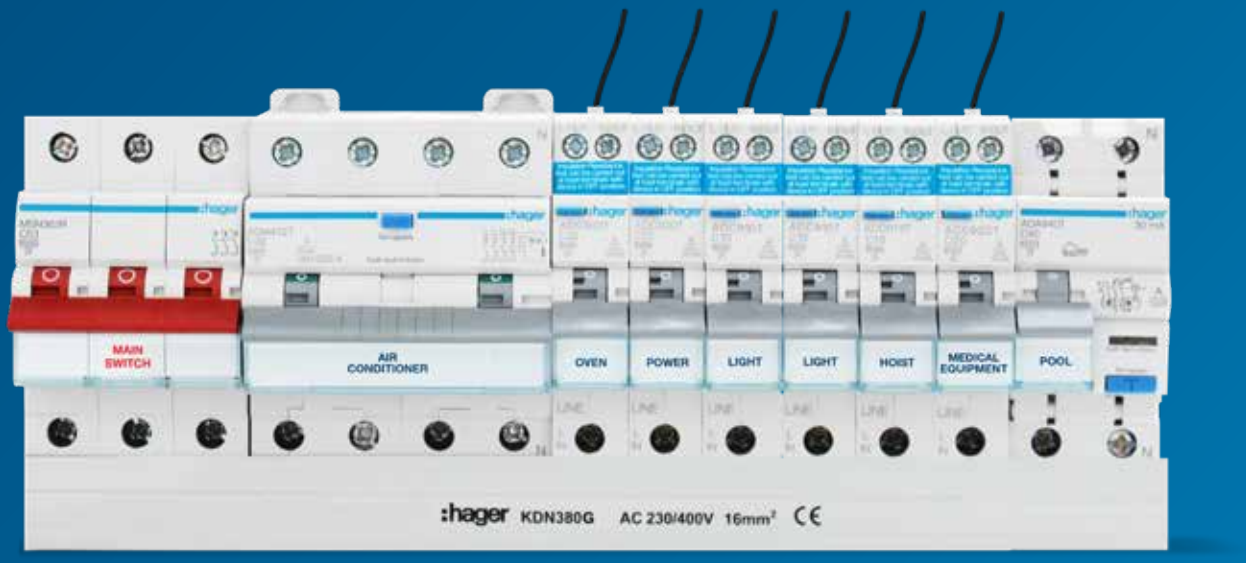
onekonekt modular
protection devices

one range, one busbar,

one solution



:hager

onekonekt: easier, faster, safer

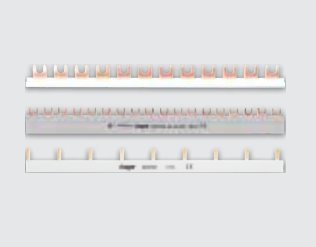
With a unique concept in mind of "one range, one busbar, one solution" we have developed the onekonekt system where all our modular protection devices including main switches, RCBOs, RCCBs and MCBs fit on our single or 3 phase busbar.

A system that not only works perfectly in combination with our golf range of surface and flush DIN enclosures but also fits our invicta range of panelboards for larger installations, making it the most versatile system for residential and commercial installation today.

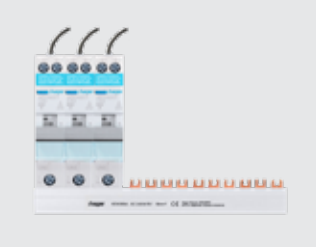
onekonekt modular protection devices
Index

onekonekt Residential system easier, faster, safer

Our onekonekt system offers one of the most versatile and flexible solutions to electricians on the market today. The use of busbar in our industry is not a new concept whereas providing a full range of residential protection devices for both single phase and three phase installations that connect to the same busbar, definitely is. Ultimately, Hager‘s onekonekt system increases safety, reduces installation time and improves technical characteristics in any application.



Single phase or 3 phase 80A busbar simplifies the board connection and drastically decreases the number of cables.



Busbar is held in position prior to tightening terminals with our unique clip system, leaving one hand free.

Unused forks can remain in-situ for future use. Busbar and endcaps ensure IP2x insulation - no direct contact with live parts, even with an open board.

All Hager Modular Protection Devices can be connected with either a single phase or a three phase busbar.

Bi-connect terminals enable supply from either cables in the cage or busbars in the slot; allowing full connection capacity.

Our RCCBs, 2 module and 4 module RCBOs, have a fully insulated neutral busbar slot so there is no need to cut the forks off the bar.

The bi-stable DIN clip ensures easy removal of a single product on the fork busbar without disconnecting other devices or wiring.

Identification of circuits reflects your professional touch. The label holders are a neat and durable protection for the labels.

From complex to compact RCBO onekombo and 4 poles

Hager's single module RCBO with switched neutral offers a breaking capacity of 6kA and can be integrated with other modular protection devices on a simple busbar or in our invicta panelboards.

Our 4 pole RCBO combines RCD and MCB protection in a 4 module wide device and is compatible with our onekonekt system... 3 phase protection in DIN rail switchboards has never been as simple and space saving.

1P+N RCBO characteristics:

Rated current (In):	6A to 32A
Rated voltage (Un):	230V~ / 240V~
Rated residual operating current (I△n):	10mA, 30mA
Curve type:	C, D
Operating characteristic:	Type A
Rated frequency:	50Hz
Rated short-circuit capacity (Icn):	6kA
Standards compliance:	AS/NZS 61009

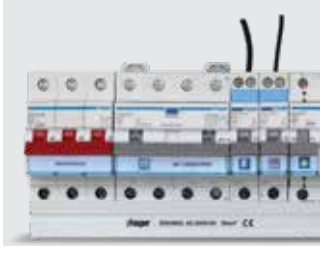
4P RCBO characteristics:

Rated current (In):	6A to 40A
Rated voltage (Un):	415V~
Rated residual operating current (I△n):	30mA, 100mA
Curve type:	C
Operating characteristic:	Type A
Rated frequency:	50Hz
Rated short-circuit capacity (Icn):	6kA
Standards compliance:	AS/NZS 61009

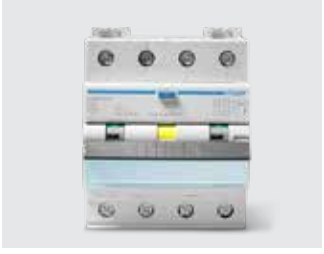
Equipped with a Neutral-in 1 metre long fly lead, the 1 module RCBO has one less cable to connect, reducing installation time.

With the 1P+N RCBO, insulation resistance test can be carried out without disconnecting outgoing conductors.

When installed on the AC side of an inverter, our 1P+N RCBO detects fault current from either the main supply or the inverter output.



With its isolated neutral fork terminal, the 4 pole RCBO fits smoothly on a 3 phase busbar for a more efficient installation.

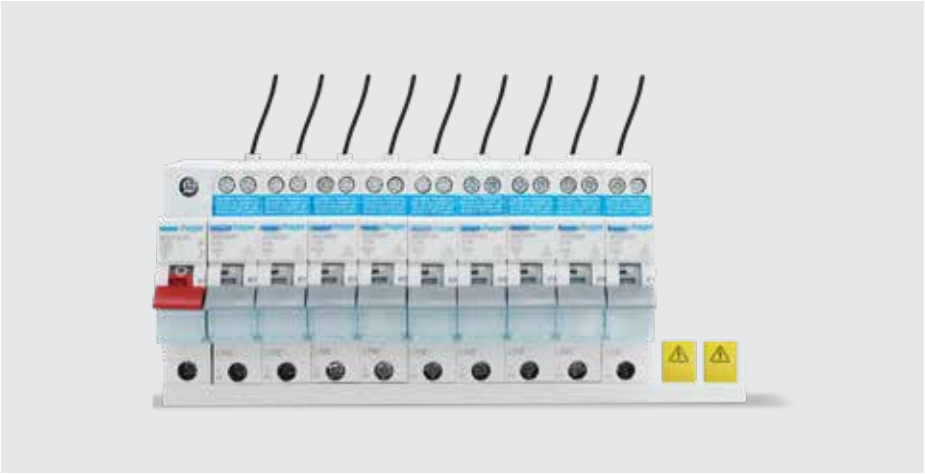


To assist in fault finding, the 4 pole RCBO has an earth fault trip indicator displayed in a separate window.

The 4P RCBO is suitable for unbalanced and balanced loads when 415V AC is between phases.

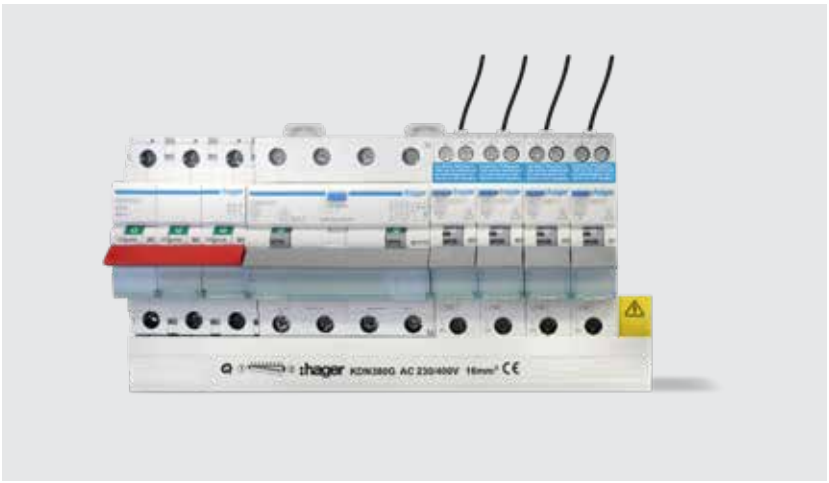
onekonekt: accommodating all your wiring habits

Electricians have their own style and method they are comfortable with when it comes to installing protection switchgear. RCBOs, RCCBs, MCBs and main switches are typically wired for single or three phase installations. Our onekonekt system offers electrical contractors the flexibility and choice to connect all of our modular protection devices, regardless of the combination with one type of busbar.



01
Best practice Single phase

Where residual current protection is required, an RCBO can be used to protect each final sub-circuit. This isolates the fault to the only circuit affected avoiding the risk of a black out and will simplify fault identification. As it is a compact device, space and cost savings can be achieved by using a smaller footprint and smaller enclosure.



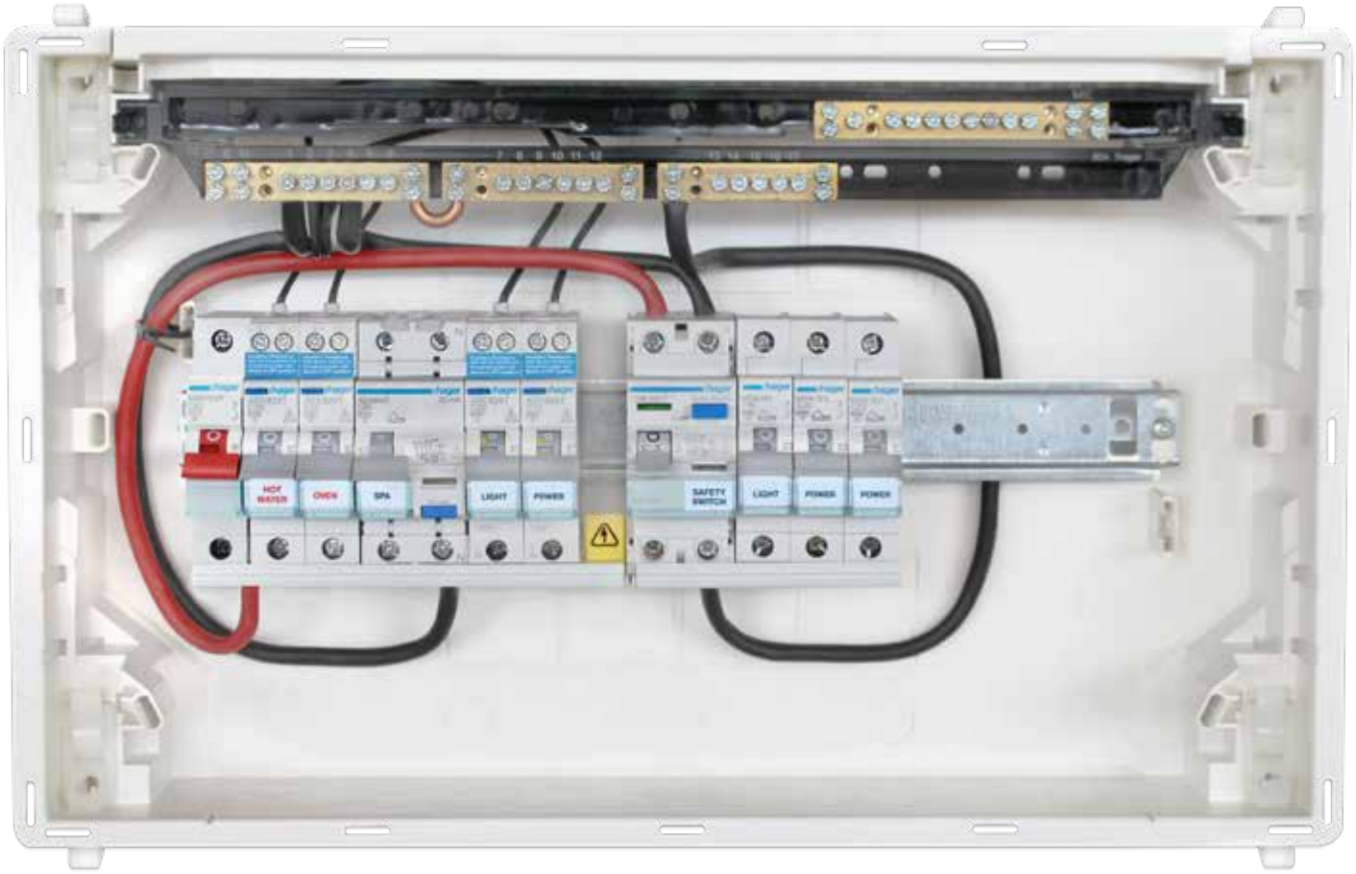
02
Best practice
Three phase

In the same way, all devices fit smoothly on a 3 phase busbar. The 4P RCBO is as fast and easy to install with its isolated neutral fork terminal.

03
Compliant Solution

Use of a main switch plus RCCBs and MCBs are needed to meet the minimum requirement of the wiring rules for residential installations. The onekonekt system allows all devices to be connected on the same busbar.

onekonekt and golf flexibility in residential installation



The golf enclosure is the perfect solution for all residential and multi-residential installations. This enclosure is swiftly and easily mounted and offers space for a large number of modular devices.

Our golf enclosures are available in flush or surface series and from 4 to 72 ways. Each enclosure is supplied with an extensive range of accessories, including the fork busbar.

VF Series Flush

The golf VF enclosure is quickly and easily installed after plastering of walls is complete.

Marking of cut-outs

Openings in the lip allow for marking of the cut-outs on the plaster board.

Easy wall box mounting

The wall box is reversible and has a wide detachable cable entry for easy mounting.

Instant fixing

A range of fixing options for instant mounting in the wall cavity. Uniquely designed hollow wall clamps allows for quicker installation.

VS Series Surface

Our surface mounted golf enclosure is a functional board created for all applications with ample wiring space.

Snap-in PE/N terminal strips

The terminal strips can be easily mounted by snapping into place allowing easier cable dressing.

Cable management

With integrated fixation for cable ties or height-adjustable cable retainers, it allows for clean and convenient wiring.

Unbreakable door hinges

Symmetrical door installation: Door hinges can be mounted on the left or right. Swift and safe cover fixing with 1/4 turn.

onekombo and invicta space saving in commercial panelboards

Available in 24, 36, 48, 60 & 72 pole, our invicta panelboard range is ideal for the large home, light commercial or retail applications.

The “onekombo” one module RCBO (ADC9xxT) can be chassis mounted in the invicta panelboard. This product has a facility testing function which eases commissioning.

To guarantee protection against direct contact with active parts, we provide safety caps and safety pole fillers in our invicta panelboards. They remain on the chassis after removal of escutcheon to maintain IP2x.

For 3 phase RCBO protection, Hager's compact one module wide Add-on Block is designed to be chassis mounted and can be used with any 3 pole MCB up to 63A.

The RCD Add-On Block + MCB combination provides the protective characteristics of both devices, thereby protecting the load of the entire circuit and removing the need to wire between DIN mounted RCD and MCB.

This results in a significant reduction of install time, labour and space within the board.

Single module ADC9 RCBOs can be swiftly mounted in invicta panelboards.

Description
For use as a switch isolator in all types of circuits. As defined in AS/NZS 3000, the supply to every installation shall be controlled by a main switch or switches that control the whole installation. Positive contact indication, with ON position 'I' in red and OFF position 'O' in green.

Technical data
- AC 22B utilisation category (mixed resistive and inductive loads. Not motors)
- PZ2 terminal screw for all ratings.
- Comply with AS/NZS IEC 60947-3 and IEC 60669-2-4 for 40A ratings

Connection capacity
- In: 40A
- 25mm² rigid cables
- 16mm² flexible cables
- In: 63A ongoing
- 50mm² rigid cables
- 35mm² flexible cables


SBR164

Single pole

Characteristics	Width	Cat ref.
1 x 40A 230V~	1 mod	**SBR140**
1 x 63A 230V~	1 mod	**SBR164**
1 x 80A 230V~	1 mod	**SBR180**
1 x 100A 230V~	1 mod	**SBR190**

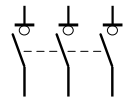

SBR264

Double pole

Characteristics	Width	Cat ref.
2 x 40A 230 to 400V~	2 mod	**SBR240**
2 x 63A 230 to 400V~	2 mod	**SBR264**
2 x 80A 230 to 400V~	2 mod	**SBR280**
2 x 100A 230 to 400V~	2 mod	**SBR290**


SBR399

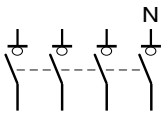
Triple pole



Characteristics	Width	Cat ref.
3 x 40A 400V~	3 mod	**SBR340**
3 x 63A 400V~	3 mod	**SBR364**
3 x 80A 400V~	3 mod	**SBR380**
3 x 100A 400V~	3 mod	**SBR390**
3 x 125A 400V~	3 mod	**SBR399**


SBR490

Four pole



Characteristics	Width	Cat ref.
4 x 63A 400V~ neutral right	4 mod	**SBR464**
4 x 100A 400V~ neutral right	4 mod	**SBR490**


ESC080

Auxiliary contacts

Characteristics	Width	Cat ref.
1NO + 1NC 6A AC1 For remote indication, mechanical indicator to show the position of the contact. Maximum one auxiliary module per isolator device (left fitting)	0.5 mod	**ESC080**

Description
Protection and control of circuits against overloads and short-circuits by isolating the circuit according to AS/NZS 3000.
The colour of the toggle on the MSNx63R gives a differentiation when used as a main switch device.

Technical data
- AS/NZS 60898
- Tripping curve - 'C' magnetic setting between 5 and 10x In
- Breaking capacity: 6,000A
- Voltage rating: 240/415V AC
  Not for use on DC voltage
- Current rating: 6 to 63A
- Bi-connect terminals enable supply from either cables in the cage or fork busbars in the slot.

Connection capacity
- 25mm² rigid
- 16mm² flexible

Accessories for MSN3xx & MSNx63R
- LZ060, MZN175, MZ201, MZ202, MZ203, MZ204, MZ206, MZN120, MZN121, Bx163T

Single pole

Current Rating (A)	Width	Pack Qty	Cat ref.
6	1 mod	12	**MSN106**
10	1 mod	12	**MSN110**
13	1 mod	12	**MSN113**
16	1 mod	12	**MSN116**
20	1 mod	12	**MSN120**
25	1 mod	12	**MSN125**
32	1 mod	12	**MSN132**
40	1 mod	12	**MSN140**
50	1 mod	12	**MSN150**
63	1 mod	12	**MSN163**
63	1 mod	12	**MSN163R**

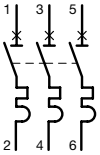

MSN163 MSN163R

Double pole

Current Rating (A)	Width	Pack Qty	Cat ref.
6	2 mod	6	**MSN206**
10	2 mod	6	**MSN210**
16	2 mod	6	**MSN216**
20	2 mod	6	**MSN220**
25	2 mod	6	**MSN225**
32	2 mod	6	**MSN232**
40	2 mod	6	**MSN240**
50	2 mod	6	**MSN250**
63	2 mod	6	**MSN263**
63	2 mod	6	**MSN263R**


MSN220 MSN263R

Triple pole



Current Rating (A)	Width	Pack Qty	Cat ref.
6	3 mod	4	**MSN306**
10	3 mod	4	**MSN310**
16	3 mod	4	**MSN316**
20	3 mod	4	**MSN320**
25	3 mod	4	**MSN325**
32	3 mod	4	**MSN332**
40	3 mod	4	**MSN340**
50	3 mod	4	**MSN350**
63	3 mod	4	**MSN363**
63	3 mod	4	**MSN363R**


MSN320


MSN363R

Description
Protection and control of circuits against overloads and short-circuits by isolating the circuit according to AS/NZS 3000.
The colour of the toggle on the MDNx63R gives a differentiation when used as a service protection device.

Technical data
- AS/NZS 60898
- Tripping curve - 'D' magnetic setting between 10 and 20 x In
- Breaking capacity: 6,000A
- Voltage rating: 240/415V AC
  Not for use on DC voltage
- Current rating: 6 to 63A
- Bi-connect terminals enable supply from either cables in the cage or busbars in the slot.

Connection capacity
- 25mm² rigid
- 16mm² flexible

Accessories for MDNxxx
- LZ060, MZN175, MZ201, MZ202, MZ203, MZ204, MZ206, MZN120, MZN121, Bx163T

MDN116P MDN163R

Single pole

Current Rating (A)	Width	Pack Qty	Cat ref.
6	1 mod	12	**MDN106P**
10	1 mod	12	**MDN110P**
16	1 mod	12	**MDN116P**
20	1 mod	12	**MDN120P**
25	1 mod	12	**MDN125P**
32	1 mod	12	**MDN132P**
40	1 mod	12	**MDN140P**
50	1 mod	12	**MDN150P**
63	1 mod	12	**MDN163P**
63	1 mod	12	**MDN163R**

MDN232P MDN263R

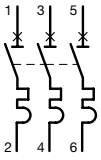
Double pole

Current Rating (A)	Width	Pack Qty	Cat ref.
6	2 mod	6	**MDN206P**
10	2 mod	6	**MDN210P**
16	2 mod	6	**MDN216P**
20	2 mod	6	**MDN220P**
25	2 mod	6	**MDN225P**
32	2 mod	6	**MDN232P**
40	2 mod	6	**MDN240P**
50	2 mod	6	**MDN250P**
63	2 mod	6	**MDN263P**
63	2 mod	6	**MDN263R**

MDN316P

MDN363R

Triple pole



Current Rating (A)	Width	Pack Qty	Cat ref.
6	3 mod	4	**MDN306P**
10	3 mod	4	**MDN310P**
16	3 mod	4	**MDN316P**
20	3 mod	4	**MDN320P**
25	3 mod	4	**MDN325P**
32	3 mod	4	**MDN332P**
40	3 mod	4	**MDN340P**
50	3 mod	4	**MDN350P**
63	3 mod	4	**MDN363P**
63	3 mod	4	**MDN363R**

Description
Auxiliaries are common to all D curve and C curve 3P MCBs. These auxiliaries are fitted to the left hand side of the devices.

Connection
- 10mm² rigid
- 6mm² flexible

Accessories

Description	Characteristics	Width in 17.5mm	Cat ref.
Auxiliary contacts 6A - 240V~ 	1NO + 1NC allows remote indication of main contact status	0.5	**MZ201**
Alarm contacts 6A - 240V~ 	1NO + 1NC indicates a fault over current on overload or short circuit (e.g. MCB tripped)	0.5	**MZ202**
Shunt trip relay Allows for remote tripping of MCB. The coil is protected by a contact which cuts the supply after MCB trips 	230V - 415V AC 110V to 130V DC	1	**MZ203**
	24V - 48V AC 12V - 48V DC	1	**MZ204**
Undervoltage release 230V AC	If supply falls to 35 to 70% of nominal voltage the MCB will trip Coil consumption: 3.5 VA	1	**MZ206**
Locking device	To lock the MCB handle in on/off position	1	**MZN175**
Heat dissipation inserts	Avoids overheating for DIN rail modules when several devices mounted side by side are carrying high continuous loads	0.5	**LZ060**
Terminal cover & screw shield			**MZN120**
Phase barriers for MDNxxx MCBs	1 set of 3		**MZN121**


MZ202


MZ203


MZN175


LZ060


MZN120


MZN121

Description
Compact combination devices which provide overcurrent protection & earth leakage protection. The Type A devices, with a switched neutral, are available in various current ratings from 6A - 40A. A 1 module RCBO is specifically designed for DIN rail enclosures but can also be used in invicta panelboards. It is supplied with a 1 metre long neutral-in fly lead.

Features
- IEC 61009.1 & AS/NZS 61009.1
- Earth fault indication window
- ACC9xxT is Type 1 to comply with AS/NZS 3190 requirements
- Trip free mechanisms

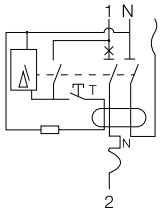
1 mod connection capacity
- 10mm² flexible
- 16mm² rigid

2 mod connection capacity
- 16mm² flexible
- 25mm² rigid

Accessories
- Toggle locking device - MZN175

ADC920T

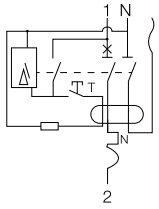
RCBO 1P+N 6kA C curve



Current rating (A)	Width	Residual current Idn	Cat ref.
6A	1 mod	30mA	**ADC906T**
10A	1 mod	30mA	**ADC910T**
13A	1 mod	30mA	**ADC913T**
16A	1 mod	30mA	**ADC916T**
20A	1 mod	30mA	**ADC920T**
25A	1 mod	30mA	**ADC925T**
32A	1 mod	30mA	**ADC932T**
6A	1 mod	10mA	**ACC906T**
10A	1 mod	10mA	**ACC910T**
13A	1 mod	10mA	**ACC913T**
16A	1 mod	10mA	**ACC916T**
20A	1 mod	10mA	**ACC920T**
25A	1 mod	10mA	**ACC925T**
32A	1 mod	10mA	**ACC932T**

ADD920T

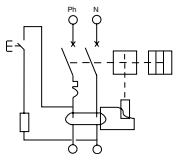
RCBO 1P+N 6kA D curve



Current rating (A)	Width	Residual current Idn	Cat ref.
6A	1 mod	30mA	**ADD906T**
10A	1 mod	30mA	**ADD910T**
13A	1 mod	30mA	**ADD913T**
16A	1 mod	30mA	**ADD916T**
20A	1 mod	30mA	**ADD920T**
25A	1 mod	30mA	**ADD925T**

ADA910T

RCBO 1P+N 6kA C curve



Current rating (A)	Width	Residual current Idn	Cat ref.
6A	2 mod	30mA	**ADA906T**
10A	2 mod	30mA	**ADA910T**
13A	2 mod	30mA	**ADA913T**
16A	2 mod	30mA	**ADA916T**
20A	2 mod	30mA	**ADA920T**
25A	2 mod	30mA	**ADA925T**
32A	2 mod	30mA	**ADA932T**
40A	2 mod	30mA	**ADA940T**
6A	2 mod	100mA	**AEA906T**
10A	2 mod	100mA	**AEA910T**
13A	2 mod	100mA	**AEA913T**
16A	2 mod	100mA	**AEA916T**
20A	2 mod	100mA	**AEA920T**
25A	2 mod	100mA	**AEA925T**
32A	2 mod	100mA	**AEA932T**
40A	2 mod	100mA	**AEA940T**

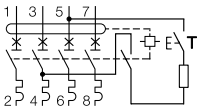
Description
Compact combination devices which provide overcurrent protection & earth leakage protection. The Type A devices, are available in various current ratings from 6A - 40A. Specifically designed for DIN rail enclosures. Suitable for balanced and unbalanced loads.

Features
- IEC 61009.1 & AS/NZS 61009.1
- Earth fault indication window
- Trip free mechanisms
- Load and line circuits may be connected at the top or bottom

4 mod connection capacity
- 16mm^2 flexible
- 25mm^2 rigid

Accessories for 4 mod devices only
- MZ201, MZ202, MZ203, MZ204, MZ206, MZN175

RCBO 4P 6kA C curve



Current rating (A)	Width	Residual current Idn	Cat ref.
6A	4 mod	30mA	**ADM406T**
10A	4 mod	30mA	**ADM410T**
13A	4 mod	30mA	**ADM413T**
16A	4 mod	30mA	**ADM416T**
20A	4 mod	30mA	**ADM420T**
25A	4 mod	30mA	**ADM425T**
32A	4 mod	30mA	**ADM432T**
40A	4 mod	30mA	**ADM440T**
6A	4 mod	100mA	**AEM406T**
10A	4 mod	100mA	**AEM410T**
13A	4 mod	100mA	**AEM413T**
16A	4 mod	100mA	**AEM416T**
20A	4 mod	100mA	**AEM420T**
25A	4 mod	100mA	**AEM425T**
32A	4 mod	100mA	**AEM432T**
40A	4 mod	100mA	**AEM440T**


ADM413T

Description
The safety switch is designed to open a circuit automatically when protected system leaks a current to earth, greater than or equal to rated tripping current. Use in residential, commercial or industrial installations.

Type A and Type F
Type A is used where the earth fault waveform is sinusoidal AC and/or pulsating DC up to 6mA (computer loads, etc).

Type F can detect and respond similarly as Type A and considers superimposed residual pulsating current with DC components ≤ 10mA. It also detects mixed frequency residual currents (such as some air conditioning controllers using variable frequency from 10Hz to 1000Hz converters, some Class I power tools, etc).

Features
- All types conform with AS/NZS 61008.1
- Type F also compliant with IEC62493
- Positive contact indication windows
- Earth fault indication window
- Load and line circuits may be connected top or bottom
- Bi-connect terminals enable supply from either cables in the cage or busbars in the slot.

Connection capacity
- 25mm^2 - Rigid (50mm^2 for 80A,100A)
- 16mm^2 - Flexible (35mm^2 for 80A, 100A)

Accessories
- MZ201, MZ202, MZ203, MZ204, MZ206, MZN175, LZ060
- CZ001 for CDA2xxT and CDA4xxT
- MZN121 for others


CDA240T

RCCB 1P+N Type A

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	25A	2 mod	**CDA225T**
30mA	40A	2 mod	**CDA240T**
30mA	63A	2 mod	**CDA263T**
30mA	80A	2 mod	**CDA580T**
30mA	100A	2 mod	**CDA584T**
100mA	25A	2 mod	**CEA525T**
100mA	40A	2 mod	**CEA540T**
100mA	63A	2 mod	**CEA563T**
100mA	80A	2 mod	**CEA580T**
100mA	100A	2 mod	**CEA584T**


CDA440T

RCCB 3P+N Type A

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	25A	4 mod	**CDA425T**
30mA	40A	4 mod	**CDA440T**
30mA	63A	4 mod	**CDA463T**
30mA	80A	4 mod	**CDA680T**
30mA	100A	4 mod	**CDA684T**
100mA	25A	4 mod	**CEA625T**
100mA	40A	4 mod	**CEA640T**
100mA	63A	4 mod	**CEA663T**
100mA	80A	4 mod	**CEA680T**
100mA	100A	4 mod	**CEA684T**


CDF540T

RCCB 1P+N Type F

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	40A	2 mod	**CDF540T**
30mA	63A	2 mod	**CDF563T**


CDF640T

RCCB 3P+N Type F

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	40A	4 mod	**CDF640T**
30mA	63A	4 mod	**CDF663T**

Description
The safety switch is designed to open a circuit automatically when protected system leaks a current to earth, greater than or equal to rated tripping current. Use in residential, commercial or industrial installations.

Type B
Type B is used where earth fault waveform is sinusoidal AC, pulsating DC or smooth DC (VSD applications, lifts, medical equipments, etc).

- Can handle mixed frequency AC currents up to 1000Hz
- AC and/or pulsating currents with superimposed residual pulsating current with DC components ≤ 10mA.
- Any superimposed residual Direct Current of 0.5 to 2 times the rated residual current 1Δn

Features
- Conforms with IEC61008.1, AS/NZS 61008.1 and IEC62423
- Earth fault indication window
- Line circuit is connected on top and load on bottom
- Not suitable for 1P or 3P fork busbars

Connection capacity
- 25mm^2 - Rigid
- 16mm^2 - Flexible

Accessories
- MZ201, MZ202, MZ203, MZ204, MZ206, MZN175, MZN121

RCCB 1P+N Type B

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	25A	4 mod	**CDB525T**
30mA	40A	4 mod	**CDB540T**
30mA	63A	4 mod	**CDB563T**

CDB540T

RCCB 3P+N Type B

Residual current Idn	Current rating (A)	Width	Cat ref.
30mA	25A	4 mod	**CDB625T**
30mA	40A	4 mod	**CDB640T**
30mA	63A	4 mod	**CDB663T**

CDB640T

Accessories compatible for all RCBOs
- MZN175

Accessories compatible for AxM4xxT, AxA5xxT and AxX4xxT RCBOs only
- MZ201, MZ202, MZ203, MZ204, MZ206

Accessories compatible for all RCCBs
- MZ201, MZ202, MZ203, MZ204, MZ206, MZN175

Combination auxiliary & alarm switch:
If shunt trip or undervoltage release is required, the CZ001 must be used as a coupler for 30mA RCCBs, 25A to 63A

Connection
- 10mm² rigid
- 6mm² flexible


CZ001


MZ202


MZ203


MZN175


LZ060

Accessories

Description	Characteristics	Width in 17.5mm	Cat ref.
Combination auxiliary & alarm contacts Allows remote indication of main contact status SD indicates a fault condition (eg Safety Switch tripped) for RCCBs	2 x (1NO + 1NC) 6A-240V~	1	**CZ001**
Auxiliary contacts Allows remote indication of main contact status for RCBOs 	6A - 240V~ 1NO + 1NC	0.5	**MZ201**
Alarm contacts indicates a fault over current on overload or short circuit (e.g. RCBO tripped) 	6A - 240V~ 1NO + 1NC	0.5	**MZ202**
Shunt trip relay Allows remote tripping of (combined) RCD when a voltage is applied. 	230V - 415V AC 110V to 130V DC	1	**MZ203**
	24V - 48V AC 12V - 48V DC	1	**MZ204**
Undervoltage release Trips the (combined) RCD when the voltage falls between 35% and 70% of nominal voltage	230V AC Coil consumption: 3.5 VA	1	**MZ206**
Locking device Allows locking of the device; toggle in the lock on/off position; will accept two padlocks with hasps of 4.75mm diameter maximum	Supplied without padlock	1	**MZN175**
Heat dissipation inserts	Avoids overheating for DIN rail modules when several devices mounted side by side are carrying high continuous loads	0.5	**LZ060**

3P MCB + RCD ADD-ON BLOCK

3P+N RCBO

Features
The compact one module wide Add-On Block (AOB) can be used in combination with any Hager 3P MCB up to 63A. The one module RCD Add-On Block + MCB combinations suit all Hager chassis boards. It is the most compact '3P+N RCBO' for chassis boards.The RCD Add-On Block + MCB provides the protective characteristics of both devices, thereby protecting the panelboards entire circuit and removing the need to wire between DIN mounted RCD & MCB. This results in a significant reduction of time, labour & the size & cost of integrated RCD socket outlets. The 'Type A' Add-On Block gives the added protection against any 'pulsating DC component' generating from such loads as; power tools, motor speed controllers etc.

Conforms with IEC 61008-1 and AS/NZS 61008.1 when used with a Hager MCB.

One Module Add-On Block

Description	Residual current Idn	Cat ref.
3 phase earth leakage protection Up to 63A Type A	30mA	**BD163T**
	100mA	**BE163T**
	300mA	**BF163T**

BD163T

Description
A range of connection devices to simplify installation of modular devices such as MCBs, RCD's etc...

KDN180A

KDN380G

Insulated busbars - Fork type

Description	Width	Cat ref.
1 phase 80A	12 mod	**KDN180A**
1 phase 80A	18 mod	**KDN180G**
1 phase 100A	57 mod	**KD190B**
2 phase 80A	12 mod	**KDN280A**
3 phase 80A	12 mod	**KDN380A**
3 phase 80A	18 mod	**KDN380G**

KB181GI

KB163P

Insulated busbars - Tongue type

Description	Characteristics	Width	Cat ref.
1 neutral 80A. Suits neutral supply in onekonekt range of RCBOs	6 tongues over 12 poles	12 mod	**KB181A1**
1 neutral 80A. Suits neutral supply in onekonekt range of RCBOs	9 tongues over 18 poles	18 mod	**KB181G1**

KZ059

Insulated caps

Description	Characteristics	Cat ref.
Busbar end caps	Suits KDN1xx & KB181xx	**KZN021**
Busbar end caps	Suits KDN2XX/KDN3XX	**KZN023**
Fork caps - yellow	Strip of 5 caps	**KZ059**

KRN163

Cable Connectors

Description	Cat ref.
Tongue type connection from top for cables: 25mm²	**KF81A**
Tongue type connection from top for cables: 2 x 16mm²	**KF82A**
Tongue type connection from side for cables: 35mm²	**KF83A**
Tongue type connection from side of cables: 35mm² with longer tongue	**KF83D**
Chassis mounted 63A to supply power to the DIN Rail for cables: 25mm²	**KRN163**
Chassis or DIN Rail mounted 125A to connect main neutral cable: 50mm²	**KRN199**

KM03A

Other accessories

Description	Characteristics	Cat ref.
RCD neutral links	3 tunnel link for fitting to RCD's	**KM03A**
Cable adaptor - one hole	35mm² to suit golf enclosure	**KM035**

Description
Hager SPD's protect electrical and electronic equipment against transients, originating from lightning and switching transient sources. These transients can cause anything from the premature aging of equipment, logic failures and down time, to the complete destruction of electrical components and the entire electrical distribution system. Surge protective devices are strongly recommended in sites that are exposed to lightning, to protect sensitive and expensive electrical equipment such as TV's, washing machines, Hi-Fi's, PC's, VCR's, alarms etc..

Installation and connection
The main protection SPDs are installed directly after the main incoming switch. SPDs are suitable for any supply system. e.g. TNCS, TNS ,TT. To be connected in parallel to the equipment to be protected. Protection is assured in both common and differential modes.

Class I spark gap arrester

Description	Poles	Iimp kA	In kA	Up kV	Uc V	Width	Cat ref.
For areas where risk of lightning is prevalent. Test wave 10/350µs	2	12.5	-	≤2.5	255	4 mod	**SPA212A**
	4	12.5	-	≤2.5	255	8 mod	**SPA412A**


SPA212A

Class II medium protection

Description	Poles	Imax kA	In kA	Up kV	Uc V	Width	Cat ref.
Metal Oxide Varistors (MOV's) technology Test wave 8/20µs Replaceable cartridge Reserve option indication and changeover contact on 'R' catalogue reference	1	65	20	≤1.5	275	1 mod	**SPN165R**
	1	40	15	≤1.2	275	1 mod	**SPN140R**
	1	40	15	≤1.2	275	1 mod	**SPN140D**
	1	15	5	≤1.0	275	1 mod	**SPN115R**
	1	15	5	≤1.0	275	1 mod	**SPN115D**


SPN140R

Class II fine protection

Description	Poles	Imax kA	In kA	Up kV	Uc V	Width	Cat ref.	Cat ref.
To be used in cascade with medium protection devices. Refer to cascade table for Up values	2	8	2	≤1.5	255	2 mod		**SPN208D**
	4	8	2	≤1.5	255	4 mod		**SPN408D**


SPN208D

Class II replacement cartridge

Description	Poles	Reserve status ind.	Standard status ind.	Width	Cat ref.
For SPN1XXX	1	Yes	-	1 mod	**SPN065R**
	1	Yes	-	1 mod	**SPN040R**
	1	-	Yes	1 mod	**SPN040D**
	1	Yes	-	1 mod	**SPN015R**
	1	-	Yes	1 mod	**SPN015D**
For SPNx08D - Active	1	End of life indicator		1 mod	**SPN008D**
For SPNx08D - Neutral	1	End of life indicator		1 mod	**SPN008N**


SPN040D

Telecom protection

Description	Line	In kA	Up kV	Un Vdc	Uc Vdc	Width	Cat ref.
Protection for those devices connected to the ADSL2, ADSL, ISDN or TDSL phone line network. Metal Oxide Varistors (MOV's) technology. Tested in IEC 61643-21 D1 and C2 classification.	Nume	2.5	≤0.6	180	180	12mm	**SPK102**


SPK102

Flush or Surface mounted distribution boxes from 1 to 4 rows, from 4 to 72 ways, supplied with opaque or transparent door for devices up to 70mm installation depth. Door can be fitted on right or left, optional lock and keys. Door opens up to 180°. Wall box and cover are symmetrical for removable cable entry slider. Cable entries for cable and conduit. 125mm between DIN rails.

Components bag:
- Earth & neutral terminals
- Pole fillers
- Labels - cable management clips in enclosures >36 modules
- Transport protection film
- Busbar supplied with references

Technical data:
- IP30 without door
  IP40 with door
- IK07
- Isolation Class II
- White colour RAL 9010
- For product assemblies with a rated current In ≤ 80A

Standard: all products conform to AS/NZS 61439-3. N&E brass terminals comply to AS/NZS 5112. All products conform to the RoHS and WEEE directives

VF212PT

VF412TT

golf enclosure Flush mounted

Description	Single phase fork busbar	Cat ref. Opaque Door	Cat ref. Transp. door
1 row 4 ways	None	**VF104PT**	**VF104TT**
1 row 8 ways	None	**VF108PT**	**VF108TT**
1 row 12 ways	1 x 12 pole	**VF112PT**	**VF112TT**
1 row 18 ways	1 x 18 pole	**VF118PT**	**VF118TT**
2 row 24 ways	2 x 12 pole	**VF212PT**	**VF212TT**
2 row 36 ways	2 x 18 pole	**VF218PT**	**VF218TT**
3 row 36 ways	3 x 12 pole	**VF312PT**	**VF312TT**
3 row 54 ways	3 x 18 pole	**VF318PT**	**VF318TT**
4 row 48 ways	3 x 12 pole	**VF412PT**	**VF412TT**
4 row 72 ways	3 x 18 pole	**VF418PT**	**VF418TT**

VF212PT

VF412TT

golf enclosure Surface mounted

Description	Single phase busbar	Cat ref. Opaque Door	Cat ref. Transp. door
1 row 4 ways	None	**VS104PT**	**VS104TT**
1 row 8 ways	None	**VS108PT**	**VS108TT**
1 row 12 ways	1 x 12 pole	**VF112PT**	**VF112TT**
1 row 18 ways	1 x 18 pole	**VF118PT**	**VF118TT**
2 row 24 ways	2 x 12 pole	**VF212PT**	**VF212TT**
2 row 36 ways	2 x 18 pole	**VF218PT**	**VF218TT**
3 row 36 ways	3 x 12 pole	**VF312PT**	**VF312TT**
3 row 54 ways	3 x 18 pole	**VF318PT**	**VF318TT**
4 row 48 ways	3 x 12 pole	**VF412PT**	**VF412TT**
4 row 72 ways	3 x 18 pole	**VF418PT**	**VF418TT**

		Board		Wall cut out	
Dimensions (mm)		**W**	**H**	**W**	**H**
VF104...	1 row 4 ways	204	225	170	189
VF108...	1 row 8 ways	275	225	242	189
VF112...	1 row 12 ways	352	293	318	257
VF212...	2 row 12 ways	352	418	318	382
VF312...	3 row 12 ways	352	543	318	507
VF412...	4 row 12 ways	352	688	318	652
VF118...	1 row 18 ways	460	293	426	257
VF218...	2 row 18 ways	460	418	426	382
VF318...	3 row 18 ways	460	543	426	507
VF418...	4 row 18 ways	460	688	426	652

		Board		Wall fixation	
Dimensions (mm)		**W**	**H**	**W**	**H**
VS104...	1 row 4 ways	138	184	101	68
VS108...	1 row 8 ways	210	184	174	68
VS112...	1 row 12 ways	282	252	222	136
VS212...	2 row 12 ways	282	377	222	261
VS312...	3 row 12 ways	282	500	222	386
VS412...	4 row 12 ways	282	647	222	491
VS118...	1 row 18 ways	390	252	330	136
VS218...	2 row 18 ways	390	377	330	261
VS318...	3 row 18 ways	390	500	330	386
VS418...	4 row 18 ways	390	647	330	491

Description
invicta panelboards have been developed as an optimised solution for small to medium commercial installations and large home projects.

Features
- Available in 24, 36, 48, 60 & 72 poles
- 1.2mm tough powdercoated galvanised steel construction
- Powdercoated RAL7035 (light grey)
- IP30
- Complete with either a 160A or 250A main isolator switch prefitted
- Split earth and neutral links for easy cabling
- Fully type tested chassis
- 2 x 8 pole DIN space each side of main incomer
- Lockable door (CL001)
- Safety pole fillers remain with chassis when escutcheon is removed
- Circuit identification card
- Positive MCB alignment system

invicta panelboards

Description	Characteristics	Cat. ref
With 160A main switch	24 pole chassis	**JVC2400S16TW**
	36 pole chassis	**JVC3600S16TW**
	48 pole chassis	**JVC4800S16TW**
	60 pole chassis	**JVC6000S16TW**
	72 pole chassis	**JVC7200S16TW**
With 250A main switch	24 pole chassis	**JVC2400S25TW**
	36 pole chassis	**JVC3600S25TW**
	48 pole chassis	**JVC4800S25TW**
	60 pole chassis	**JVC6000S25TW**
	72 pole chassis	**JVC7200S25TW**


JVC2400S16TW

Extension boxes

Description	Characteristics	Cat. ref
Supplied without gland plates. Gland plates only required if mounting as a stand alone.	2 row 18 DIN	**JVC0EXTDW**


JVC0EXTDW

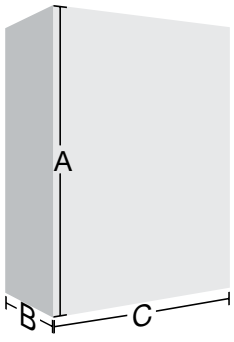
Accessories

Description	Characteristics	Width	Cat. ref
Incomer link kit	For 3Ø 80-125A MCB	4.5mod	**JVC0M12**
	For 3Ø up to 63A MCB	3 mod	**JVC0M06**
MEN kit			**JVC0MEN**
Gland plates			**JVC0GPL**
Safety pole fillers (10Pk)			**JVC0PFL**
Door lock and key (CL001)			**JVC0LCK**
Spare keys (CL001)	2 keys		**JVC0LSK**
Document holder			**JK2X007AU**

Dimensions (mm)	**A**	**B**	**C**
24 pole panelboard	800	135	480
36 pole panelboard	900	135	480
48 pole panelboard	1000	135	480
60 pole panelboard	1128	135	480
72 pole panelboard	1235	135	480

Extension box

Dimensions (mm)	**A**	**B**	**C**
JVC0EXTDW	350	135	480



Hager Electro Pty Ltd
Unit 17/2-8 South Street
Rydalmere NSW 2116
hagerelectro.com.au

Nationwide sales
Phone: 1300 850 253
Fax: 1300 424 372
Email: customerservice@hagerelectro.com.au