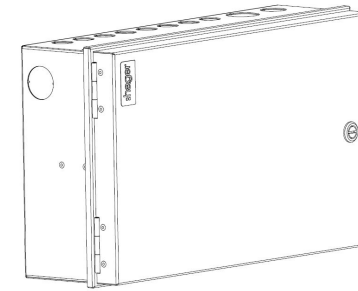


Painted Metal Enclosure

Dimensions (mm)	Enclosure Size							
	8	12	16	22	2x12	2x16	2x22	3x22
A	254	326	398	505	326	398	505	505
B	236	236	236	236	472	472	472	708
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
D	125	125	125	125	125	125	125	125

GB JKA Boards
Instructions/Data Sheet



This DBO and Hager devices conform with the following standards:
Meter Direct Fed EN 50470
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:

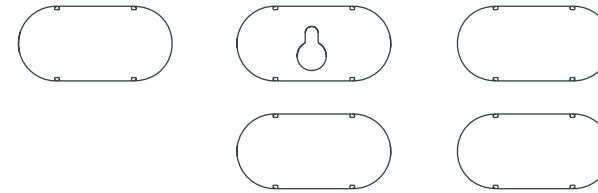
To prevent potential overheating from loose connections the installer shall check connections are tight to the torque levels stated in these instructions prior to energizing this board. This check should include factory made connections which may have loosened in transit.

Tightening torque values to be applied (Nm)

Switch-disconnector's: 40A & 63A: 2.8 Nm
 Switch-disconnector's: 100A: 3.6 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
 Meter torque: 2.4 Nm

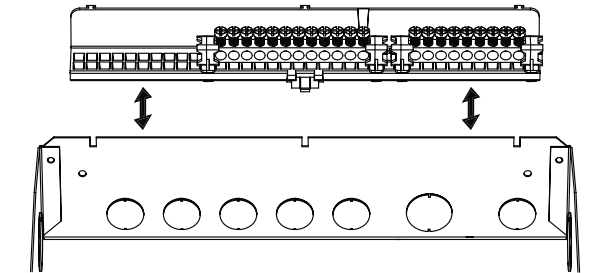
Good workmanship and proper materials must be applied by the installer. The cable entry method shall, as far as reasonably practical, maintain the non-combustible arrangement of the enclosure. Account shall be taken of these instructions.

Cable entry facilities:



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

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.

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.

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 DBO, 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.
DBOs 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 DBO 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, IP30. 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
IP30	Protection against access with a tool (2.5mm diameter, shall not penetrate)
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.

1. Isolate the electrical supply from the DBO.
2. Remove the front cover.
3. Fully slacken the lower terminal of the device.
4. Fully open the bottom device clip (fig 1.)

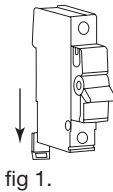


fig 1.

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

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	
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) Direct Fed Meter - 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. (Does not include metered type A distribution boards) JK A Board DBO Icc = 10kA, Ipk 17kA	
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 and full compliment of outgoing devices and or blanks fitted. IP30 with door 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 JKA: 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)	

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