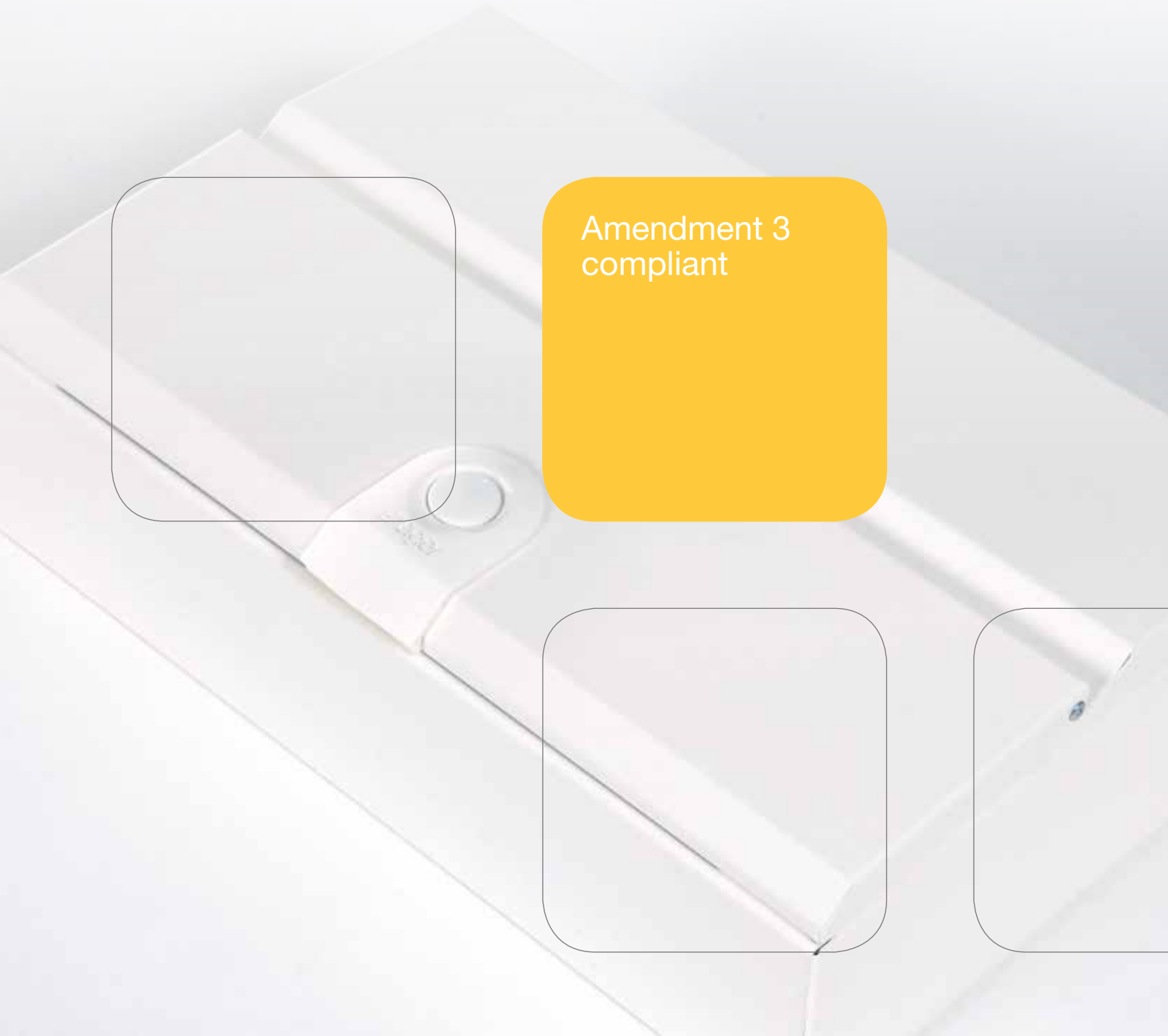
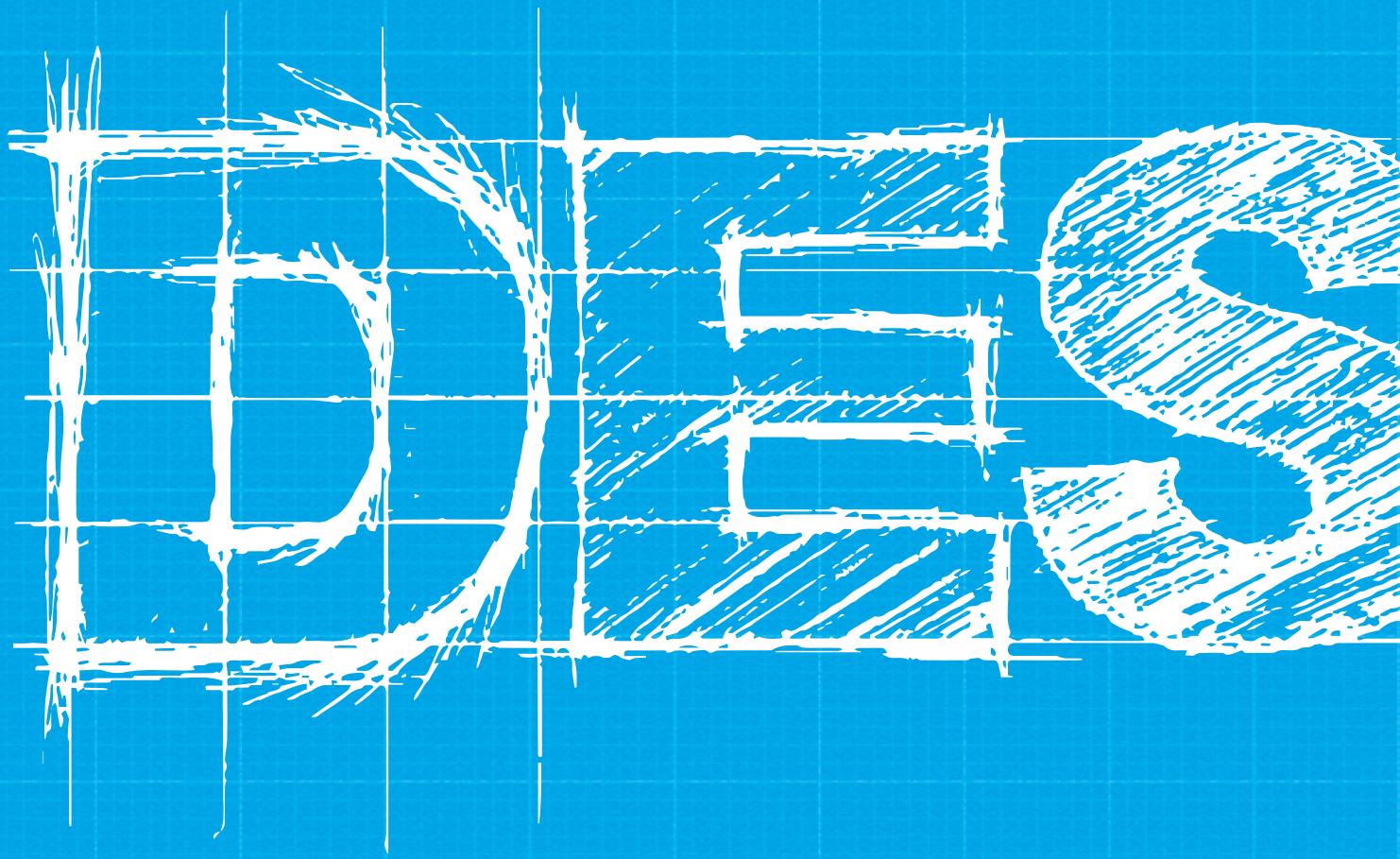
Design Range of Consumer Units

Amendment 3 compliant



Designed for **safety**
Designed for **installation**
Designed for **aesthetics**



by hager

Features Comparison

Feature	Description	Design 10	Design 30
Square Knockouts	Knockouts designed to accommodate common sizes of trunking for surface mounting cables.	●	●*
Grommet Strips	Provided to fit around the rougher edges of the knockouts to protect incoming cables.	●	●
Front cover retained screws	Screws attached to the front cover are retained to prevent loss during the installation	●	●
Cable Clamp	Incoming meter tails can be safely secured, eliminating stress within the switch terminal.	○	●
Cable Protector Plate	Allows cables to enter rear of board without the risk of damage from sharp edges.	○	●
Locate & Hold Cover	Locates and holds the cover during installation, reducing the risk of damage, leaving both hands free to fix the cover to the base.	—	●

● Available as standard ○ Available as an accessory — Not Compatible

* Knockouts available by choice on Design 30 range. References ending with a 'K' will contain knockouts.

DESIGN

Hagers metal consumer unit ranges

For many years the Hager name has been synonymous with consumer units in the UK, having manufactured more than 4 million in the UK at our Telford site. Changes in January 2015 to the Wiring Regulations with the publication of amendment 3 have had an impact on the installation practice for household (residential) consumer units.

What the regulations say
Amendment 3 states that:
421.1.201
Within domestic (household) premises, consumer units and similar switchgear assemblies shall comply with BS EN 61439 3 and shall:
(i). Have their enclosures manufactured from non-combustible material, or
(ii). Be enclosed in a cabinet or enclosure constructed of non-combustible material and complying with Regulation 132.12.
NOTE 1: Ferrous metal e.g. steel is deemed to be an example of a non-combustible material.
NOTE 2:* the implementation date for this regulation is the 1st January 2016. This does not preclude compliance with this regulation prior to this date.

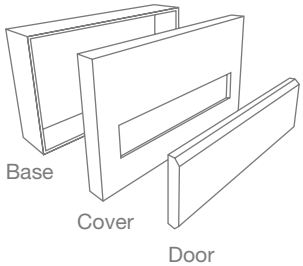
What the regulations mean
Guidance from BEAMA (British Electrotechnical and Allied Manufacturers Association) who represent the UK manufacturers.

The Intent of regulation 421.1.201 is considered to be, as far as reasonably practicable, to contain any fire within the enclosure and to minimise flames from escaping a consumer unit in the event of a fire.

The following Q&A's cover key points.

1. What is a definition of non-combustible?
There is no published definition for 'non-combustible' that aligns with the intent of regulation 421.1.201. Ferrous metal is deemed to be one example of a non-combustible material that meets the intent of the regulation.

2. What constitutes a 'non-combustible enclosure'?
A non-combustible enclosure includes base, cover, door and any components e.g. hinges, covers, screws and catches, necessary to maintain fire containment. See diagram 1. Blanks and devices are contained within the non-combustible enclosure.



3. How is account taken of cable entries into a 'non-combustible enclosure' with respect to containment of internal fire and escape of flames?
Good workmanship and proper materials must be applied by the installer. The cable installation entry method shall, as far as is reasonably practicable, maintain the fire containment of the enclosure. Account shall be taken of the manufacturers instructions, if any.

4. What is meant by 'similar switchgear assemblies'?
'Similar switchgear assemblies' are assemblies used for the same fundamental application as consumer units.

5. Does regulation 421.1.201 apply to consumer units and similar switchgear assemblies installed in domestic (household) garages and outbuildings?
Yes, the intent of regulation 421.1.201 is that it applies to consumer units and similar switchgear assemblies to BS EN 61439-3 inside all domestic (household) premises including their integral/attached garages and outbuildings or those in close proximity.

Design *10, 30*

The amendment 3 Hager Design ranges include surface and flush solutions, with offers suitable for installations where the consumer unit will be on show and applications where they are hidden away.

Through in-depth customer research we have developed a number of consumer units to allow compliance with amendment 3, incorporating features and benefits for the ease of installation and use which have resulted in ranges aimed at meeting the requirements of the differing customer groups.

The Design ranges of consumer units

Designed for safety
Designed for installation
Designed for aesthetics
Designed by Hager

Index

Design 10

Fixings
Multiple points allow the use of No.8 or No.10 fixings giving a range of fixing options.

Terminal bar
The top mounted terminal rail makes the wiring of the neutral and earth connections neat and simple.

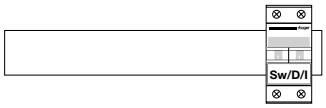
Cable space
Maximum cable space is available even with RCBO's fitted to make installation easier and faster

Snap-able busbar
Provides quick and easy configuration of circuits.

Full metal DIN rail
Minimised distortion to ensure the devices sit square and are not easily displaced.


ON
OFF

VML206



Switch Disconnector Incomer

Metal switch disconnector incomer enclosures, 1 row from 2 to 20 outgoing ways.

Enclosures come supplied with a full metal DIN rail, 63A or 100A switch disconnector incomer and full complement of earth and neutral terminals along with marking labels, busbar and instructions.

Recommended for use with TT systems when utilising RCBO on outgoing circuits.

Hager also recommend the use of cable clamp VA10MT for use on TT systems. Available as accessory.

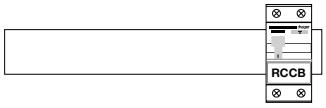
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

Description	Size	Cat ref.
2 Way 63A Switch Disconnector Incomer	2	**VML202**
6 Way 63A Switch Disconnector Incomer	3	**VML206**
6 Way 100A Switch Disconnector Incomer	3	**VML106**
10 Way 100A Switch Disconnector Incomer	4	**VML110**
14 Way 100A Switch Disconnector Incomer	5	**VML114**
20 Way 100A Switch Disconnector Incomer	7	**VML120**

VML310H



RCCB Incomer

Metal RCCB incomer enclosures, 1 row from 2 to 14 outgoing ways.

Enclosures come supplied with a full metal DIN rail, 40A, 63A or 100A 30mA RCCB incomer and full complement of earth and neutral terminals along with marking labels, busbar and instructions.

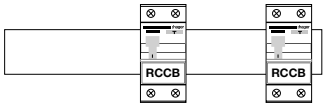
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

Description	Size	Cat ref.
2 Way 40A 30mA RCCB Incomer	2	**VML402H**
6 Way 63A 30mA RCCB Incomer	3	**VML406H**
6 Way 100A 30mA RCCB Incomer	3	**VML306H**
10 Way 63A 30mA RCCB Incomer	4	**VML410H**
10 Way 100A 30mA RCCB Incomer	4	**VML310H**
14 Way 100A 30mA RCCB Incomer	5	**VML314H**

VML712TG



Time Delayed RCCB Incomer - Split Load

Metal RCCB incomer enclosures, 1 row 12 outgoing ways.

Enclosures come supplied with a full metal DIN rail 100A 100mA time delayed and 63A 30mA RCCB incomer and full complement of earth and neutral terminals along with marking labels, busbar, meter tail clamp and instructions.

Recommended for use with TT systems.

Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

Description	Size	Cat ref.
12 Way Configurable 100A 100mA Time Delay RCCB 63A 30mA RCCB	5	**VML712TG**

Split Load

Metal split load and configurable enclosures, 1 row from 6 to 16 outgoing ways.

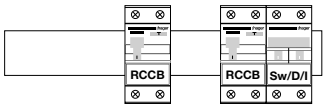
Enclosures come supplied with a full metal DIN rail and 2 RCCBs and full complement of earth and neutral terminals along with marking labels, busbar and instructions.

Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

VML716C



Description	Size	Cat ref.
6 Way Split Load 3+3 100A Switch 2x63A 30mA RCCB	4	**VML733H**
10 Way Split Load 5+5 100A Switch 2x63A 30mA RCCB	5	**VML755H**
12 Way Split Load 6+6 100A Switch 2x63A 30mA RCCB	6	**VML766H**
10 Way Split Load Configurable 100A Switch 2x 63A 30mA RCCB	5	**VML710C**
16 Way Split Load Configurable 100A Switch 2x 63A 30mA RCCB	7	**VML716C**
10 Way Split Load 5+5 100A Switch 2x80A 30mA RCCB	5	**VML855H**
12 Way Split Load 6+6 100A Switch 2x80A 30mA RCCB	6	**VML866H**
10 Way Split Load Configurable 100A Switch 2x80A 30mA RCCB	**5**	**VML810C**
16 Way Split Load Configurable 100A Switch 2x80A 30mA RCCB	7	**VML816C**

High Integrity

Metal split load and configurable enclosures, 1 row from 10 to 16 outgoing ways.

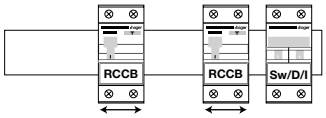
Enclosures come supplied with a full metal DIN rail and 2 RCCBs and full complement of earth and neutral terminals along with marking labels, busbar and instructions.

Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

VML878R



Description	Size	Cat ref.
10 Way High Integrity Split Load Configurable 100A Switch 2x63A 30mA RCCB	5	**VML710CU**
16 Way High Integrity Split Load Configurable 100A Switch 2x63A 30mA RCCB	7	**VML716CU**
10 Way High Integrity Split Load Configurable 100A Switch 2x80A 30mA RCCB	5	**VML810CU**
16 Way High Integrity Split Load Configurable 100A Switch 2x80A 30mA RCCB	7	**VML816CU**
10 Way High Integrity 5+4+1 100A Switch 2x63A 30mA RCCB + 6A RCBO	5	**VML754R**
16 Way High Integrity 7+8+1 100A Switch 2x63A 30mA RCCB + 6A RCBO	7	**VML778R**
10 Way High Integrity 5+4+1 100A Switch 2x80A 30mA RCCB + 6A RCBO	5	**VML854R**
16 Way High Integrity 7+8+1 100A Switch 2x80A 30mA RCCB + 6A RCBO	7	**VML878R**
14 Way Split Load 6+6+2 100A Switch 2x80A 30mA RCCB + 40A 30mA RCCB	7	**VML8662**

Multi Tariff

Metal switch disconnector incomer enclosures, 1 row 18 outgoing ways.

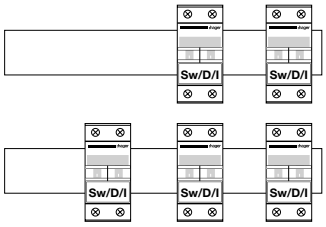
Enclosures come supplied with a full metal DIN rail, multiple switch disconnector incomers and full complement of earth and neutral terminals along with marking labels, busbar and instructions.

Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For dimensions see page 18.
For accessories see page 14.

All Design 10 boards contain top & bottom knockouts.

VML918C

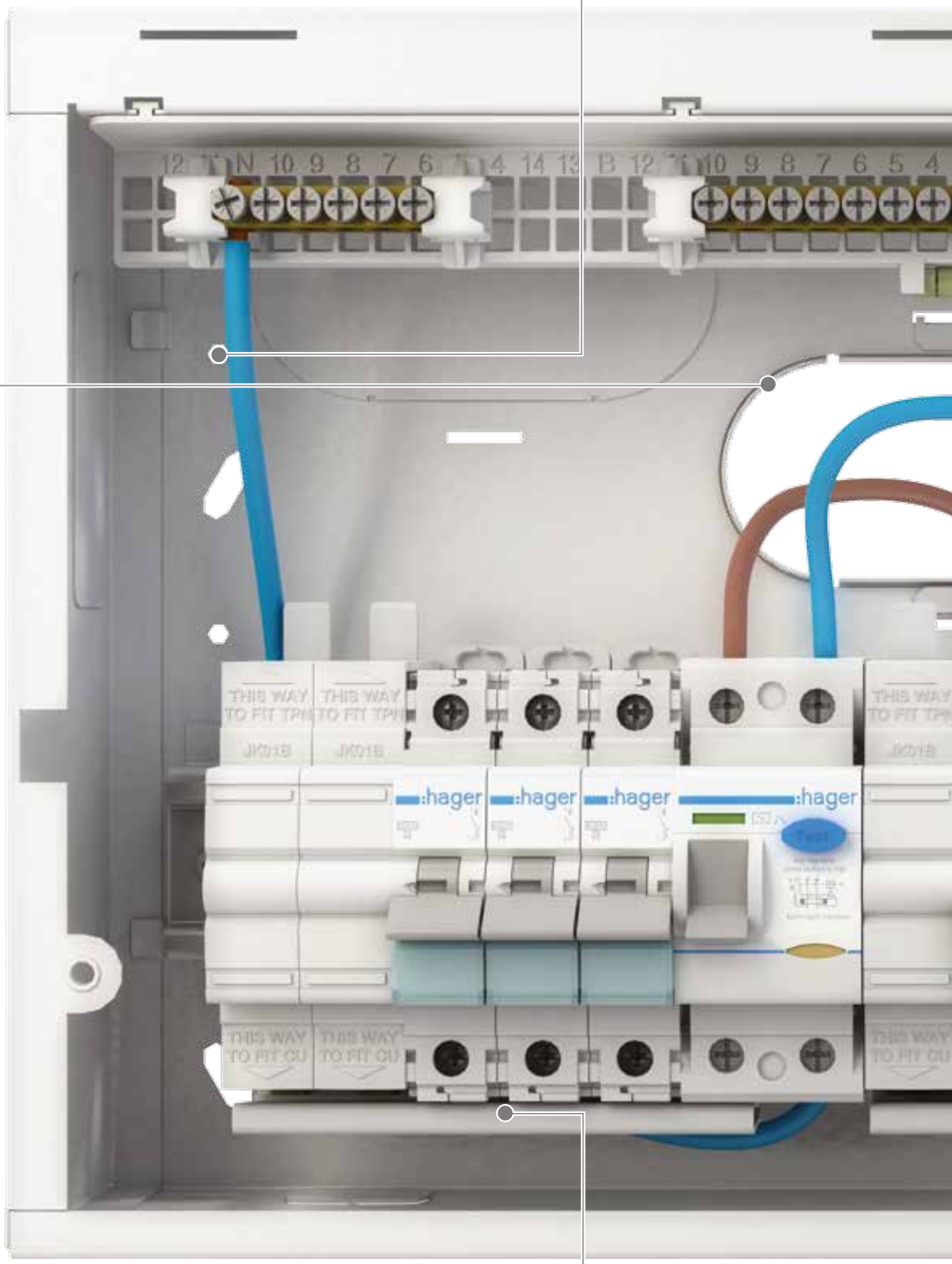


Description	Size	Cat ref.
18 Way Twin Tariff Configurable 2x100A Switch	7	**VML918C**
12 Way Multi Tariff 6+5+1 2x100A 1x63A Swtich	6	**VML9651**

Design 30

Cable entry
Optional knockouts designed to accommodate 100mm x 50mm, 50mm x 50mm and 40mm x 25mm trunking allows easy access to the board when surface mounting cables.

Fixings
Multiple points allow the use of No.8 or No.10 fixings giving a range of fixing options.



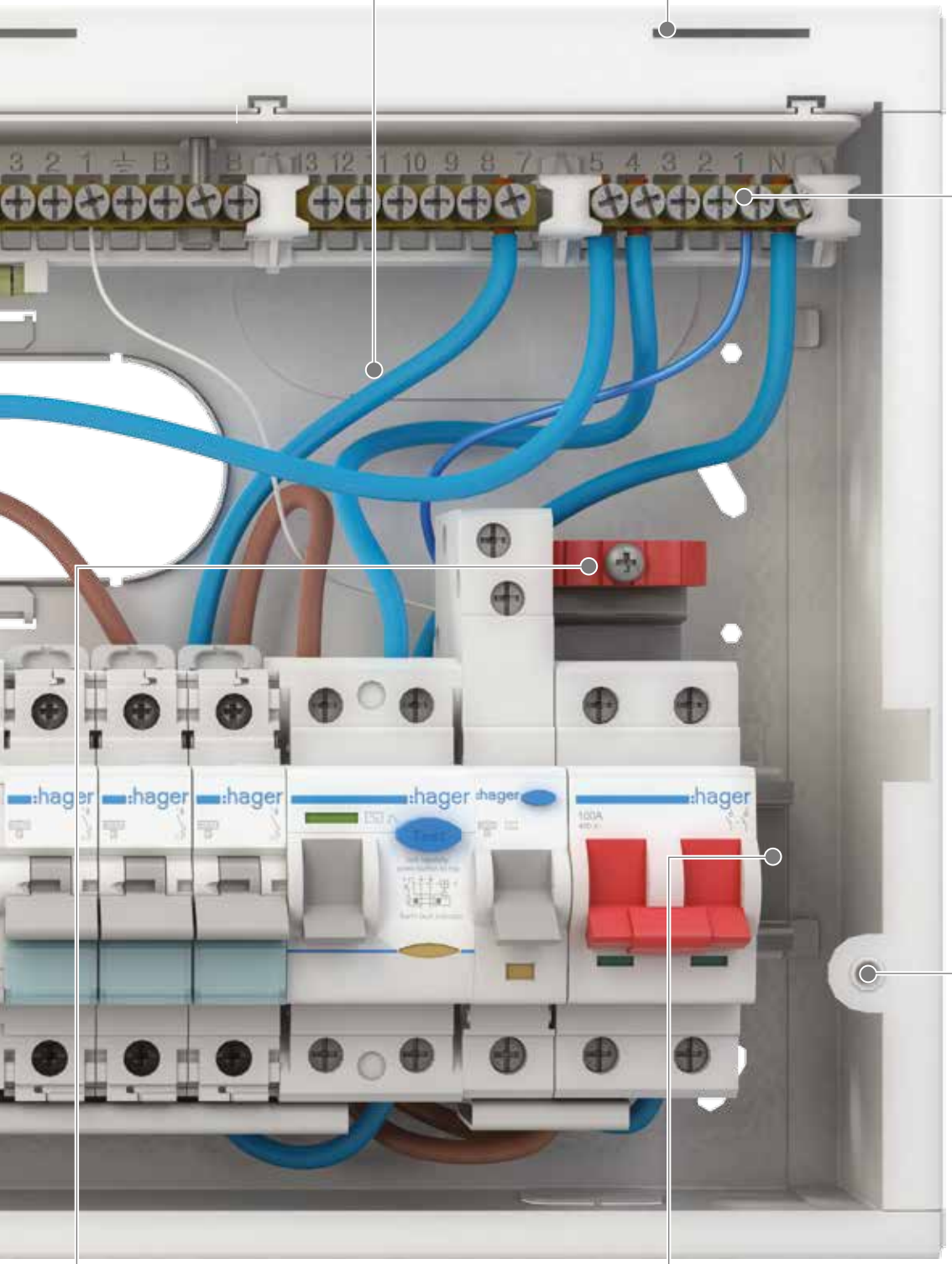
Cable protector plate
Allows cables to enter rear of board without the risk of damage from sharp edges. the knockout is removed using suitable tools and then the protector plate is inserted into the aperture and the fixing tabs bent over to secure

Snap-able busbar
Provides quick and easy configuration of circuits.

Cable space
Maximum cable space is available even with RCBO's fitted to make installation easier and faster

Locate and hold cover
Locates and holds the cover during installation, reduces risk of damage leaving both hands free to fix the cover to the base.

Terminal bars
The top mounted terminal rail makes the wiring of the neutral and earth connections neat and simple.

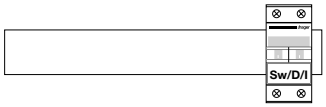


Front cover retained screws
Screws attached to the front cover are retained to prevent loss during the installation.

Cable clamp
Incoming meter tails can be safely secured, eliminating stress within the switch terminal. Now slimmer to acommodate and RCBO next to the main switch.

Full metal DIN rail
Minimised distortion to ensure the devices sit square and are not easily displaced.

VM206



Switch Disconnector

Metal switch disconnector incomer enclosures, 1 row from 2 to 20 outgoing ways.

Enclosures come supplied with a full metal DIN rail, 63A or 100A switch disconnector incomer and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

Recommended for use with TT systems when utilising RCBO on outgoing circuits.

Where the cable clamp is fitted it is not possible to install single RCBO next to the main switch. In this instance a blank (JK01B) should be installed next to the main switch.

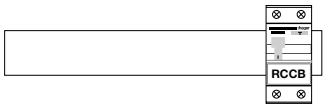
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
2 Way 63A Switch Disconnector Incomer	2	**VM202**	**VM202K**
6 Way 63A Switch Disconnector Incomer	3	**VM206**	**VM206K**
6 Way 100A Switch Disconnector Incomer	3	**VM106**	**VM106K**
10 Way 100A Switch Disconnector Incomer	4	**VM110**	**VM110K**
14 Way 100A Switch Disconnector Incomer	5	**VM114**	**VM114K**
20 Way 100A Switch Disconnecotr Incomer	7	**VM120**	**VM120K**

VM310H



RCCB Incomer

Metal RCCB incomer enclosures, 1 row from 2 to 14 outgoing ways.

Enclosures come supplied with a full metal DIN rail, 40A, 63A or 100A 30mA RCCB incomer and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

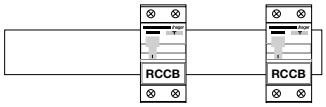
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
2 Way 40A 30mA RCCB Incomer	2	**VM402H**	**VM402HK**
6 Way 63A 30mA RCCB Incomer	3	**VM406H**	**VM406HK**
6 Way 100A 30mA RCCB Incomer	3	**VM306H**	**VM306HK**
10 Way 63A 30mA RCCB Incomer	4	**VM410H**	**VM410HK**
10 Way 100A 30mA RCCB Incomer	4	**VM310H**	**VM310HK**
14 Way 100A 30mA RCCB Incomer	5	**VM314H**	**VM314HK**

VM712TG



Time Delayed RCCB Incomer - Split Load

Metal RCCB incomer enclosures, 1 row 12 outgoing ways.

Enclosures come supplied with a full metal DIN rail 100A 100mA time delayed RCCB incomer and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

Recommended for use with TT systems.

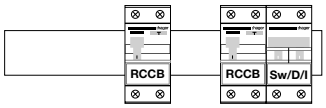
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
12 Way Configurable 100A 100mA Time Delay RCCB 63A 30mA RCCB	5	**VM712TG**	**VM712TGK**

VM716C



Split Load

Metal split load and configurable enclosures, 1 row from 6 to 16 outgoing ways.

Enclosures come supplied with a full metal DIN rail and 2 RCCBs and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

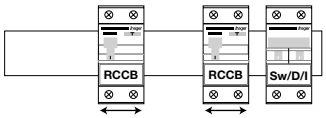
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
6 Way Split Load 3+3 100A Switch 2x63A 30mA RCCB	4	**VM733H**	**VM733HK**
10 Way Split Load 5+5 100A Switch 2x63A 30mA RCCB	5	**VM755H**	**VM755HK**
12 Way Split Load 6+6 100A Switch 2x63A 30mA RCCB	6	**VM766H**	**VM766HK**
10 Way Split Load Configurable 100A Switch 2x 63A 30mA RCCB	5	**VM710C**	**VM710CK**
16 Way Split Load Configurable 100A Switch 2x 63A 30mA RCCB	7	**VM716C**	**VM716CK**
10 Way Split Load 5+5 100A Switch 2x80A 30mA RCCB	5	**VM855H**	**VM855HK**
12 Way Split Load 6+6 100A Switch 2x80A 30mA RCCB	6	**VM866H**	**VM866HK**
10 Way Split Load Configurable 100A Switch 2x 80A 30mA RCCB	5	**VM810C**	**VM810CK**
16 Way Split Load Configurable 100A Switch 2x80A 30mA RCCB	7	**VM816C**	**VM816CK**

VM878R



High Integrity

Metal split load and configurable enclosures, 1 row from 10 to 16 outgoing ways.

Enclosures come supplied with a full metal DIN rail and 2 RCCBs and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

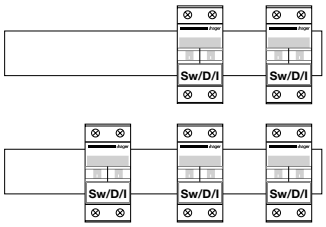
Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
10 Way High Integrity Split Load Configurable 100A Switch 2x 63A 30mA RCCB	5	**VM710CU**	**VM710CUK**
16 Way High Integrity Split Load Configurable 100A Switch 2x 63A 30mA RCCB	7	**VM716CU**	**VM716CUK**
10 Way High Integrity Split Load Configurable 100A Switch 2x 80A 30mA RCCB	5	**VM810CU**	**VM810CUK**
16 Way High Integrity Split Load Configurable 100A Switch 2x 80A 30mA RCCB	7	**VM816CU**	**VM816CUK**
10 Way High Integrity 5+4+1 100A Switch 2x 63A 30mA RCCB + 6A RCBO	5	**VM754R**	**VM754RK**
16 Way High Integrity Split Load 7+8+1 100A Switch 2x 63A 30mA RCCB + 1x RCBO	7	**VM778R**	**VM778RK**
10 Way High Integrity 5+4+1 100A Switch 2x 80A 30mA RCCB + 6A RCBO	5	**VM854R**	**VM854RK**
16 Way High Integrity Split Load 7+8+1 100A Switch 2x 80A 30mA RCCB + 1x RCBO	7	**VM878R**	**VM878RK**
14 Way Split Load 6+6+2 100A Switch 2x 80A 30mA RCCB plus 1x 40A 30mA RCCB	7	**VM8662**	**VM8662K**

VM918C



Multi Tariff

Metal switch disconnector incomer enclosures, 1 row 18 outgoing ways.

Enclosures come supplied with a full metal DIN rail, multiple switch disconnector incomers and full complement of earth and neutral terminals along with marking labels, busbar, instructions, rear cable protector plate and meter tail clamp.

Conforms to BS EN 61439-3 Including Annex ZB (16kA rating).

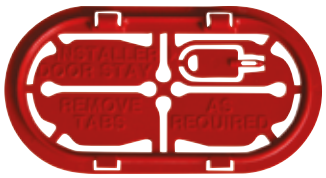
For accessories see page 14.
For dimensions see page 18.

Boards with knockouts contain top & bottom knockouts.

Description	Size	Cat ref.	Cat ref. with knockouts
18 Way Twin Tariff Configurable 2x100A Switch	7	**VM918C**	**VM918CK**
12 Way Multi Tariff 6+5+1 2x100A 1x63A Switch	6	**VM9651**	**VM9651K**

Cable Protector Plate

VM01CE



VM02CE

Provides a safe and smooth entry for cables into the rear of the consumer unit.

Designed to fit into the aperture left by the removal of a rear knockout on the Design 10 or Design 30 Consumer Unit. (Included as standard with the Design 30 board)

VM01CE: Simply insert protector plate and bend over tabs inside board.
VM02CE: Break away sections as required and simply push into place.

Description	Pack Qty.	Cat ref.
Cable Protector Plate	1	**VM01CE**
Cable Protector Plate (Insulated)	5	**VM02CE**

Cable Clamp

VA10MT

Secures supply cables on entry to main incoming device, eliminating any movement of the cables being transmitted to the terminals.

Simply insert supply cables through clamp into incoming device & secure with fixing provided.

Description	Cat ref.
Cable Clamp for Meter Tails	**VA10MT**

Health & Safety Lock

VMHBL

Provides the ability to lock the consumer unit during the installation process.

Used in conjunction with the lock surround.

Description	Cat ref.
Health & Safety Padlock Bracket	**VMHBL**
Padlock	**JK25A**

Key Lock

VMLOCK

Allows door to be lockable. Simply remove the centre of the lock surround and the knockout behind, and fit lock.

Description	Cat ref.
Design 30 Door Locking Kit	**VMLOCK**

Other Accessories

JK01B

Description	Pack qty	Cat ref.
1 Module busbar blank	25	**JK01B**
Surge protecion kit	1	**VA02SPD**
Label pack	1	**VAP00**

MTN163

Single Pole MCBs - 6kA Type B

Description
Protection and control of circuits against overloads and short circuits for use in domestic installations.

Technical data
Type B tripping characteristics complies with BS EN 60898.
Calibration temperature 30°C
Breaking capacity: 6kA
Voltage rating: 230 - 400V
Current rating: 6 - 63A
Electrical operations: 20,000

Connection capacity
Rigid conductor 25mm²
Flexible conductor 16mm²

1 Mod = 17.5mm

Rating	Width (17.5mm)	Cat ref.
6A	1 Mod	**MTN106**
10A	1 Mod	**MTN110**
16A	1 Mod	**MTN116**
20A	1 Mod	**MTN120**
25A	1 Mod	**MTN125**
32A	1 Mod	**MTN132**
40A	1 Mod	**MTN140**
50A	1 Mod	**MTN150**
63A	1 Mod	**MTN163**

ADN120

Single Pole RCBOs - Sensitivity 30mA (6kA)

Compact protection devices which combine the overcurrent functions of an MCB with the earth fault functions of an RCCB in a single unit. A range of sensitivity and current ratings are available for use in domestic installations.

Technical Data
Insulated DIN clip
Complies with BS EN 61009, IEC1009
Sensitivities (fixed)
10mA and 30mA
Breaking capacity: 6kA
Flying neutral lead: 200mm

Connection Capacity
Rigid 16mm²
Flexible 10mm²

Application
1 module devices provide a compact solution for installation in consumer units.

These devices are 1pole & solid neutral.

Operating Voltage
127-230V AC

1 Mod = 17.5mm

Current rating	Width (17.5mm)	Type B Cat ref.
6A	1 Mod	**ADN106**
10A	1 Mod	**ADN110**
16A	1 Mod	**ADN116**
20A	1 Mod	**ADN120**
32A	1 Mod	**ADN132**
40A	1 Mod	**ADN140**
45A	1 Mod	**ADN145**
50A	1 Mod	**ADN150**

MZN175

Locking Kit

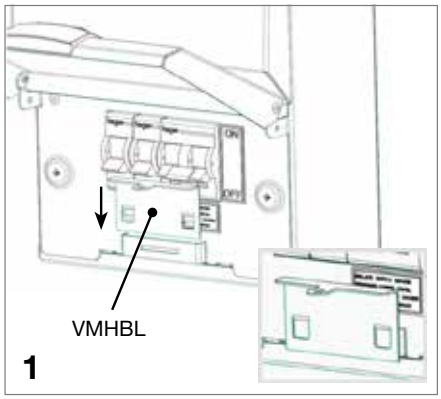
Allows MCB's, RCCB's and RCBO's to be locked in the off position.

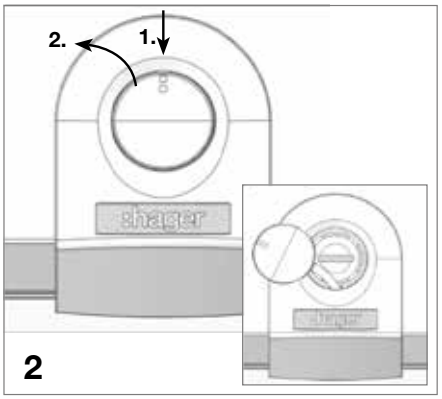
Will accept two padlocks with hasps of 4.75mm diameter max (supplied without padlock).

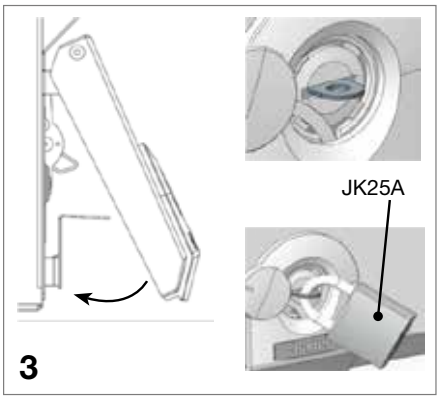
Description	Cat ref.
Padlockable locking kit for MCB, RCCB & RCBO (Padlock not included)	**MZN175**
Padlock with 2 keys 3/4"	**JK25A**

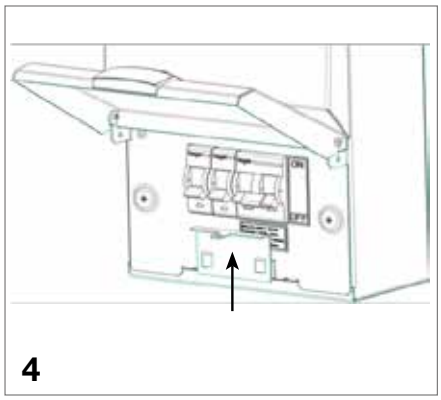
Health & Safety Lock (VMHBL) (Design 30 only)
This quick and simple to install device allows the board to be isolated for the safety of tradespersons during construction of a building. Lock surround forms no part of the non-combustable enclosure with the lock surround removed the rating of IP2XC is maintained.

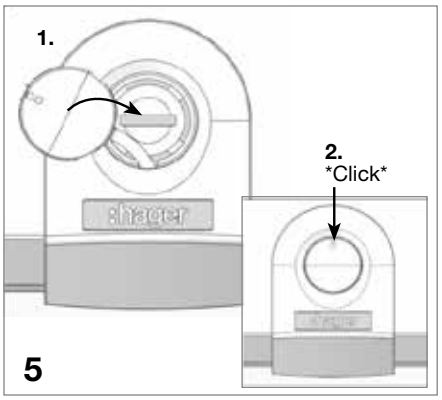
How to fit a health and safety lock.

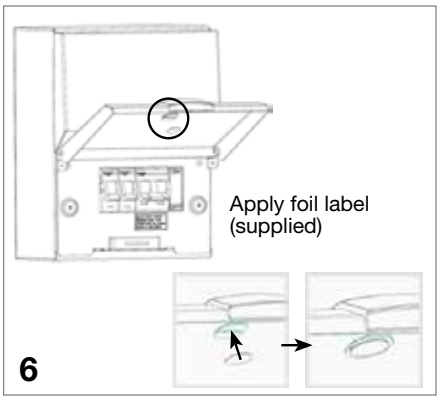






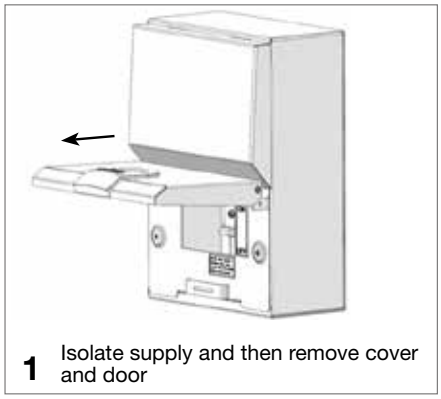


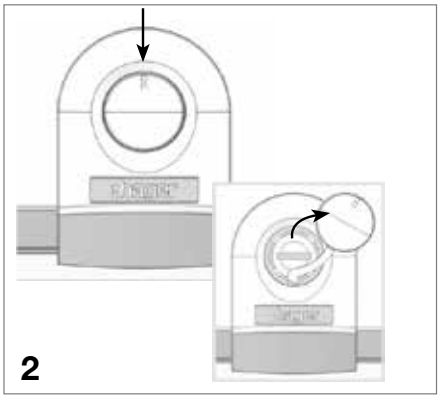


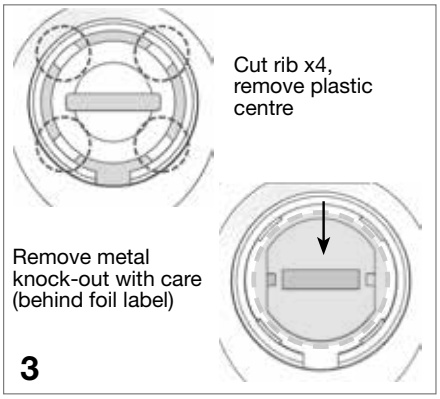


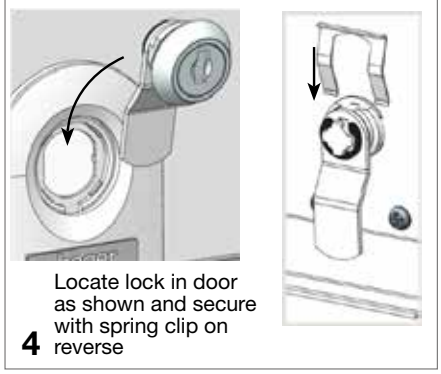
Keylock (VMLOCK) (Design 30 only)
Allows the board to be locked to prevent unauthorised access.

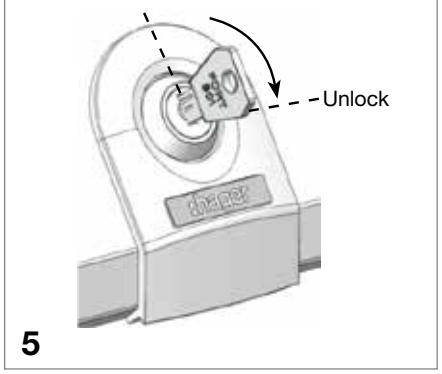
How to Fit Keylock

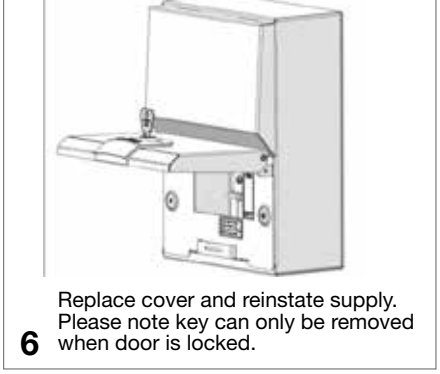












1. Why are these changes being made?
Investigation into several household fires involving plastic consumer units, by the London Fire Brigade, has concluded that a key cause of the fires was substandard cable connections made by the Electrician within the consumer unit.

These resulted in overheating, which subsequently ignited the plastic enclosure.

2. What constitutes a substandard cable connection?
There are many things that may contribute to a substandard connection. Some of these are inadequate tightening of conductors in the relevant terminals or clamping the insulation of the cable rather than the conductor with the terminal screw.

In the third amendment, it is expected that, the schedule of inspections for new installation work and condition report for existing installations, will require confirmation that, at a consumer unit / distribution board, all conductor connections are correctly located in terminals and are tight and secure.

3. What are the proposed changes?
The regulations state:

421.1.201
Within domestic (household) premises, consumer units and similar switchgear assemblies shall comply with BS EN 61439 3 and shall:
(i). Have their enclosures manufactured from non-combustible material, or
(ii). Be enclosed in a cabinet or enclosure constructed of non-combustible material and complying with Regulation 132.12.

NOTE 1: Ferrous metal e.g. steel is deemed to be an example of a non-combustible material.
NOTE 2: The implementation date for this regulation is the 1st January 2016. This does not preclude compliance with this regulation prior to this date.

4. What is the intent of the new regulation?
The intent of regulation 421.1.201 is considered to be, as far as is reasonably practicable, to contain any fire within the enclosure and to minimise flames from escaping, caused mainly as a result of poorly installed connections.

5. How has Hager been involved with the proposed changes?
Hager have been closely involved in the development of these changes by providing expert industry liaison with interested bodies which included; BEAMA (British Electrotechnical and Allied Manufacturers Association), London Fire Brigade, Government and the Joint IET/BSI Technical Committee JPEL/64 which has the responsibility for the content of BS 7671 (17th Edition Wiring Regulations).

6. What is meant by ''non-combustible"?
There is no published definition for "non-combustible" that aligns with the intent of regulation 421.1.201. Ferrous metal, e.g. steel is deemed to be one example of a non-combustible material that meets the intent of the regulation. All Hager Design Range consumer units have their enclosure manufactured from steel.

7. What impact will this regulation have?
This would mean that eventually all new consumer units installed in UK homes, i.e. within domestic (household) premises must have their enclosures manufactured from a non-combustible material, or be enclosed in a cabinet or enclosure constructed from a non-combustible material. This is likely to result in an increased use of metal enclosures.

8. What is meant by 'within domestic (household) premises'?
It is understood that Regulation 421.1.201 applies to consumer units and similar switchgear assemblies to BS EN 61439-3 inside all domestic (household) premises including their integral/attached garages and outbuildings or those in close proximity.

9. When will Amendment 3 come into effect?
The third amendment to BS 7671:2008 was issued in January 2015 and is intended to come into effect on 1st July 2015. Installations designed after 30th June 2015 are to comply with BS 7671:2008 incorporating Amendment 3, 2015.

However, Regulation 421.1.201 does not come into effect until the 1st January 2016. This does not preclude compliance with this regulation prior to this date.

10. Does this mean all installed consumer units with plastic enclosures are a fire risk?
No, provided the consumer unit and its incorporated components conform to the relevant product standard(s), do not have latent defects and have been installed correctly.

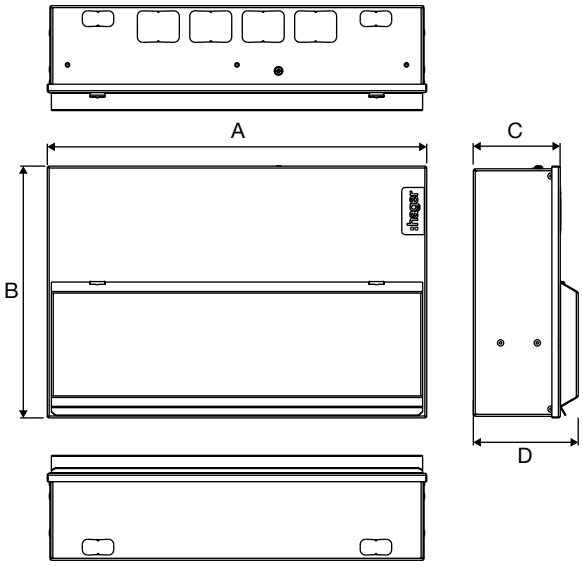
11. If a fire occurred inside a metal hager consumer unit would plastic trunking fitted to the top of the consumer unit catch fire?
During extensive testing of the metal hager consumer units with the knockouts removed and plastic trunking installed we have seen no evidence of burning of the cables or the trunking outside of the consumer unit. These tests have been carried conducted with the trunking forming an IP4X rated installation of the consumer unit with grommet strip fitted to protect the cables and without the use of any sealant inside the trunking. However there is no reason that an installer could not use sealant (standard or intumescent) if they so wished.

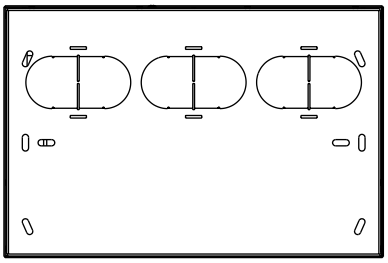
12. Can metal boards be used on TT systems?
Where a steel consumer unit is installed in an installation forming part of a TT system, the earth fault loop impedance, Ze, is likely to be much higher than that permitted by the overcurrent protective device, i.e. cut-out. Should the tails become loose and make contact with the ferrous enclosure, it is likely that the overcurrent device will not operate within 5s.

On such installations Hager recommend the use of a metal switch disconnector board with RCBO's on all outgoing circuits or a split metal board with a Type S RCCB incomer and MCB's on outgoing circuits.

To reduce any risk of the tails becoming disconnected from the main switch and making contact with the metal enclosure hager also recommend the use of;
1) a cable clamp to secure the cables before entering the device, or
2) the tails being installed in trunking to prevent any movement of the tails outside the consumer unit , or
3) the use of a suitable cable entry gland to prevent any movement of the tails being transmitted into the consumer unit.

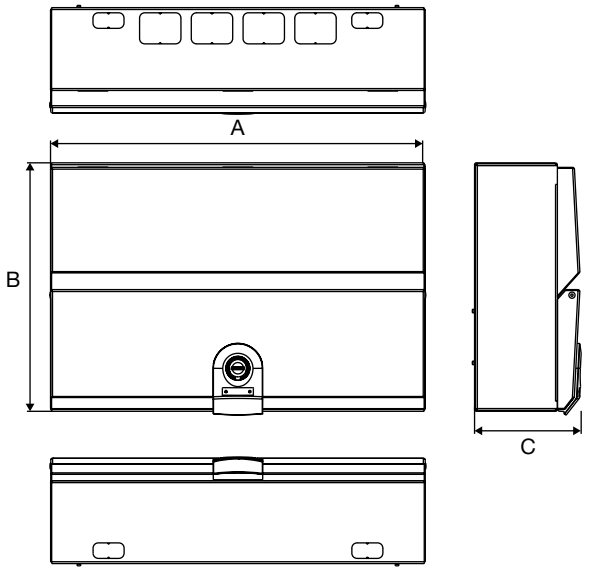
However the tails enter the enclosure it must be through the same aperture and they must be protected from mechanical damage or wear. Hager recommend the use of grommet strip and dedicated knockout.

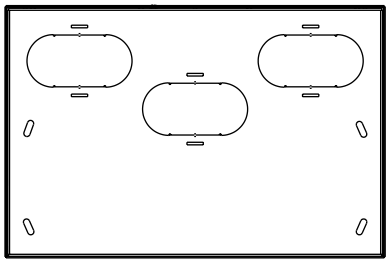




Design 10

Dimensions (mm)	Enclosure Size					
	2	3	4	5	6	7
A	155	227	299	370	406	478
B	246	246	246	246	246	246
C	83	83	83	83	83	83
D	100	100	100	100	100	100





Design 30

Dimensions (mm)	**Enclosure Size**					
	2	**3**	**4**	**5**	**6**	**7**
A	**149**	**221**	**293**	**364**	**400**	**472**
B	**240**	**240**	**240**	**240**	**240**	**240**
C	**102.5**	**102.5**	**102.5**	**102.5**	**102.5**	**102.5**

Torque Settings

					**Cables >1.5mm² Tightening torque (N.m)**		**Cables ≤1.5mm² Tightening torque (N.m)**		**Cable Stripping (mm)**
	Pz No.	**(mm)**	**(mm)**		**Single Cable**	**Multi Cables**	**Single Cable**	**Multi Cable**	
Consumer unit terminals									
Earth and neutral terminal bars	2	6.5	-	-	2	2	1.5	1.5	10
Isolation									
SB switch disconnectors	2	6.5	-	-	3.6	3.6	3.6	3.6	15
Circuit protection									
MTN MCB	2	6.5	-	-	2.8	2.8	2.8	2.8	13
NBN/NCN/NDN MCB	2	6.5	-	-	2.8	2.8	2.8	2.8	13
RCBO	2	5.5	-	-	2.1	2.1	2.1	2.1	13
RCCB	2	5.5	-	-	2.8	2.8	2.8	2.8	13

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