

# Consumer Unit

## Design 30 Split Load Dual Row 100A (I<sub>nA</sub>) & SPD for use with AFDD

For the distribution of power in a residential application, conforming to BS EN 61439-3

The range of consumer units with a 100A rated current (I<sub>nA</sub>) have been designed for installations where the upstream overcurrent protection device (OCPD) is rated at 100A or below.

Designed for use with Arc Fault Detection Devices the board contains double pole busbars to allow the connection of these devices. Earth leakage protection is provided by 100 A, 30 mA type A RCCBs. Designed for all applications and allows compliance with BS 7671:2018;

Regulation 421.1.201 within domestics (household) applications consumer units and similar assemblies shall comply with BS EN 61439-3 and shall have their enclosure manufactured from a non-combustible material.

Regulation 411.3.3 additional protection by means of a 30mA RCD.

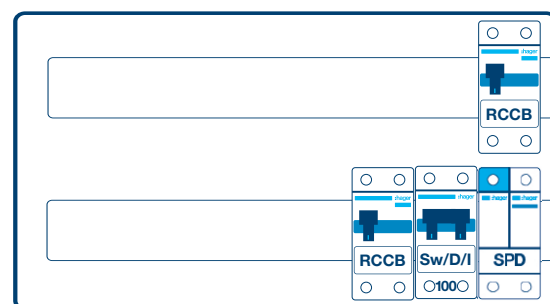
Regulation 314.1&2 segregation of circuits to avoid danger and minimise inconvenience in the event of a fault.

Regulation 522.6.202 protection of wiring concealed in walls or partitions.

Regulation 531.3.3 Selection of appropriate RCD. Type A RCCBs can detect and respond to both AC and pulsating DC components.

Regulation 536.4.3.2 & 536.4.202 overload protection of switches and RCCBs. For installations where the upstream overcurrent protection is less than or equal to 100 A

A split load board allows circuits to be arranged in a configuration to minimise inconvenience to the householder in case of an earth leakage fault.



VMA90507HSPD

Description	Size	Cat ref.	Cat ref. with Knockouts
12 Way Split Load 5+7 100A Main Switch 2*100A 30mA Type A RCCB with SPD for AFDD Devices	5 (2)	VMA90507HSPD	VMA90507HKSPD
18 Way Split Load 8+10 100A Main Switch 2*100A 30mA Type A RCCB with SPD for AFDD Devices	7 (2)	VMA90810HSPD	VMA90810HKSPD
Devices	B Curve		C Curve
AFDD + MCB, Double Mod, Double Pole 6kA, 6A	ARC906U		ARC956U
AFDD + MCB, Double Mod, Double Pole 6kA, 10A	ARC910U		ARC960U
AFDD + MCB, Double Mod, Double Pole 6kA, 16A	ARC916U		ARC966U
AFDD + MCB, Double Mod, Double Pole 6kA, 20A	ARC920U		ARC970U
AFDD + MCB, Double Mod, Double Pole 6kA, 25A	ARC925U		ARC975U
AFDD + MCB, Double Mod, Double Pole 6kA, 32A	ARC932U		ARC982U
AFDD + MCB, Double Mod, Double Pole 6kA, 40A	ARC940U		ARC990U

## Features & Benefits

- Provides for large quantities of outgoing ways or space for additional devices
- Enclosure fully open between rows giving easy access for cables
- Square cable entry points top and bottom for use with cable trunking
- Meter tail cable entry plate (VM04CE) provided
- Rigid top wall – Enhances rigidity to prevent distortion when removing knockouts
- Rear Knockouts for ease of cable entry - cable protector plate (VM02CE) available as accessory
- Front cover retained screws – Prevents loss during installation
- Full metal DIN rail – Secure and stable attachment of devices
- Optimised cabling space – DIN rail position allows maximum cabling space
- Top mounted terminal rail for each row makes the wiring of the neutral and earth connections neat and simple.
- Torque settings displayed inside front cover – easily accessible to electrician during installation and maintenance.
- Single pole busbar and Neutral cable link provided to enable the installer to convert one row to single pole for MCB's.
- Factory fitted Type II surge protection device.

#### Technical Characteristics

Standards	BS EN 61439-3
Classification	Consumer Unit
Rated & Operational Voltage ( $U_N/U_e$ )	230V a.c 50 Hz
Rated Insulation Voltage ( $U_i$ )	320V a.c. 50Hz
Rated Frequency (fn)	50 Hz
Rated impulse withstand voltage ( $U_{imp}$ )	4kV
Rated Current of the Assembly ( $I_{na}$ )	100A
Rated Current of an Outgoing Circuit $I_{nC}$	AFDD 6A-40A (Marked Rated Current on Device)
Rated Conditional Short Circuit of the Assembly ( $I_{cC}$ )	Annex ZB: 16kA rms at 250V, power factor 0.6 with equipment and arrangements specified in Hager's technical documentation/catalogue
Rated Current of outgoing unit ( $I_{nC}$ )	RCCB 100A (marked rated current on device)
Protection against electric shock	Consumer Unit shall be installed in an electrical system conforming to IEC 60364 / BS 7671
Rated Diversity Factor (RDF) / Values of assumed loading	10 way 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.

Pollution Degree	2
Types of System Earthing for which the assembly is designed	TNC-S and TN-S when installed in an electrical system conforming to BS 7671
Intended locations	Indoor use only
Stationary assembly	
Degree of protection	IP2XC with door open / closed and full compliment of devices / blanks fitted. Note: Where cables are installed through the top wall of the 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	Wall mounted, surface type, enclosed assembly.
Mechanical impact protection	IK05
Type of construction	Fixed parts
Incoming Line/Neutral terminal	50mm <sup>2</sup>
Incoming Earth Terminal	16mm <sup>2</sup>

Warranty - Hager undertakes to replace or repair at its discretion products should they become inoperable within the time periods as stated - 2 Years

#### Accessories

Top Wall cable entry plates	Provide more options for cable entry, when used with 50x50mm trunking IP ratings can be achieved.	<b>VM03CE</b>
Blind cable entry plates	A blank plate for drilling which allows the installer to decide on the method of incoming cables - compression gland etc.	<b>VM04CB, VM03CB</b>
Rear cable entry plate	Provides protection for cables entering from the rear of the board	<b>VM02CE</b>
Cable Clamp	Secures supply cables on entry to main incoming device	<b>VA10MT</b>
Grommet strip	For protecting cables against damage when entering the board	<b>VM05GS</b>
Rear stand off plates	To stand consumer unit off wall allowing surface mounted cables to enter through rear of unit.	<b>VM01SP</b>

#### Dual Row Design 10 Dimensions (mm)

	Enclosure Size	
	5 (2)	7 (2)
Height	486	486
Width	370	478
Depth 1	83	83
Depth 2	100	100

<input type="checkbox"/>	Top Face 30 x 25 (mm)	2	2
<input type="checkbox"/>	Top Face 40 x 30 (mm)	4	6
<input type="checkbox"/>	Back 100 x 50 (mm)	6	6
<input type="checkbox"/>	Bottom Face 30 x 25 (mm)	4	5

