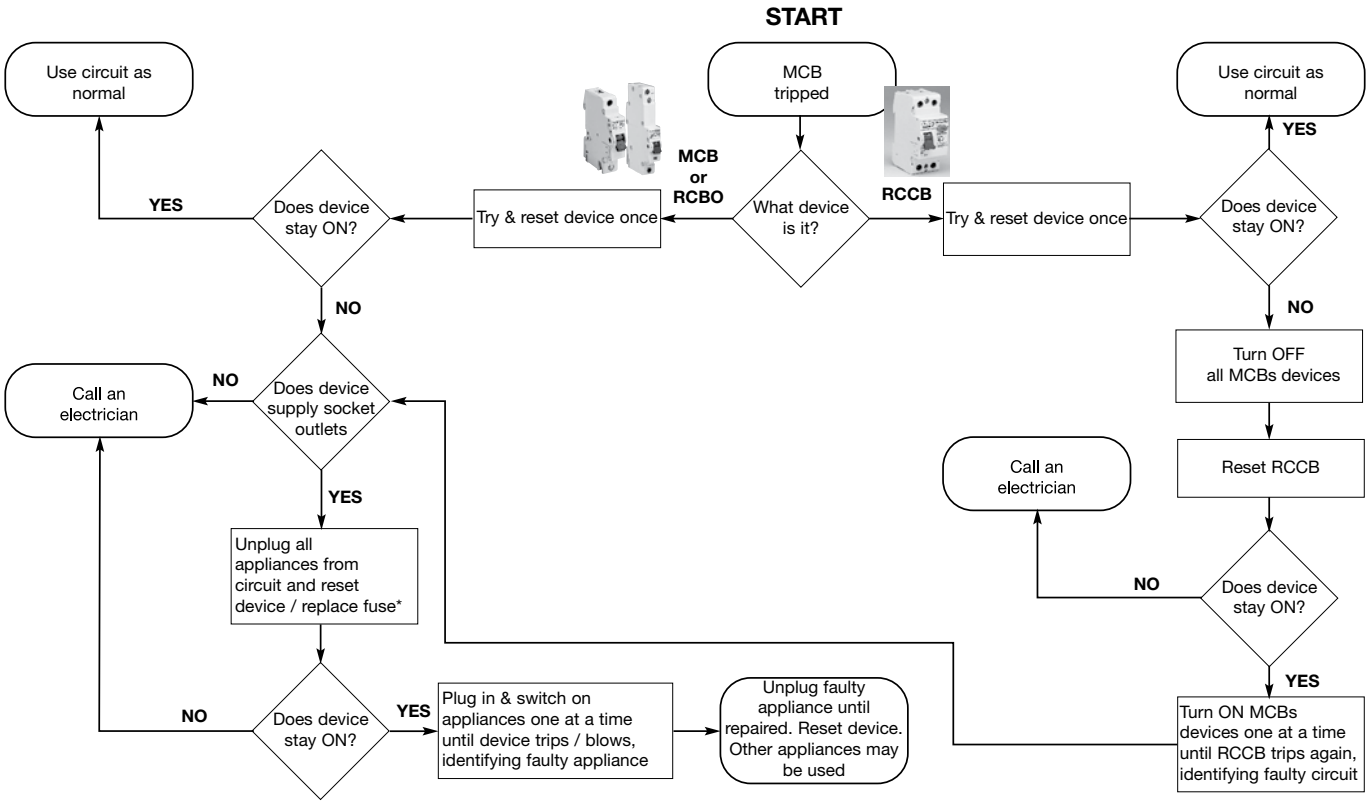
Hager Technical Help Line: 01952 675 689
Hager Technical Fax: 01952 675 557

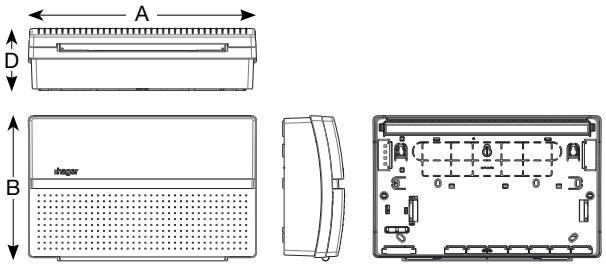
Website: www.hager.co.uk
E-mail us: info@hager.co.uk

ZD0632

Interface characteristics	
Rated & operational voltage (Un / Ue) 230V a.c. 50Hz	
Rated insulation voltage (Ui) 320V a.c. 50Hz	
Rated impulse withstand voltage (Uimp) 4kV	
Rated current of the Assembly (InA) 100A, 63A, 40A Note: Dependent upon rating of main incoming device	
Rated current of an Outgoing circuit (Inc) MCB 6A - 63A (marked rated current on device) RCBO 6A - 50A (marked rated current on device)	**Rated current of outgoing unit (Inc)** RCCB 40A -100A (marked rated current on device)
Rated conditional short-circuit current of the ASSEMBLY (Icc) Annex ZB: 16 kA rms at 250V, power factor 0.6 with equipment and arrangements specified in Hager's technical documentation / catalogue.	
Protection against electric shock Consumer unit shall be installed in an electrical system conforming to the current edition of IEC 60364 / BS 7671	
Rated diversity factor (RDF) / Values of assumed loading 1way = 1.0 2way – 3way = 0.8 4way – 5way = 0.7 6way – 9way = 0.6 10way and above = 0.5	Note: RDF only applies to continuously and simultaneously loaded circuits. In principle, this means adjacent circuit-breakers having a load 'on' time exceeding 30 minutes or where a load not exceeding 30 minutes has an 'off' time less than the 'on' time, will need to have the rated diversity factor applied as indicated.
Rated frequency (fn) 50 Hz	
Pollution degree 2	
Types of system earthing for which the ASSEMBLY is designed TNC-S, TN-S when installed in an electrical installation complying with BS 7671 Hager recommends for TT systems a 100A type S time delayed RCCB or a main switch with RCBO protection only on all outgoing circuits.	
Indoor use only	
Stationary ASSEMBLY	
Degree of protection IP2XC with Door Open / closed and full compliment of outgoing devices and or blanks fitted. Note: Where cables are installed through top wall of enclosure, gaps of IP4X to be maintained.	
Intended use Intended for use in domestic (residential) or similar premises.	
Electromagnetic compatibility (EMC) classification EMC Environment B	
External design VC & VH: Wall-mounted, surface type, enclosed assembly.	
Mechanical impact protection IK 05	
The type of construction Fixed parts	
Type A DBO (Distribution board for use by ordinary persons)	

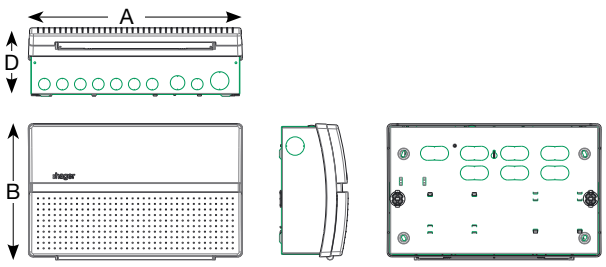






Insulated

Dimensions (mm)	Enclosure Size 2	3	4	5	6
A	110	240	310	380	490
B	180	245	245	245	245
C	N/A	N/A	N/A	N/A	N/A
D	94	105	105	105	105



Hybrid

Dimensions (mm)	Enclosure Size 2	3	4	5	6	7
A	168	220	240	310	380	490
B	193	230	245	245	245	245
C	N/A	N/A	N/A	N/A	N/A	N/A
D	124	110	120	120	120	120