

General Catalogue

# Energy Distribution

Middle East



**:hager**





**Hager.**  
**A partner**  
**you can**  
**plan with.**

# Building the electrical world of tomorrow together





**“Our commitment is to provide you with future-proof, reliable and ingenious products, solutions and services.”**



**Sabine Busse**  
Hager Group CEO

**Dear customers, partners and friends of Hager,**

It is with great enthusiasm that I address you as the new CEO, taking over from Daniel Hager, who is now Chairman of the group's Supervisory Board. I am delighted to embark on a new chapter of the company alongside you, our customers, partners, and friends, as well our dedicated team of employees.

The world is electrifying at fast speed, and it is a privilege to be with you as your business develops. Our commitment is to provide you with future-proof, reliable and ingenious products, solutions and services. In the pages of this catalogue, you will discover them. I hope you enjoy discovering them as much as we enjoyed designing them.

As part of our continuing commitment to support you, we produce, invest and innovate to follow our guiding principle “safe & simple”. Over the past four years, we have invested over 500 million euros in our factories, logistics centres and in research & development. These investments ensure a level of quality, operational efficiency and continuous innovation in line with your evolving needs.

This is also reflected in our data strategy. We understand its crucial role in improving our processes and optimising your customer experience. We are investing more than ever in technological solutions to fully harness the

potential of data and provide increasingly customer-tailored solutions.

And our customer-focus does not end there. We are an environmentally transparent and responsible company, we integrate sustainability into our business strategy and operations. We develop solutions that enable our customers to become more sustainable, together we contribute to a successful energy transition with both reduced energy consumption and CO2 emissions. We believe in creating a cleaner, safer and more enjoyable world for current and future generations; our strategic choices reflect this commitment.

Together, let's continue to build on our strong relationship and advance innovation while honouring our commitment to sustainability.

Thank you for your continued trust.

A handwritten signature in black ink, appearing to read 'S. Busse'. The signature is fluid and cursive, written on a white background.

Best regards,  
Sabine Busse. CEO. Hager Group

# Our vision

Hager Group's vision is to make life on our planet safer, cleaner and more enjoyable through ingenious, sustainable and reliable electrical infrastructure solutions, for all kinds of buildings.

## Our world today and tomorrow

We're constantly reimagining electricity in order to meet the world's rising energy demands with better performing and less consuming products and solutions. We're also moving at pace with technology as electricity usage becomes 'smarter' in homes and buildings and yet one thing endures in all this fast-moving change, we will always produce and supply for you safe and simple solutions and products. It's what we have been doing for over 65 years.

## Big enough to matter, small enough to care

As a global player, we play in every domain of the electrical infrastructure world; energy distribution, energy management, e-mobility, cable management, wiring accessories, connected and automated homes. We have you covered and our products and solutions are almost always customisable should you desire. We've built a reputation for high quality, scalable and dependable European-made products that are tested, trusted and ready for all types of buildings large and small, so you and your customers can rest assured your installations will endure over the long term.

## Generational approach

As a family-owned business that prides itself on being easy to work with, finding solutions in the spirit of collaboration, cooperation and co-creation is how we enjoy working on a daily basis, it's how we feel business is done best and how end results are best achieved together. Because we're driven by an entrepreneurial flair in a world where people like you matter to us, so much so that we'll be by your side right through your projects and beyond. No matter what, Hager will go the extra mile for you to meet your requirements.

## Looking ahead

We are investing on a large scale to ensure you will always get the best from us with huge investments in production capacity and at distribution sites but also developing new and exciting products in our new research and development centres to meet the joint challenges of energy consumption and the environment. As much as the world changes we'll never change our approach to you, our customers, we'll always be with our customary support and learning platforms continuously available for you, with you.



# hagergroup

Hager Group is a leading provider of solutions and services for electrical installations in residential, commercial and industrial buildings with 13,000 employees generating € 3.1 Bn in sales (2023). Components and solutions are produced at 22 locations around the globe and are distributed to customers in more than 100 countries.

## Members of Hager Group

**:hager**

**B.**  
Berker

**ELCOM.**

ENERGY STORAGE  
**E3DC**

**eficia**

**Pmflex™**

**B BOCCHIOTTI**

**B IBOCO**

Hager Group prepares buildings and neighbourhoods for the energy transition with intelligent energy management systems, bidirectional charging functionalities, and charging stations for electromobility as well as the digitalisation of energy distribution.

# On our journey to a sustainable future

At Hager Group, we shape the electric world of tomorrow, a world in which long-term success goes hand in hand with sustainability.

For us, sustainability encompasses Ethics, Employees and the Environment. We call our approach E3. This embraces an ethical approach to business, an inclusive and healthy work environment and reliable products and ingenious solutions which are future-proof. With a strong focus on the environment, we're on the way to making our company a low-carbon operation. We want to take our employees, partners and customers with us on this journey. Let's make better choices together. For our planet and for all generations.

## Ethics

We put a strong emphasis on a responsible approach towards business. This approach considers our own employees as well as every person involved in our value chain: from suppliers and their employees, to partners and customers. As we produce electrical equipment and solutions, consumer safety is one of our main concerns, as well as business and data integrity. We are committed to complying with all national and international industry standards and in many instances go above and beyond what is required. Since 2007, we are signatories of the United Nations' Global Compact.





# Employees



Recruiting and retaining talent is one of the great challenges of businesses today. For us, a sustainable business is only possible if we can attract the right people who feel welcome and able to fulfil their potential at Hager Group. We see our company as a cross-generational endeavour, much like a family. With life-long learning opportunities and opportunities to build a meaningful career we're offering our employees the ideal basis from which to fully engage in a long-term and fruitful mutual relationship with our company. It goes without saying that diversity and inclusion and equal opportunities are part and parcel of our recruitment policies.

# Environment

We are committed to reducing waste and emissions considerably by investing in an environmentally friendly design, the longevity and quality of our products and more sustainable solutions in production and distribution. We perform full life cycle analysis of all our products in the form of a Product Environmental Profile (PEP). At production level, we are continuously looking for ways to reduce our resources consumption. Currently, 18 of our production facility locations and 4 of our distribution centres are certified to the international environmental management standard ISO 14001, which defines globally recognised requirements for environmental management.



Sustainability certifications for Hager Group:

Member of:



United Nations  
Global Compact

# Care-fully designed

We care for our customers.  
Our design tells the story.

High performance and premium solutions should incorporate great design. That is part of our mission at Hager, and we do take this to heart. The family of products you will find in this catalogue all fit together smoothly and therefore contribute to proud installations. This, in turn, contributes to loving the brand. We hope you love it as much as we do.

**Let's see what that covers:**

We want to be best-in-class in usability. That means that our devices and systems should be easy to understand and easy to use in any situation. And why not aim for more than pure ease of use? In our new products, we aim for pleasurable, enjoyable features that will positively surprise you. Clever ideas that will make the difference for you and for end-users.

It is also about overall coherence. Our total family of devices should make sense to you. It should allow you to install habits and speed. It should contribute to building up familiarity and trust. Working with our solutions should feel like coming home.

Nice design is, of course, also about style, form precision, and finishings. We feel that Hager's

ingenious technical solutions deserve careful design to the smallest details. Attractive and recognizable design grants premium electrical installations that grace contemporary homes and buildings. We know how to fascinate your clients with contemporary yet timeless designs, but we also know how to elegantly disappear when needed.

Sustainability is part of our natural values and authentic attitudes. In a sense, eco-design is an expression of care. Care for the planet and, consequently, for all of us. We know we have an important role to play here. We always work to offer the best business solutions with a view to long-term sustainability.

**Digital and physical design excellence:**

The rapidly growing digital world offers us endless



The Design Studio team





Erwin van Handenhoven, Hager Group Design Studio Director

possibilities. It has been anchored for many years now in our design philosophy.

We design our digital tools with the utmost care. Totally in line with the physical offer, they must reflect the same usability and identity. We want them to be easy to understand and fascinating and captivating to use. At the same time, they should enrich and simplify our user experience. We recently designed a new and thrilling digital design system that we will implement over time and that will be part of your future daily activities. As Hager designers, we want your digital experience to be friendly and cool but also classy and strong on performance, enabling the extraordinary tasks and workflows of the ever-evolving electrical world.

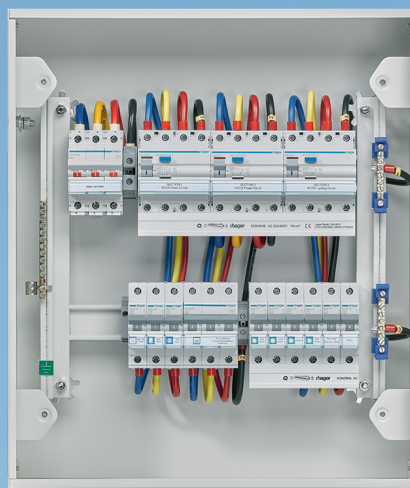
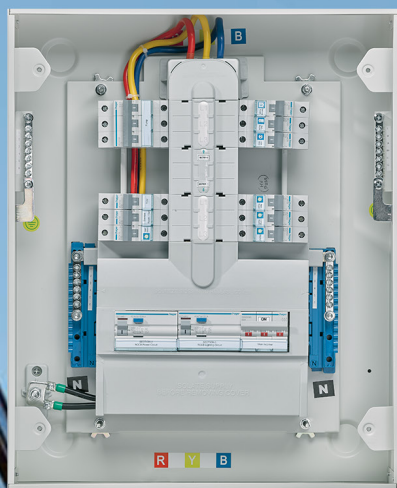
#### **Safe and simple:**

This new electrical world that we shape together with you must, above all, be perfectly safe for you and the end user. Protecting you in every possible situation. You need robust and reliable solutions. You claim premium quality devices, and we try to exceed your expectations. We design them with safety in mind but also in order for you to feel comfortable. Furthermore, they need to be safe for the planet, too.

Amidst the unstoppable rise of technical performance, we must not forget to aim for the simplest of solutions. Making things difficult is quite easy. Making high performance easy and simple for

you and your client is, on the other hand, a real challenge for our developers. This is clearly our focus and ambition.

We expect a careful and fully designed offer to be safe and simple. It is our everyday motto. We do not compromise here. We think about ingenious and innovative solutions based on the best technologies with only one purpose: satisfying our family of customers. You.



# The partner

for your  
electrical  
installations.

Enclosures  
Protection devices  
Control devices  
Weatherproof  
Cable management

**:hager**



## 01 Enclosures and distribution boards

invicta VT consumer units / invicta DR boards / invicta TPN boards & ECB enclosure / invicta TPN load center / invicta panel boards / unimes.ME / Vega D / Dimensions



14

## 02 Main circuit breakers

hw ACBs / Accessories for hw ACBs / h3 MCCBs / Accessories for h3 MCCBs / h3+ MCCBs / Switch disconnectors / RCD Add-on block / Accessories for h3+ MCCBs / Load break switches / Accessories for load break switches / Enclosed load break switches / Accessories for enclosed load break switches



40

## 03 Modular protection devices

Miniature circuit breakers (MCB) / RCD add-on blocks / Residual circuit breakers with overcurrent protection (RCBO) / Residual current circuit breakers (RCCB) / Auxiliaries / Motor starters / HRC fuse carriers



100

## 04 Power, control and signaling interfaces

Modular contactors / Latching relays / Modular switches / Modular changeover switches / Indicator lights / Earth leakage relays and toroidal transformers / Brass distribution terminals / Supply busbars



122

## 05 Energy monitoring and measurement

Energymeters / Accessories



134

## 06 Energy and lighting control

Motion & presence detectors / Time lag & analogue time switches / Modular delay timers / Twilight switches / Digital time switches / Digital Time Switches With Bluetooth



148

## 07 Weatherproof Range

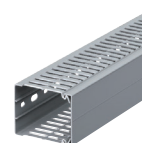
IP55 switches & sockets / IP66 switches & sockets / IP66 isolators



160

## 08 Cable management

tehalit. BA7A wide slot wiring duct/Underfloor systems



166



# Enclosures and distribution boards

As a specialist in residential and commercial projects, we offer an extensive selection of enclosures and distribution boards. Whether you're in need of final distribution boards, submain distribution boards, or main distribution boards, we provide solutions in both plastic and steel, suitable for flush or surface mounting to cater to your specific needs.



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invicta VT consumer units	16
invicta DR boards	17
invicta TPN boards & ECB enclosure	18
invicta TPN load center	22
invicta panel boards	24
unimes.ME	28
Vega D	31
Dimensions	32

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### Characteristics

Easy to install, compact in size and with ample wiring space, the consumer unit range is available as flush and surface mounting enclosures and dedicated for indoor use. The range includes boxes with capacities of 1 row with 6 to 18 modules.

### Delivered with

- neutral and earth terminal
- plain door
- with & without busbar

### Technical data

- class I
- IP 40
- colour: RAL 9002
- steel epoxy powder coated enclosure
- backbox and frame : 1.0mm, door 1.0mm
- 70mm depth
- DIN rail mounting
- nominal current (In): 100A for busbar version



VT12FM

### Consumer unit with 100A 1P busbar flush mounting

Description	Nr. of outgoing ways	Cat. ref
1 row, 6 ■	4	<b>VT04FM</b>
1 row, 8 ■	6	<b>VT06FM</b>
1 row, 10 ■	8	<b>VT08FM</b>
1 row, 12 ■	10	<b>VT10FM</b>
1 row, 14 ■	12	<b>VT12FM</b>
1 row, 18 ■	16	<b>VT16FM</b>



VT16SM

### Consumer unit with 100A 1P busbar surface mounting

Description	Nr. of outgoing ways	Cat. ref
1 row, 6 ■	4	<b>VT04SM</b>
1 row, 8 ■	6	<b>VT06SM</b>
1 row, 10 ■	8	<b>VT08SM</b>
1 row, 12 ■	10	<b>VT10SM</b>
1 row, 14 ■	12	<b>VT12SM</b>
1 row, 18 ■	16	<b>VT16SM</b>



VT08FD-T

### Consumer unit without busbar flush mounting

Description	Nr. of modules	Cat. ref
1 row, 8 ■	8	<b>VT08FD-T</b>
1 row, 12 ■	12	<b>VT12FD-T</b>
1 row, 18 ■	18	<b>VT18FD-T</b>



VT12SD-T

### Consumer unit without busbar surface mounting

Description	Nr. of modules	Cat. ref
1 row, 8 ■	8	<b>VT08SD-T</b>
1 row, 12 ■	12	<b>VT12SD-T</b>
1 row, 18 ■	18	<b>VT18SD-T</b>



### Characteristics

The DIN rail boards are a safe and reliable solution for distributing and controlling power, compatible with various types of DIN rail modular components. The Invicta DR range is easy to install and available in flush and surface mounting enclosures, in 16 or 24 module width options. The range includes boxes with capacities ranging from 1 to 6 rows with 16 to 96 modules, as well as 4 to 6 rows with 96 to 144 modules.

### Delivered with

- plain metallic door
- adjustable & removable DIN rail chassis

### Technical data

- class I
- IP 40
- colour: RAL 9002
- steel epoxy powder coated enclosure
- backbox and frame : 1.2mm, door 1.0mm
- 110mm depth
- DIN rail mounting
- door earthing to ensure earth continuity
- reversible doors



DR32F

### invicta DR 16 modules flush mounting

Description	Cat. ref
1 row, 16 ■	<b>DR16F</b>
2 rows, 32 ■	<b>DR32F</b>
3 rows, 48 ■	<b>DR48F</b>
4 rows, 64 ■	<b>DR64F</b>
5 rows, 80 ■	<b>DR80F</b>
6 rows, 96 ■	<b>DR96F</b>



DR48S

### invicta DR 16 modules surface mounting

Description	Cat. ref
1 row, 16 ■	<b>DR16S</b>
2 rows, 32 ■	<b>DR32S</b>
3 rows, 48 ■	<b>DR48S</b>
4 rows, 64 ■	<b>DR64S</b>
5 rows, 80 ■	<b>DR80S</b>
6 rows, 96 ■	<b>DR96S</b>



DR424F

### invicta DR 24 modules flush mounting

Description	Cat. ref
4 rows, 96 ■	<b>DR424F</b>
5 rows, 120 ■	<b>DR524F</b>
6 rows, 144 ■	<b>DR624F</b>

### invicta DR 24 modules surface mounting

Description	Cat. ref
4 rows, 96 ■	<b>DR424S</b>
5 rows, 120 ■	<b>DR524S</b>
6 rows, 144 ■	<b>DR624S</b>

### Accessories

Description	Cat. ref
joining kits for flush boards	<b>JK01FK</b>
joining kits for surface boards	<b>JK01SK</b>
1 ■ blanking strip	<b>P032H</b>
keylock	<b>VZ303</b>
plastic handle lock	<b>VZ300</b>

### Characteristics

Invicta 125A Type B distribution board range is a perfect solution for both residential and commercial installations. The range includes 125A boards with multiple incomer choices, available in flush and surface mounting enclosures. The range offers a variety of options, including boxes with capacities ranging from 4 to 24 TP ways, available in both fixed and split load types.

**Complies with: IEC 61 439 – 1 & 3  
ASTA certified & ADQCC approved**

### Delivered with

- 125A rated pan assembly
- height adjustable & removable busbar assembly
- neutral and earth brass terminal
- plain metallic door
- door earthing to ensure earth continuity
- removable pre punched top and bottom gland plates.
- I/C link kit suitable for 3 pole modular isolator (up to 125A) MCBs (up to 63A) or RCCBs (up to 125A)

### Technical data

- class I
- IP41
- colour : RAL 9002
- steel epoxy powder coated enclosure
- backbox and frame : 1.2mm, door 1.0mm
- 120mm depth
- busbar current rating: 125A
- rated voltage (Un /Ue): 415V ac - 50Hz
- rated insulation voltage (Ui): 690V ac
- rated impulse withstand voltage (Uimp): 4kV
- rated short circuit withstand (Icw) : 17kA for 0.25 sec.
- suitable for modular incomers (125A) and modular outgoing (63A)
- incomer cutout width: 13 mod
- incomer DIN rail mounting
- reversible doors
- accessories like key lock, DIN rail extension boxes etc ...

### invicta TPN125 type B distribution boards fixed load boards



JK1B08F2

Description	Cat. ref surface	flush
4 ways	<b>JK1B04S2</b>	<b>JK1B04F2</b>
6 ways	<b>JK1B06S2</b>	<b>JK1B06F2</b>
8 ways	<b>JK1B08S2</b>	<b>JK1B08F2</b>
10 ways	<b>JK1B10S2</b>	<b>JK1B10F2</b>
12 ways	<b>JK1B12S2</b>	<b>JK1B12F2</b>
14 ways	<b>JK1B14S2</b>	<b>JK1B14F2</b>
16 ways	<b>JK1B16S2</b>	<b>JK1B16F2</b>
18 ways	<b>JK1B18S2</b>	<b>JK1B18F2</b>
24 ways	<b>JK1B24S2</b>	<b>JK1B24F2</b>



JK1B044F2WA316

### invicta TPN125 type B distribution boards split busbar with wire set

-to fit up to 125A isolator, 2 nos of 4P RCCB (section A and B) as incomers

No. of out going ways section A	section B	Cat. ref surface	flush
2	2	<b>JK1B022S2WA316</b>	<b>JK1B022F2WA316</b>
4	2	<b>JK1B042S2WA316</b>	<b>JK1B042F2WA316</b>
4	4	<b>JK1B044S2WA316</b>	<b>JK1B044F2WA316</b>
6	2	<b>JK1B062S2WA316</b>	<b>JK1B062F2WA316</b>
6	4	<b>JK1B064S2WA316</b>	<b>JK1B064F2WA316</b>
8	2	<b>JK1B082S2WA316</b>	<b>JK1B082F2WA316</b>



JK1B066F2

### invicta TPN125 type B distribution boards split busbar without wire set

- to fit up to 125A isolator, 2 nos of 4P RCCB (sectionA and B) as incomers

No. of out going ways section A	section B	Cat. ref surface	flush
6	6	<b>JK1B066S2</b>	<b>JK1B066F2</b>
8	4	<b>JK1B084S2</b>	<b>JK1B084F2</b>
8	6	<b>JK1B086S2</b>	<b>JK1B086F2</b>
8	8	<b>JK1B088S2</b>	<b>JK1B088F2</b>
10	4	<b>JK1B104S2</b>	<b>JK1B104F2</b>

### Incoming link kits for JK1 TPN 125 Type B distribution board



JK1L1253MM

Description	Cat. ref
3P 80A - 125A MCB incomer kit	<b>JK1L1253MM</b>
4P 80A - 125A MCB incomer kit	<b>JK1L1254MM</b>
3P 100A switch or RCCB incomer kit	<b>JK1L1003SR</b>
3P 63A MCB / switch disconnecter / 63A - 100A RCCB, fixed & split load	<b>JK1L1003SMSL</b>
3P 125A switch disconnecter kit	<b>JK1L1253SK</b>
4P 63A MCB / switch disconnecter / 63A - 100A RCCB, fixed & split load	<b>JK1L1004SMSL</b>
125A direct connection kit	<b>JK2L2504D</b>
4P isolator + RCCB incomer kit	<b>JK1L1004SR</b>
3P cable spreader links and barrier for 125A	<b>JK1XCSP</b>

### Cable spreader boxes

Description	Cat. ref for surface enclosures	Cat. ref for flush enclosures
cable spreader box	<b>JK2E01S</b>	<b>JK2E01F</b>

### DIN rail extension boxes

Description	Cat. ref for surface enclosures	Cat. ref for flush enclosures
16	<b>JK2E16S</b>	<b>JK2E16F</b>
32	<b>JK2E32S</b>	<b>JK2E32F</b>
48	<b>JK2E48S</b>	<b>JK2E48F</b>

### Accessories for JK1 Type B distribution board



JK1XKLS



JK1XBSP

Description	Cat. ref
top & bottom gland plate with screws	<b>JK1XGP</b>
1  blank	<b>P032H</b>
single phase blank for TPN boards	<b>JK1XBSP</b>
busbar protective boot	<b>P100H</b>
key lock	<b>JK1XKLS</b>
incomer shroud 13	<b>JK2XISS</b>
neutral terminal cover IP2X	<b>JK1XNC</b>



### Characteristics

Invicta 250A Type B distribution board range is a perfect solution for commercial & industrial installations. The range includes both 250A boards with MCCB incomer or direct connection. The range is presented in surface or flush mounting enclosures and includes boxes with capacities of 4 to 24 TP ways in fixed load types.

**Complies with: IEC 61 439 – 1 & 3  
ASTA certified & ADQCC approved**

### Delivered with

- 250A rated pan assembly
- height adjustable & removable busbar assembly
- neutral and earth brass terminal
- plain metallic door
- door earthing to ensure earth continuity
- removable pre punched top and bottom gland plates

### Technical data

- class I
- IP41
- colour : RAL 9002
- steel epoxy powder coated enclosure
- backbox and frame : 1.2mm, door 1.0mm
- 120mm depth
- busbar current rating: 250A / 200A (ADQCC)
- rated voltage (U<sub>n</sub> / U<sub>e</sub>) : 415V ac - 50Hz
- rated insulation voltage (U<sub>i</sub>) : 690V ac
- rated impulse withstand voltage (U<sub>imp</sub>) : 4kV
- rated short circuit withstand (I<sub>cw</sub>) : 17kA for 0.25 sec.
- suitable for non-modular incomers and modular outgoing
- reversible doors
- accessories like key lock, DIN rail extension boxes etc ...
- 13 mod blank supplied with link kit to suit JK switch/MCCB incomers
- **link kits are not supplied as standard, please order i/c link kits separately**



JK2B12F2

### invicta TPN250 Type B distribution boards fixed load boards

Description	Cat. ref surface	flush
4 ways	<b>JK2B04S2</b>	<b>JK2B04F2</b>
6 ways	<b>JK2B06S2</b>	<b>JK2B06F2</b>
8 ways	<b>JK2B08S2</b>	<b>JK2B08F2</b>
10 ways	<b>JK2B10S2</b>	<b>JK2B10F2</b>
12 ways	<b>JK2B12S2</b>	<b>JK2B12F2</b>
14 ways	<b>JK2B14S2</b>	<b>JK2B14F2</b>
16 ways	<b>JK2B16S2</b>	<b>JK2B16F2</b>
18 ways	<b>JK2B18S2</b>	<b>JK2B18F2</b>
24 ways	<b>JK2B24S2</b>	<b>JK2B24F2</b>

### Incoming link kits



JK2L2503MH

Description	Cat. ref
3P 160A switch disconnecter incomer kit (JK160S)	<b>JK2L1603SK</b>
3P 200/250A switch disconnecter incomer kit (JK200S/JK250S)	<b>JK2L2503SK</b>
3P x160A frame MCCB (upto 160A)	<b>JK2L1603MH</b>
3P x250 frame MCCB (upto 250A)	<b>JK2L2503MH</b>
3P 200/250A direct connection kit	<b>JK2L2503D</b>
4P x160A frame MCCB (upto 160A)	<b>JK2L1604MH</b>
4P x250 frame MCCB (upto 250A)	<b>JK2L2504MH</b>
4P 200/250A direct connection kit	<b>JK2L2504D</b>

### Extension boxes for JK2 TPN250 Type B

Description	Cat. ref surface	flush
16 modules DIN extension box (15 modules available)	<b>JK2E16S</b>	<b>JK2E16F</b>
32 modules DIN extension box	<b>JK2E32S</b>	<b>JK2E32F</b>
48 modules DIN extension box	<b>JK2E48S</b>	<b>JK2E48F</b>

### Spreader boxes for JK2 TPN250 Type B

Description	Cat. ref surface	flush
JK2 cable spreader box	<b>JK2E01S</b>	<b>JK2E01F</b>



P032H JK1XBSP



JK2XB

### Accessories for JK2 TPN250 type B distribution boards

Description	Cat. ref.
top and bottom gland plate with screws	<b>JK2XGP</b>
1 ■ blank	<b>P032H</b>
busbar protective boot	<b>P100H</b>
single phase blank for TPN boards	<b>JK1XBSP</b>
key lock	<b>JK1XKLS</b>
neutral terminal cover IP2X	<b>JK1XNC</b>
13 ■ blank for 125/160A switch disconnecter	<b>JK2XBSK1</b>
13 ■ blank for 200/250A switch disconnecter	<b>JK2XBSK2</b>
13 ■ blank for x160 frame MCCB	<b>JK2XBMH1</b>
13 ■ blank for x250 frame MCCB	<b>JK2XBMH2</b>

### ECB enclosure

#### Characteristics

- surface mounting
- 1.2 mm thickness sheet steel
- epoxy Powder coated
- colour : RAL 9002

#### Technical data

- neutral and Earth terminal up to 125A. For higher ratings neutral bar with bolts and nuts as standard
- removable pre punched top and bottom gland plates
- Dual knockouts
- sufficient cabling space
- supplied without MCCB



MH1253S4

### ECB enclosure

Description	Cat. ref.
ECB enclosure for x160 MCCB	<b>MH1253S4</b>
ECB enclosure for x250 MCCB	<b>MH2503S4</b>
ECB enclosure for h400 MCCB	<b>MH4003S2</b>
ECB enclosure for h630 MCCB	<b>MH6303S2</b>

### Characteristics

- standard : IEC 61439 - 1 & 3 ASTA certified
- current rating: 125A/250A
- operating Voltage: 220 | 440 VAC, 3 PH 4 wire
- frequency: 50 / 60 Hz
- short circuit withstand: 17kA for 0.25 sec
- peak short time withstand: 34kA
- IP: IP41
- range: 4/24 TPN - 12/72 SPN way
- colour: RAL 9002
- lock: Push to open with key lock
- Backbox and frame : 1.2mm, door 1.0mm

### Advantages and Benefits

- best performance of short circuit withstand:17kA for 0.25sec
- compact and enough space for wiring
- reversible door
- push to open and key lock provision
- removable and height adjustable PAN assembly
- wrap around neutral to facilitate even distribution of neutral cables
- fully insulated busbar stalk with provision for circuit labelling
- top TAP-OFF provision for extension to other boards
- removable Gland plates
- dual knockouts to suit cable size
- side knockouts for cable routing to adjacent load centers

### Incoming Devices MCCB

- standard: IEC 947-2
- incomer rating up to 125A (F4) & 250A (F5)

### Outgoing Devices MCB /RCBO

- standard: IEC 898 | IEC 947-2 | IEC 61009
- outgoing rating up to 63A

### Invicta load center without MCCB incomer 125A load center (flush)

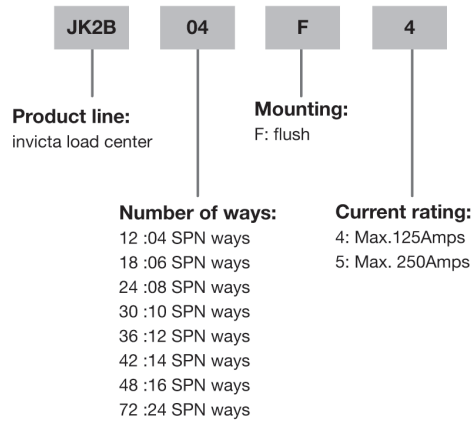


JK2B08F4

No. of ways TPN / SPN	Description	Cat. ref.
4 / 12	12 SPN way load center without incomer fitted	<b>JK2B04F4</b>
6 / 18	18 SPN way load center without incomer fitted	<b>JK2B06F4</b>
8 / 24	24 SPN way load center without incomer fitted	<b>JK2B08F4</b>
10 / 30	30 SPN way load center without incomer fitted	<b>JK2B10F4</b>
12 / 36	36 SPN way load center without incomer fitted	<b>JK2B12F4</b>
14 / 42	48 SPN way load center without incomer fitted	<b>JK2B14F4</b>
16 / 48	54 SPN way load center without incomer fitted	<b>JK2B16F4</b>
24 / 72	72 SPN way load center without incomer fitted	<b>JK2B24F4</b>



Nomenclature



invicta load center without MCCB incomer  
250A load center (flush)



JK2B08F5

No. of ways TPN / SPN	Description	Cat. ref.
4 / 12	12 SPN way load center fitted with 200A MCCB	<b>JK2B04F5</b>
6 / 18	18 SPN way load center fitted with 200A MCCB	<b>JK2B06F5</b>
8 / 24	24 SPN way load center fitted with 200A MCCB	<b>JK2B08F5</b>
10 / 30	30 SPN way load center fitted with 200A MCCB	<b>JK2B10F5</b>
12 / 36	36 SPN way load center fitted with 200A MCCB	<b>JK2B12F5</b>
14 / 42	48 SPN way load center fitted with 200A MCCB	<b>JK2B14F5</b>
16 / 48	54 SPN way load center fitted with 200A MCCB	<b>JK2B16F5</b>
24 / 72	72 SPN way load center fitted with 200A MCCB	<b>JK2B24F5</b>

**Characteristics**

- standards: IEC 61439 - 1 & 2
- suitable for non - modular (MCCBs & isolating switches) incomers and MCCB outgoing
- option for installing CTs in meterable versions
- ASTA certified
- busbar current rating: 250A

- rated short circuit withstand for busbars 25KA
- removable top and bottom gland plates
- steel with epoxy powder coating
- RAL 9002
- IP41
- accessories like key lock, DIN rail extension boxes etc ...
- Backbox and frame : 1.5mm, door 1.0mm



JN2B00008S2

**invicta 250A panel board, incomer: x250 frame MCCB (up to 250A) / JK200S / JK250S switch disconnecter outgoing: x160 frame MCCB (up to 125A)**

- incomer link kits are not supplied as standard for non meterable boards. For link kits refer below references for accessories
- 3 pole incomer link kits are supplied with the meterable board

No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P switch disconnecter (JK200S / JK250S) / x250 frame MCCB (up to 250A) incomer non-meterable	provision for 3P x250 frame MCCB (up to 250A) incomer meterable
2	<b>JN2B00002S2</b>	<b>JN2B00002S3</b>
4	<b>JN2B00004S2</b>	<b>JN2B00004S3</b>
6	<b>JN2B00006S2</b>	<b>JN2B00006S3</b>
8	<b>JN2B00008S2</b>	<b>JN2B00008S3</b>
10	<b>JN2B00010S2</b>	<b>JN2B00010S3</b>
12	<b>JN2B00012S2</b>	<b>JN2B00012S3</b>
16	<b>JN2B00016S2</b>	<b>JN2B00016S3</b>

**Incoming kits**

Description	Cat. ref.
250A 3P MCCB incomer kit	<b>JN2L2503MH</b>
3P h250 frame MCCB (for meterable boards only)	<b>JN2L2503MHH</b>
250A 3P isolator incomer kit	<b>JN2L2503SK</b>
250A direct incomer kit	<b>JN2L2503D</b>

**Switch disconnecter**

Description	Cat. ref.
switch 3P 250A 400V	<b>JK250S</b>

**Extension boxes**

Description	Cat. ref.
cable spreader box   Meter box without cutout	<b>JN2E01S</b>
meter box with cutout (Provision for 96mm x 96mm for VM/AM, RYB indicating lamps, selector switches)	<b>JN2E02S</b>
DIN rail box - 20 modules	<b>JN2E20S</b>

**Accessories / spares**

Description	Cat. ref.
single pole blanking plate 125A frame	<b>JN2XBSP</b>
keylock for distribution board	<b>JK1XKLS</b>

### Characteristics

- standards: IEC 61439 - 1 & 2
- suitable for MCCBs incomers and outgoing
- option for installing CTs in meterable versions
- ASTA certified
- busbar current rating: 400A
- rated short circuit withstand for busbars 35KA for 1 sec
- removable top and bottom gland plates

- incomer link kits not supplied as standard for non-meterable boards
- 3 pole incomer link kits supplied with the meterable board
- steel with epoxy powder coating RAL 9002
- IP41
- accessories like key lock, DIN rail extension boxes etc ...
- Backbox and frame : 1.5mm, door 1.0mm



JN4B00008S2

### invicta 400A panel board, incomer: h400 frame MCCB (up to 400A) - outgoing: x160 frame MCCB (up to 125A)

No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref.	
	provision for 3P h400 frame MCCB (up to 250A) incomer non-meterable	provision for 3P h400 frame MCCB (up to 250A) incomer meterable
4	<b>JN4B00004S2</b>	<b>JN4B00004S3</b>
6	<b>JN4B00006S2</b>	<b>JN4B00006S3</b>
8	<b>JN4B00008S2</b>	<b>JN4B00008S3</b>
10	<b>JN4B00010S2</b>	<b>JN4B00010S3</b>
12	<b>JN4B00012S2</b>	<b>JN4B00012S3</b>
16	<b>JN4B00016S2</b>	<b>JN4B00016S3</b>

### invicta 400A panel board, incomer: h400 frame MCCB (up to 400A) - outgoing: x250 frame MCCB (up to 250A) + x160 frame MCCB (up to 125A)

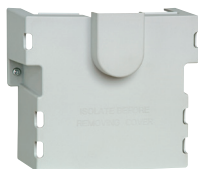
No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref.	
		provision for 3P h400 frame MCCB (up to 250A) incomer non-meterable	provision for 3P h400 frame MCCB (up to 250A) incomer meterable
2	2	<b>JN4B00202S2</b>	<b>JN4B00202S3</b>
2	4	<b>JN4B00204S2</b>	<b>JN4B00204S3</b>
2	6	<b>JN4B00206S2</b>	<b>JN4B00206S3</b>
2	8	<b>JN4B00208S2</b>	<b>JN4B00208S3</b>
2	10	<b>JN4B00210S2</b>	<b>JN4B00210S3</b>
2	14	<b>JN4B00214S2</b>	<b>JN4B00214S3</b>

### Incoming kits

Description	Cat. ref.
400A 3P MCCB incomer kit	<b>JN4L4003MH</b>
400A 3P direct incomer kit	<b>JN4L4003D</b>

### Extension boxes

Description	Cat. ref.
<b>For x160 frame MCCB outgoing</b>	
cable spreader box / meter box without cutout	<b>JN4E01S</b>
meter box with cutout	<b>JN4E02S</b>
DIN rail box - 24 modules	<b>JN4E24S</b>
<b>For x250 + x160 frame MCCB outgoing</b>	
cable spreader box / meter box without cutout	<b>JN8E01S</b>
meter box with cutout	<b>JN8E02S</b>
DIN rail box - 32 modules	<b>JN8E32S</b>



JN2XBSP

### Accessories / spares

Description	Cat. ref.
single pole blanking plate 125A frame	<b>JN2XBSP</b>
three pole blanking plate 250A frame	<b>JN4XBTP</b>
keylock for distribution board	<b>JK1XKLS</b>

### Characteristics

- standards: IEC 61439 - 1 & 2
- suitable for MCCBs incomers and outgoing
- option for installing CTs in meterable versions
- ASTA certified
- busbar current rating: 800A
- rated short circuit withstand for busbars 40kA for 1 sec
- removable top and bottom gland plates
- incomer link kits not supplied as standard for non meterable boards, for link kits

- please refer opposite page
- 3 pole h630 frame MCCB incomer link kits are supplied with the meterable boards
- incomer link kits not supplied as standard for non-meterable boards
- 3 pole incomer link kits supplied with the meterable board
- steel with epoxy powder coating RAL 9002
- IP41
- accessories like key lock, DIN rail extension boxes etc ...
- Backbox and frame : 1.5mm, door 1.0mm



JN8B00008S2

### invicta 630/800A panel board, incomer: h630 frame MCCB (up to 630A) / h1000 frame MCCB (up to 800A) - outgoing: x160 frame MCCB (up to 125A)

No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P h630/1000 frame MCCB incomer non-meterable	provision for 3P h630/1000 frame MCCB incomer meterable
-	4	<b>JN8B00004S2</b>	-
-	6	<b>JN8B00006S2</b>	-
-	8	<b>JN8B00008S2</b>	-
-	10	<b>JN8B00010S2</b>	-
-	12	<b>JN8B00012S2</b>	-
-	16	<b>JN8B00016S2</b>	-

### invicta 630/800A panel board, incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) - outgoing: x250 frame MCCB (up to 250A)

No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P h630/1000 frame MCCB incomer non-meterable	provision for 3P h630/1000 frame MCCB incomer meterable
4	-	<b>JN8B00400S2</b>	-
6	-	<b>JN8B00600S2</b>	-
8	-	<b>JN8B00800S2</b>	-
10	-	<b>JN8B01000S2</b>	-
12	-	<b>JN8B01200S2</b>	-
16	-	<b>JN8B01600S2</b>	-

### invicta 630/800A panel board, incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) - outgoing: x250 frame MCCB (up to 250A) + x160 frame MCCB (up to 125A)

No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P h630/1000 frame MCCB incomer non-meterable	provision for 3P h630/1000 frame MCCB incomer meterable
2	2	<b>JN8B00202S2</b>	<b>JN8B00202S3</b>
2	4	<b>JN8B00204S2</b>	<b>JN8B00204S3</b>
2	6	<b>JN8B00206S2</b>	<b>JN8B00206S3</b>
2	8	<b>JN8B00208S2</b>	<b>JN8B00208S3</b>
2	10	<b>JN8B00210S2</b>	<b>JN8B00210S3</b>
2	14	<b>JN8B00214S2</b>	<b>JN8B00214S3</b>

### invicta 630/800A panel board, incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) - outgoing: x250 frame MCCB (up to 250A) + x160 frame MCCB (up to 125A)

No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P h630/1000 frame MCCB incomer non-meterable	provision for 3P h630/1000 frame MCCB incomer meterable
4	2	<b>JN8B00402S2</b>	-
4	4	<b>JN8B00404S2</b>	-
4	6	<b>JN8B00406S2</b>	-
4	8	<b>JN8B00408S2</b>	-
4	10	<b>JN8B00410S2</b>	-



**invicta 630/800A panel board, incomer: h630 frame MCCB (up to 630A) / h1000 frame MCCB (up to 800A) - outgoing: x160 frame MCCB (up to 125A)**

No. of out going ways x400 frame MCCB (up to 400A)	No. of out going ways x250 frame MCCB (up to 250A)	No. of out going ways x160 frame MCCB (up to 125A)	Cat. ref. provision for 3P h630/1000 frame MCCB incomer non-meterable	provision for 3P h630/1000 frame MCCB incomer meterable
-	6	6	<b>JN8B00606S2</b>	-
-	6	8	<b>JN8B00608S2</b>	-

**Incoming kits**

Description	Cat. ref.
630A 3P MCCB incomer kit	<b>JN8L6303MH</b>
630A 3P direct incomer kit	<b>JN8L6303D</b>
800A 3P MCCB incomer kit	<b>JN8L8003MH</b>
800A 3P direct incomer kit	<b>JN8L8003D</b>

**Extension boxes**

Description	Cat. ref.
cable spreader box / meter box without cutout	<b>JN8E01S</b>
meter box with cutout	<b>JN8E02S</b>
DIN rail box - 32 modules	<b>JN8E32S</b>

**Accessories / spares**

Description	Cat. ref.
keylock for distribution board	<b>JK1XKLS</b>

unimes.ME main distribution boards provide comprehensive range of solutions that caters to versatile project requirements.

The distribution boards are optimized for different configurations and requirements and have the ability to expand if required in the future.

unimes.ME complies with the most stringent safety criteria set by IEC standards to provide maximum safety of equipment and personnel.

unimes.ME switchboards are among the most compact in the market. They are pre-assembled in accordance with panel builder requirements to save on assembly time.

Internal metallic and non metallic partitions up to form 4b provide maximum

protection against direct contact with any live parts. The form 4b partition also limits contact with solid bodies (e.g. working tools)

With an IP54 rating, unimes.ME provides complete safety from foreign solid bodies or liquids.

Busbars are enclosed in fully partitioned compartments. They consist of one or more copper bars per phase held by functional busbar supports. The main busbars are mounted horizontally while the distribution busbars are mounted vertically to enable front and rear access to the busbars.

The ample space in the main busbar chamber provides easy and safe coupling between the different enclosures. This reduces the assembly time and also increases the safety of operation.

## Technical Characteristics

### Mechanical characteristics

<b>Degree of protection</b>	In accordance with IEC 60529	
	External	IP54
<b>Forms of separation</b>	as per IEC 61439-2 upto Form 4b	
<b>Dimensions</b>	Height (mm)	2200 (with plinth)
	Width (mm)	600, 800, 900 (600+300)
	Depth (mm)	800
	Surface treatment	
<b>Resistance to corrosion IEC 61439-1 / 10.2.2.2</b>	Internal Components	Powder coated / Painted
	External Components	Powder coated /Painted
<b>Resistance of insulating materials IEC 61439-1 / 10.2.3.2</b>	Damp heat cycling test	IEC 60068-2-30
	Salt mist test	IEC 60068-8-11
	Glow wire test	IEC 60695-2-11

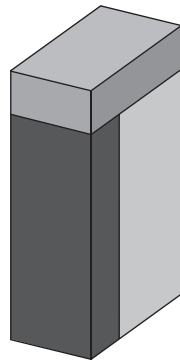
### Electrical characteristics

<b>Standards</b>		IEC 61439
<b>Voltage ratings</b>	Rated operational voltage ( $U_n$ )	415 VAC
	Rated insulation voltage ( $U_i$ )	1000 VAC
	Rated impulse withstand voltage ( $U_{imp}$ )	8 KV
	Rated frequency ( $f_n$ )	50 / 60 Hz
<b>Current ratings</b>	Rated current ( $I_n$ )	upto 2500 A
	Rated peak withstand current ( $I_{pk}$ )	105 kA / 187 kA
	Rated short-time withstand current ( $I_{sw}$ )	50 kA, 3 s & 85 kA, 1 s

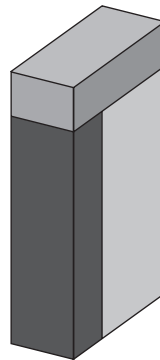


Range of sizes

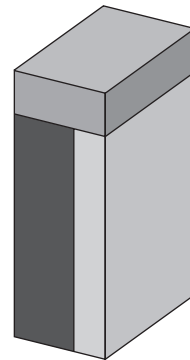
- Functional units
- Cable / Busbar
- Main Busbar



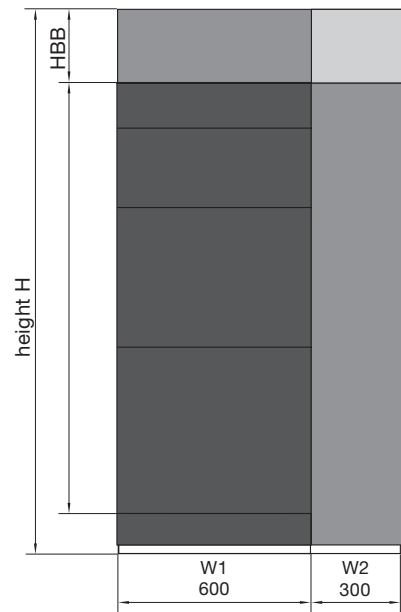
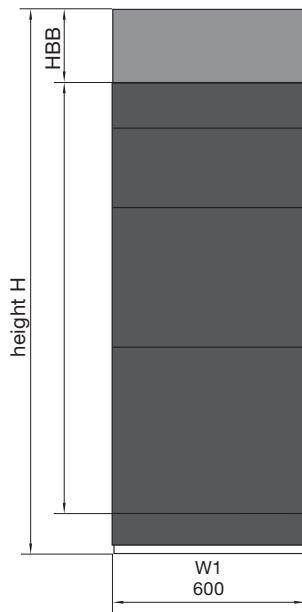
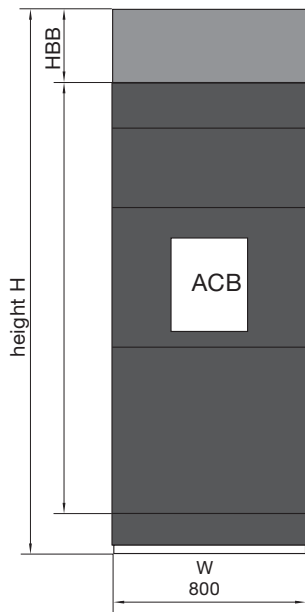
**ACB Panel**



**MCCB Panel**



**MCCB Panel**



<b>Width</b>	800 mm	600 mm	900 mm
<b>Height (with plinth)</b>	2200 mm	2200 mm	
<b>Depth</b>	800 mm	800 mm	
<b>Horizontal busbar (HBB)</b>	350 mm	350 mm	

# Flexibly scalable installations

This system is flexible and allows perfectly smooth integration in all types of projects, including multimedia or automation devices. Using a wide choice of functional accessories, you can easily associate multiple enclosures or add rows of modules to optimize space. vega D distribution boards guarantee installation without unnecessary effort and constraints. And to save even more time, partially equipped enclosures can also be ordered.



## Professional finishing

Clip-on label holder & above or below modular products for perfect alignment. Doors to choose from, solid or transparent. Timeless design and impeccable finish. Outside of the modular footprint.

## Smart packaging


Easy unpacking  
Storage of ingenious dismantled parts Reusable / Recyclable for a future shipment

## Easy cabling

More accessibility on the sides and more spaces between the back of the cabinet and the DIN rail. Fixing without tools.



### Characteristics

Vega D flush and surface mounting enclosures range is adapted to installations in residential and commercial premises. The vega D range includes enclosures from 2 up to 7 rows from 48 to 168  capacities.

### Delivered with

- quickconnect earth terminal block
- blanking clip
- marking strip
- pocket plan
- cable strain relief bar

### Technical data

- IP30 and IK07 without door
- IP40 and IK08 with door (flush)
- IP41 and IK08 with door (surface)
- class II
- DIN rail mounting
- colour: RAL 9010
- material: metallic enclosure
- empty space for equipment unit for enclosure to be completed







**Note:** enclosures of this range are delivered without doors.



FU42DN

### Full equipped flush enclosures

- without door, low depth (150mm)
- w. 550 x d. 150 mm
- frame height: 40 mm







Description	Height (mm)	quickconnect terminals	Cat. ref.
2 rows (48  )	537	1 x KN26E	<b>FU22DN</b>
3 rows (72  )	687	2 x KN22E+ 1 x KN99E	<b>FU32DN</b>
4 rows (96  )	837	1 x KN22E + 1 x KN26E + 1 x KN99E	<b>FU42DN</b>
5 rows (120  )	987	1 x KN22E + 1 x KN26E + 1 x KN99E	<b>FU52DN</b>
6 rows (144  )	1137	3 x KN26E+ 2 x KN99E	<b>FU62DN</b>
7 rows (168  )	1287	3 x KN26E+ 2 x KN99E	<b>FU72DN</b>



FD52DN

### Full equipped surface enclosures

- without door
- w. 550 x d. 193 mm

Description	Height (mm)	quickconnect terminals	Cat. ref.
2 rows (48  )	450	1 x KN26E	<b>FD22DN</b>
3 rows (72  )	600	2 x KN22E+ 1 x KN99E	<b>FD32DN</b>
4 rows (96  )	750	1 x KN22E + 1 x KN26E + 1 x KN99E	<b>FD42DN</b>
5 rows (120  )	900	1 x KN22E + 1 x KN26E + 1 x KN99E	<b>FD52DN</b>
6 rows (144  )	1050	3 x KN26E+ 2 x KN99E	<b>FD62DN</b>
7 rows (168  )	1200	3 x KN26E+ 2 x KN99E	<b>FD72DN</b>



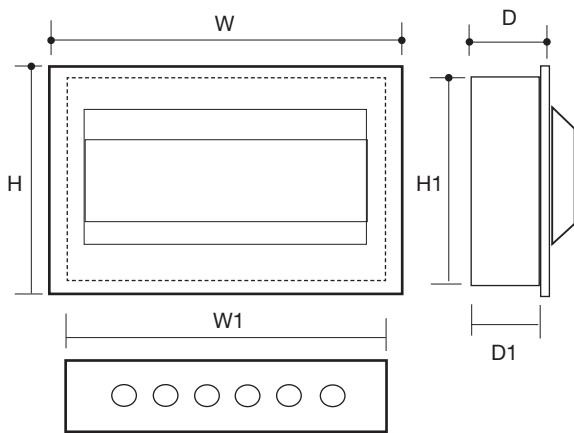
FD52TN

### Transparent doors

- door opening angle 135°

Description	Height (mm)	Cat. ref.
for FD22DN, FU22DN	350	<b>FD22TN</b>
for FD32DN FU32DN	500	<b>FD32TN</b>
for FD42DN, FU42DN	650	<b>FD42TN</b>
for FD52DN, FU52DN	800	<b>FD52TN</b>
for FD62DN, FU62DN	950	<b>FD62TN</b>
for FD62DN, FU62DN	1100	<b>FD72TN</b>

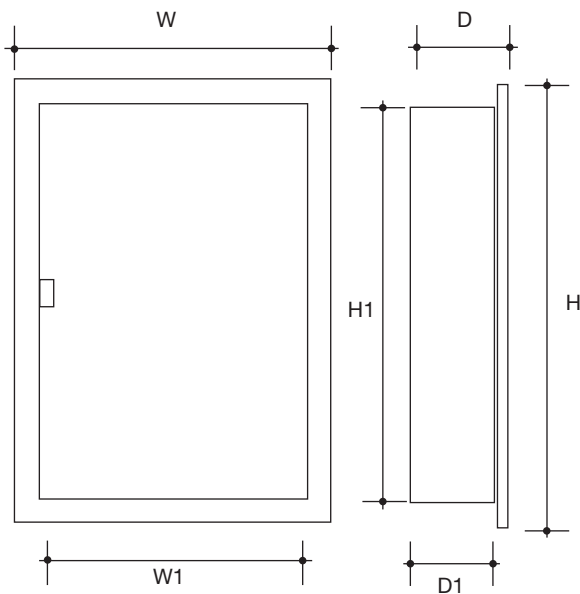
**invicta VT consumer units**



**Dimensions (mm)**

Reference	H	W	D	H1	W1	D1
VT04FM	251	234	92	226	208	70
VT06FM	251	270	92	226	244	70
VT08FM	251	306	92	226	280	70
VT10FM	251	342	92	226	316	70
VT12FM	251	378	92	226	352	70
VT16FM	251	450	92	226	424	70
VT04SM	231	214	92	226	208	70
VT06SM	231	250	92	226	244	70
VT08SM	231	286	92	226	280	70
VT10SM	231	322	92	226	316	70
VT12SM	231	358	92	226	352	70
VT16SM	231	430	92	226	424	70
VT08FD-T	251	270	92	226	244	70
VT12FD-T	251	270	92	226	244	70
VT18FD-T	251	450	92	226	424	70
VT08SD-T	231	250	92	226	244	70
VT12SD-T	231	322	92	226	316	70
VT18SD-T	231	430	92	226	424	70

**invicta DR DIN rail boards**

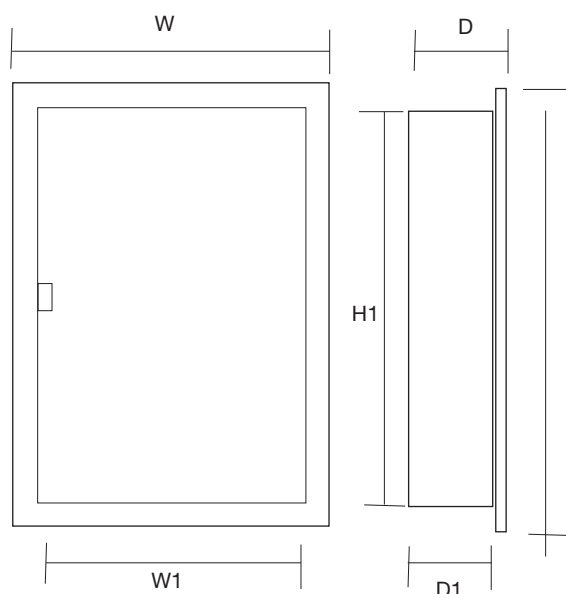


**Dimensions (mm)**

References (flush)	H	W	D	H1	W1	D1
DR16F	350	430	110	320	400	110
DR32F	500	430	110	470	400	110
DR48F	650	430	110	620	400	110
DR64F	800	430	110	770	400	110
DR80F	950	430	110	920	400	110
DR96F	1100	430	110	1070	400	110
DR424F	800	572	115	770	542	110
DR524F	950	572	115	920	542	110
DR624F	1110	572	115	1070	542	110

References (surface)	H	W	D	H1	W1	D1
DR16S	325	405	110	320	400	110
DR32S	475	405	110	470	400	110
DR48S	625	405	110	620	400	110
DR64S	775	405	110	770	400	110
DR80S	925	405	110	920	400	110
DR96S	1075	405	110	1070	400	110
DR424S	775	547	115	770	542	110
DR524S	925	547	115	920	542	110
DR624S	1075	547	115	1070	542	110

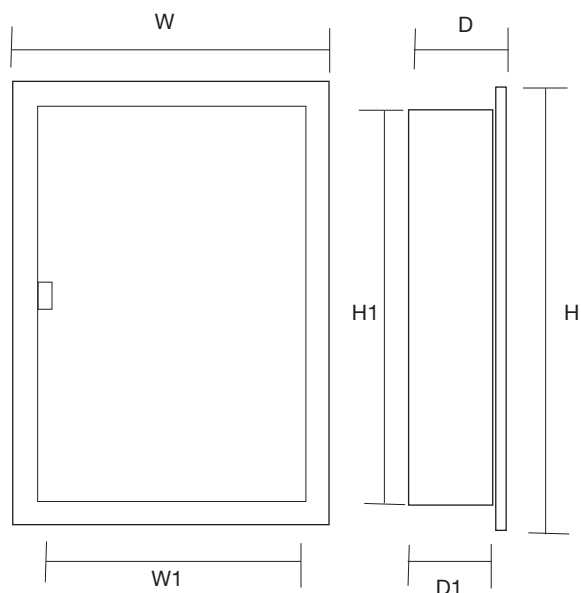
invicta 125A - TPN distribution boards - fixed busbar



Reference (surface)	H	W	D	H1	W1	D1
JK1B04S2	495	445	125	490	440	120
JK1B06S2	555	445	125	550	440	120
JK1B08S2	605	445	125	600	440	120
JK1B10S2	660	445	125	655	440	120
JK1B12S2	715	445	125	710	440	120
JK1B14S2	770	445	125	765	440	120
JK1B16S2	820	445	125	815	440	120
JK1B18S2	940	445	125	935	440	120
JK1B24S2	1105	445	125	1100	440	120

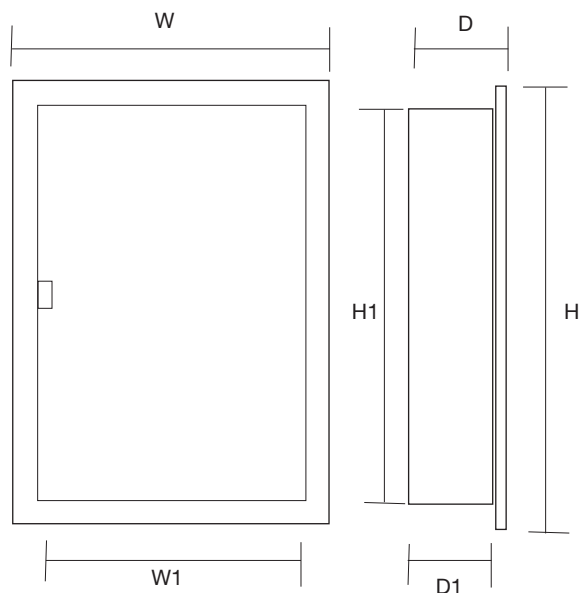
Reference (flush)	H	W	D	H1	W1	D1
JK1B04F2	520	470	125	490	440	120
JK1B06F2	580	470	125	550	440	120
JK1B08F2	630	470	125	600	440	120
JK1B10F2	685	470	125	655	440	120
JK1B12F2	740	470	125	710	440	120
JK1B14F2	795	470	125	765	440	120
JK1B16F2	845	470	125	815	440	120
JK1B18F2	965	470	125	935	440	120
JK1B24F2	1130	470	125	1100	440	120

invicta 125A - TPN distribution boards - split busbar



Reference (surface)	H	W	D	H1	W1	D1
JK1B022S2WA316	555	445	125	550	440	120
JK1B042S2WA316	610	445	125	605	440	120
JK1B044S2WA316	665	445	125	660	440	120
JK1B062S2WA316	665	445	125	660	440	120
JK1B064S2WA316	720	445	125	715	440	120
JK1B082S2WA316	720	445	125	715	440	120
JK1B066S2	775	445	125	770	440	120
JK1B084S2	775	445	125	770	440	120
JK1B086S2	830	445	125	825	440	120
JK1B088S2	885	445	125	880	440	120
JK1B104S2	935	445	125	930	440	120

Reference (flush)	H	W	D	H1	W1	D1
JK1B022F2WA316	580	470	125	550	440	120
JK1B042F2WA316	635	470	125	605	440	120
JK1B044F2WA316	690	470	125	660	440	120
JK1B062F2WA316	690	470	125	660	440	120
JK1B064F2WA316	745	470	125	715	440	120
JK1B082F2WA316	745	470	125	715	440	120
JK1B066F2	800	470	125	770	440	120
JK1B084F2	800	470	125	770	440	120
JK1B086F2	855	470	125	825	440	120
JK1B088F2	910	470	125	880	440	120
JK1B104F2	960	470	125	930	440	120



**invicta 250A - TPN distribution boards**

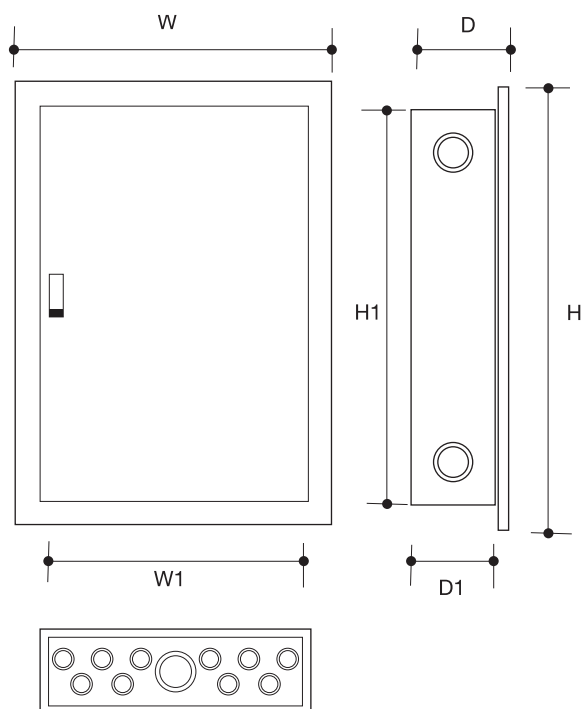
Reference (surface)	H	W	D	H1	W1	D1
<b>JK2B04S2</b>	665	445	125	650	440	120
<b>JK2B06S2</b>	705	445	125	700	440	120
<b>JK2B08S2</b>	760	445	125	755	440	120
<b>JK2B10S2</b>	815	445	125	810	440	120
<b>JK2B12S2</b>	865	445	125	860	440	120
<b>JK2B14S2</b>	920	445	125	915	440	120
<b>JK2B16S2</b>	975	445	125	970	440	120
<b>JK2B18S2</b>	1030	445	125	1025	440	120
<b>JK2B24S2</b>	1195	445	125	1190	440	120

Reference (flush)	H	W	D	H1	W1	D1
<b>JK2B04F2</b>	680	470	125	650	440	120
<b>JK2B06F2</b>	730	470	125	700	440	120
<b>JK2B08F2</b>	785	470	125	755	440	120
<b>JK2B10F2</b>	840	470	125	810	440	120
<b>JK2B12F2</b>	890	470	125	860	440	120
<b>JK2B14F2</b>	945	470	125	915	440	120
<b>JK2B16F2</b>	1000	470	125	970	440	120
<b>JK2B18F2</b>	1055	470	125	1025	440	120
<b>JK2B24F2</b>	1220	470	125	1190	440	120

**invicta TPN board accessories**

Reference	H	W	D	H1	W1	D1
<b>JK2E01F</b>	300	470	125	270	440	120
<b>JK2E01S</b>	275	445	125	270	440	120
<b>JK2E16S</b>	275	445	125	270	440	120
<b>JK2E32S</b>	425	445	125	420	440	120
<b>JK2E48S</b>	575	445	125	570	440	120
<b>JK2E16F</b>	300	470	125	270	440	120
<b>JK2E32F</b>	450	470	125	420	440	120
<b>JK2E48F</b>	600	470	125	570	440	120





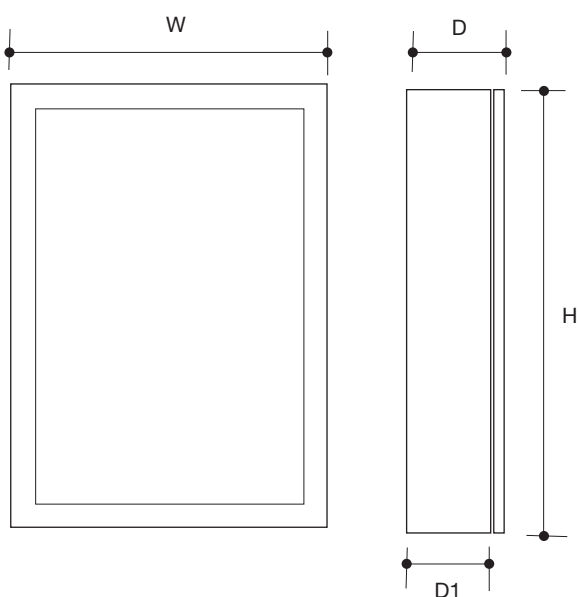
**Gland plate knockouts**  
60x50mm - 1nos  
32x20mm - 10 nos

**Side Knockouts**  
60x50mm - 4nos

### TPN load center

Reference (flush) 125A load center	H	W	D	H1	W1	D1
JK2B04F4	588	430	125	558	400	120
JK2B06F4	641	430	125	611	400	120
JK2B08F4	694	430	125	664	400	120
JK2B10F4	800	430	125	770	400	120
JK2B12F4	800	430	125	770	400	120
JK2B14F4	906	430	125	876	400	120
JK2B16F4	906	430	125	876	400	120
JK2B24F4	1118	430	125	1088	400	120

Reference (flush) 250A load center	H	W	D	H1	W1	D1
JK2B04F5	699	430	125	669	400	120
JK2B06F5	752	430	125	722	400	120
JK2B08F5	805	430	125	775	400	120
JK2B10F5	880	430	125	850	400	120
JK2B12F5	913	430	125	883	400	120
JK2B14F5	986	430	125	956	400	120
JK2B16F5	1060	430	125	1030	400	120
JK2B24F5	1233	430	125	1203	400	120



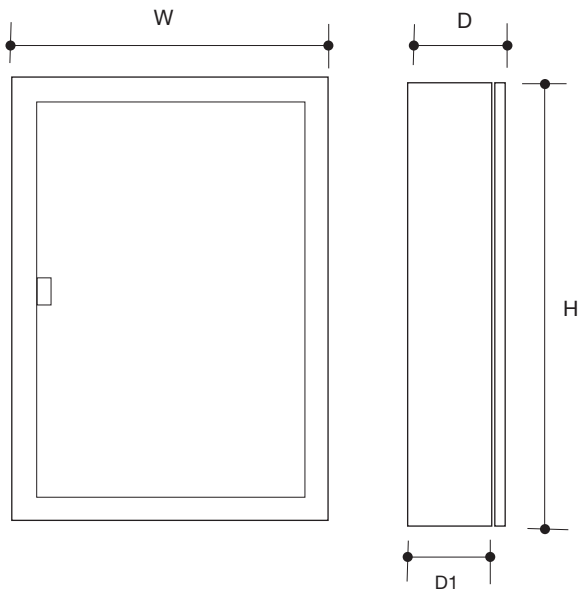
### invicta - 250A panel board system 250A incoming, 125A outgoing

Reference (surface)	H	W	D1	D
JN2B00002S2	700	615	160	165
JN2B00004S2	775	615	160	165
JN2B00006S2	855	615	160	165
JN2B00008S2	925	615	160	165
JN2B00010S2	1000	615	160	165
JN2B00012S2	1115	615	160	165
JN2B00016S2	1375	615	160	165

Reference (surface)	H	W	D1	D
JN2B00002S3	860	615	160	165
JN2B00004S3	935	615	160	165
JN2B00006S3	1010	615	160	165
JN2B00008S3	1085	615	160	165
JN2B00010S3	1160	615	160	165
JN2B00012S3	1275	615	160	165
JN2B00016S3	1535	615	160	165

### Dimensions of spreader box + din extension box

Reference	H	W	D
JN2E01S	303	615	160
JN2E02S	179	615	160
JN2E20S	303	615	160



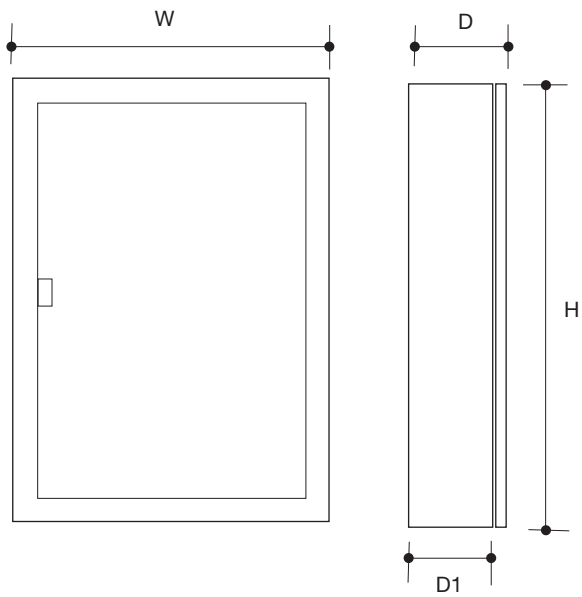
**invicta - 400A panel board system**  
400A incoming, 125A / 250A outgoing

Reference (surface)	H	W	D1	D
JN4B00004S2	930	690	200	205
JN4B00006S2	1005	690	200	205
JN4B00008S2	1080	690	200	205
JN4B00010S2	1155	690	200	205
JN4B00012S2	1230	690	200	205
JN4B00016S2	1380	690	200	205
JN4B00202S2	960	846	200	205
JN4B00204S2	1035	846	200	205
JN4B00206S2	1110	846	200	205
JN4B00208S2	1185	846	200	205
JN4B00210S2	1260	846	200	205
JN4B00214S2	1410	846	200	205

Reference (surface)	H	W	D1	D
JN4B00004S3	1090	690	200	205
JN4B00006S3	1165	690	200	205
JN4B00008S3	1240	690	200	205
JN4B00010S3	1315	690	200	205
JN4B00012S3	1390	690	200	205
JN4B00016S3	1540	690	200	205
JN4B00202S3	1120	846	200	205
JN4B00204S3	1195	846	200	205
JN4B00206S3	1270	846	200	205
JN4B00208S3	1345	846	200	205
JN4B00210S3	1420	846	200	205
JN4B00214S3	1570	846	200	205

**Dimensions of spreader box + din extension box**

Reference	H	W	D
JN4E01S	303	690	200
JN4E02S	179	690	200
JN4E24S	303	690	200
JN8E32S	453	615	160



invicta - 800A panel board system  
630A/ 800A incoming 125A/ 250A

Reference (surface)	H	W	D1	D
JN8B00004S2	1035	846	200	205
JN8B00006S2	1110	846	200	205
JN8B00008S2	1215	846	200	205
JN8B00010S2	1320	846	200	205
JN8B00012S2	1410	846	200	205
JN8B00016S2	1620	846	200	205
JN8B00400S2	1095	846	200	205
JN8B00600S2	1200	846	200	205
JN8B00800S2	1305	846	200	205
JN8B01000S2	1410	846	200	205
JN8B01200S2	1515	846	200	205
JN8B01600S2	1725	846	200	205
JN8B00202S2	1065	846	200	205
JN8B00204S2	1140	846	200	205
JN8B00206S2	1215	846	200	205
JN8B00208S2	1320	846	200	205
JN8B00210S2	1410	846	200	205
JN8B00214S2	1560	846	200	205
JN8B00402S2	1170	846	200	205
JN8B00404S2	1245	846	200	205
JN8B00406S2	1350	846	200	205
JN8B00408S2	1440	846	200	205
JN8B00410S2	1650	846	200	205
JN8B00606S2	1485	846	200	205
JN8B00608S2	1620	846	200	205

Dimensions of spreader box + dim. extension box

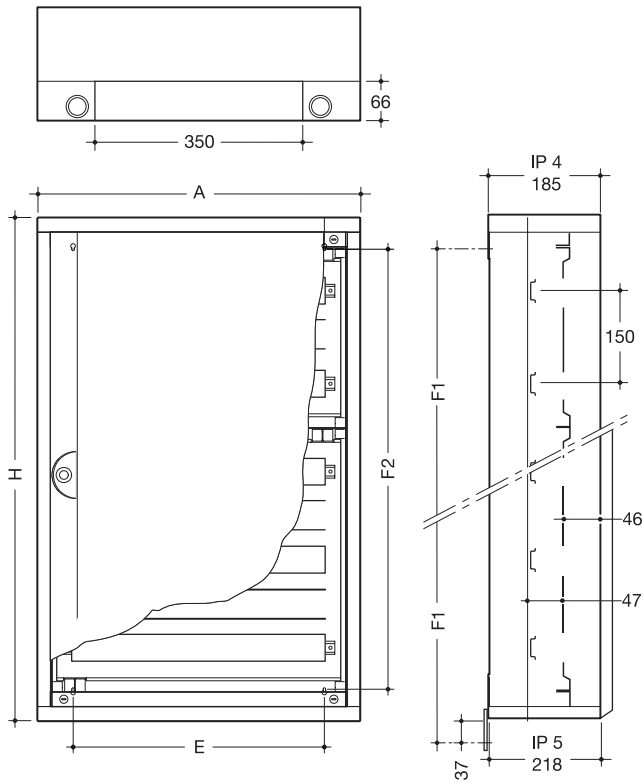
Reference	H	W	D
JN8E01S	303	846	200
JN8E02S	179	846	200
JN8E32S	453	846	200

	H	W	D1	D
JN8B00202S3	1225	846	200	205
JN8B00204S3	1300	846	200	205
JN8B00206S3	1375	846	200	205
JN8B00208S3	1480	846	200	205
JN8B00210S3	1570	846	200	205
JN8B00214S3	1720	846	200	205

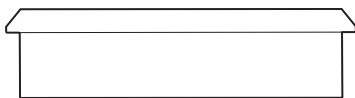
vega D Surface version

Dimensions (mm)

Surface version

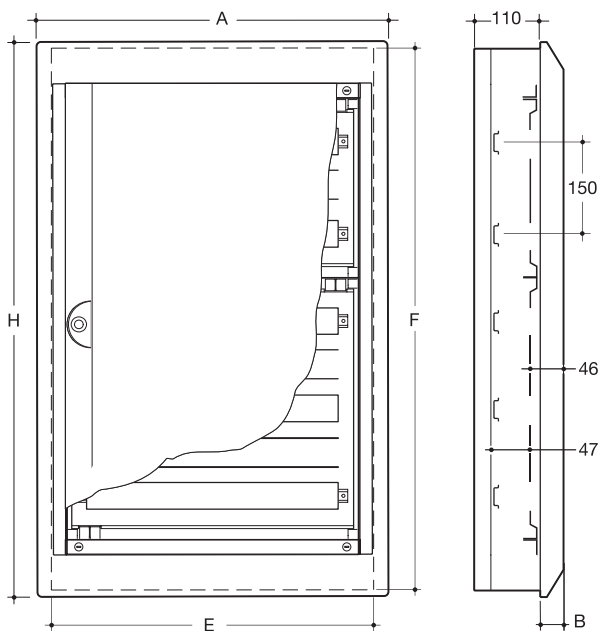


References	Dimensions of box		Fixing		
	A	H	E	F1	F2
FD22DN	550	450	350	325	245
FD32DN	550	600	350	475	395
FD42DN	550	750	350	625	545
FD52DN	550	900	350	775	695
FD62DN	550	1050	350	925	845
FD72DN	550	1200	350	1075	995



vega D Flush version

Flush version



References	Dimensions external frame			Wall niche	
	A	H	B	E	F
FU22DN	600	537	40	550	506
FU32DN	600	687	40	550	656
FU42DN	600	837	40	550	806
FU52DN	600	987	40	550	956
FU62DN	600	1137	40	550	1106
FU72DN	600	1287	40	550	1256

\* version FUx2AN only





# Main circuit breakers

Our main circuit breakers allow the connection, protection, breaking and switching in the low voltage distribution boards.

The range includes air circuit breakers, moulded case circuit breakers and load break switches.



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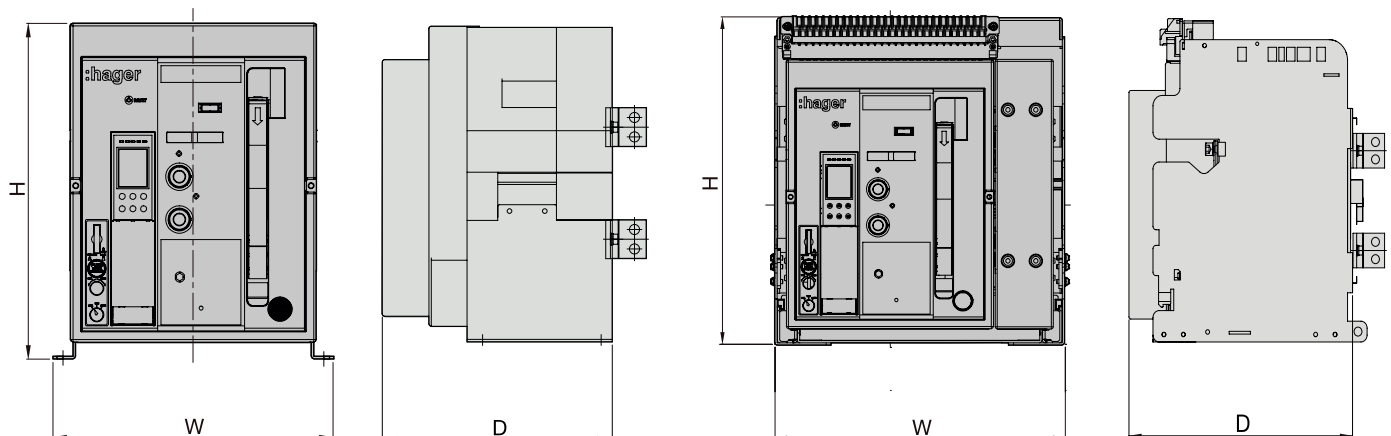
hw ACBs	42
Accessories for hw ACBs	50
h3 MCCBs	60
Accessories for h3 MCCBs	70
h3+ MCCBs	74
Switch disconnectors	82
RCD add-on blocks	83
Accessories for h3+ MCCBs	84
Load break switches	94
Accessories for load break switches	96
Enclosed load break switches	97
Accessories for enclosed load break switches	98

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Frame		A		B			C	
Type		H	N	N	S	P	P	
Rated current	A	630-2000		630-4000			3200-5000	
Rated operating voltage (U <sub>e</sub> )	V	690						
Rated insulation voltage (U <sub>i</sub> )	V	1000						
Rated impulse withstand voltage (U <sub>imp</sub> )	KV	12						
Frequency	Hz	50/60						
Number of poles	poles	3-4						
Current setting range (...x I <sub>n</sub> max)	I <sub>r</sub>	0.4-1.0						
Rated current of neutral pole (...% x I <sub>n</sub> )	%/I <sub>n</sub>	100%						
Rated breaking capacity (I <sub>cu</sub> )	AC 690/600/550V	KA	36	50	50	65	85	85
	AC 415/380/220V	KA	50	65	65	85	100	100
Rated service breaking capacity (I <sub>cs</sub> )	AC 690/600/550V	KA	100% I <sub>cu</sub>					
	AC 415/380/220V	KA	100% I <sub>cu</sub>					
Rated short-time capacity (I <sub>cw</sub> )	1s	KA	50	65	65	85	85	85
	3s	KA	36	36	50	55	65	65
Rated making capacity (kA peak) (I <sub>cm</sub> )	AC 690/600/550V	KA	76	105	105	143	187	187
	AC 415/380/220V	KA	105	143	143	187	220	220
Utilization category (according to IEC 60947-2)		B						
<b>Time</b>								
Maximum total breaking time	ms	40						
Closing operating time	motor charging time	s	10					
	max. closing time	ms	40					
<b>Operating cycle</b>								
Mechanical life cycle	without maintenance	times	20000		15000		10000	
	with maintenance		30000		20000		20000	
Electrical life cycle	without maintenance	times	5000		06-20: 10000 25-40: 5000		2000	
	with maintenance		10000		06-20: 15000 25-40: 10000		5000	
<b>Dimensions</b>								
External dimension (W x H x D, except busbar)	fixed type	3 pole	mm	337x404x296	408x404x296	633x404x296		
		4 pole		422x404x296	523x404x296	803x404x296		
	draw-out type	3 pole		328x460x368	399x460x368	624x460x368		
		4 pole		413x460x368	514x460x368	794x460x368		
Weight	fixed type	3 pole	kg	34	06-32: 44 40: 61	76		
		4 pole		44	06-32: 55 40: 81	81		
	draw-out type	3 pole		63	06-32: 87 40: 107	145		
		4 pole		80	06-32: 130 40: 161	173		

**Fixed type**

**Draw-out type**



### Characteristics

Reference		HWX611	HWX612	HWX613	HWX621	HWX622	HWX623	HWX633
Type		LI	LSI	LSIG	LI Amp	LSI Amp	LSIG Amp	Energy
Frequency 50/60 Hz		•	•	•	•	•	•	•
OCR								
Power	externals	•	•	•	•	•	•	•
	self	•	•	•	•	•	•	•
Protection function	LTD	•	•	•	•	•	•	•
	STD	-	•	•	-	•	•	•
	INST	•	•	•	•	•	•	•
	PTA	-	-	-	•	•	•	•
	GFT	-	-	•	-	-	•	•
	neutral protection	•	•	•	•	•	•	•
	fail safe	•	•	•	•	•	•	•
	MCR	•	•	•	•	•	•	•
Indication	long time pick up LED	•	•	•	•	•	•	•
	fault LED	L, I	L, S/I	L, S/I, G	L, I PTA	L, S/I PTA	L, S/I, G PTA	L, S/I, G PTA
	LCD display, Amp and measurement	-	-	-	•	•	•	-
	LCD display, Amp, Energy, voltage, power, energy, demand and measurement	-	-	-	-	-	-	•
Digital output	separately continuous contact	• (2NO) L, I	• (2NO) L, S/I	• (3NO) L, S/I, G	• (3NO) L, I, PTA	• (3NO) L, S/I, PTA	• (4NO) L, S/I, G, PTA	• (4NO) L, S/I, G, PTA
ZSI		•	•	•	•	•	•	•
Reset button		•	•	•	•	•	•	•
Advanced functions	COM	-	-	-	•	•	•	•
	event / fault recording	-	-	-	•	•	•	•
	under/over voltage protection	-	-	-	-	-	-	•
	unbalanced current / voltage protection	-	-	-	-	-	-	•
	reverse power protection	-	-	-	-	-	-	•
	power P, Q, S, power factor, 3 phases voltage	-	-	-	-	-	-	•
	demand current / voltage	-	-	-	-	-	-	•



**Air Circuit Breakers, frame A**

Icu=Ics=50KA  
Icu=Ics=Icw



HWAN416

Description	Rating (A)	Nr. of poles	Cat. ref.
ACB, frame A	630	3	<b>HWAH306_</b>
ACB, frame A	800	3	<b>HWAH308_</b>
ACB, frame A	1000	3	<b>HWAH310_</b>
ACB, frame A	1250	3	<b>HWAH312_</b>
ACB, frame A	1600	3	<b>HWAH316_</b>
ACB, frame A	2000	3	<b>HWAH320_</b>
ACB, frame A	630	4	<b>HWAH406_</b>
ACB, frame A	800	4	<b>HWAH408_</b>
ACB, frame A	1000	4	<b>HWAH410_</b>
ACB, frame A	1250	4	<b>HWAH412_</b>
ACB, frame A	1600	4	<b>HWAH416_</b>
ACB, frame A	2000	4	<b>HWAH420_*</b>

**Air Circuit Breakers, frame A**

Icu=Ics=65KA  
Icu=Ics=Icw

Description	Rating (A)	Nr. of poles	Cat. ref.
ACB, frame A	630	3	<b>HWAN306_</b>
ACB, frame A	800	3	<b>HWAN308_</b>
ACB, frame A	1000	3	<b>HWAN310_</b>
ACB, frame A	1250	3	<b>HWAN312_</b>
ACB, frame A	1600	3	<b>HWAN316_</b>
ACB, frame A	2000	3	<b>HWAN320_</b>
ACB, frame A	630	4	<b>HWAN406_</b>
ACB, frame A	800	4	<b>HWAN408_</b>
ACB, frame A	1000	4	<b>HWAN410_</b>
ACB, frame A	1250	4	<b>HWAN412_</b>
ACB, frame A	1600	4	<b>HWAN416_</b>
ACB, frame A	2000	4	<b>HWAN420_*</b>

### Air Circuit Breakers, frame B

Icu=Ics=65KA  
Icu=Ics=Icw



HWBN416

Description	Rating (A)	Nr. of poles	Cat. ref.
ACB, frame B	630	3	<a href="#">HWBN306_</a>
ACB, frame B	800	3	<a href="#">HWBN308_</a>
ACB, frame B	1000	3	<a href="#">HWBN310_</a>
ACB, frame B	1250	3	<a href="#">HWBN312_</a>
ACB, frame B	1600	3	<a href="#">HWBN316_</a>
ACB, frame B	2000	3	<a href="#">HWBN320_</a>
ACB, frame B	2500	3	<a href="#">HWBN325_</a>
ACB, frame B	2500	3	<a href="#">HWBN326_</a>
ACB, frame B	3200	3	<a href="#">HWBN332_</a>
ACB, frame B	4000	3	<a href="#">HWBN340_</a>
ACB, frame B	630	4	<a href="#">HWBN406_</a>
ACB, frame B	800	4	<a href="#">HWBN408_</a>
ACB, frame B	1000	4	<a href="#">HWBN410_</a>
ACB, frame B	1250	4	<a href="#">HWBN412_</a>
ACB, frame B	1600	4	<a href="#">HWBN416_</a>
ACB, frame B	2000	4	<a href="#">HWBN420_</a>
ACB, frame B	2500	4	<a href="#">HWBN425_</a>
ACB, frame B	2500	4	<a href="#">HWBN426_</a>
ACB, frame B	3200	4	<a href="#">HWBN432_</a>
ACB, frame B	4000	4	<a href="#">HWBN440_</a>

### Air Circuit Breakers, frame B

Icu=Ics=85KA  
Icu=Ics=Icw



HWBS416

Description	Rating (A)	Nr. of poles	Cat. ref.
ACB, frame B	630	3	<a href="#">HWBS306_</a>
ACB, frame B	800	3	<a href="#">HWBS308_</a>
ACB, frame B	1000	3	<a href="#">HWBS310_</a>
ACB, frame B	1250	3	<a href="#">HWBS312_</a>
ACB, frame B	1600	3	<a href="#">HWBS316_</a>
ACB, frame B	2000	3	<a href="#">HWBS320_</a>
ACB, frame B	2500	3	<a href="#">HWBS325_</a>
ACB, frame B	3200	3	<a href="#">HWBS332_</a>
ACB, frame B	4000	3	<a href="#">HWBS340_</a>
ACB, frame B	630	4	<a href="#">HWBS406_</a>
ACB, frame B	800	4	<a href="#">HWBS408_</a>
ACB, frame B	1000	4	<a href="#">HWBS410_</a>
ACB, frame B	1250	4	<a href="#">HWBS412_</a>
ACB, frame B	1600	4	<a href="#">HWBS416_</a>
ACB, frame B	2000	4	<a href="#">HWBS420_</a>
ACB, frame B	2500	4	<a href="#">HWBS425_</a>
ACB, frame B	3200	4	<a href="#">HWBS432_</a>
ACB, frame B	4000	4	<a href="#">HWBS440_</a>

**Air Circuit Breakers, frame B**

Icu=Ics=100KA  
Icw=85KA

Description	Rating (A)	Nr. of poles	Cat. ref
ACB, frame B	630	3	<b>HWBP306_</b>
ACB, frame B	800	3	<b>HWBP308_</b>
ACB, frame B	1000	3	<b>HWBP310_</b>
ACB, frame B	1250	3	<b>HWBP312_</b>
ACB, frame B	1600	3	<b>HWBP316_</b>
ACB, frame B	2000	3	<b>HWBP320_</b>
ACB, frame B	2500	3	<b>HWBP325_</b>
ACB, frame B	3200	3	<b>HWBP332_</b>
ACB, frame B	4000	3	<b>HWBP340_</b>
ACB, frame B	630	4	<b>HWBP406_</b>
ACB, frame B	800	4	<b>HWBP408_</b>
ACB, frame B	1000	4	<b>HWBP410_</b>
ACB, frame B	1250	4	<b>HWBP412_</b>
ACB, frame B	1600	4	<b>HWBP416_</b>
ACB, frame B	2000	4	<b>HWBP420_</b>
ACB, frame B	2500	4	<b>HWBP425_</b>
ACB, frame B	3200	4	<b>HWBP432_</b>
ACB, frame B	4000	4	<b>HWBP440_</b>

**Air Circuit Breakers, frame C**

Icu=Ics=100KA  
Icw=85KA



HWCP432

Description	Rating (A)	Nr. of poles	Cat. ref
ACB, frame C	3200	3	<b>HWCP332_</b>
ACB, frame C	4000	3	<b>HWCP340_</b>
ACB, frame C	5000	3	<b>HWCP350_</b>
ACB, frame C	3200	4	<b>HWCP432_</b>
ACB, frame C	4000	4	<b>HWCP440_</b>
ACB, frame C	5000	4	<b>HWCP450_</b>

### Switch disconnectors, frame A

I<sub>cw</sub>=50KA



HWAH416

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame A	630	3	<b>HWAH306_A</b>
switch disconnector, frame A	800	3	<b>HWAH308_A</b>
switch disconnector, frame A	1000	3	<b>HWAH310_A</b>
switch disconnector, frame A	1250	3	<b>HWAH312_A</b>
switch disconnector, frame A	1600	3	<b>HWAH316_A</b>
switch disconnector, frame A	2000	3	<b>HWAH320_A</b>
switch disconnector, frame A	630	4	<b>HWAH406_A</b>
switch disconnector, frame A	800	4	<b>HWAH408_A</b>
switch disconnector, frame A	1000	4	<b>HWAH410_A</b>
switch disconnector, frame A	1250	4	<b>HWAH412_A</b>
switch disconnector, frame A	1600	4	<b>HWAH416_A</b>
switch disconnector, frame A	2000	4	<b>HWAH420_A</b>

### Switch disconnectors, frame A

I<sub>cw</sub>=65KA

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame A	630	3	<b>HWAN306_A</b>
switch disconnector, frame A	800	3	<b>HWAN308_A</b>
switch disconnector, frame A	1000	3	<b>HWAN310_A</b>
switch disconnector, frame A	1250	3	<b>HWAN312_A</b>
switch disconnector, frame A	1600	3	<b>HWAN316_A</b>
switch disconnector, frame A	2000	3	<b>HWAN320_A</b>
switch disconnector, frame A	630	4	<b>HWAN406_A</b>
switch disconnector, frame A	800	4	<b>HWAN408_A</b>
switch disconnector, frame A	1000	4	<b>HWAN410_A</b>
switch disconnector, frame A	1250	4	<b>HWAN412_A</b>
switch disconnector, frame A	1600	4	<b>HWAN416_A</b>
switch disconnector, frame A	2000	4	<b>HWAN420_A</b>



HWBN416

### Switch disconnectors, frame B

I<sub>cw</sub>=65kA(1s)  
I<sub>cw</sub>=50 kA (3s)

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame B	630	3	<b>HWBN306_A</b>
switch disconnector, frame B	800	3	<b>HWBN308_A</b>
switch disconnector, frame B	1000	3	<b>HWBN310_A</b>
switch disconnector, frame B	1250	3	<b>HWBN312_A</b>
switch disconnector, frame B	1600	3	<b>HWBN316_A</b>
switch disconnector, frame B	2000	3	<b>HWBN320_A</b>
switch disconnector, frame B	2500	3	<b>HWBN325_A</b>
switch disconnector, frame B	3200	3	<b>HWBN332_A</b>
switch disconnector, frame B	4000	3	<b>HWBN340_A</b>
switch disconnector, frame B	630	4	<b>HWBN406_A</b>
switch disconnector, frame B	800	4	<b>HWBN408_A</b>
switch disconnector, frame B	1000	4	<b>HWBN410_A</b>
switch disconnector, frame B	1250	4	<b>HWBN412_A</b>
switch disconnector, frame B	1600	4	<b>HWBN416_A</b>
switch disconnector, frame B	2000	4	<b>HWBN420_A</b>
switch disconnector, frame B	2500	4	<b>HWBN425_A</b>
switch disconnector, frame B	3200	4	<b>HWBN432_A</b>
switch disconnector, frame B	4000	4	<b>HWBN440_A</b>



HWBS416

### Switch disconnectors, frame B

I<sub>cw</sub>=85kA (1s)  
I<sub>cw</sub>=55 kA (3s)

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame B	630	3	<b>HWBS306_A</b>
switch disconnector, frame B	800	3	<b>HWBS308_A</b>
switch disconnector, frame B	1000	3	<b>HWBS310_A</b>
switch disconnector, frame B	1250	3	<b>HWBS312_A</b>
switch disconnector, frame B	1600	3	<b>HWBS316_A</b>
switch disconnector, frame B	2000	3	<b>HWBS320_A</b>
switch disconnector, frame B	2500	3	<b>HWBS325_A</b>
switch disconnector, frame B	3200	3	<b>HWBS332_A</b>
switch disconnector, frame B	4000	3	<b>HWBS340_A</b>
switch disconnector, frame B	630	4	<b>HWBS406_A</b>
switch disconnector, frame B	800	4	<b>HWBS408_A</b>
switch disconnector, frame B	1000	4	<b>HWBS410_A</b>
switch disconnector, frame B	1250	4	<b>HWBS412_A</b>
switch disconnector, frame B	1600	4	<b>HWBS416_A</b>
switch disconnector, frame B	2000	4	<b>HWBS420_A</b>
switch disconnector, frame B	2500	4	<b>HWBS425_A</b>
switch disconnector, frame B	3200	4	<b>HWBS432_A</b>
switch disconnector, frame B	4000	4	<b>HWBS440_A</b>

### Switch disconnectors, frame B

l<sub>cw</sub>=85kA (1s)  
l<sub>cw</sub>=65 kA (3s)

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame B	630	3	<b>HWBP306__A_</b>
switch disconnector, frame B	800	3	<b>HWBP308__A_</b>
switch disconnector, frame B	1000	3	<b>HWBP310__A_</b>
switch disconnector, frame B	1250	3	<b>HWBP312__A_</b>
switch disconnector, frame B	1600	3	<b>HWBP316__A_</b>
switch disconnector, frame B	2000	3	<b>HWBP320__A_</b>
switch disconnector, frame B	2500	3	<b>HWBP325__A_</b>
switch disconnector, frame B	3200	3	<b>HWBP332__A_</b>
switch disconnector, frame B	4000	3	<b>HWBP340__A_</b>
switch disconnector, frame B	630	4	<b>HWBP406__A_</b>
switch disconnector, frame B	800	4	<b>HWBP408__A_</b>
switch disconnector, frame B	1000	4	<b>HWBP410__A_</b>
switch disconnector, frame B	1250	4	<b>HWBP412__A_</b>
switch disconnector, frame B	1600	4	<b>HWBP416__A_</b>
switch disconnector, frame B	2000	4	<b>HWBP420__A_</b>
switch disconnector, frame B	2500	4	<b>HWBP425__A_</b>
switch disconnector, frame B	3200	4	<b>HWBP432__A_</b>
switch disconnector, frame B	4000	4	<b>HWBP440__A_</b>

### Switch disconnectors, frame C

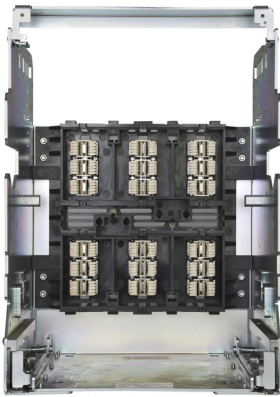
l<sub>cw</sub>=85kA (1s)  
l<sub>cw</sub>=65 kA (3s)

Description	Rating (A)	Nr. of poles	Cat. ref
switch disconnector, frame C	3200	3	<b>HWCP332__A_</b>
switch disconnector, frame C	4000	3	<b>HWCP340__A_</b>
switch disconnector, frame C	5000	3	<b>HWCP350__A_</b>
switch disconnector, frame C	3200	4	<b>HWCP432__A_</b>
switch disconnector, frame C	4000	4	<b>HWCP440__A_</b>
switch disconnector, frame C	5000	4	<b>HWCP450__A_</b>



HWCP432





HWY750

**Chassis**

Description	Pack qty.	Cat. ref.
frame A, 3 pole, 630 -1600A	1	<b>HWY750</b>
frame A, 4 pole, 630 -1600A	1	<b>HWY751</b>
frame A, 3 pole, 2000A	1	<b>HWY752</b>
frame A, 4 pole, 2000A	1	<b>HWY753</b>
frame B, 3 pole, 630 -2500A	1	<b>HWY754</b>
frame B, 4 pole, 630 -2500A	1	<b>HWY755</b>
frame B, 3 pole, 3200A	1	<b>HWY756</b>
frame B, 4 pole, 3200A	1	<b>HWY757</b>
frame B, 3 pole, 4000A vertical	1	<b>HWY758</b>
frame B, 4 pole, 4000A vertical	1	<b>HWY759</b>
frame B, 3 pole, 4000A horizontal	1	<b>HWY760</b>
frame B, 4 pole, 4000A horizontal	1	<b>HWY761</b>
frame C, 3 pole, 3200-5000A vertical	1	<b>HWY762</b>
frame C, 4 pole, 3200-5000A vertical	1	<b>HWY763</b>
frame C, 3 pole, 3200-5000A horizontal	1	<b>HWY764</b>
frame C, 4 pole, 3200-5000A horizontal	1	<b>HWY765</b>



HWX633

**Protection trip units (OCR)**

Description	Pack qty.	Cat. ref.
LI	1	<b>HWX611</b>
LSI	1	<b>HWX612</b>
LSIG	1	<b>HWX613</b>
Amp LI	1	<b>HWX621</b>
Amp LSI	1	<b>HWX622</b>
Amp LSIG	1	<b>HWX623</b>
Energy LSIG	1	<b>HWX633</b>



HWY650

**Voltage module**

Description	Pack qty.	Cat. ref.
voltage module	1	<b>HWY650</b>



HWY654

**Remote control units**

Description	Pack qty.	Cat. ref.
remote control unit	1	<b>HWY639</b>
remote control temperature unit	1	<b>HWY654</b>
remote control temperature unit + temperature sensor	1	<b>HWY655</b>



HWY640

### Temperature sensor and supports

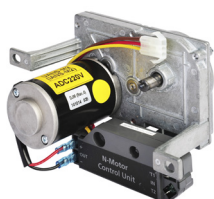
Description	Pack qty.	Cat. ref.
temperature sensor	1	<b>HWY640</b>
support for frame A, 3 pole	1	<b>HWY690</b>
support for frame A, 4 pole	1	<b>HWY691</b>
support for frame B, 3 pole	1	<b>HWY692</b>
support for frame B, 4 pole	1	<b>HWY693</b>
support for frame C, 3 pole	1	<b>HWY695</b>
support for frame C, 4 pole	1	<b>HWY696</b>



HWX573

### Position switches

Description	Pack qty.	Cat. ref.
isolated 1C, test 1C, connected 2C	1	<b>HWX570</b>
inserted 1C, isolated 1C, test 1C, connected 1C	1	<b>HWX571</b>
inserted 1C, isolated 1C, test 3C, connected 3C	1	<b>HWX572</b>
inserted 2C, isolated 2C, test 2C, connected 2C	1	<b>HWX573</b>



HWX544

### Motor operators (MO)

Description	Pack qty.	Cat. ref.
motor operator DC 24V	1	<b>HWX541</b>
motor operator DC 48V	1	<b>HWX542</b>
motor operator AC/DC 110V	1	<b>HWX543</b>
motor operator AC/DC 220V	1	<b>HWX544</b>



HWX554

### Closing coils (CC)

Description	Pack qty.	Cat. ref.
closing coil DC 24V	1	<b>HWX551</b>
closing coil DC 48V	1	<b>HWX552</b>
closing coil AC/DC 110V	1	<b>HWX553</b>
closing coil AC/DC 220V	1	<b>HWX554</b>
closing coil AC 380/415V	1	<b>HWX555</b>
closing coil AC 440V	1	<b>HWX556</b>



HWX501

### Shunt trip coils (SH)

Description	Pack qty.	Cat. ref.
shunt trip coil DC 24V	1	<b>HWX501</b>
shunt trip coil DC 48V	1	<b>HWX502</b>
shunt trip coil AC/DC 110V	1	<b>HWX503</b>
shunt trip coil AC/DC 220V	1	<b>HWX504</b>
shunt trip coil AC 380/415V	1	<b>HWX505</b>
shunt trip coil AC 440V	1	<b>HWX506</b>

**Secondary trip coils (sSH)**

Description	Pack qty.	Cat. ref.
secondary trip coil DC 24V	1	<b>HWX521</b>
secondary trip coil DC 48V	1	<b>HWX522</b>
secondary trip coil AC/DC 110V	1	<b>HWX523</b>
secondary trip coil AC/DC 220/250V	1	<b>HWX524</b>
secondary trip coil AC 380/415V	1	<b>HWX525</b>
secondary trip coil AC 440V	1	<b>HWX526</b>

**Under voltage trip coils - instantaneous (UVT)**



HWX514

Description	Pack qty.	Cat. ref.
under voltage trip coil DC 24V	1	<b>HWX511</b>
under voltage trip coil DC 48V	1	<b>HWX512</b>
under voltage trip coil AC/DC 110V	1	<b>HWX513</b>
under voltage trip coil AC/DC 220/250V	1	<b>HWX514</b>
under voltage trip coil AC 380/415V	1	<b>HWX515</b>
under voltage trip coil AC 440V	1	<b>HWX516</b>

**UVT time delay controllers**

Description	Pack qty.	Cat. ref.
UVT time delay controller AC/DC 110V	1	<b>HWX533</b>
UVT time delay controller AC/DC 220/250V	1	<b>HWX534</b>
UVT time delay controller AC 380/415V	1	<b>HWX535</b>
UVT time delay controller AC 440V	1	<b>HWX536</b>

**Mechanical operated cell switch (additional AX)**

Description	Pack qty.	Cat. ref.
mechanical operated cell switch 5NO+5NC	1	<b>HWX565</b>

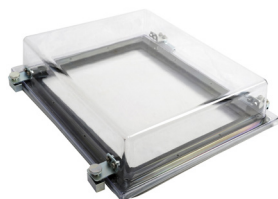


HWX547

**Ready to close contact RTC**

Description	Pack qty.	Cat. ref.
draw-out type 1NO	1	<b>HWX547</b>
fixed type 1NO	1	<b>HWX548</b>

**Accessories**



HWY642

Description	Pack qty.	Cat. ref.
counter	1	<b>HWY638</b>
lifting lug	1	<b>HWY648</b>
wrong insertion preventer for draw-out type	1	<b>HWY636</b>
door flange	1	<b>HWY641</b>
dust cover	1	<b>HWY642</b>
ON/OFF button cover	1	<b>HWY632</b>



HWY6xx

### Key cylinder lock in open position

Description	Pack qty.	Cat. ref.
type 1	1	<b>HWY633</b>
type 2	1	<b>HWY634</b>
type 3	1	<b>HWY635</b>
type 4	1	<b>HWY646</b>
type 5	1	<b>HWY647</b>
type 6	1	<b>HWY656</b>
type 7	1	<b>HWY657</b>
type 8	1	<b>HWY658</b>
type 9	1	<b>HWY659</b>



HWY701

### Key Ronis lock in open position

Description	Pack qty.	Cat. ref.
type 1 - K1L1/L4	1	<b>HWY701</b>
type 2 - K2L2/L4/L5	1	<b>HWY702</b>
type 3 - K3L3/L5	1	<b>HWY703</b>
type 4 - K4L4	1	<b>HWY704</b>
type 5 - K5L5	1	<b>HWY705</b>
adaptor kit for Ronis locks	1	<b>HWY697</b>



HWY706

### Key Castell lock in open position

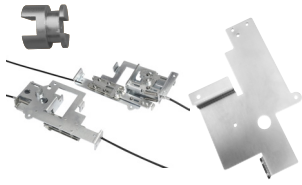
Description	Pack qty.	Cat. ref.
type 1 - AA	1	<b>HWY706</b>
type 2 - AB	1	<b>HWY707</b>
type 3 - A_	1	<b>HWY708</b>
adaptor kit for Castell locks	1	<b>HWY698</b>



HWW268

### Neutral CT

Description	Pack qty.	Cat. ref.
neutral CT 630A	1	<b>HWW260</b>
neutral CT 800A	1	<b>HWW261</b>
neutral CT 1000A	1	<b>HWW262</b>
neutral CT 1250A	1	<b>HWW263</b>
neutral CT 1600A	1	<b>HWW264</b>
neutral CT 2000A	1	<b>HWW265</b>
neutral CT 2500A	1	<b>HWW266</b>
neutral CT 3200A	1	<b>HWW267</b>
neutral CT 4000A	1	<b>HWW268</b>
neutral CT 5000A	1	<b>HWW269</b>



HWY502

**Mechanical interlocks**

with mechanism and cables

Description	Pack qty.	Cat. ref.
draw-out type, 2 way	1	<b>HWY500</b>
draw-out type, 3 way	1	<b>HWY501</b>
fixed type, 2 way (incl. plate)	1	<b>HWY502</b>
fixed type, 3 way (incl. plate)	1	<b>HWY503</b>

**Cables for mechanical interlocks**

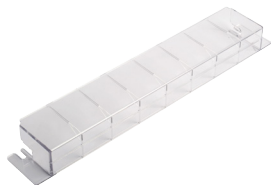
Description	Pack qty.	Cat. ref.
cable 3m	1	<b>HWY508</b>
cable 5m	1	<b>HWY509</b>



HWY630

**Phase insulation barrier**

Description	Pack qty.	Cat. ref.
3 pole (2 units)	1	<b>HWY630</b>
4 pole (3 units)	1	<b>HWY631</b>



HWY637

**Control terminal protection cover**

Description	Pack qty.	Cat. ref.
for draw-out type	1	<b>HWY637</b>



HWY672

**Arc shield (for draw-out type)**

Description	Pack qty.	Cat. ref.
for frame A 3 pole, 630-2000A	1	<b>HWY670</b>
for frame A 4 pole, 630-2000A	1	<b>HWY671</b>
for frame B 3 pole, 630-4000A	1	<b>HWY672</b>
for frame B 4 pole, 630-4000A	1	<b>HWY673</b>
for frame C 3 pole, 3200-5000A	1	<b>HWY674</b>
for frame C 4 pole, 3200-5000A	1	<b>HWY675</b>

**Fixed type connector plug**

Description	Length	Pack qty.	Cat. ref.
pre-wired kit	3m	1	<b>HWY065</b>



HWY649

### OCR portable checker

Description	Pack qty.	Cat. ref.
OCR portable checker	1	<b>HWY649</b>

### OCR manual reset and alarm switch reset (MHT)

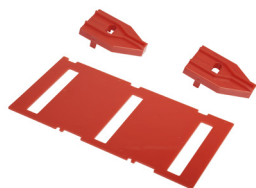
Description	Pack qty.	Cat. ref.
for draw-out type	1	<b>HWY651</b>
for fixed type	1	<b>HWY652</b>

### Motor controller unit only

Description	Pack qty.	Cat. ref.
motor controller unit only	1	<b>HWW068</b>

### Motor ON/OFF switch only

Description	Pack qty.	Cat. ref.
motor ON/OFF switch only	1	<b>HWW069</b>



HWY660

### Safety shutters

Description	Pack qty.	Cat. ref.
frame A 3 pole, 630-2000A	1	<b>HWY660</b>
frame A 4 pole, 630-2000A	1	<b>HWY661</b>
frame B 3 pole, 630-4000A	1	<b>HWY662</b>
frame B 4 pole, 630-4000A	1	<b>HWY663</b>
frame C 3 pole, 3200-5000A	1	<b>HWY664</b>
frame C 4 pole, 3200-5000A	1	<b>HWY665</b>

### Horizontal / vertical terminals

Description	Pack qty.	Cat. ref.
for frame A 3 pole, 630-1600A	1	<b>HWY610</b>
for frame A 4 pole, 630-1600A	1	<b>HWY611</b>
for frame B 3 pole, 630-3200A	1	<b>HWY612</b>
for frame B 4 pole, 630-3200A	1	<b>HWY613</b>



HWY644

### Rotary handle

Description	Pack qty.	Cat. ref.
for draw-out type	1	<b>HWY644</b>



**Codification**

H	W	A	H	3	16	E	F	A	0	A	A	0	A	0	A	0
---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	---	---

**ACB series name**

**Frame size**

- A = Frame size A
- B = Frame size B
- C = Frame size C

**Product Family + Breaking capacity**

- H = breaker with breaking capacity of 50kA
- N = breaker with breaking capacity of 65kA
- S = breaker with breaking capacity of 85kA
- P = breaker with breaking capacity of 100kA

**Number of poles**

- 3 = 3 poles
- 4 = 4 poles

**Rated current (In)**

- 06 = 630A
- 08 = 800A
- 10 = 1000A
- 12 = 1250A
- 16 = 1600A
- 20 = 2000A
- 25 = 2500A
- 32 = 3200A
- 40 = 4000A
- 50 = 5000A

**Market**

C/E = Market letter

**Version**

- F = fixed
- D = draw-out

**Trip unit**

- A = no OCR switch disc.
- B = OCR STD LJ
- C = OCR STD LSI
- D = OCR STD LSIG
- E = OCR LCD display Amp LJ
- F = OCR LCD display Amp LSI
- G = OCR LCD display Amp LSIG
- H = OCR LCD display Energy LSIG

**Terminal connection**

- 0 = without
- 1 = horizontal terminal (HC/HC)
- 2 = vertical terminal (VC/VC)
- 3 = horizontal and vertical (HC/VC)
- 4 = vertical and horizontal (VC/HC)
- 5 = front terminal (FC/FC)
- 6 = front terminal and horizontal terminal (FC/HC)
- 7 = front terminal and vertical terminal (FC/VC)
- 8 = horizontal terminal and front terminal (HC/FC)
- 9 = vertical terminal and front terminal (VC/FC)

### Position switch (only DO ACB)

- 0 = without
- 1 = isolated 1C, test 1C, connected 2C
- 2 = inserted 1C, isolated 1C, test 1C, connected 1C
- 3 = inserted 1C, isolated 1C, test 3C, connected 3C
- 4 = inserted 2C, isolated 2C, test 2C, connected 2C

### OFF lock (key lock device)

- A = without
- B = type 1 (key lock device)
- C = type 2 (key lock device)
- D = type 3 (key lock device)
- E = type 4 (key lock device)
- F = type 5 (key lock device)
- G = Ronis type 1 - K1-L1/L4
- H = Ronis type 2 - K2-L2/4/5
- I = Ronis type 3 - K3-L3/5
- J = Ronis type 4 - K4-L4
- K = Ronis type 5 - K5-L5
- L = Castell type 1 - AA
- M = Castell type 2 - AB
- N = Castell type 3 - A\_

### MOC 2nd Auxiliary Switch & Counter & Arc Shield (only DO ACB)

- 0 = without Counter & without MOC & without Arc Shield
- 1 = with Counter & without MOC & without Arc Shield
- 2 = without Counter & with MOC & without Arc Shield
- 3 = with Counter & with MOC & without Arc Shield
- 4 = without Counter & without MOC & with Arc Shield
- 5 = with Counter without MOC & with Arc Shield
- 6 = without Counter & with MOC & with Arc Shield
- 7 = with Counter & with MOC & with Arc Shield

### Under voltage release or 2nd SH coil

- |                                |                                     |
|--------------------------------|-------------------------------------|
| A = without                    | K = AC 440V with time delay         |
| B = AC/DC 110V                 | L = DC 24V with time delay          |
| C = AC/DC 220V                 | M = DC 48V with time delay          |
| D = AC 380V                    | N = AC/DC 110V double shunt release |
| E = AC 440V                    | O = AC/DC 220V double shunt release |
| F = DC 24V                     | P = AC 380V double shunt release    |
| G = DC 48V                     | Q = AC 440V double shunt release    |
| H = AC/DC 110V with time delay | R = DC 24V double shunt release     |
| I = AC/DC 220V with time delay | S = DC 48V double shunt release     |
| J = AC 380V with time delay    |                                     |

### Closing release

- |                |             |
|----------------|-------------|
| 0 = without    | 4 = AC 440V |
| 1 = AC/DC 110V | 5 = DC 24V  |
| 2 = AC/DC 220V | 6 = DC 48V  |
| 3 = AC 380V    |             |

### Motor operator & ready to close switch

- |                           |                               |
|---------------------------|-------------------------------|
| A = without               | N = AC/DC 110V motor with RTC |
| B = AC/DC 110V motor only | O = AC/DC 220V motor with RTC |
| C = AC/DC 220V motor only | P = AC 380V motor with RTC    |
| D = AC 380V motor only    | Q = AC 440V motor with RTC    |
| E = AC 440V motor only    | R = DC 24V motor with RTC     |
| F = DC 24V motor only     | S = DC 48V motor with RTC     |
| G = DC 48V motor only     | U = without motor with RTC    |

### Shunt release

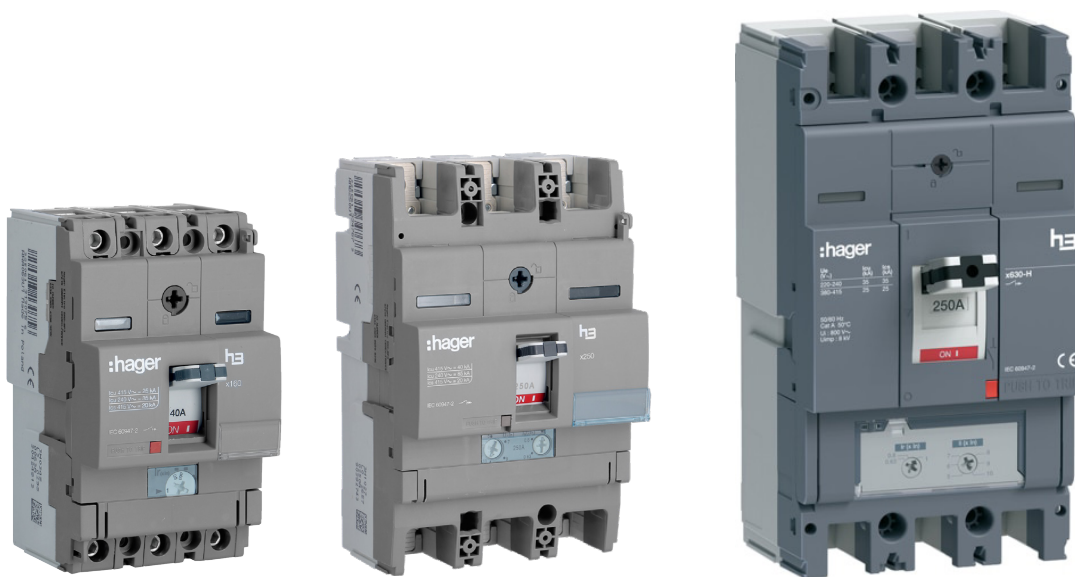
- |                |             |
|----------------|-------------|
| A = without    | E = AC 440V |
| B = AC/DC 110V | F = DC 24V  |
| C = AC/DC 220V | G = DC 48V  |
| D = AC380V     |             |

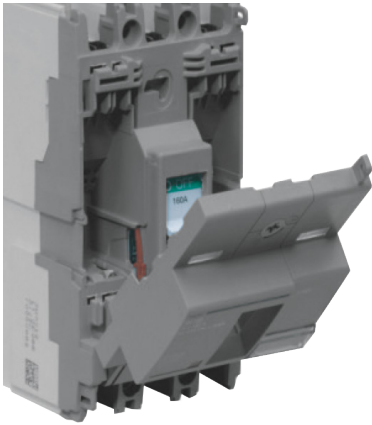
Guaranteed protection

# h3 MCCB Moulded case circuit breaker

h3 range of MCCBs - the reliable solution for protecting low voltage distribution systems against overloads and short circuits.

With a compact size and available in 1,2,3,4 pole configurations, these state of the art circuit breakers offer installers and panel builders a wide range of features and benefits, including a breaking capacity ranging from 18kA to 70kA and options for built-in thermal-magnetic or electronic trip units, ensuring high protection performance.





## 01 Easy mounting of auxiliaries

Easy opening of secondary cover, clip-on type auxiliaries.



## 02 Visibility of auxiliaries fitted

Indicates type of auxiliary mounted in the circuit breaker.



## 03 Integrated padlocking facility

A very good solution for maintenance.



## 04 Complete range of accessories

Rotary handles, padlocks, motors, terminal covers, a wide range of terminals & connections.



## 05 Breaking capacity

18 to 70kA, Icu 415V AC, covers all applications.

### Technical characteristics

Frame	x160						x250			x630 TM MCCB
	Product	Switch	MCCB			Switch	MCCB		MCCB	
Reference		HCA	HDA	HHA	HNA	HCB	HHB	HNB	HHJ	
Number of poles	[No.]	3-4	1-2-3-4	1-2-3-4	3-4	3-4			3-4	
<b>Electrical characteristics</b>										
Rated current	In	[A]	160			250			630	
Current rated range		[A]	125-160	16-125 (1P), 16-160 (2,3,4P)		250	100-250		250-630	
Rated service voltage, (AC)	Ue	[V]	220-690			220-690		220-415		
Frequency	f	[Hz]	50/60			50/60		50/60		
Rated insulation voltage	Ui	[V]	690			800		800		
Rated impulse withstand voltage	Uimp	[kV]	8			8		8		
Rated ultimate short-circuit breaking capacity	(Icu)									
(AC) 50-60 Hz 220/230 V	Icu	[kA]	-	25	35	85	-	35	85	35
<b>(AC) 50-60 Hz 380/415 V</b>	Icu	<b>[kA]</b>	-	<b>18</b>	<b>25</b>	<b>40</b>	-	<b>25</b>	<b>40</b>	<b>25</b>
(AC) 50-60 Hz 480/500/525 V	Icu	[kA]	-	6	7.5	12.5	-	-	10	-
(AC) 50-60 Hz 660/690 V	Icu	[kA]	-	-	-	-	-	-	4	-
(DC) 250 V - 2 poles in series	Icu	[kA]	-	12.5	20	25	-	25	25	-
Rated service short-circuit breaking capacity,	(Ics)									
(AC) 50-60 Hz 220/230 V	Ics	[kA]	-	25	25	40	-	25	40	35
<b>(AC) 50-60 Hz 380/415 V</b>	Ics	<b>[kA]</b>	-	<b>18</b>	<b>20</b>	<b>20</b>	-	<b>20</b>	<b>20</b>	<b>25</b>
(AC) 50-60 Hz 480/500/525 V	Ics	[kA]	-	3	4	7.5	-	-	7.5	-
(AC) 50-60 Hz 660/690 V	Ics	[kA]	-	-	-	3	-	-	2	-
(DC) 250 V - 2 poles in series	Ics	[kA]	-	7	10	13	-	13	13	-
Rated short-circuit making capacity	Icm	[kA]	2,8	-	-	-	6	-	-	-
Rated short-time withstand current for 1s	Icw	[kA]	2	-	-	-	3	-	-	-
Category of use (EN 60947-2)			-	A			-	A		A
Calibration temperature			-	50°C			-	50°C		50°C (250A-400A), 30°C (630A)
Derating	40°C		-	100%			-	100%		-
	50°C		-	100%			-	100%		100% (250A - 400A), 97% (630A)
	55°C		-	95%			-	94%		97% (250A - 400A), 88% (630A)
	60°C		-	93%			-	91%		94.5% (250A - 400A), 88% (630A)
	65°C		-	90%			-	88%		92% (250A - 400A), 88% (630A)
Suitability for insulation			ok			ok			ok	
Electric endurance in number of cycles			10000			10000			6000<=400A 4000 for 630A	
Mechanical endurance in number of operations			20000			20000			15000	
Operating temperature			-25 to +70°C			-25 to +70°C			-25 to +70 °C	
Storage temperature			-35 to +70°C			-35 to +70°C			-35 to +70°C	
Power loss (at In for 3P)		[W]	39			60			250A - 71.4W, 320A - 80W, 400A - 116W, 630A - 160W	
Reference standard			IEC 60947-3	IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-2	
Releases: switch			ok	-		ok	-		-	
Releases: TM (thermomagnetic)			-	ok		-	ok		-	
T fixed, M fixed			-	ok		-	ok		-	
T adjustable, M fixed			-	ok		-	-		-	
T adjustable, M adjustable			-	-		-	ok		ok	
Thermal adjustment value			-	0,63 to 1 x In		-	0,63 to 1 x In		0.63 to 0.8 to 1 x In	
Magnetic adjustment value			-	-		-	6-8-10-13 x In (200A) 5-7-9-11 In (250A)		5 to 10 x In (Up to 400A) 4 to 8 x In (630A)	
Releases: LSI (electronic)			-	-		-	-		-	
Long delay			-	-		-	-		-	
Short delay			-	-		-	-		-	
Time delay			-	-		-	-		-	
<b>Connection</b>										
Standard terminal type			cage			lugs			lugs	
Maximum terminal capacity			95 mm <sup>2</sup>			185 mm <sup>2</sup> (cage)			-	
Terminal width		mm	-			25			32	
Terminal shields			ok			ok			ok	
Cage terminal			integrated			ok			-	
Extended connections			ok			ok			ok	
Rear connections			no			ok			-	
<b>Dimensions</b>										
Height		mm	130			165			260	
Width	1P	mm	-	25	-	-			-	
	2P	mm	-	50	-	-			-	
	3P	mm	75			105			140	
	4P	mm	100			140			-	
Depth		mm	68			68			150	
Weight	1P	kg	-	0,29	-	-			-	
	2P	kg	-	0,48	-	-			-	
	3P	kg	0,715			1,3			5.8	
	4P	kg	0,95			1,6			-	

# Moulded case circuit breakers

## h3 MCCBs



		h400 TM*			h630 LSI*			h1000 LSI			h1600 LSI		
		MCCB			Switch	MCCB		Switch	MCCB		Switch	MCCB	
HNJ	HMJ	HHD	HND	HCD	HND	HED	HCE	HNE	HEE	HCF	HNF	HEF	
		3-4			3-4		3-4			3-4			
		400			630		1000			1600			
		250-400			400-630	250-400-630	630-800-1000			1250-1600			
		220-690			220-690		220-690			220-690			
		50/60			50/60		50/60			50/60			
		800			800		800			800			
		8			8		8			8			
70	85	35	85	-	85	100	-	85 (800A) 75 (1000A)	100	-	100	100	
<b>40</b>	<b>50</b>	<b>25</b>	<b>50</b>	-	<b>50</b>	<b>70</b>	-	<b>50</b>	<b>70</b>	-	<b>50</b>	<b>70</b>	
-	-	10	30	-	30	30	-	30	30	-	45	65	
-	-	7,5	20	-	20	20	-	20	20	-	25	45	
-	-	25	40	-			-	-	-	-	-	-	
70	85	35	85	-	85	85	-	85 (800A) 75 (1000A)	100 (800A) 75 (1000A)	-	75	75	
<b>40</b>	<b>50</b>	<b>25</b>	<b>50</b>	-	<b>50</b>	<b>50</b>	-	<b>50</b>	<b>50</b>	-	<b>50</b>	<b>50</b>	
-	-	10	30	-	30	30	-	30	30	-	45	50	
-	-	7,5	15	-	15	15	-	20	20	-	25	34	
-	-	25	40	-			-	-	-	-	-	-	
-	-	-	-	9	-	-	20	-	-	45	-	-	
-	-	-	-	5 (0,3s)	-	-	10 (0,3s)	-	-	20 (0,3s)	-	-	
		A			B(250-400A) - A(630A)		B(800A) - A(1000A)			B			
0°C (630A)		50°C			40/50°C		40/50°C			40/50°C			
		100%			100%		100%			100%			
90% (630A)		100%			95%		95%			95%			
87% (630A)		95%			90%		90%			90%			
84.5% (630A)		92%			80%		80%			80%			
81.6% (630A)		89%			80%		80%			80%			
or 630A (Above 400A)		ok			ok		ok			ok			
		4500			4500		4500			4500			
		15000			15000		15000			15000			
		-25 to +70°C			-25 to +70°C		-25 to +70°C			-25 to +70°C			
		-35 to +70°C			-35 to +70°C		-35 to +70°C			-35 to +70°C			
- 75W 176.3W		75			150		150			170			
		IEC 60947-2			IEC 60947-3	IEC 60947-2	IEC 60947-3	IEC 60947-2		IEC 60947-3	IEC 60947-2		
-	-	-			ok	-	ok	-		ok	-		
-	-	ok			-		-			-			
-	-	-			-		-			-			
-	-	-			-		-			-			
		ok			-		-			-			
		0,63 to 1 x In			-		-			-			
		6-8-10-12 x In			-		-			-			
-	-	-			ok		ok			-	ok		
-	-	-			0,4 to 1 x Ir		0,4 to 1 x Ir			-	0,4 to 1 x In		
-	-	-			2,5 to 10 x Ir (250-400A) 2,5 to 8 x Ir (630A)		2,5 to 10 x Ir (800A) 2,5 to 8 x Ir (1000A)			-	2,5 to 10 x Ir		
-	-	-			0,1 - 0,2s		0,1 - 0,2s			-	0,1 - 0,2s		
		lugs			lugs		lugs			lugs			
		240 mm <sup>2</sup> (cage)			-		-			-			
		30			30		45			45			
		ok			ok		ok			ok			
		ok			-		-			-			
		ok			integrated		integrated			integrated			
		ok			ok		ok			ok			
		260			260		273/433			370/570			
		-			-		-			-			
		-			-		-			-			
		140			140		210			210			
		185			185		280			280			
		97			97		99,5			140			
		-			-		-			-			
		-			-		-			-			
		4,2			4,3		11			27			
		5,6			5,7		14,8			31			

\*Will be discontinued soon



### Characteristics

- Thermal magnetic trip unit
- Two versions:
  - Z version: fixed thermal and fixed magnetic
  - U version: adjustable thermal and fixed magnetic
- Adjustable thermal: 0.63 - 0.8 - 1 x I<sub>n</sub>
- Access to mechanical test button on cover
- Lockable cover protects MCCB settings
- Integrated padlocking handle: Ø 4mm
- Cage terminals

- Connection capacity: 95mm<sup>2</sup> rigid cables, 70mm<sup>2</sup> flexible cables
- Fixed thermal: 1 x I<sub>n</sub>

Complies to the standard IEC 60 947-2

### Trip-free switches :

- Allows tripping at distance using a voltmeterical trip unit (optional)
- AC 22/23A
- Complies to the standard IEC 60 947-3



HDA125Z

### MCCBs x160 18kA

Breaking capacity I<sub>cu</sub>:18kA (400/415 V AC) I<sub>cs</sub>: 18kA

Description	I <sub>n</sub> (A)	Cat. ref.			
		1P	2P	3P	4P
fixed thermal 1 x I <sub>n</sub> fixed magnetic > 10 x I <sub>n</sub>	16	HDA014Z	HDA015Z	HDA016Z	HDA017Z
	20	HDA018Z	HDA019Z	HDA020Z	HDA021Z
	25	HDA023Z	HDA024Z	HDA025Z	HDA026Z
	32	HDA030Z	HDA031Z	HDA032Z	HDA033Z
	40	HDA038Z	HDA039Z	HDA040Z	HDA041Z
	50	HDA048Z	HDA049Z	HDA050Z	HDA051Z
	63	HDA061Z	HDA062Z	HDA063Z	HDA064Z
	80	HDA078Z	HDA079Z	HDA080Z	HDA081Z
	100	HDA098Z	HDA099Z	HDA100Z	HDA101Z
	125	HDA123Z	HDA124Z	HDA125Z	HDA126Z
adjustable thermal 0.63 - 0.8 - 1 x I <sub>n</sub> fixed magnetic > 10 x I <sub>n</sub>	160	-	HDA159Z	HDA160Z	HDA161Z
	25	-	-	HDA025U	HDA026U
	40	-	-	HDA040U	HDA041U
	63	-	-	HDA063U	HDA064U
	80	-	-	HDA080U	HDA081U
	100	-	-	HDA100U	HDA101U
	125	-	-	HDA125U	HDA126U
	160	-	-	HDA160U	HDA161U



HHA161U

### MCCBs x160 25kA

Breaking capacity I<sub>cu</sub>: 25kA (400/415 V AC) I<sub>cs</sub>: 20kA

Description	I <sub>n</sub> (A)	Cat. ref.			
		1P	2P	3P	4P
fixed thermal 1 x I <sub>n</sub> fixed magnetic > 10 x I <sub>n</sub>	16	HHA014Z	HHA015Z	HHA016Z	HHA017Z
	20	HHA018Z	HHA019Z	HHA020Z	HHA021Z
	25	HHA023Z	HHA024Z	HHA025Z	HHA026Z
	32	HHA030Z	HHA031Z	HHA032Z	HHA033Z
	40	HHA038Z	HHA039Z	HHA040Z	HHA041Z
	50	HHA048Z	HHA049Z	HHA050Z	HHA051Z
	63	HHA061Z	HHA062Z	HHA063Z	HHA064Z
	80	HHA078Z	HHA079Z	HHA080Z	HHA081Z
	100	HHA098Z	HHA099Z	HHA100Z	HHA101Z
	125	HHA123Z	HHA124Z	HHA125Z	HHA126Z
adjustable thermal 0.63 - 0.8 - 1 x I <sub>n</sub> fixed magnetic > 10 x I <sub>n</sub>	160	-	HHA159Z	HHA160Z	HHA161Z
	25	-	-	HHA025U	HHA026U
	40	-	-	HHA040U	HHA041U
	63	-	-	HHA063U	HHA064U
	80	-	-	HHA080U	HHA081U
	100	-	-	HHA100U	HHA101U
	125	-	-	HHA125U	HHA126U
	160	-	-	HHA160U	HHA161U



HNA125Z

### MCCBs x160 40kA

Breaking capacity Icu: 40kA (400/415 V AC) Ics: 20kA

Description	In (A)	Cat. ref.	
		3P	4P
fixed thermal 1 x In fixed magnetic > 10 x In	16	HNA016Z	HNA017Z
	20	HNA020Z	HNA021Z
	25	HNA025Z	HNA026Z
	32	HNA032Z	HNA033Z
	40	HNA040Z	HNA041Z
	50	HNA050Z	HNA051Z
	63	HNA063Z	HNA064Z
	80	HNA080Z	HNA081Z
	100	HNA100Z	HNA101Z
	125	HNA125Z	HNA126Z
adjustable thermal 0.63 - 0.8 - 1 x In fixed magnetic > 10 x In	160	HNA160Z	HNA161Z
	25	HNA025U	HNA026U
	40	HNA040U	HNA041U
	63	HNA063U	HNA064U
	80	HNA080U	HNA081U
	100	HNA100U	HNA101U
	125	HNA125U	HNA126U
	160	HNA160U	HNA161U



HNA161U

### Trip-free switches x160

suitable for AC22A / AC 23A  
Ue: 415 V AC  
Icw (1s): 2 kA

Description	In (A)	Cat. ref.	
		3P	4P
trip-free switches x160	125	HCA125Z	HCA126Z
	160	HCA160Z	HCA161Z



HCA160Z

**Characteristics**

- Thermal magnetic trip unit
- Two versions:
  - Z version: fixed thermal and fixed magnetic
  - U version: adjustable thermal & magnetic
- Access to mechanical test button on cover
- Lockable cover protects MCCB settings
- Integrated padlocking handle: Ø 4mm
- Direct connection with palm lug max. width: 25mm
- Connection capacity: 185mm<sup>2</sup> rigid cables, 150mm<sup>2</sup> flexible cables
- Z version
  - Fixed thermal: 1x In
  - Fixed magnetic: ≥10 x In

- U version
  - Adjustable thermal: 0.63, 0.8, 1 x In
  - Adjustable magnetic:
    - 6 - 8 - 10 - 13 x In (100 - 200A)
    - 5 - 7 - 9 - 11 x In (250A)

**Complies to the standard IEC 60 947-2**

**Trip-free switches :**

- Allows tripping at distance using a voltmeterical trip unit (optional)
- AC 22/23A
- Complies to the standard IEC 60 947-3

**MCCBs x250 25kA**

Breaking capacity Icu: 25kA (400/415 V AC) Ics: 20kA



HHB100Z

Description	In (A)	Cat. ref. 3P	4P
fixed thermal 1 x In fixed magnetic ≥10 x In	100	<b>HHB100Z</b>	<b>HHB101Z</b>
	125	<b>HHB125Z</b>	<b>HHB126Z</b>
	160	<b>HHB160Z</b>	<b>HHB161Z</b>
	200	<b>HHB200Z</b>	<b>HHB201Z</b>
	250	<b>HHB250Z</b>	<b>HHB251Z</b>
adjustable thermal 0.63 - 0.8 - 1x In adjustable magnetic 6 - 8 - 10 - 13 x In (100 - 200A) 5 - 7 - 9 - 11 x In (250A)	100	<b>HHB100U</b>	
	125	<b>HHB125U</b>	
	160	<b>HHB160U</b>	
	200	<b>HHB200U</b>	
	250	<b>HHB250U</b>	

**MCCBs x250 40kA**

Breaking capacity Icu: 40kA (400/415 V AC) Ics: 20kA



HNB100U

Description	In (A)	Cat. ref. 3P	4P
fixed thermal 1 x In fixed magnetic ≥ 10 x In	100	<b>HNB100Z</b>	<b>HNB101Z</b>
	125	<b>HNB125Z</b>	<b>HNB126Z</b>
	160	<b>HNB160Z</b>	<b>HNB161Z</b>
	200	<b>HNB200Z</b>	<b>HNB201Z</b>
	250	<b>HNB250Z</b>	<b>HNB251Z</b>
adjustable thermal 0.63 - 0.8 - 1x In adjustable magnetic 6 - 8 - 10 - 13 x In (100 - 200A) 5 - 7 - 9 - 11 x In (250A)	100	<b>HNB100U</b>	<b>HNB101U</b>
	125	<b>HNB125U</b>	<b>HNB126U</b>
	160	<b>HNB160U</b>	<b>HNB161U</b>
	200	<b>HNB200U</b>	<b>HNB201U</b>
	250	<b>HNB250U</b>	<b>HNB251U</b>

**Trip-free switches x250**

suitable for AC 22A/23A  
Ue: 415VAC  
Icw (1s): 3 kA



HCB250Z

Description	In (A)	Cat. ref. 3P	4P
trip-free switches x250	250	<b>HCB250Z</b>	<b>HCB251Z</b>

### Characteristics

- Adjustable thermal and magnetic trip unit
- 3P & 4P
- Mechanical test button

- Lockable settings
- Compliant with IEC60947-2.

### Connection:

- Directly on copper cable terminal with end lug
- Max. width: 32mm



### MCCB x630 25kA TM Fixed

Description	In (A)	Cat. ref. 3P	4P
fixed thermal 1 x In	250	<b>HHJ250ER</b>	<b>HHJ251ER</b>
fixed magnetic 10 x In (250A-400A)	320	<b>HHJ320ER</b>	<b>HHJ321ER</b>
	400	<b>HHJ400ER</b>	<b>HHJ401ER</b>
8 x In (630A)	630	<b>HHJ630EE</b>	<b>HHJ631EE</b>

HHJ250ER



### MCCB x630 25kA TM Adjustable

Description	In (A)	Cat. ref. 3P	4P
adjustable thermal 0.63 - 0.8 - 1x In	250	<b>HHJ250DR</b>	<b>HHJ251DR</b>
adjustable magnetic 5 - 6 - 7 - 8 - 9 - 10 x In (250 - 400A)	320	<b>HHJ320DR</b>	<b>HHJ321DR</b>
	400	<b>HHJ400DR</b>	<b>HHJ401DR</b>
4 - 5 - 6 - 7 - 8 x In (630A)	630	<b>HHJ630DE</b>	<b>HHJ631DE</b>

HHJ250DR



### MCCB x630, 40kA, TM Fixed

Description	In (A)	Cat. ref. 3P	4P
fixed thermal 1 x In	250	<b>HNJ250ER</b>	<b>HNJ251ER</b>
fixed magnetic 10 x In (250A-400A)	320	<b>HNJ320ER</b>	<b>HNJ321ER</b>
	400	<b>HNJ400ER</b>	<b>HNJ401ER</b>
8 x In (630A)	630	<b>HNJ630DE</b>	<b>HNJ631DE</b>

HNJ250ER



### MCCB x630, 40kA, TM Adjustable

Description	In (A)	Cat. ref. 3P	4P
adjustable thermal 0.63 - 0.8 - 1x In	250	<b>HNJ250DR</b>	<b>HNJ251DR</b>
adjustable magnetic 5 - 6 - 7 - 8 - 9 - 10 x In (250 - 400A)	320	<b>HNJ320DR</b>	<b>HNJ321DR</b>
	400	<b>HNJ400DR</b>	<b>HNJ401DR</b>
4 - 5 - 6 - 7 - 8 x In (630A)	630	<b>HNJ630EE</b>	<b>HNJ631EE</b>

HNJ250DR



HMJ250ER

### MCCB x630, 50kA, TM Fixed

Description	In (A)	Cat. ref. 3P	4P
fixed thermal 1 x In	250	<b>HMJ250ER</b>	<b>HMJ251ER</b>
fixed magnetic 10 x In (250A-400A)	320	<b>HMJ320ER</b>	<b>HMJ321ER</b>
	400	<b>HMJ400ER</b>	<b>HMJ401ER</b>
8 x In (630A)	630 A	<b>HMJ630DE</b>	<b>HMJ631DE</b>



HMJ250DR

### MCCB x630, 50kA, TM Adjustable

Description	In (A)	Cat. ref. 3P	4P
adjustable thermal 0.63 - 0.8 - 1x In	250	<b>HMJ250DR</b>	<b>HMJ251DR</b>
adjustable magnetic 5 - 6 - 7 - 8 - 9 - 10 x In (250 - 400A)	320	<b>HMJ320DR</b>	<b>HMJ321DR</b>
	400	<b>HMJ400DR</b>	<b>HMJ401DR</b>
4 - 5 - 6 - 7 - 8 x In (630A)	630	<b>HMJ630DE</b>	<b>HMJ631DE</b>



HNJ500HR

### MCCB x630, 40kA, LSnl Fixed

Description	In (A)	Cat. ref. 3P	4P
220 / 415 V	320	<b>HNJ320HR</b>	<b>HNJ321HR</b>
	500	<b>HNJ500HR</b>	<b>HNJ501HR</b>



HNJ400GR

### MCCB x630, 40kA, LSnl Adjustable

Description	In (A)	Cat. ref. 3P	4P
220 / 415 V	400	<b>HNJ400GR</b>	<b>HNJ401GR</b>
	630	<b>HNJ630GR</b>	<b>HNJ631GR</b>



HMJ320HR

### MCCB x630, 50kA, LSnl Fixed

Description	In (A)	Cat. ref. 3P	4P
220 / 415 V	320	<b>HMJ320HR</b>	<b>HMJ321HR</b>
	500	<b>HMJ500HR</b>	<b>HMJ501HR</b>



HMJ400GR

### MCCB x630, 50kA, LSnl Adjustable

Description	In (A)	Cat. ref. 3P	4P
220 / 415 V	400	<b>HMJ400GR</b>	<b>HMJ401GR</b>
	630	<b>HMJ630GR</b>	<b>HMJ631GR</b>

### Characteristics

- Access to mechanical test button on cover
- Lockable cover protects MCCB settings
- Direct connection with palm lug max. width: 30 mm
- Connection capacity: 240mm<sup>2</sup> rigid cables, 240mm<sup>2</sup> flexible cables
- Thermal magnetic trip unit TM:
  - thermal adjustment: from 0.63 to 1 x I<sub>n</sub>
  - magnetic adjustment: from 6 to 12 x I<sub>n</sub>

- Electronic trip unit LSI
  - long delay (thermal equivalent) adjustable: I<sub>r</sub> = 0.4 to 1 x I<sub>n</sub>
  - short delay (magnetic equivalent) adjustable: 2.5 to 10 x I<sub>r</sub> (400A) 2.5 to 8 x I<sub>r</sub> (630A)
  - time delay: 0.1 – 0.2 s
  - 3P & 4P (adjustable neutral 0 - 50% - 100%)

Complies to the standard IEC 60 947-2

### Trip-free switches :

- Allows tripping at distance using a voltmeterical trip unit (optional)
- AC 22/23A
- Complies to the standard IEC 60 947-3



HHD400U

### MCCBs h400 25kA TM\*

Breaking capacity I<sub>cu</sub>: 25kA (400/415 V AC) I<sub>cs</sub>: 25kA

Description	I <sub>n</sub> (A)	Cat. ref. 3P	4P
adjustable thermal: 0.63 to 1 x I <sub>n</sub>	250	<b>HHD250U</b>	-
adjustable magnetic: 6 to 12 x I <sub>n</sub>	400	<b>HHD400U</b>	-

### MCCBs h400 50kA TM\*

Breaking capacity I<sub>cu</sub>: 50 kA (400/415 V AC) I<sub>cs</sub>: 50 kA

Description	I <sub>n</sub> (A)	Cat. ref. 3P	4P
adjustable thermal: 0.63 to 1 x I <sub>n</sub>	250	<b>HND250U</b>	<b>HND251U</b>
adjustable magnetic: 6 to 12 x I <sub>n</sub>	400	<b>HND400U</b>	<b>HND401U</b>



HND631H

### MCCBs h630 50kA LSI\*

Breaking capacity I<sub>cu</sub>: 50kA (400/415 V AC) I<sub>cs</sub>: 50kA

Description	I <sub>n</sub> (A)	Cat. ref. 3P	4P
adjustable thermal: I <sub>r</sub> = 0.4 to 1 x I <sub>n</sub>	400	<b>HND400H</b>	<b>HND401H</b>
adjustable magnetic: 2.5 to 10 x I <sub>r</sub> (250-400A) 2.5 to 8 x I <sub>r</sub> (630A) time delay: 0.1 - 0.2 s	630	<b>HND630H</b>	<b>HND631H</b>



HED401H

### MCCBs h630 70kA LSI\*

Breaking capacity I<sub>cu</sub>: 70 kA (400/415 V AC) I<sub>cs</sub>: 50 kA

Description	I <sub>n</sub> (A)	Cat. ref. 3P	4P
adjustable thermal: I <sub>r</sub> = 0.4 to 1 x I <sub>n</sub>	400	<b>HED400H</b>	<b>HED401H</b>
adjustable magnetic: 2.5 to 10 x I <sub>r</sub> (250-400A) 2.5 to 8 x I <sub>r</sub> (630A) time delay: 0.1 - 0.2 s	630	<b>HED630H</b>	<b>HED631H</b>

### Trip-free switches\*

suitable for AC 22A / AC 23A  
U<sub>e</sub>: 415 V AC I<sub>cw</sub> (0.3s) = 5kA

Description	I <sub>n</sub> (A)	Cat. ref. 3P	4P
trip-free switches	400	<b>HCD400H</b>	<b>HCD401H</b>
	630	<b>HCD630H</b>	<b>HCD631H</b>



**Characteristics**

- Electronic trip unit LSI:
  - long delay (thermal equivalent) adjustable:  $I_r = 0.4$  to  $1 \times I_n$
  - short delay (magnetic equivalent) adjustable:  $2.5$  to  $10 \times I_r$  (630-800A) and  $2.5$  to  $8 \times I_r$  (1000A)
  - time delay:  $0.1-0.2$  s
- 3P & 4P (adjustable neutral 0 - 50% - 100%)

- Mechanical test button, lockable settings
- Connection capacity : Directly on copper cable terminal, with end lug max. width: 50 mm

**Complies to the standard IEC 60 947-2**

**Trip-free switches :**

- Allows tripping at distance using a voltmeterical trip unit (optional)
- AC 22/23A
- Complies to the standard IEC 60 947-3



HNE970H

**MCCBs h1000 50kA LSI**

Breaking capacity Icu: 50 kA (400/415 V AC) Ics: 50 kA

Description	In (A)	Cat. ref. 3P	4P
adjustable thermal $I_r = 0.4$ to $1 \times I_n$	800	<b>HNE800H</b>	<b>HNE801H</b>
adjustable magnetic $2.5$ to $10 \times I_r$ (630 - 800A) $2.5$ to $8 \times I_r$ (1000A) time delay: $0.1-0.2$ s	1000	<b>HNE970H</b>	<b>HNE971H</b>

neutral setting from 0-50 to 100%

**MCCBs h1000 70kA LSI**

Breaking capacity Icu: 70 kA (400/415 V AC) Ics: 50 kA

Description	In (A)	Cat. ref. 3P	4P
adjustable thermal $I_r = 0,4$ to $1 \times I_n$	800	<b>HEE800H</b>	<b>HEE801H</b>
adjustable magnetic $2,5$ to $10 \times I_r$ (800A) $2,5$ to $8 \times I_r$ (1000A) time delay: $0,1-0,2$ s	1000	<b>HEE970H</b>	<b>HEE971H</b>

neutral setting from 0-50 to 100%

**MCCBs h1000 70kA LSI plug in**

Breaking capacity Icu: 70 kA (400/415 V AC) Ics: 50 kA

Description	In (A)	Cat. ref. 3P	4P
MCCBs h1000 70kA LSI plug in	630	<b>HEE630G</b>	<b>HEE631G</b>
MCCBs h1000 70kA LSI plug in	800	<b>HEE800G</b>	<b>HEE801G</b>
base plate for h1000 MCCBs plug in		<b>HYE200H</b>	<b>HYE201H</b>

**Trip-free switches**

suitable for AC 22A / AC 23A  
Ue: 415V AC  
Icw (0.3 s) = 10 kA

Description	In (A)	Cat. ref. 3P	4P
trip-free switches	800	<b>HCE800U</b>	<b>HCE801U</b>
	1000	<b>HCE970H</b>	<b>HCE971H</b>

### Characteristics

- Electronic trip unit LSI
  - long delay (thermal equivalent) adjustable:
    - $I_r = 0.4$  to  $1 \times I_n$
  - short delay (magnetic equivalent) adjustable:
    - $2.5$  to  $10 \times I_r$
  - time delay:  $0.1-0.2$  s
- 3P & 4P (adjustable neutral 0 - 50% - 100%)
- Mechanical test button, lockable settings.

- Connection capacity : Directly on copper cable terminal, with end lug max. width: 60 mm

### Complies to the standard IEC 60 947-2

### Trip-free switches :

- Allows tripping at distance using a voltmeterical trip unit (optional)
- AC 22/23A
- Complies to the standard IEC 60 947-3



HNF990H

### MCCBs h1600 50kA LSI

Breaking capacity  $I_{cu}$ : 50 kA (400/415 V AC)  $I_{cs}$ : 50 kA

Description	$I_n$ (A)	Cat. ref. 3P	4P
adjustable thermal $I_r = 0.4$ to $1 \times I_n$	1250	<b>HNF980H</b>	<b>HNF981H</b>
adjustable magnetic $2.5$ to $10 \times I_r$ time delay: $0.1-0.2$ s	1600	<b>HNF990H</b>	<b>HNF991H</b>

neutral setting 0, 50, 100%

### MCCBs h1600 70kA LSI

Breaking capacity  $I_{cu}$ : 70 kA (400/415 V AC)  $I_{cs}$ : 50 kA

Description	$I_n$ (A)	Cat. ref. 3P	4P
adjustable thermal $I_r = 0.4$ to $1 \times I_n$	1250	<b>HEF980H</b>	<b>HEF981H</b>
adjustable magnetic $2.5$ to $10 \times I_r$ time delay: $0.1-0.2$ s	1600	<b>HEF990H</b>	<b>HEF991H</b>

neutral setting from 0, 50, 100%

### Trip-free switches

suitable for AC 22A / AC 23A  
 $I_{cw}$  (0.3 s) = 20 kA  
 $U_e$ : 415 V AC

Description	$I_n$ (A)	Cat. ref. 3P	4P
trip-free switches	1250	<b>HCF980U</b>	<b>HCF981U</b>
	1600	<b>HCF990U</b>	<b>HCF991U</b>



HXA004H



HXA014H



HXA021H



HXA031H



HXB042H



HYB012H

Product Description	In A / Ue V	Pole	x160	x250	x630
Shunt Trip Release SH	24V DC	3P/4P	HXA001H	HXA001H	HXA001H
	48V DC		HXA002H	HXA002H	HXA002H
	100-120V AC		HXA003H	HXA003H	HXA003H
	200-240V AC		HXA004H	HXA004H	HXA004H
	380-450V AC		HXA005H	HXA005H	HXA005H
Undervoltage Release UVR	24V DC	3P/4P	HXA011H	HXA011H	HXA011H
	100-120V AC		HXA013H	HXA013H	HXA013H
	200-240V AC		HXA014H	HXA014H	HXA014H
	380-450V AC		HXA015H	HXA015H	HXA014H
Delayed Undervoltage Release DUVR	24V DC	3P/4P	HXA051H	HXA051H	HXA011H
	100-120 V AC		HXA053H	HXA053H	HXA053H
	220-240V AC		HXA054H	HXA054H	HXA054H
	380-450V AC		HXA055H	HXA055H	HXA055H
Auxiliary contact AX	1NO+1NC 250V AC/3A 125V DC/0.4A	3P/4P	HXA021H	HXA021H	HXA021H
Alarm contact AL	1NO+1NC 250V AC/3A 125V DC/0.4A	3P/4P	HXA024H	HXA024H	HXA024H HXA027H
Auxiliary contact - Low level	1NO+1NC 125V AC/0.1A 30V DC/0.1A	3P/4P	HXA025H	HXA025H	HXS122H
Alarm contact - Low level	1NO+1NC 125V AC/0.1A 30V DC/0.1A	3P/4P	HXA026H	HXA026H	HXA028H
Rotary handle, direct		3P/4P	HXA030H	HXB030H	HXW030H
Rotary handle, on door		3P/4P	HXA031H	HXB031H	HXW031H
Padlock removable			HXA039H	HXA039H	HXA039H
Padlock permanent			integrated	integrated	integrated
Motor operator	24V DC	3P/4P	/	HXB040H	HXW040H
	230 - 240VAC	3P/4P	/	HXB042H	HXW042H
Interlocking kit wire type (full kit for 2 MCCBs)			/	HXB065H	HXD068H
Interlock front cover unit			/	HXB066H	HXW066H
Interlocking mechanical cable	1 M		/	HXB070H	
	1.5 M		/	HXB071H	
Electrical interlock between motors			/	HXB068H	
Collar terminals		3P	integrated	HYB001H	HYW001H (1x35-300mm <sup>2</sup> ) HYW007H (2x35-300mm <sup>2</sup> )
		4P	integrated	HYB002H	HYW002H (1x35-300mm <sup>2</sup> ) HYW008H (2x35-300mm <sup>2</sup> )
Extended connections - straight (set of 4 pieces)		3P/4P	HYA013H	HYB010H	HYW010H (4P up to 400A) HYW013H (4P up to 630A)
		3P	HYA014H	HYB011H	HYW011H (3P up to 400A) HYW014H (3P up to 630A)
Extended connections - spreader		4P	HYA015H	HYB012H	HYW012H (4P up to 400A) HYW015H (4P up to 630A)
		3P	/	HYB031H	/
Rear connection		4P	/	HYB032H	/
		3P/4P	HYA019H	HYB019H	HYW019H
Interphase barrier (set of 4 pieces)		3P	HYA021H	HYB021H	HYW021H
		4P	HYA022H	HYB022H	HYW022H
Terminal cover for straight connections		3P	HYA023H	HYB023H	HYW023H
		4P	HYA024H	HYB024H	HYW024H
Terminal cover for spreader connections		3P	HYA025H	HYB025H	HYW025H
		4P	HYA026H	HYB026H	HYW026H
Terminal cover short for rear connection		3P	HYA027H	HYB027H	/
		4P	HYA028H	HYB028H	/
Din Rail adaptor		3P/4P	HYA033H	HYB033H	/
Connecting kit (0.75 mm 2 , set of 3 x 2 wires, length: 1.30m)		3P/4P	HYA035H	HYA035H	HYA035H
Din Rail raiser		3P/4P	HYA036H	HYA036H	/

# Moulded case circuit breakers

## Accessories for h3 MCCBs



HXC004H



HXC014H



HXC021H



HXD031H



HXD042H



HXD039H

Product Description	In A / Ue V	Pole	h400	h630	h1000	h1600
Shunt Trip Release SH	24V DC	3P/4P	HXC001H	HXC001H	HXC001H	HXF001H
	48V DC		HXC002H	HXC002H	HXC002H	HXF002H
	100-120V AC		HXC003H	HXC003H	HXC003H	HXF003H
	200-240V AC		HXC004H	HXC004H	HXC004H	HXF004H
	380-450V AC		HXC005H	HXC005H	HXC005H	HXF005H
Undervoltage Release UVR	24V DC	3P/4P	HXC011H	HXC011H	HXE011H	HXE011H
	100-120V AC		HXC013H	HXC013H	HXE013H	HXE013H
	200-240V AC		HXC014H	HXC014H	HXE014H	HXE014H
	380-450V AC		HXC015H	HXC015H	HXE015H	HXE015H
Delayed Undervoltage Release DUVR	24V DC	3P/4P	HXD051H	HXD051H	HXE051H	HXE051H
	100-120V AC		HXD053H	HXD053H	HXE053H	HXE053H
	220-240V AC		HXD054H	HXD054H	HXE054H	HXE054H
	380-450V AC		HXD055H	HXD055H	HXE055H	HXE055H
Auxiliary contact AX	1NO+1NC 250V AC/3A 125V DC/0.4A	3P/4P	HXC021H	HXC021H	HXC021H	HXC021H
Alarm contact AL	1NO+1NC 250V AC/3A 125V DC/0.4A	3P/4P	HXC024H	HXC024H	HXC024H	HXC024H
Auxiliary contact - Low level	1NO+1NC 125V AC/0.1A 30V DC/0.1A	3P/4P	HXC025H	HXC025H	HXC025H	HXC025H
Alarm contact - Low level	1NO+1NC 125V AC/0.1A 30V DC/0.1A	3P/4P	HXC026H	HXC026H	HXC026H	HXC026H
Rotary handle, direct		3P/4P	HXD030H	HXD030H	HXE030H	HXF030H
Rotary handle, on door		3P/4P	HXD031H	HXD031H	HXE031H	HXF031H
Padlock removable			HXD039H	HXD039H	HXD039H	HXF039H
Padlock permanent			/	/	/	/
Motor operator	24V DC	3P/4P	HXD040H	HXD040H	HXE040H	HXF040H
	230 - 240VAC	3P/4P	HXD042H	HXD042H	HXE042H	HXF042H
Interlocking kit wire type (full kit for 2 MCCBs)			HXD065H	HXD065H	HXE065H	/
Interlock front cover unit			HXD066H	HXD066H	HXE066H	/
Interlocking mechanical cable	1 M		HXB070H	HXB070H	HXB070H	/
	1.5 M		HXB071H	HXB071H	HXB071H	/
Electrical interlock between motors			HXD068H	HXD068H	HXD068H	/
Collar terminals		3P	HYD007H	HYD007H	HYE007H	/
		4P	HYD008H	HYF008H	HYE008H	/
Extended connections - straight (set of 4 pieces)		3P/4P	HYD010H	HYD013H	included	included
Extended connections - spreader		3P	HYD011H	HYD014H	/	/
		4P	HYD012H	HYD015H	/	/
Rear connection		3P	HYD031H	HYD033H	HYE031H / 33H	/
		4P	HYD032H	HYD034H	HYE032H / 34H	/
Interphase barrier (set of 4 pieces)		3P/4P	HYD019H	HYD019H	HYD019H	HYD019H
Terminal cover for straight connections		3P	HYD021H	HYD021H	HYE021H	/
		4P	HYD022H	HYD022H	HYE022H	/
Terminal cover for spreader connections		3P	HYD023H	HYD023H	/	/
		4P	HYD024H	HYD024H	/	/
Terminal cover short for rear connection / plug-in		3P	HYD025H	HYD025H	HYE025H	/
		4P	HYD026H	HYD026H	HYE026H	/
Terminal cover for collar terminal		3P	HYD027H	HYD027H	/	/
		4P	HYD028H	HYD028H	/	/
Din Rail adaptor		3P/4P	/	/	/	/
Connecting kit (0.75 mm <sup>2</sup> , set of 3 x 2 wires, length: 1.30m)		3P/4P	HYA035H	HYA035H	HYA035H	HYA035H

# h3+ MCCB

## Moulded case circuit breaker

The new generation of Hager Moulded Case Circuit Breakers h3+ ensures reliable protection against overloads and short circuits, combined with accurate integrated energy monitoring for all low voltage distribution systems. With a compact frame size, available from 25 to 630A in 3 and 4 poles, h3+ offers high protection performance with a breaking capacity up to 50kA.

h3+ MCCBs, available with either a built-in thermal-magnetic trip unit or electronic trip unit, offer flexible protection settings to ease discrimination in all electrical distribution installations.

Users will benefit from a class 1 energy monitoring and communication system compatible with Modbus RTU protocol, that will allow them to configure protections parameters, monitor energy consumptions and manage alarms.

Special attention has been given to ergonomics in order to facilitate the integration of h3+ MCCB in electrical panel boards. Different methods of mounting are proposed along with different types of connections to increase the flexibility of installation.



h3+ P160 3P Energy



h3+ P250 3P Energy



h3+ P630 3P Energy

### h3+ Moulded Case Circuit Breaker at a glance

The h3+ range of MCCB can be briefly described as follows:

- 3 frame sizes: P160 and P250, 3P630
- Rated current from 25A to 630A
- Icu up to 50kA, Ics up to 50kA (415 V~)
- Available in 3 and 4 poles
- Rated nominal voltage Ue up to 690 V~
- Thermal-Magnetic, Magnetic and Electronic Trip Units
- Wide range of accessories

h3+ Switch-disconnectors

- P160 ratings: 125A, 160A
- P250 ratings: 200A, 250A
- P630 ratings: 400A, 630A

### Energy electronic trip unit with:

- Embedded display
- Measurement features (I, U, P, E, PF, THD...)
- Class 1 accuracy on energy measurements according to IEC 61557-12
- Alarm management and event histories
- Output contacts (PTA, OAC)
- Modbus RTU communication for remote monitoring and control
- Maintenance Interface Port (MIP)
- Communication accessories (Panel display, COM module...)

Circuit breakers			P160			P250			P630	
Number of poles			3, 4			3, 4			3, 4	
<b>General characteristics</b>										
Rated current at 50 °C		In (A)	160			250			630	
Current rated range		(A)	25 - 160 (Thermal Magnetic), 40 - 160 (Electronic)			50 - 250 (Thermal Magnetic), 40 - 250 (Electronic)			250 - 630	
Operational voltage, (AC)		Ue (V)	220 - 690			220 - 690			220 - 690	
Frequency		f (Hz)	50/60			50/60			50/60	
Rated insulation voltage		Ui (V)	800			800			800	
Rated impulse withstand voltage		Uimp (kV)	8			8			8	
Suitability for isolation			yes			yes			yes	
Utilisation category (IEC60947-2)			A			A			B ≤400A A > 400A	
Pollution degree			3			3			3	
Breaking capacity level			H	N	M	H	N	M	N	M
<b>Rated ultimate short-circuit breaking capacity, (Icu)</b>										
(AC) 50/60 Hz 220/240 V		Icu (kA)	35	50	65	35	50	65	70	85
(AC) 50/60 Hz 380/415 V		Icu (kA)	25	40	50	25	40	50	40	50
(AC) 50/60 Hz 660/690 V		Icu (kA)	6	6	6	6	6	6	7	12
<b>Rated service short-circuit breaking capacity, (Ics)</b>										
(AC) 50/60 Hz 220/240 V		Ics (kA)	35	50	65	35	50	65	70	85
(AC) 50/60 Hz 380/415 V		Ics (kA)	25	40	50	25	40	50	40	50
(AC) 50/60 Hz 660/690 V		Ics (kA)	6	6	6	6	6	6	7	12
Mechanical endurance in number of operations (IEC 60947-2)			40 000			40 000			30 000	
Electrical endurance in number of cycles at 440 V~ (IEC 60947-2)			10 000			10 000			6 000 ≤400A 4 000 > 400A	
<b>Environment</b>										
Operating temperature			-25 °C to +70 °C			-25 °C to +70 °C			-25 °C to +70 °C	
Storage temperature			-35 °C to +70 °C			-35 °C to +70 °C			-35 °C to +70 °C	
Tropicalisation			95 % HR at 55 °C			95 % HR at 55 °C			95 % HR at 55 °C	
Altitude		(m)	≤ 2000			≤ 2000			≤ 2000	
<b>Terminations</b>										
Pitch		(mm)	30			35			45	
Maximal terminal torque		(Nm)	6			12			18	
Terminal width		(mm)	21			25			32	
<b>Dimensions</b>										
Height		(mm)	130			165			260	
Width		3P (mm)	90			105			140	
		4P (mm)	120			140			185	
Depth		(mm)	97			97			150	
Weight		3P (kg)	1.1			1.5			5.8	
		4P (kg)	1.4			1.9			7.6	

**Moulded case circuit breakers P160**

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHS160DC

**MCCBs h3+ P160 - TM adjustable**

Breaking capacity I<sub>cu</sub>: 25kA (400/415 V AC)  
I<sub>cs</sub>: 25kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal	25	<b>HHS025DC</b>	<b>HHS026DC</b>
0.63 - 0.8 - 1 x I <sub>n</sub>	40	<b>HHS040DC</b>	<b>HHS041DC</b>
adjustable magnetic	63	<b>HHS063DC</b>	<b>HHS064DC</b>
6 - 8 - 10 - 12 x I <sub>n</sub> (25 - 125A)	80	<b>HHS080DC</b>	<b>HHS081DC</b>
6 - 7 - 8 - 9 - 10 x I <sub>n</sub> (160A)	100	<b>HHS100DC</b>	<b>HHS101DC</b>
	125	<b>HHS125DC</b>	<b>HHS126DC</b>
	160	<b>HHS160DC</b>	<b>HHS161DC</b>



HNS160DC

**MCCBs h3+ P160 - TM adjustable**

Breaking capacity I<sub>cu</sub>: 40kA (400/415 V AC)  
I<sub>cs</sub>: 40kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal	25	<b>HNS025DC</b>	<b>HNS026DC</b>
0.63 - 0.8 - 1 x I <sub>n</sub>	40	<b>HNS040DC</b>	<b>HNS041DC</b>
adjustable magnetic	63	<b>HNS063DC</b>	<b>HNS064DC</b>
6 - 8 - 10 - 12 x I <sub>n</sub> (25 - 125A)	80	<b>HNS080DC</b>	<b>HNS081DC</b>
6 - 7 - 8 - 9 - 10 x I <sub>n</sub> (160A)	100	<b>HNS100DC</b>	<b>HNS101DC</b>
	125	<b>HNS125DC</b>	<b>HNS126DC</b>
	160	<b>HNS160DC</b>	<b>HNS161DC</b>



HMS100DC

**MCCBs h3+ P160 - TM adjustable**

Breaking capacity I<sub>cu</sub>: 50kA (400/415 V AC)  
I<sub>cs</sub>: 50kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal	25	<b>HMS025DC</b>	<b>HMS026DC</b>
0.63 - 0.8 - 1 x I <sub>n</sub>	40	<b>HMS040DC</b>	<b>HMS041DC</b>
adjustable magnetic	63	<b>HMS063DC</b>	<b>HMS064DC</b>
6 - 8 - 10 - 12 x I <sub>n</sub> (25 - 125A)	80	<b>HMS080DC</b>	<b>HMS081DC</b>
6 - 7 - 8 - 9 - 10 x I <sub>n</sub> (160A)	100	<b>HMS100DC</b>	<b>HMS101DC</b>
	125	<b>HMS125DC</b>	<b>HMS126DC</b>
	160	<b>HMS160DC</b>	<b>HMS161DC</b>



### Moulded case circuit breakers P160

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHS160JC

#### MCCBs h3+ P160 - LSI

Breaking capacity Icu: 25kA (400/415 V AC)  
Ics: 25kA

In (A)	Cat. ref 3P	4P
40	<b>HHS040JC</b>	<b>HHS041JC</b>
100	<b>HHS100JC</b>	<b>HHS101JC</b>
160	<b>HHS160JC</b>	<b>HHS161JC</b>



HNS040JC

#### MCCBs h3+ P160 - LSI

Breaking capacity Icu: 40kA (400/415 V AC)  
Ics: 40kA

In (A)	Cat. ref 3P	4P
40	<b>HNS040JC</b>	<b>HNS041JC</b>
100	<b>HNS100JC</b>	<b>HNS101JC</b>
160	<b>HNS160JC</b>	<b>HNS161JC</b>



HMS040JC

#### MCCBs h3+ P160 - LSI

Breaking capacity Icu: 50kA (400/415 V AC)  
Ics: 50kA

In (A)	Cat. ref 3P	4P
40	<b>HMS040JC</b>	<b>HMS041JC</b>
100	<b>HMS100JC</b>	<b>HMS101JC</b>
160	<b>HMS160JC</b>	<b>HMS161JC</b>

**Moulded case circuit breakers P160**

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHS040NC

**MCCBs h3+ P160 - Energy**

Breaking capacity Icu: 25kA (400/415 V AC)  
Ics: 25kA

In (A)	Cat. ref 3P	4P
40	<b>HHS040NC</b>	<b>HHS041NC</b>
100	<b>HHS100NC</b>	<b>HHS101NC</b>
160	<b>HHS160NC</b>	<b>HHS161NC</b>



HNS160NC

**MCCBs h3+ P160 - Energy**

Breaking capacity Icu: 40kA (400/415 V AC)  
Ics: 40kA

In (A)	Cat. ref 3P	4P
40	<b>HNS040NC</b>	<b>HNS041NC</b>
100	<b>HNS100NC</b>	<b>HNS101NC</b>
160	<b>HNS160NC</b>	<b>HNS161NC</b>



HMS100NC

**MCCBs h3+ P160 - Energy**

Breaking capacity Icu: 50kA (400/415 V AC)  
Ics: 50kA

In (A)	Cat. ref 3P	4P
40	<b>HMS040NC</b>	<b>HMS041NC</b>
100	<b>HMS100NC</b>	<b>HMS101NC</b>
160	<b>HMS160NC</b>	<b>HMS161NC</b>

### Moulded case circuit breakers P250

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHT250DR

#### MCCBs h3+ P250 - TM adjustable

Breaking capacity Icu: 25kA (400/415 V AC)  
Ics: 25kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal 0.63 - 0.8 - 1 x In	50	<b>HHT050DR</b>	<b>HHT051DR</b>
adjustable magnetic 6 - 8 - 10 - 13 x In (50 - 125A)	63	<b>HHT063DR</b>	<b>HHT064DR</b>
6 - 8 - 10 - 12 x In (200A)	100	<b>HHT100DR</b>	<b>HHT101DR</b>
6 - 7 - 8 - 9 - 10 x In (250A)	125	<b>HHT125DR</b>	<b>HHT126DR</b>
	160	<b>HHT160DR</b>	<b>HHT161DR</b>
	200	<b>HHT200DR</b>	<b>HHT201DR</b>
	250	<b>HHT250DR</b>	<b>HHT251DR</b>



HNT050DR

#### MCCBs h3+ P250 - TM adjustable

Breaking capacity Icu: 40kA (400/415 V AC)  
Ics: 40kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal 0.63 - 0.8 - 1 x In	50	<b>HNT050DR</b>	<b>HNT051DR</b>
adjustable magnetic 6 - 8 - 10 - 13 x In (50 - 125A)	63	<b>HNT063DR</b>	<b>HNT064DR</b>
6 - 8 - 10 - 12 x In (200A)	100	<b>HNT100DR</b>	<b>HNT101DR</b>
6 - 7 - 8 - 9 - 10 x In (250A)	125	<b>HNT125DR</b>	<b>HNT126DR</b>
	160	<b>HNT160DR</b>	<b>HNT161DR</b>
	200	<b>HNT200DR</b>	<b>HNT201DR</b>
	250	<b>HNT250DR</b>	<b>HNT251DR</b>



HMT200DR

#### MCCBs h3+ P250 - TM adjustable

Breaking capacity Icu: 50kA (400/415 V AC)  
Ics: 50kA

Description	In (A)	Cat. ref 3P	4P
adjustable thermal 0.63 - 0.8 - 1 x In	50	<b>HMT050DR</b>	<b>HMT051DR</b>
adjustable magnetic 6 - 8 - 10 - 13 x In (50 - 125A)	63	<b>HMT063DR</b>	<b>HMT064DR</b>
6 - 8 - 10 - 12 x In (200A)	100	<b>HMT100DR</b>	<b>HMT101DR</b>
6 - 7 - 8 - 9 - 10 x In (250A)	125	<b>HMT125DR</b>	<b>HMT126DR</b>
	160	<b>HMT160DR</b>	<b>HMT161DR</b>
	200	<b>HMT200DR</b>	<b>HMT201DR</b>
	250	<b>HMT250DR</b>	<b>HMT251DR</b>

**Moulded case circuit breakers P250**

Mechanical test button, lockable setting, integrated padlocking  
handle Ø 4 mm



HHT250JR

**MCCBs h3+ P250 - LSI**

Breaking capacity Icu: 25kA (400/415 V AC)  
Ics: 25kA

In (A)	Cat. ref 3P	4P
40	HHT040JR	HHT041JR
100	HHT100JR	HHT101JR
160	HHT160JR	HHT161JR
250	HHT250JR	HHT251JR



HNT250JR

**MCCBs h3+ P250 - LSI**

Breaking capacity Icu: 40kA (400/415 V AC)  
Ics: 40kA

In (A)	Cat. ref 3P	4P
40	HNT040JR	HNT041JR
100	HNT100JR	HNT101JR
160	HNT160JR	HNT161JR
250	HNT250JR	HNT251JR



HMT160JR

**MCCBs h3+ P250 - LSI**

Breaking capacity Icu: 50kA (400/415 V AC)  
Ics: 50kA

In (A)	Cat. ref 3P	4P
40	HMT040JR	HMT041JR
100	HMT100JR	HMT101JR
160	HMT160JR	HMT161JR
250	HMT250JR	HMT251JR

### Moulded case circuit breakers P250

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHT040LR

#### MCCBs h3+ P250 - LSIg

Breaking capacity I<sub>cu</sub>: 25kA (400/415 V AC)  
I<sub>cs</sub>: 25kA

In (A)	Cat. ref 3P	4P
40	HHT040LR	HHT041LR
100	HHT100LR	HHT101LR
160	HHT160LR	HHT161LR
250	HHT250LR	HHT251LR



HNT040LR

#### MCCBs h3+ P250 - LSIg

Breaking capacity I<sub>cu</sub>: 40kA (400/415 V AC)  
I<sub>cs</sub>: 40kA

In (A)	Cat. ref 3P	4P
40	HNT040LR	HNT041LR
100	HNT100LR	HNT101LR
160	HNT160LR	HNT161LR
250	HNT250LR	HNT251LR



HMT250LR

#### MCCBs h3+ P250 - LSIg

Breaking capacity I<sub>cu</sub>: 50kA (400/415 V AC)  
I<sub>cs</sub>: 50kA

In (A)	Cat. ref 3P	4P
40	HMT040LR	HMT041LR
100	HMT100LR	HMT101LR
160	HMT160LR	HMT161LR
250	HMT250LR	HMT251LR

**Moulded case circuit breakers P250**

Mechanical test button, lockable setting, integrated padlocking handle Ø 4 mm



HHT250NR

**MCCBs h3+ P250 - Energy**

Breaking capacity Icu: 25kA (400/415 V AC)  
Ics: 25kA

In (A)	Cat. ref 3P	4P
40	<b>HHT040NR</b>	<b>HHT041NR</b>
100	<b>HHT100NR</b>	<b>HHT101NR</b>
160	<b>HHT160NR</b>	<b>HHT161NR</b>
250	<b>HHT250NR</b>	<b>HHT251NR</b>



HNT250NR

**MCCBs h3+ P250 - Energy**

Breaking capacity Icu: 40kA (400/415 V AC)  
Ics: 40kA

In (A)	Cat. ref 3P	4P
40	<b>HNT040NR</b>	<b>HNT041NR</b>
100	<b>HNT100NR</b>	<b>HNT101NR</b>
160	<b>HNT160NR</b>	<b>HNT161NR</b>
250	<b>HNT250NR</b>	<b>HNT251NR</b>



HMT250NR

**MCCBs h3+ P250 - Energy**

Breaking capacity Icu: 50kA (400/415 V AC)  
Ics: 50kA

In (A)	Cat. ref 3P	4P
40	<b>HMT040NR</b>	<b>HMT041NR</b>
100	<b>HMT100NR</b>	<b>HMT101NR</b>
160	<b>HMT160NR</b>	<b>HMT161NR</b>
250	<b>HMT250NR</b>	<b>HMT251NR</b>



HMW400JR

**MCCBs h3+ P630 - LSI**

Icu / Ics 400 - 415 V~	In (A)	Cat. ref 3P	4P
40 kA / 40 kA	250	<b>HNW250JR</b>	<b>HNW251JR</b>
	400	<b>HNW400JR</b>	<b>HNW401JR</b>
	630	<b>HNW630JR</b>	<b>HNW631JR</b>
50 kA / 50 kA	250	<b>HMW250JR</b>	<b>HMW251JR</b>
	400	<b>HMW400JR</b>	<b>HMW401JR</b>
	630	<b>HMW630JR</b>	<b>HMW631JR</b>



HNW630LR

**MCCBs h3+ P630 - LSIG**

Icu / Ics 400 - 415 V~	In (A)	Cat. ref 3P	4P
40 kA / 40 kA	250	<b>HNW250LR</b>	<b>HNW251LR</b>
	400	<b>HNW400LR</b>	<b>HNW401LR</b>
	630	<b>HNW630LR</b>	<b>HNW631LR</b>
50 kA / 50 kA	250	<b>HNW250LR</b>	<b>HMW251LR</b>
	400	<b>HNW400LR</b>	<b>HMW401LR</b>
	630	<b>HNW630LR</b>	<b>HMW631LR</b>



HNW400NR

**MCCBs h3+ P630 - LSI Energy**

Icu / Ics 400 - 415 V~	In (A)	Cat. ref 3P	4P
40 kA / 40 kA	250	<b>HNW250NR</b>	<b>HNW251NR</b>
	400	<b>HNW400NR</b>	<b>HNW401NR</b>
	630	<b>HNW630NR</b>	<b>HNW631NR</b>
50 kA / 50 kA	250	<b>HMW250NR</b>	<b>HMW251NR</b>
	400	<b>HMW400NR</b>	<b>HMW401NR</b>
	630	<b>HMW630NR</b>	<b>HMW631NR</b>



**h3+ P160 - Switch disconnectors**



HCS160AC

In (A)	3P	4P
125	<b>HCS125AC</b>	<b>HCS126AC</b>
160	<b>HCS160AC</b>	<b>HCS161AC</b>

**h3+ P250 - Switch disconnectors**



HCT200AR

In (A)	3P	4P
200	<b>HCT200AR</b>	<b>HCT201AR</b>
250	<b>HCT250AR</b>	<b>HCT251AR</b>

**h3+ P630 - Switch disconnectors**



HCW400AR

In (A)	3P	4P
400	<b>HCW400AR</b>	<b>HCW401AR</b>
630	<b>HCW630AR</b>	<b>HCW631AR</b>

RCD add-on block for P250



HBT160F

	In (A)	P 250
Fixed RCD	100 A	<b>HBT100F</b>
	160 A	<b>HBT160F</b>
	250 A	-



HBT250H

	In (A)	
Adjustable RCD	100 A	<b>HBT100H</b>
	160 A	<b>HBT160H</b>
	250 A	<b>HBT250H</b>



HBT250L

	In (A)	
Alarm only	100 A	<b>HBT100L</b>
	160 A	<b>HBT160L</b>
	250 A	<b>HBT250L</b>

RCD add-on block for P630



HBW630H

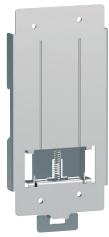
	In (A)	P 630
Adjustable RCD	400 A	<b>HBW400H</b>
	630 A	<b>HBW630H</b>



HBW630L

	In (A)	P 630
Alarm only	400 A	<b>HBW400L</b>
	630 A	<b>HBW630L</b>

### DIN rail mounting



HYT033H

		Poles	P160	P250	P630
DIN rail adaptor		3P / 4P	<b>HYS033H</b>	<b>HYT033H</b>	-

### Cable terminals



HYT002H



HYT006H



HYT066H

		Poles	P160 Front connection	P160 Cable terminal	P250	P630
Integrated	1 wire Cu/Al	3P	-	<b>HYS001H</b>	<b>HYT001H</b>	<b>HYW001H</b>
		4P	-	<b>HYS002H</b>	<b>HYT002H</b>	<b>HYW002H</b>
External	1 wire Cu/Al	3P	HYS105H	<b>HYS005H</b>	<b>HYT005H</b>	-
		4P	HYS106H	<b>HYS006H</b>	<b>HYT006H</b>	-
	2 wires Cu/Al	3P	-	-	<b>HYT007H</b>	<b>HYW007H</b>
		4P	-	-	<b>HYT008H</b>	<b>HYW008H</b>
6 wires Cu/Al	3P	HYS155H	HYS055H	<b>HYT065H</b>	-	
	4P	HYS156H	HYS056H	<b>HYT066H</b>	-	

### Terminal extensions



HYB010H



HYB012H

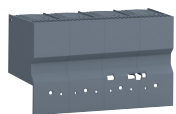


HYB032H

		Poles	P160 Front connection	P160 Cable terminal	P250	P630
Straight terminal extension		3P/4P	HYS010H	<b>HYS013H</b>	<b>HYB010H</b>	<b>HYW010H</b> (250-400A) <b>HYW013H</b> (630A)
Spreader terminal extension		3P	HYS011H	HYS014H	HYB011H	<b>HYW011H</b> (250-400A) <b>HYW014H</b> (630A)
		4P	HYS012H	HYS015H	HYB012H	<b>HYW012H</b> (250-400A) <b>HYW015H</b> (630A)
Rear connection		3P	HYS031H (16-50 A) HYS131H (63-160 A)	-	HYB031H	<b>HYD031H</b> (250-400A) <b>HYD033H</b> (630A)
		4P	HYS032H (16-50 A) HYS132H (63-160 A)	-	HYB032H	<b>HYD032H</b> (250-400A) <b>HYD034H</b> (630A)

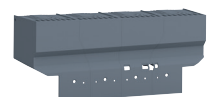
### Terminal covers and protections

	Poles	P160	P250	P630
Terminal cover for straight extensions	3P	<b>HYS021H</b>	<b>HYT021H</b>	<b>HYW021H</b>
	4P	<b>HYS022H</b>	<b>HYT022H</b>	<b>HYW022H</b>



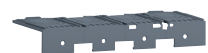
HYT022H

Terminal cover for spread extensions	3 P	<b>HYS023H</b>	<b>HYT023H</b>	<b>HYW023H</b>
	4 P	<b>HYS024H</b>	<b>HYT024H</b>	<b>HYW024H</b>



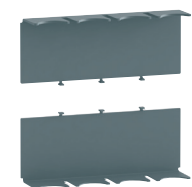
HYT024H

Terminal cover for rear & plug-in connections	3P	<b>HYS025H</b>	<b>HYT025H</b>	<b>HYW025H</b>
	4P	<b>HYS026H</b>	<b>HYT026H</b>	<b>HYW026H</b>



HYT026H

Isolating earth plate for Straight terminal cover	3P	<b>HYS050H</b>	<b>HYT050H</b>	<b>HYW050H</b>
	4P	<b>HYS051H</b>	<b>HYT051H</b>	<b>HYW051H</b>



HYT051H

Isolating Earth plate for Spread terminal cover	3P	<b>HYS052H</b>	<b>HYT052H</b>	<b>HYW052H</b>
	4P	<b>HYS053H</b>	<b>HYT053H</b>	<b>HYW053H</b>




HYT053H

Interphase barrier	50 mm	3/4P	<b>HYS019H</b>	-	-
	100 mm	3/4P	<b>HYT019H</b>		<b>HYW019H</b>












HYT019H







**Electronic devices and accessories**

	Poles	P160	P250	P630	Energy
	AX/AL Energy				
	For communication only	-	-	-	<b>HXS120H</b>
	COM + 250 V AC contact wires	-	-	-	<b>HXS121H</b>
	COM +125 V AC low level contact wires	-	-	-	<b>HXS122H</b>
	COM Module				
	Without I/O	-	-	-	<b>HTC310H</b>
	With I/O	-	-	-	<b>HTC320H</b>
	Side support for wire	-	-	-	<b>HTC100H</b>
	Panel display	-	-	-	<b>HTD210H</b>
	Configuration tool				<b>HTP610H</b>
	Spare parts				
	h3+ Configurator				<b>HTP010H</b>
	MIP adaptor for h3+				<b>HTP020H</b>
	VGA cable 1m for HTP610H				<b>HTP030H</b>
	Power supply for HTP610H				<b>HTP040H</b>
	Battery for HTP610H				<b>HTP050H</b>
	HTP050H 24 V DC Power supply	-	-	-	<b>HTG911H</b>

### Electronic devices and accessories






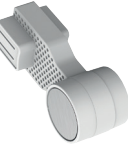
			P160	P250	P630	Energy
 HTC330H	CIP - Adaptor	0.5 m	-	-	-	<b>HTC330H</b>
		1.5 m	-	-	-	<b>HTC340H</b>
		3 m	-	-	-	<b>HTC350H</b>
		5 m	-	-	-	<b>HTC360H</b>
		10 m	-	-	-	<b>HTC370H</b>
 HTC140H	CIP - 24 V Adaptor	1.2 m	-	-	-	<b>HTC140H</b>
 HTC130H	OAC/PTA adaptor	1.2 m	-	<b>HTC130H</b>		
 HTC150H	ZSI adaptor	1.2 m	-	-	-	<b>HTC150H</b>
 HTC160H	NSP cable adaptor RJ45 - RJ45	0.2 m	-	-	-	<b>HTG480H</b>
		1 m	-	-	-	<b>HTG481H</b>
		2 m	-	-	-	<b>HTG482H</b>
		5 m	-	-	-	<b>HTG484H</b>
 HTG481H	Modbus cable RJ45 - RJ45	0.2 m	-	-	-	<b>HTG480H</b>
		1 m	-	-	-	<b>HTG481H</b>
		2 m	-	-	-	<b>HTG482H</b>
		5 m	-	-	-	<b>HTG484H</b>
 HTG471H	RJ45 - RJ45 with earth	1 m	-	-	-	<b>HTG472H</b>
		2 m	-	-	-	<b>HTG472H</b>
 HTG465H	RJ45 with earth	5 m	-	-	-	<b>HTG474H</b>
		3 m	-	-	-	<b>HTG465H</b>
 HTG485H		25 m	-	-	-	<b>HTG485H</b>

**Auxiliaries**


		P160 / P250 / P630
 <p>HXA021H</p>	AX position auxiliary contact	<b>HXA021H</b>
		Low level <b>HXA025H</b>
 <p>HXA024H</p>	AL tripping auxiliary contact	<b>HXA024H</b>
		Left side <b>HXA026H</b>
		Low level <b>HXA027H</b>
		Right side <b>HXA028H</b>
 <p>HXA005H</p>	Shunt trip release	<b>HXA001H</b>
		24 V DC <b>HXA002H</b>
		48 V DC <b>HXA003H</b>
		100 - 120 V~ <b>HXA004H</b>
		200 - 240 V~ <b>HXA005H</b>
 <p>HXA015H</p>	Undervoltage release	<b>HXA011H</b>
		24 V DC <b>HXA013H</b>
		100 - 120 V~ <b>HXA014H</b>
		200 - 240 V~ <b>HXA015H</b>
		380 - 450 V~
 <p>HXA051H</p>	Delayed UVR	<b>HXA051H</b>
		24 V DC <b>HXA053H</b>
		110 V~ <b>HXA054H</b>
		240 V~ <b>HXA055H</b>
 <p>HYA035H</p>	Cable kit	<b>HYA035H</b>
		0.75 mm <sup>2</sup> - 6 wires



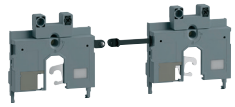
### Handles

		P160	P250	P630
	Direct rotary handle	<b>HXS030H</b>	<b>HXT030H</b>	<b>HXW030H</b>
	with interlocking	<b>HXS032H</b>	<b>HXT032H</b>	<b>HXW032H</b>
	Key kit for rotary handle	<b>HXS888H</b>		<b>HXW888H</b>
	key lock only HXS999H	<b>HXS999H</b>		
	On door rotary handle	<b>HXS031H</b>	<b>HXT031H</b>	<b>HXW031H</b>
	Shaft extension	black & grey IP55	<b>HXS901H</b>	<b>HXW901H</b>
		200 mm	<b>HXS912H</b>	<b>HXW912H</b>
		320 mm	<b>HXS913H</b>	<b>HXW913H</b>
		500 mm	<b>HXS915H</b>	<b>HXW915H</b>
	Shaft guide for door rotary handle			-
	Extended toggle	-		<b>HXW033H</b>

### Locking kits

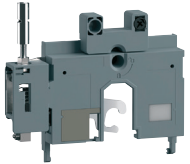
	Padlocking kit			P160 <b>HXA039H</b>
	Locking kit for on door rotary handle			<b>HZC019</b>

**Mechanical interlocking**



		P160	P250	P630
Link interlock kit	3P	<b>HXS165H</b>	<b>HXT165H</b>	<b>HXW165H</b>
	4P	<b>HXS166H</b>	<b>HXT166H</b>	<b>HXW166H</b>

HXT166H



Mechanical interlock (1 front cover)	3P / 4P	<b>HXS066H</b>	<b>HXT066H</b>	<b>HXW066H</b>
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HXT066H



Cable for mechanical interlock	1 m	<b>HXB070H</b>		
	1.5 m	<b>HXB071H</b>		

HXB070H

### Motor operators



HXT040H



HXT040HK



HXT043H



HXT043HK



HXB068H

		P250	P630
Motor operator with auto-reset	24 V DC	<b>HXT040H</b>	-
	24 - 48 V DC	-	<b>HXW040H</b>
	48 V DC	<b>HXT048H</b>	-
	100 - 110 V AC/DC	<b>HXT041H</b>	-
	100 - 110 V DC	-	<b>HXW041H</b>
	110 - 240 V AC	-	<b>HXW042H</b>
	200 - 220 V AC/DC	<b>HXT045H</b>	-
	230 - 240 V AC	<b>HXT042H</b>	-
Motor operator with auto-reset and Ronis key lock	24 V DC	<b>HXT040HK</b>	-
	24 - 48 V DC	-	<b>HXW040HK</b>
	48 V DC	<b>HXT048HK</b>	-
	100 - 110 V AC/DC	<b>HXT041HK</b>	-
	100 - 110 V DC	-	<b>HXW041HK</b>
	110 - 240 V AC	-	<b>HXW042HK</b>
	200 - 220 V AC/DC	<b>HXT045HK</b>	-
	230 - 240 V AC	<b>HXT042HK</b>	-
Motor operator without auto-reset	24 V DC	<b>HXT043H</b>	-
	24 - 48 V DC	-	<b>HXW043H</b>
	48 V DC	<b>HXT049H</b>	-
	100 - 110 V AC/DC	<b>HXT046H</b>	-
	100 - 110 V DC	-	<b>HXW046H</b>
	110 - 240 V AC	-	<b>HXW044H</b>
	200 - 220 V AC/DC	<b>HXT047H</b>	-
	230 - 240 V AC	<b>HXT044H</b>	-
Motor operator without auto-reset and Ronis key lock	24 V DC	<b>HXT043HK</b>	-
	24 - 48 V DC	-	<b>HXW043HK</b>
	48 V DC	<b>HXT049HK</b>	-
	100 - 110 V AC/DC	<b>HXT046HK</b>	-
	100 - 110 V DC	-	<b>HXW046HK</b>
	110 - 240 V AC	-	<b>HXW044HK</b>
	200 - 220 V AC/DC	<b>HXT047HK</b>	-
	230 - 240 V AC	<b>HXT044HK</b>	-
Electrical interlock for Motor operator	For 2 same motors	<b>HXB068H</b>	<b>HXD068H</b>
	For P250 to P630 motors	<b>HXB069H</b>	

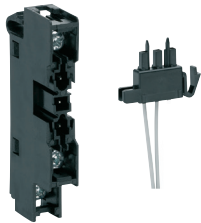
**Plug-in system**



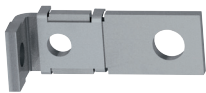
HYT201H



HYT301H



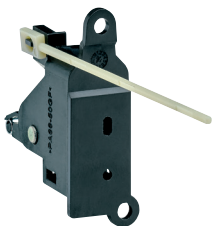
HYC250H HYC352H



HYT328H



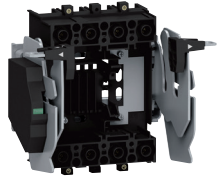


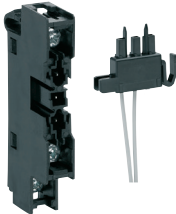
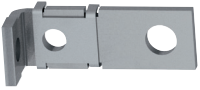
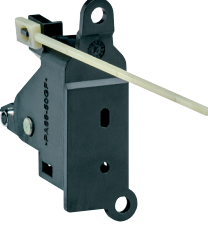
HYC321H



HYS256H

		P160	P250	P630
Plug-in base	3P	<b>HYS200H</b>	<b>HYT200H</b>	<b>HYW200H</b>
	4P	<b>HYS201H</b>	<b>HYT201H</b>	<b>HYW201H</b>
Plug-in circuit breaker conversion kit	3P	<b>HYS300H</b> <b>HYS310H</b> (≤50 A)	<b>HYT300H</b>	<b>HYW300H</b>
	4P	<b>HYS301H</b> <b>HYS311H</b> (≤50 A)	<b>HYT301H</b>	<b>HYW301H</b>
Auxiliary circuit terminal	Base side	<b>HYC250H</b>		
	MCCB side 2 wires	<b>HYC352H</b>		
	MCCB side 3 wires	<b>HYC353H</b>		
L connection	1P	<b>HYS328H</b>	<b>HYT328H</b>	<b>HYW328H</b>
Terminal cover for plug-in base	3P	<b>HYS321H</b>	<b>HYC321H</b>	<b>HYD321H</b>
	4P	<b>HYS322H</b>	<b>HYC322H</b>	<b>HYD322H</b>
Safety trip		<b>HYS256H</b>		<b>HYW256H</b>
	Kit for Quadro SX and Unimes H enclosures	<b>HYS257H</b>	<b>HYT257H</b>	<b>HYW257H</b>

### Withdrawable system

		P250	P630	
	Base for withdrawable circuit breaker			
		3P 4P	<b>HYT330H</b> <b>HYT331H</b>	<b>HYW330H</b> <b>HYW331H</b>
HYT331H				
	Withdrawable circuit breaker adaptor with safety trip			
		3P 4P	<b>HYT332H</b> <b>HYT333H</b>	<b>HYW332H</b> <b>HYW333H</b>
HYT333H				
	Locking key kit			
			<b>HXT890H</b>	<b>HXW890H</b>
HXT890H				
	Auxiliary circuit terminal			
		Base side	<b>HYC250H</b>	
		MCCB side 2 wires	<b>HYC352H</b>	
	MCCB side 3 wires	<b>HYC353H</b>		
HYC250H HYC352H				
	L connection			
		1P	<b>HYT328H</b>	<b>HYW328H</b>
HYT328H				
	Position switch			
	Spare safety trip (safety trip included as standard)		<b>HYS256H</b>	<b>HYW256H</b>
		Kit for Quadro SX and Unimes H enclosures	<b>HYT257H</b>	<b>HYW257H</b>
HYS256H				

### Load break switches 20 to 125A

- modular design,
  - to mount directly on DIN rail,
  - lockable in OFF position.
- Comply with NF EN 60 947-3.

### Connection

- with collar terminals copper conductors compatible.
- connection capacity:
  - HAB** 20 to 63A: 16 mm<sup>2</sup> flexible or rigid cables
  - HAC** 60 to 100A: 35 mm<sup>2</sup> flexible or rigid cables
  - HAD** 100 and 125A: 70 mm<sup>2</sup> flexible or rigid cables



HAC410

### Load break switches visual breaking

- disconnecter modular design
- IP20
- In=lth, AC23

In/A	Width in modules		Cat. ref.	
	3P	4P	3P	4P
20A	2.6	3.5	<b>HAB302</b>	<b>HAB402</b>
32A	2.6	3.5	<b>HAB303</b>	<b>HAB403</b>
40A	2.6	3.5	<b>HAB304</b>	<b>HAB404</b>
63A	2.6	3.5	<b>HAB306</b>	<b>HAB406</b>
63A	3	4.5	<b>HAC306</b>	<b>HAC406</b>
80A	3	4.5	<b>HAC308</b>	<b>HAC408</b>
100A	3	4.5	<b>HAC310</b>	<b>HAC410</b>
100A	4.5	6	<b>HAD310</b>	<b>HAD410</b>
125A	4.5	6	<b>HAD312</b>	<b>HAD412</b>



HZC011

### External handles

- IP55
- lockable with 3 padlocks

Description	Cat. ref.
for LBS 20 to 100A (HAB, HAC)	<b>HZC010</b>
for LBS 100 to 125A (HAD)	<b>HZC011</b>



HZC113

### Shaft extensions

Description	Cat. ref.
20 to 125A, 150mm	<b>HZC111</b>
20 to 125A, 200mm	<b>HZC112</b>
20 to 125A, 320mm	<b>HZC113</b>



HZC212

### Terminal shrouds

- 2 pieces / packaging: top and bottom

Description	Cat. ref.	
	3P	4P
20 to 63A (HAB)	<b>HZC211</b>	<b>HZC212</b>
63 to 100A (HAC)	<b>HZC213</b>	<b>HZC214</b>
100 to 125A (HAD)	<b>HZC215</b>	<b>HZC216</b>



HZC311

### Auxiliaries contacts

- In = 10A
- 250V AC

Description	Width in modules	Cat. ref.
1NO + 1NC	0.5	<b>HZC311</b>
2NO	0.5	<b>HZC312</b>

### Load break switches with handle

- for main and/or modular breaking, to use in commercial premises.
- Ith (40°): 125 to 1600A
- Un 400 / 690V AC

- 3P and 4P switches with visible breaking, with sudden double breaking, positive action opening, breaking or engagement visualisation.
- selfcleaning silver plated copper contacts.

Comply with EN 60 947-3.

#### Options

- extended handle;
- auxiliary contact.



HA358

### Load break switches with handle

Insulating voltage Ui: from 160 to 400A: 800V AC  
630A: 1000V AC

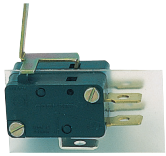
Connection: In 160A: 95 mm<sup>2</sup> max.  
In 250A: 150 mm<sup>2</sup> max.  
In 400A: 240 mm<sup>2</sup> max. or  
2 x 150 mm<sup>2</sup> max.

#### Delivered with:

- 1 lockable handle
- fixing screws and nuts
- tightening programming segments

In/A	Cat. ref.	
	3P	4P
125A	<b>HA351</b>	<b>HA451</b>
160A	<b>HA352</b>	<b>HA452</b>
200A	<b>HA353</b>	<b>HA453</b>
250A	<b>HA354</b>	<b>HA454</b>
400A	<b>HA357</b>	<b>HA457</b>
630A	<b>HA358</b>	<b>HA458</b>
800A	<b>HA360</b>	<b>HA460</b>
1250A	<b>HA362</b>	<b>HA462</b>
1600A	<b>HA364</b>	<b>HA464</b>





HZ023

**Auxiliaries contact**

- for HA load break switches 125 to 1600A
- AC1, 5A, 250V

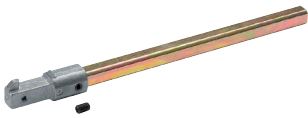
Description	Cat. ref.
1NO + 1NC	<b>HZ023</b>



HZC002

**Rotary handles**

Description	Cat. ref.
for extended shaft, 125 to 630A	<b>HZC002</b>
for extended shaft, 800 to 1600A	<b>HZA001</b>



HZC101

**Shaft extensions**

Description	Cat. ref.
63 to 630A, 200mm	<b>HZC101</b>
63 to 630A, 320mm	<b>HZC102</b>
800 to 1600A, 200mm	<b>HZC105</b>
800 to 1600A, 320mm	<b>HZC106</b>

### Characteristics

The range of enclosed LBS has been designed to match the TP&N range of distribution boards. The number of enclosure sizes has been optimized, to ensure an easy installation.

The LBS products are designed to isolate individual circuits. The range is presented in surface mounting enclosures and includes 2 versions of boxes :

- TPN 20-1600A (14 ratings)
- TPSN 20-1600A (14 ratings)

### Delivered with

- load break switch
- plain door
- extended rotary handle

### Technical data

- nominal current (In): 20A up to 1600A
- rated voltage (Ue): 415V AC
- utilisation category: AC23A / AC23B / AC22B
- colour: epoxy powder coating RAL 9002
- metallic enclosure
- 1.2mm thickness
- extra cabling space

### Comply with

IEC 60947-3, EN 60947-3  
Sequence 1, 2 and 3



JAB306

### Enclosed load break switches triple pole and neutral

Description	Utilisation category	Cat. ref IP40.	IP55
20A	AC23A	JAB302	JAB302S-IP55
32A	AC23A	JAB303	JAB303S-IP55
63A	AC23A	JAB306	JAB306S-IP55
100A	AC23A	JAB310	JAB310S-IP55
125A	AC23A	JAC312	JAC312S-IP55
160A	AC23A	JAC316	JAC316S-IP55
200A	AC23A	JAE320	JAE320S-IP55
250A	AC23A	JAE325	JAE325S-IP55
315A	AC23A	JAG331	JAG331S-IP55
400A	AC23A	JAG340	JAG340S-IP55
630A	AC23A	JAH363	JAH363S-IP55
800A	AC23B	JAH380	JAH380S-IP55
1250A	AC23B	JAH390	JAH390S-IP55
1600A	AC22B	JAH392	JAH392S-IP55

### Enclosed load break switches triple pole switched neutral

Description	Utilisation category	Cat. ref IP40.	IP55
20A	AC23A	JAB402	JAB402S-IP55
32A	AC23A	JAB403	JAB403S-IP55
63A	AC23A	JAB406	JAB406S-IP55
100A	AC23A	JAB410	JAB410S-IP55
125A	AC23A	JAC412	JAC412S-IP55
160A	AC23A	JAC416	JAC416S-IP55
200A	AC23A	JAE420	JAE420S-IP55
250A	AC23A	JAE425	JAE425S-IP55
315A	AC23A	JAG431	JAG431S-IP55
400A	AC23A	JAG440	JAG440S-IP55
630A	AC23A	JAH463	JAH463S-IP55
800A	AC23B	JAH480	JAH480S-IP55
1250A	AC23B	JAH490	JAH490S-IP55
1600A	AC22B	JAH492	JAH492S-IP55

**Cable extension boxes triple pole and triple pole switched neutral**

Description	Cat. ref.
125A, 160A	<b>JZA700</b>
200A, 250A, 315A, 400A	<b>JZA701</b>
630A, 800A	<b>JZA702</b>



HZ023

**Auxiliary contacts**

Description	Cat. ref.
20A to 160A, 1NO+1NC	<b>HZC311</b>
20A to 160A, 2NO	<b>HZC312</b>
125A to 1600A, 2x(1NO+1NC)	<b>HZ023</b>



HZC201

**Terminal shrouds**

Description	Cat. ref. 3P	4P
20A to 40A	<b>HZC211</b>	<b>HZC212</b>
63A to 100A	<b>HZC213</b>	<b>HZC214</b>
125A to 160A	<b>HZC201</b>	<b>HZC202</b>
200A to 315A	<b>HZC203</b>	<b>HZC204</b>
400A to 630A	<b>HZC205</b>	<b>HZC206</b>



HZ046

**Terminal protection screens**

Description	Cat. ref. 3P	4P
800A	<b>HZ036</b>	<b>HZ046</b>
1250A to 1600A	<b>HZ037</b>	<b>HZ047</b>



# Modular protection devices

We offer a wide range of modular protection devices, such as MCBs, RCCBs, RCBOs, HRC fuse carriers and motor starters.



---

Miniature circuit breakers (MCB)	102
Residual current breakers with overcurrent protection (RCBO)	114
Residual current circuit breakers (RCCB)	115
Auxiliaries	118
Motor starters	120
HRC fuse carriers	121

---

### Characteristics

Protection and control of circuits against overloads and short-circuits in electrical installations. Allows to isolate circuits.

### Complies to the standard IEC 60898-1

### Technical data

- breaking capacity: 3000A (as per IEC 60898-1)
- voltage: 230/400V AC
- current: 6A to 40A
- frequency: 50/60Hz
- tripping curve:
  - B curve: 3 to 5 I<sub>n</sub>
  - C curve: 5 to 10 I<sub>n</sub>

### Technical features

- bi-connect (cable & busbar)
- supply feed either top or bottom
- will not accept auxiliaries
- poles: 1P, 2P, 3P, 4P (protected poles)
- climate sealed: T2
- trip free mechanism

### Connection capacity

- flexible: up to 16 mm<sup>2</sup>
- rigid: up to 25 mm<sup>2</sup>



MW110



MW216



MW332



MW432

In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Single pole miniature circuit breakers 3kA</b>				
6 A	1	12	<b>MV106</b>	<b>MW106</b>
10 A	1	12	<b>MV110</b>	<b>MW110</b>
16 A	1	12	<b>MV116</b>	<b>MW116</b>
20 A	1	12	<b>MV120</b>	<b>MW120</b>
25 A	1	12	<b>MV125</b>	<b>MW125</b>
32 A	1	12	<b>MV132</b>	<b>MW132</b>
40 A	1	12	<b>MV140</b>	<b>MW140</b>
<b>Double pole miniature circuit breakers 3kA</b>				
6 A	2	6	<b>MV206</b>	<b>MW206</b>
10 A	2	6	<b>MV210</b>	<b>MW210</b>
16 A	2	6	<b>MV216</b>	<b>MW216</b>
20 A	2	6	<b>MV220</b>	<b>MW220</b>
25 A	2	6	<b>MV225</b>	<b>MW225</b>
32 A	2	6	<b>MV232</b>	<b>MW232</b>
40 A	2	6	<b>MV240</b>	<b>MW240</b>
<b>Three pole miniature circuit breakers 3kA</b>				
6 A	3	4	<b>MV306</b>	<b>MW306</b>
10 A	3	4	<b>MV310</b>	<b>MW310</b>
16 A	3	4	<b>MV316</b>	<b>MW316</b>
20 A	3	4	<b>MV320</b>	<b>MW320</b>
25 A	3	4	<b>MV325</b>	<b>MW325</b>
32 A	3	4	<b>MV332</b>	<b>MW332</b>
40 A	3	4	<b>MV340</b>	<b>MW340</b>
<b>Four pole miniature circuit breakers 3kA</b>				
6 A	4	3	<b>MV406</b>	<b>MW406</b>
10 A	4	3	<b>MV410</b>	<b>MW410</b>
16 A	4	3	<b>MV416</b>	<b>MW416</b>
20 A	4	3	<b>MV420</b>	<b>MW420</b>
25 A	4	3	<b>MV425</b>	<b>MW425</b>
32 A	4	3	<b>MV432</b>	<b>MW432</b>
40 A	4	3	<b>MV440</b>	<b>MW440</b>



### Range : Onekonekt

#### Characteristics

Protection and control of circuits against overloads and short-circuits in electrical installations. Allows to isolate circuits.

#### Complies to the standard IEC 60898-1

#### Technical data

- comply to the standard IEC 60898-1
- breaking capacity: 6000A (as per IEC 60898-1)
- voltage: 230/400V AC
- current: 0.5A to 63A
- frequency: 50/60Hz
- tripping curve:
  - C curve: 5 to 10 In

#### Technical features

- label holder
- IP2X terminals
- bi-connect (cable & busbar)
- supply feed either top or bottom
- will accept auxiliaries
- poles: 1P, 2P, 3P, 4P (protected poles)
- climate sealed: T2
- trip free mechanism

#### Connection capacity

- flexible: up to 16 mm<sup>2</sup>
- rigid: up to 25 mm<sup>2</sup>

### onekonekt Miniature circuit breakers 6 kA type C

In	Width in module 17.5 mm	Pack qty	Cat. ref. C curve
<b>Single pole miniature circuit breakers 6 kA</b>			
0.5 A	1	12	<b>MCN100</b>
1 A	1	12	<b>MCN101</b>
2 A	1	12	<b>MCN102</b>
3 A	1	12	<b>MCN103</b>
4 A	1	12	<b>MCN104</b>
6 A	1	12	<b>MCN106</b>
10 A	1	12	<b>MCN110</b>
16 A	1	12	<b>MCN116</b>
20 A	1	12	<b>MCN120</b>
25 A	1	12	<b>MCN125</b>
32 A	1	12	<b>MCN132</b>
40 A	1	12	<b>MCN140</b>
50 A	1	12	<b>MCN150</b>
63 A	1	12	<b>MCN163</b>
<b>Double pole miniature circuit breakers 6 kA</b>			
0.5 A	2	6	<b>MCN200</b>
1 A	2	6	<b>MCN201</b>
2 A	2	6	<b>MCN202</b>
3 A	2	6	<b>MCN203</b>
4 A	2	6	<b>MCN204</b>
6 A	2	6	<b>MCN206</b>
10 A	2	6	<b>MCN210</b>
16 A	2	6	<b>MCN216</b>
20 A	2	6	<b>MCN220</b>
25 A	2	6	<b>MCN225</b>
32 A	2	6	<b>MCN232</b>
40 A	2	6	<b>MCN240</b>
50 A	2	6	<b>MCN250</b>
63 A	2	6	<b>MCN263</b>



MCN110

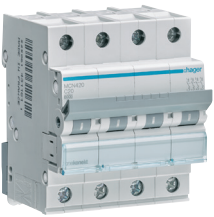


MCN220



MCN332

In	Width in module 17.5 mm	Pack qty	Cat. ref. C curve
<b>Three pole miniature circuit breakers 6 kA</b>			
0.5 A	3	4	<b>MCN300</b>
1 A	3	4	<b>MCN301</b>
2 A	3	4	<b>MCN302</b>
3 A	3	4	<b>MCN303</b>
4 A	3	4	<b>MCN304</b>
6 A	3	4	<b>MCN306</b>
10 A	3	4	<b>MCN310</b>
16 A	3	4	<b>MCN316</b>
20 A	3	4	<b>MCN320</b>
25 A	3	4	<b>MCN325</b>
32 A	3	4	<b>MCN332</b>
40 A	3	4	<b>MCN340</b>
50 A	3	4	<b>MCN350</b>
63 A	3	4	<b>MCN363</b>



MCN420

<b>Four pole miniature circuit breakers 6 kA</b>			
0.5 A	4	3	<b>MCN400</b>
1 A	4	3	<b>MCN401</b>
2 A	4	3	<b>MCN402</b>
3 A	4	3	<b>MCN403</b>
4 A	4	3	<b>MCN404</b>
6 A	4	3	<b>MCN406</b>
10 A	4	3	<b>MCN410</b>
16 A	4	3	<b>MCN416</b>
20 A	4	3	<b>MCN420</b>
25 A	4	3	<b>MCN425</b>
32 A	4	3	<b>MCN432</b>
40 A	4	3	<b>MCN440</b>
50 A	4	3	<b>MCN450</b>
63 A	4	3	<b>MCN463</b>

### Miniature circuit breakers 10kA, type B and C

- tripping curve:
  - B curve: 3 to 5 I<sub>n</sub>
  - C curve: 5 to 10 I<sub>n</sub>
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating: 240/400V AC
- current rating: 6 to 196 A
- frequency: 50/60Hz
- climate sealed: T2
- connecting capacity:
  - 16 mm<sup>2</sup> flexible conductor
  - 25 mm<sup>2</sup> rigid conductor
- comply to the standard IEC 60898-1
- breaking capacity: 6kA (IEC 60898-1)
- will not accept accessories



MU132A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Single pole miniature circuit breakers 6kA</b>				
6 A	1	12	<b>MT106A</b>	<b>MU106A</b>
10 A	1	12	<b>MT110A</b>	<b>MU110A</b>
16 A	1	12	<b>MT116A</b>	<b>MU116A</b>
20 A	1	12	<b>MT120A</b>	<b>MU120A</b>
25 A	1	12	<b>MT125A</b>	<b>MU125A</b>
32 A	1	12	<b>MT132A</b>	<b>MU132A</b>
40 A	1	12	<b>MT140A</b>	<b>MU140A</b>
50 A	1	12	<b>MT150A</b>	<b>MU150A</b>
63 A	1	12	<b>MT163A</b>	<b>MU163A</b>



MU220A



<b>Double pole miniature circuit breakers 6kA</b>				
6 A	2	6	<b>MT206A</b>	<b>MU206A</b>
10 A	2	6	<b>MT210A</b>	<b>MU210A</b>
16 A	2	6	<b>MT216A</b>	<b>MU216A</b>
20 A	2	6	<b>MT220A</b>	<b>MU220A</b>
25 A	2	6	<b>MT225A</b>	<b>MU225A</b>
32 A	2	6	<b>MT232A</b>	<b>MU232A</b>
40 A	2	6	<b>MT240A</b>	<b>MU240A</b>
50 A	2	6	<b>MT250A</b>	<b>MU250A</b>
60 A	2	6	<b>MT263A</b>	<b>MU263A</b>



MU340A



<b>Three pole miniature circuit breakers 6kA</b>				
6 A	3	4	<b>MT306A</b>	<b>MU306A</b>
10 A	3	4	<b>MT310A</b>	<b>MU310A</b>
16 A	3	4	<b>MT316A</b>	<b>MU316A</b>
20 A	3	4	<b>MT320A</b>	<b>MU320A</b>
25 A	3	4	<b>MT325A</b>	<b>MU325A</b>
32 A	3	4	<b>MT332A</b>	<b>MU332A</b>
40 A	3	4	<b>MT340A</b>	<b>MU340A</b>
50 A	3	4	<b>MT350A</b>	<b>MU350A</b>
63 A	3	4	<b>MT363A</b>	<b>MU363A</b>



MU463A



<b>Four pole miniature circuit breakers 6kA</b>				
6 A	4	3	-	<b>MU406A</b>
10 A	4	3	-	<b>MU410A</b>
16 A	4	3	-	<b>MU416A</b>
20 A	4	3	-	<b>MU420A</b>
25 A	4	3	-	<b>MU425A</b>
32 A	4	3	-	<b>MU432A</b>
40 A	4	3	-	<b>MU440A</b>
50 A	4	3	-	<b>MU450A</b>
63 A	4	3	-	<b>MU463A</b>

**Miniature circuit breakers 10 kA, type B and C**

- tripping curve:  
  B curve: 3 to 5 I<sub>n</sub>,  
  C curve: 5 to 10 I<sub>n</sub>
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating: 240/400V AC
- current rating: 0.5 to 63A
- frequency: 50/60Hz

- climate sealed: T2
- connecting capacity:  
  16 mm<sup>2</sup> flexible conductor  
  25 mm<sup>2</sup> rigid conductor
- comply to the standard IEC 60898-1  
  breaking capacity: 6kA (IEC 60898-1)



MC100A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Single pole miniature circuit breakers 6 kA</b>				
0.5 A	1	12	-	<b>MC100A</b>
1 A	1	12	-	<b>MC101A</b>
2 A	1	12	-	<b>MC102A</b>
3 A	1	12	-	<b>MC103A</b>
4 A	1	12	-	<b>MC104A</b>
6 A	1	12	<b>MB106A</b>	<b>MC106A</b>
10 A	1	12	<b>MB110A</b>	<b>MC110A</b>
16 A	1	12	<b>MB116A</b>	<b>MC116A</b>
20 A	1	12	<b>MB120A</b>	<b>MC120A</b>
25 A	1	12	<b>MB125A</b>	<b>MC125A</b>
32 A	1	12	<b>MB132A</b>	<b>MC132A</b>
40 A	1	12	<b>MB140A</b>	<b>MC140A</b>
50 A	1	12	<b>MB150A</b>	<b>MC150A</b>
63 A	1	12	<b>MB163A</b>	<b>MC163A</b>



MC225A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Double pole miniature circuit breakers 6 kA</b>				
0.5 A	2	6	-	<b>MC200A</b>
1 A	2	6	-	<b>MC201A</b>
2 A	2	6	-	<b>MC202A</b>
3 A	2	6	-	<b>MC203A</b>
4 A	2	6	-	<b>MC204A</b>
6 A	2	6	<b>MB206A</b>	<b>MC206A</b>
10 A	2	6	<b>MB210A</b>	<b>MC210A</b>
16 A	2	6	<b>MB216A</b>	<b>MC216A</b>
20 A	2	6	<b>MB220A</b>	<b>MC220A</b>
25 A	2	6	<b>MB225A</b>	<b>MC225A</b>
32 A	2	6	<b>MB232A</b>	<b>MC232A</b>
40 A	2	6	<b>MB240A</b>	<b>MC240A</b>
50 A	2	6	<b>MB250A</b>	<b>MC250A</b>
63 A	2	6	<b>MB263A</b>	<b>MC263A</b>



MC303A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Three pole miniature circuit breakers 6 kA</b>				
0.5 A	3	4	-	<b>MC300A</b>
1 A	3	4	-	<b>MC301A</b>
2 A	3	4	-	<b>MC302A</b>
3 A	3	4	-	<b>MC303A</b>
4 A	3	4	-	<b>MC304A</b>
6 A	3	4	<b>MB306A</b>	<b>MC306A</b>
10 A	3	4	<b>MB310A</b>	<b>MC310A</b>
16 A	3	4	<b>MB316A</b>	<b>MC316A</b>
20 A	3	4	<b>MB320A</b>	<b>MC320A</b>
25 A	3	4	<b>MB325A</b>	<b>MC325A</b>
32 A	3	4	<b>MB332A</b>	<b>MC332A</b>
40 A	3	4	<b>MB340A</b>	<b>MC340A</b>
50 A	3	4	<b>MB350A</b>	<b>MC350A</b>
63 A	3	4	<b>MB363A</b>	<b>MC363A</b>



MC463A

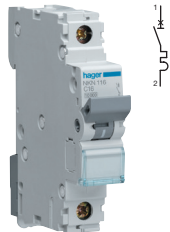


In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Four pole miniature circuit breakers 6 kA</b>				
0.5 A	4	3	-	MC400A
1 A	4	3	-	MC401A
2 A	4	3	-	MC402A
3 A	4	3	-	MC403A
4 A	4	3	-	MC404A
6 A	4	3	MB406A	MC406A
10 A	4	3	MB410A	MC410A
16 A	4	3	MB416A	MC416A
20 A	4	3	MB420A	MC420A
25 A	4	3	MB425A	MC425A
32 A	4	3	MB432A	MC432A
40 A	4	3	MB440A	MC440A
50 A	4	3	MB450A	MC450A
63 A	4	3	MB463A	MC463A

### Miniature circuit breakers 6/10 kA, type D

- tripping curve: D curve: 10 to 20 In,
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating: 240/400V AC
- current rating: 0.5 to 63A
- frequency: 50/60Hz

- climate sealed: T2
- connecting capacity:
  - 25 mm<sup>2</sup> flexible conductor
  - 35 mm<sup>2</sup> rigid conductor
- comply to the standard IEC 60898-1  
 breaking capacity: 6kA (IEC 60898-1)  
 10 kA (IEC 60947-2)



NGN116



In	Width in module 17.5 mm	Pack qty	Cat. ref. D curve
<b>Single pole miniature circuit breakers 6/10 kA</b>			
0.5 A	1	1	NGN100
1 A	1	1	NGN101
2 A	1	1	NGN102
3 A	1	1	NGN103
4 A	1	1	NGN104
6 A	1	1	NGN106
10 A	1	1	NGN110
16 A	1	1	NGN116
20 A	1	1	NGN120
25 A	1	1	NGN125
32 A	1	1	NGN132
40 A	1	1	NGN140
50 A	1	1	NGN150
63 A	1	1	NGN163



NGN232



In	Width in module 17.5 mm	Pack qty	Cat. ref. D curve
<b>Double pole miniature circuit breakers 6/10 kA</b>			
0.5 A	2	1	NGN200
1 A	2	1	NGN201
2 A	2	1	NGN202
3 A	2	1	NGN203
4 A	2	1	NGN204
6 A	2	1	NGN206
10 A	2	1	NGN210
16 A	2	1	NGN216
20 A	2	1	NGN220
25 A	2	1	NGN225
32 A	2	1	NGN232
40 A	2	1	NGN240
50 A	2	1	NGN250
63 A	2	1	NGN263



NGN320



<b>Three pole miniature circuit breakers 6/10 kA</b>			
0.5 A	3	1	NGN300
1 A	3	1	NGN301
2 A	3	1	NGN302
3 A	3	1	NGN303
4 A	3	1	NGN304
6 A	3	1	NGN306
10 A	3	1	NGN310
16 A	3	1	NGN316
20 A	3	1	NGN320
25 A	3	1	NGN325
32 A	3	1	NGN332
40 A	3	1	NGN340
50 A	3	1	NGN350
63 A	3	1	NGN363



NGN440



<b>Four pole miniature circuit breakers 6/10 kA</b>			
0.5 A	4	1	NGN400
1 A	4	1	NGN401
2 A	4	1	NGN402
3 A	4	1	NGN403
4 A	4	1	NGN404
6 A	4	1	NGN406
10 A	4	1	NGN410
16 A	4	1	NGN416
20 A	4	1	NGN420
25 A	4	1	NGN425
32 A	4	1	NGN432
40 A	4	1	NGN440
50 A	4	1	NGN450
63 A	4	1	NGN463

### Characteristics

Protection and control of circuits against overloads and short-circuits in electrical installations. Allows to isolate circuits.

### Complies to the standard IEC 60898-1

### Technical data

- breaking capacity: 10kA (as per IEC 60898-1)
- voltage: 230/400V AC
- current: 6A to 63A
- frequency: 50/60Hz
- tripping curve:
  - B curve: 3 to 5 I<sub>n</sub>
  - C curve: 5 to 10 I<sub>n</sub>

### Technical features

- bi-connect (cable & busbar)
- supply feed either top or bottom
- will accept auxiliaries
- poles: 1P, 2P, 3P, 4P (protected poles)
- climate sealed: T2
- trip free mechanism

### Connection capacity

- flexible: up to 16 mm<sup>2</sup>
- rigid: up to 25 mm<sup>2</sup>



NC110A



NC236A



NC363A



NC432A

In	Width in module 17,5 mm	Pack qty	Cat. ref. B curve	Cat. ref. C curve
<b>Single pole miniature circuit breakers 10 kA</b>				
6 A	1	12	<b>NB106A</b>	<b>NC106A</b>
10 A	1	12	<b>NB110A</b>	<b>NC110A</b>
16 A	1	12	<b>NB116A</b>	<b>NC116A</b>
20 A	1	12	<b>NB120A</b>	<b>NC120A</b>
25 A	1	12	<b>NB125A</b>	<b>NC125A</b>
32 A	1	12	<b>NB132A</b>	<b>NC132A</b>
40 A	1	12	<b>NB140A</b>	<b>NC140A</b>
50 A	1	12	<b>NB150A</b>	<b>NC150A</b>
63 A	1	12	<b>NB163A</b>	<b>NC163A</b>
<b>Double pole miniature circuit breakers 10 kA</b>				
6 A	2	6	<b>NB206A</b>	<b>NC206A</b>
10 A	2	6	<b>NB210A</b>	<b>NC210A</b>
16 A	2	6	<b>NB216A</b>	<b>NC216A</b>
20 A	2	6	<b>NB220A</b>	<b>NC220A</b>
25 A	2	6	<b>NB225A</b>	<b>NC225A</b>
32 A	2	6	<b>NB232A</b>	<b>NC232A</b>
40 A	2	6	<b>NB240A</b>	<b>NC240A</b>
50 A	2	6	<b>NB250A</b>	<b>NC250A</b>
63 A	2	6	<b>NB263A</b>	<b>NC263A</b>
<b>Three pole miniature circuit breakers 10 kA</b>				
6 A	3	4	<b>NB306A</b>	<b>NC306A</b>
10 A	3	4	<b>NB310A</b>	<b>NC310A</b>
16 A	3	4	<b>NB316A</b>	<b>NC316A</b>
20 A	3	4	<b>NB320A</b>	<b>NC320A</b>
25 A	3	4	<b>NB325A</b>	<b>NC325A</b>
32 A	3	4	<b>NB332A</b>	<b>NC332A</b>
40 A	3	4	<b>NB340A</b>	<b>NC340A</b>
50 A	3	4	<b>NB350A</b>	<b>NC350A</b>
63 A	3	4	<b>NB363A</b>	<b>NC363A</b>
<b>Four pole miniature circuit breakers 10 kA</b>				
6 A	4	3	<b>NB406A</b>	<b>NC406A</b>
10 A	4	3	<b>NB410A</b>	<b>NC410A</b>
16 A	4	3	<b>NB416A</b>	<b>NC416A</b>
20 A	4	3	<b>NB420A</b>	<b>NC420A</b>
25 A	4	3	<b>NB425A</b>	<b>NC425A</b>
32 A	4	3	<b>NB432A</b>	<b>NC432A</b>
40 A	4	3	<b>NB440A</b>	<b>NC440A</b>
50 A	4	3	<b>NB450A</b>	<b>NC450A</b>
63 A	4	3	<b>NB463A</b>	<b>NC463A</b>

**Miniature circuit breakers 10/15 kA, type B, C and D**

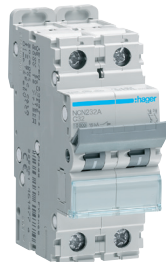
- tripping curve:
  - B curve: 3 to 5 I<sub>n</sub>
  - C curve: 5 to 10 I<sub>n</sub>
  - D curve: 10 to 20 I<sub>n</sub>
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating: 240/400V AC
- current rating: 0.5 to 63A
- frequency: 50/60Hz
- climate sealed: T2
- connecting capacity:
  - 25 mm<sup>2</sup> flexible conductor
  - 35 mm<sup>2</sup> rigid conductor
- comply to the standard IEC 60898-1
- breaking capacity: 10kA (IEC 60898-1)  
15 kA (IEC 60947-2)



NCN116A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Single pole miniature circuit breakers 10/15 kA</b>					
0.5 A	1	12	-	NCN100A	NDN100A
1 A	1	12	-	NCN101A	NDN101A
2 A	1	12	-	NCN102A	NDN102A
3 A	1	12	-	NCN103A	NDN103A
4 A	1	12	-	NCN104A	NDN104A
6 A	1	12	NBN106A	NCN106A	NDN106A
10 A	1	12	NBN110A	NCN110A	NDN110A
16 A	1	12	NBN116A	NCN116A	NDN116A
20 A	1	12	NBN120A	NCN120A	NDN120A
25 A	1	12	NBN125A	NCN125A	NDN125A
32 A	1	12	NBN132A	NCN132A	NDN132A
40 A	1	12	NBN140A	NCN140A	NDN140A
50 A	1	12	NBN150A	NCN150A	NDN150A
63 A	1	12	NBN163A	NCN163A	NDN163A



NCN232A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Double pole miniature circuit breakers 10/15 kA</b>					
0.5 A	2	6	-	NCN200A	NDN200A
1 A	2	6	-	NCN201A	NDN201A
2 A	2	6	-	NCN202A	NDN202A
3 A	2	6	-	NCN203A	NDN203A
4 A	2	6	-	NCN204A	NDN204A
6 A	2	6	NBN206A	NCN206A	NDN206A
10 A	2	6	NBN210A	NCN210A	NDN210A
16 A	2	6	NBN216A	NCN216A	NDN216A
20 A	2	6	NBN220A	NCN220A	NDN220A
25 A	2	6	NBN225A	NCN225A	NDN225A
32 A	2	6	NBN232A	NCN232A	NDN232A
40 A	2	6	NBN240A	NCN240A	NDN240A
50 A	2	6	NBN250A	NCN250A	NDN250A
63 A	2	6	NBN263A	NCN263A	NDN263A



NCN320A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Three pole miniature circuit breakers 10/15 kA</b>					
0.5 A	3	4	-	NCN300A	NDN300A
1 A	3	4	-	NCN301A	NDN301A
2 A	3	4	-	NCN302A	NDN302A
3 A	3	4	-	NCN303A	NDN303A
4 A	3	4	-	NCN304A	NDN304A
6 A	3	4	NBN306A	NCN306A	NDN306A
10 A	3	4	NBN310A	NCN310A	NDN310A
16 A	3	4	NBN316A	NCN316A	NDN316A
20 A	3	4	NBN320A	NCN320A	NDN320A
25 A	3	4	NBN325A	NCN325A	NDN325A
32 A	3	4	NBN332A	NCN332A	NDN332A
40 A	3	4	NBN340A	NCN340A	NDN340A
50 A	3	4	NBN350A	NCN350A	NDN350A
63 A	3	4	NBN363A	NCN363A	NDN363A





NCN440A



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Four pole miniature circuit breakers 10/15 kA</b>					
0.5 A	4	3	-	<b>NCN400A</b>	<b>NDN400A</b>
1 A	4	3	-	<b>NCN401A</b>	<b>NDN401A</b>
2 A	4	3	-	<b>NCN402A</b>	<b>NDN402A</b>
3 A	4	3	-	<b>NCN403A</b>	<b>NDN403A</b>
4 A	4	3	-	<b>NCN404A</b>	<b>NDN404A</b>
6 A	4	3	<b>NBN406A</b>	<b>NCN406A</b>	<b>NDN406A</b>
10 A	4	3	<b>NBN410A</b>	<b>NCN410A</b>	<b>NDN410A</b>
16 A	4	3	<b>NBN416A</b>	<b>NCN416A</b>	<b>NDN416A</b>
20 A	4	3	<b>NBN420A</b>	<b>NCN420A</b>	<b>NDN420A</b>
25 A	4	3	<b>NBN425A</b>	<b>NCN425A</b>	<b>NDN425A</b>
32 A	4	3	<b>NBN432A</b>	<b>NCN432A</b>	<b>NDN432A</b>
40 A	4	3	<b>NBN440A</b>	<b>NCN440A</b>	<b>NDN440A</b>
50 A	4	3	<b>NBN450A</b>	<b>NCN450A</b>	<b>NDN450A</b>
63 A	4	3	<b>NBN463A</b>	<b>NCN463A</b>	<b>NDN463A</b>

### Miniature circuit breakers 15 to 25 kA, type B, C and D

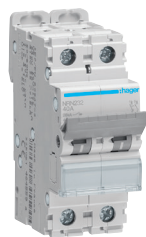
- tripping curve:
  - B curve: 3 to 5 In
  - C curve: 5 to 10 In
  - D curve: 10 to 20 In
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating: 240/400V AC
- current rating: 0.5 to 63A
- frequency: 50/60Hz
- climate sealed: T2
- connecting capacity:
  - 25 mm<sup>2</sup> flexible conductor
  - 35 mm<sup>2</sup> rigid conductor
- comply to the standard IEC 60898-1, breaking capacity:
  - 25kA for 0.5 to 25A (IEC 60 947-2)
  - 20kA for 32 to 40A (IEC 60 947-2)
  - 15kA for 50 to 63A (IEC 60 947-2)



NRN116



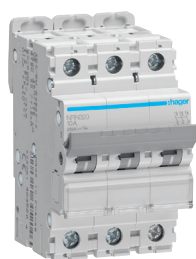
In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Single pole miniature circuit breakers 15 to 25 kA</b>					
0.5 A	1	1	-	<b>NRN100</b>	<b>NSN100</b>
1 A	1	1	-	<b>NRN101</b>	<b>NSN101</b>
2 A	1	1	-	<b>NRN102</b>	<b>NSN102</b>
3 A	1	1	-	<b>NRN103</b>	<b>NSN103</b>
4 A	1	1	-	<b>NRN104</b>	<b>NSN104</b>
6 A	1	1	<b>NQN106</b>	<b>NRN106</b>	<b>NSN106</b>
10 A	1	1	<b>NQN110</b>	<b>NRN110</b>	<b>NSN110</b>
16 A	1	1	<b>NQN116</b>	<b>NRN116</b>	<b>NSN116</b>
20 A	1	1	<b>NQN120</b>	<b>NRN120</b>	<b>NSN120</b>
25 A	1	1	<b>NQN125</b>	<b>NRN125</b>	<b>NSN125</b>
32 A	1	1	<b>NQN132</b>	<b>NRN132</b>	<b>NSN132</b>
40 A	1	1	<b>NQN140</b>	<b>NRN140</b>	<b>NSN140</b>
50 A	1	1	<b>NQN150</b>	<b>NRN150</b>	<b>NSN150</b>
63 A	1	1	<b>NQN163</b>	<b>NRN163</b>	<b>NSN163</b>



NRN232



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Double pole miniature circuit breakers 15 to 25 kA</b>					
0.5 A	2	1	-	NRN200	NSN200
1 A	2	1	-	NRN201	NSN201
2 A	2	1	-	NRN202	NSN202
3 A	2	1	-	NRN203	NSN203
4 A	2	1	-	NRN204	NSN204
6 A	2	1	NQN206	NRN206	NSN206
10 A	2	1	NQN210	NRN210	NSN210
16 A	2	1	NQN216	NRN216	NSN216
20 A	2	1	NQN220	NRN220	NSN220
25 A	2	1	NQN225	NRN225	NSN225
32 A	2	1	NQN232	NRN232	NSN232
40 A	2	1	NQN240	NRN240	NSN240
50 A	2	1	NQN250	NRN250	NSN250
63 A	2	1	NQN263	NRN263	NSN263



NRN320



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Three pole miniature circuit breakers 15 to 25 kA</b>					
0.5 A	3	1	-	NRN300	NSN300
1 A	3	1	-	NRN301	NSN301
2 A	3	1	-	NRN302	NSN302
3 A	3	1	-	NRN303	NSN303
4 A	3	1	-	NRN304	NSN304
6 A	3	1	NQN306	NRN306	NSN306
10 A	3	1	NQN310	NRN310	NSN310
16 A	3	1	NQN316	NRN316	NSN316
20 A	3	1	NQN320	NRN320	NSN320
25 A	3	1	NQN325	NRN325	NSN325
32 A	3	1	NQN332	NRN332	NSN332
40 A	3	1	NQN340	NRN340	NSN340
50 A	3	1	NQN350	NRN350	NSN350
63 A	3	1	NQN363	NRN363	NSN363



NRN440



In	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve	D curve
<b>Four pole miniature circuit breakers 15 to 25 kA</b>					
0.5 A	4	1	-	NRN400	NSN400
1 A	4	1	-	NRN401	NSN401
2 A	4	1	-	NRN402	NSN402
3 A	4	1	-	NRN403	NSN403
4 A	4	1	-	NRN404	NSN404
6 A	4	1	NQN406	NRN406	NSN406
10 A	4	1	NQN410	NRN410	NSN410
16 A	4	1	NQN416	NRN416	NSN416
20 A	4	1	NQN420	NRN420	NSN420
25 A	4	1	NQN425	NRN425	NSN425
32 A	4	1	NQN432	NRN432	NSN432
40 A	4	1	NQN440	NRN440	NSN440
50 A	4	1	NQN450	NRN450	NSN450
63 A	4	1	NQN463	NRN463	NSN463

# Modular protection devices

## Miniature circuit breakers (MCB)

### Characteristics

Protection and control of circuits against overloads and short circuits in electrical installations. Allows to isolate circuits. They can be used for installation in commercial building and industrial premises.

- frequency: 50/60Hz
- tripping curve:
  - B curve: 3 to 5 I<sub>n</sub>,
  - C curve: 5 to 10 I<sub>n</sub>

**Complies to the standard IEC 60898-1, IEC 60947-2**

### Technical data

- breaking capacity
  - 10 kA (IEC 60 898-1)
  - 10 kA (IEC 60 947-2)
- voltage: 230/400V AC
- current: 80A to 125 A

### Technical features

- supply feed either top or bottom
- will accept auxiliaries
- poles: 1P, 2P, 3P, 4P (protected poles)
- climate sealed: T2
- trip free mechanism

### Connection capacity

- flexible: up to 50 mm<sup>2</sup>
- rigid: up to 70 mm<sup>2</sup>



HLF199S

In/A	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Single pole miniature circuit breakers 10 kA</b>				
80	1.5	1	<b>HLE180S</b>	<b>HLF180S</b>
100	1.5	1	<b>HLE190S</b>	<b>HLF190S</b>
125	1.5	1	<b>HLE199S</b>	<b>HLF199S</b>



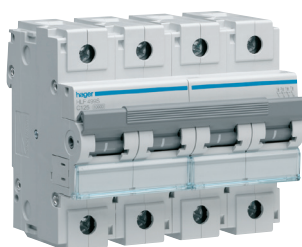
HLF299S

In/A	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Double pole miniature circuit breakers 10 kA</b>				
80	3	1	<b>HLE280S</b>	<b>HLF280S</b>
100	3	1	<b>HLE290S</b>	<b>HLF290S</b>
125	3	1	<b>HLE299S</b>	<b>HLF299S</b>



HLF399S

In/A	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Three pole miniature circuit breakers 10 kA</b>				
80	4.5	1	<b>HLE380S</b>	<b>HLF380S</b>
100	4.5	1	<b>HLE390S</b>	<b>HLF390S</b>
125	4.5	1	<b>HLE399S</b>	<b>HLF399S</b>



HLF499S

In/A	Width in module 17.5 mm	Pack qty	Cat. ref. B curve	C curve
<b>Four pole miniature circuit breakers 10 kA</b>				
80	6	1	<b>HLE480S</b>	<b>HLF480S</b>
100	6	1	<b>HLE490S</b>	<b>HLF490S</b>
125	6	1	<b>HLE499S</b>	<b>HLF499S</b>

### Characteristics

Compact protection devices which combine the overcurrent functions of an MCB with the earth fault functions of an RCCB in a single unit. These devices are single pole & solid neutral.

### Complies to the standard IEC 61009-1

### Technical data

- tripping curve:  
C curve: 5 to 10 I<sub>n</sub>
- sensitivity:  
high sensitivity: 10mA, 30mA  
medium sensitivity: 100mA, 300mA
- voltage: 230V AC
- current: 6A to 40A
- frequency: 50Hz / 60Hz

- type: AC type (Ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising)

### Technical features

- bi-connect (cable & busbar)
- flying neutral lead length: 700mm
- will not accept auxiliaries
- poles: SP & passing N
- climate sealed: T2
- trip free mechanism
- fixed instantaneous tripping

### Connection capacity

- flexible: up to 16 mm<sup>2</sup>
- rigid: up to 25 mm<sup>2</sup>



ADC232Z



ADC290Y

In / A	Width in module 17.5 mm	Pack qty	Cat. ref. C curve	Cat. ref. C curve
<b>RCBOs AC type - 30 mA</b>				
			<b>6 kA</b>	<b>10 kA</b>
6	1	1	ADC206Z	ADC284Y
10	1	1	ADC210Z	ADC285Y
16	1	1	ADC216Z	ADC287Y
20	1	1	ADC220Z	ADC288Y
25	1	1	ADC225Z	ADC289Y
32	1	1	ADC232Z	ADC290Y
40	1	1	ADC240Z	ADC291Y
<b>RCBOs AC type - 100 mA</b>				
6	1	1	AEC206Z	AEC207Y
10	1	1	AEC210Z	AEC211Y
16	1	1	AEC216Z	AEC217Y
20	1	1	AEC220Z	AEC221Y
25	1	1	AEC225Z	AEC226Y
32	1	1	AEC232Z	AEC233Y
40	1	1	AEC240Z	AEC241Y
<b>RCBOs AC type - 300 mA</b>				
10	1	1	AFC210Z	-
16	1	1	AFC216Z	-
20	1	1	AFC220Z	-
25	1	1	AFC225Z	-
32	1	1	AFC232Z	-
40	1	1	AFC240Z	-
<b>RCBOs AC type - 10 mA</b>				
6	1	1	-	ACC206Y
10	1	1	-	ACC210Y
16	1	1	-	ACC216Y
20	1	1	-	ACC220Y
25	1	1	-	ACC225Y
32	1	1	-	ACC232Y

### Characteristics

Protection and control of circuits against earth leakage currents, between line and earth, and/or neutral and earth. Protects against electrical shocks.

### Complies to the standard IEC 61008-1

### Technical data

- sensitivity: 10mA, 30mA, 100mA, 300mA, 500mA
- voltage: 240V (2P) and 240/415V (4P)
- current rating: 16A to 125A
- frequency: 50Hz
- type: AC type (Ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising)

### Technical features

- label holder (up to 63A)
- IP2X terminals (up to 63A)
- bi-connect (up to 63A)
- earth fault indication (yellow = tripped)
- ON/OFF indication
- will accept auxiliaries
- climate sealed: T2
- trip free mechanism
- fixed instantaneous tripping

### Connection capacity

- flexible: up to 16 mm<sup>2</sup>
- rigid: up to 25 mm<sup>2</sup>

### Residual Current Circuit Breakers (RCCB) onekonekt



CEC241J



CFC464J

In	Pack qty	Cat. ref. 2P	Cat. ref. 4P
<b>RCCBs AC type - 10mA</b>			
16 A	1	<b>CCC217J</b>	-
<b>RCCBs AC type - 30mA</b>			
25 A	1	<b>CDC226J</b>	<b>CDC426J</b>
40 A	1	<b>CDC241J</b>	<b>CDC441J</b>
63 A	1	<b>CDC264J</b>	<b>CDC464J</b>
80 A	1	<b>CD281Z</b>	<b>CD480Z</b>
100 A	1	<b>CD285Z</b>	<b>CD485Z</b>
<b>RCCBs AC type - 100mA</b>			
25 A	1	<b>CEC226J</b>	<b>CEC426J</b>
40 A	1	<b>CEC241J</b>	<b>CEC441J</b>
63 A	1	<b>CEC264J</b>	<b>CEC464J</b>
80 A	1	<b>CE281Z</b>	<b>CE481Z</b>
100 A	1	<b>CE285Z</b>	<b>CE485Z</b>
<b>RCCBs AC type - 300mA</b>			
25 A	1	<b>CFC226J</b>	<b>CFC426J</b>
40 A	1	<b>CFC241J</b>	<b>CFC441J</b>
63 A	1	<b>CFC264J</b>	<b>CFC464J</b>
80 A	1	<b>CF281Z</b>	<b>CF481Z</b>
100 A	1	<b>CF285Z</b>	<b>CF485Z</b>

### Residual Current Circuit Breakers (RCCB)-125A



CDC690



CFC690

In	Pack qty	Cat. ref. 2P	Cat. ref. 4P
<b>RCCB AC type - 30mA</b>			
125 A	1	-	<b>CDC690</b>
<b>RCCB A type - 100mA</b>			
125 A	1	-	<b>CEA690</b>
<b>RCCB AC type - 300mA</b>			
125 A	1	-	<b>CFC690</b>
<b>RCCB AC type - 500mA</b>			
125 A	1	-	<b>CGC690</b>

### Residual Current Circuit Breakers (RCCBs)

Compact devices which provide earth leakage protection (protect against electrical shocks by direct or indirect contacts).

To open automatically in the event of an earth fault between phase and earth and/or neutral and earth.

### Technical information

- AC type

Ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising

- A and HI type (reinforced immunity)

In addition to the characteristics of AC type, it ensured for residual pulsating direct currents, whether suddenly applied or slowly rising.

They are used whenever fault currents are not sinusoidal.

HI types only: It reduces the unexpected tripping when they protect equipment generating disturbances like DC fault current (washing machines, speed drives, microprocessing, electronic ballast...).

Note: to fit auxiliaries contact, alarm contact, for all tripping auxiliaries we have to use the dedicated auxiliaries CZ001

### RCCBs

- sensitivity:

- high sensitivity: 10, 30mA instantaneous tripping (fixed)

- medium sensitivity: 100mA, 300mA instantaneous or selective tripping (fixed)

- current rating: 16 to 100A

- voltage rating: 230V AC (2P) and 400V (4P)

- poles: 2P and 4P

- types: AC, A and HI types

- frequency: 50Hz

- connection capacity

- 25 to 63A:

- rigid conductors: 25mm<sup>2</sup>

- flexible conductors: 16mm<sup>2</sup>

- 80 and 100A:

- rigid conductors: 50mm<sup>2</sup>

- flexible conductors: 35mm<sup>2</sup>

- Comply with IEC 61008-1 and 61008-2-1



CD241J



CD441J

Current rating	Pack qty	Cat. ref.	2P	4P
<b>RCCBs AC type - 10 mA</b>				
16 A	1	<b>CC217J</b>		-
<b>RCCBs AC type - 30 mA</b>				
25 A	1	<b>CD226J</b>		<b>CD426J</b>
40 A	1	<b>CD241J</b>		<b>CD441J</b>
63 A	1	<b>CD264J</b>		<b>CD464J</b>
80 A	1	<b>CD281Z</b>		<b>CD481Z</b>
100 A	1	<b>CD285Z</b>		<b>CD485Z</b>
<b>RCCBs A type - 30 mA</b>				
25 A	1	<b>CD225J</b>		<b>CD425J</b>
40 A	1	<b>CD240J</b>		<b>CD440J</b>
63 A	1	<b>CD263J</b>		<b>CD463J</b>
<b>RCCBs HI type - 30 mA</b>				
25 A	1	<b>CH225J</b>		<b>CH425J</b>
40 A	1	<b>CH240J</b>		<b>CH440J</b>
63 A	1	<b>CH263J</b>		<b>CH463J</b>
<b>RCCBs AC type - 100 mA</b>				
25 A	1	<b>CE226J</b>		<b>CE426J</b>
40 A	1	<b>CE241J</b>		<b>CE441J</b>
63 A	1	<b>CE264J</b>		<b>CE464J</b>
80 A	1	<b>CE281Z</b>		<b>CE481Z</b>
100 A	1	<b>CE285Z</b>		<b>CE485Z</b>
<b>RCCBs AC type - 300 mA</b>				
25 A	1	<b>CF226J</b>		<b>CF426J</b>
40 A	1	<b>CF241J</b>		<b>CF441J</b>
63 A	1	<b>CF264J</b>		<b>CF464J</b>
80 A	1	<b>CF281Z</b>		<b>CF481Z</b>
100 A	1	<b>CF285Z</b>		<b>CF485Z</b>
<b>RCCBs AC type selective r - 300 mA</b>				
40 A	1	-		<b>CP441J</b>
63 A	1	-		<b>CP464J</b>

Current rating	Pack qty	Cat. ref. 2P	4P
<b>RCCBs A type - 300 mA</b>			
25 A	1	<b>CF225J</b>	<b>CF425J</b>
40 A	1	<b>CF240J</b>	<b>CF440J</b>
63 A	1	<b>CF263J</b>	<b>CF463J</b>
<b>RCCBs A type selective r - 300 mA</b>			
40 A	1	-	<b>CP440J</b>
63 A	1	-	<b>CP463J</b>
<b>RCCBs HI type selective r - 300 mA</b>			
40 A	1	-	<b>CQ440J</b>
63 A	1	-	<b>CQ463J</b>
<b>RCCBs AC type - 500 mA</b>			
80 A	1	-	<b>CQ481Z</b>
100 A	1	-	<b>CQ485Z</b>

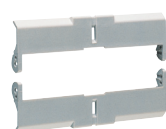


CZ001

### Auxiliaries and alarm contact

- 6 V - 230 V

Description	Width in module 17.5 mm	Pack qty	Cat. ref.
1NO+1NC for auxiliary or alarm contact	1	1	<b>CZ001</b>



CZN006

### Sealable terminal covers

- 1 set is composed of 2 terminal covers

Description	Pack qty	Cat. ref.
for RCCB 2 modules, 25 to 63 A	10	<b>CZN005</b>
for RCCB 4 modules, 25 to 63 A	10	<b>CZN006</b>
for RCCB 2 modules, 80 A	10	<b>CZ007</b>
for RCCB 4 modules, 80 to 100 A	10	<b>CZ008</b>

## Auxiliaries and accessories for MCBs, RCCBs and RCBOs

Use of MZ203 - MZ212 on RCCBs requires the use of interface auxiliary CZ001.

All auxiliaries are common to both single and multi-pole circuit breakers. These auxiliaries are fitted to the left hand side of devices. Shunt trips, and under-voltage releases are fitted with a flag indicator that indicates the automatic/remote tripping of the device.

Connection capacity  
6 mm<sup>2</sup> rigid cables  
4 mm<sup>2</sup> flexible cables



MZ201

### Auxiliary contacts

- indication of main contact status

Description	Width in module 17.5 mm	Cat. ref.
1NO + 1NC auxiliary contact	0.5	<b>MZ201</b>



MZ202

### Alarm contacts

- SD contact indicates a fault overcurrent (e.g. MCB tripped) on overload or short-circuit

Description	Width in module 17.5 mm	Cat. ref.
alarm contact	0.5	<b>MZ202</b>

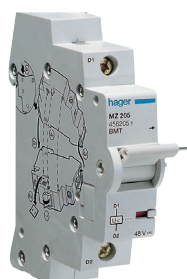


MZ203

### Shunt trips

- allows remote tripping of the device

Description	Width in module 17.5 mm	Cat. ref.
24V - 415V AC / 12V - 130V DC	1	<b>MZ203</b>
24V - 48V AC / 12V - 48V DC	1	<b>MZ204</b>



MZ205

### Undervoltage releases

- allows MCB to be closed only when voltage is above 70% of Un. MCB will automatically trip when voltage falls by 35% of Un

Description	Width in module 17.5 mm	Cat. ref.
48V DC	1	<b>MZ205</b>
230V AC	1	<b>MZ206</b>



### Overvoltage releases

- monitors the voltage between phase and neutral in a network
- it opens the current circuit in case of over voltage by tripping the connected protection device (e.g. MCB or RCCB)



MZ212

Description	Width in module	Cat. ref.
230V AC	17.5 mm	<b>MZ212</b>

### Over and undervoltage auxiliary

- trip when the voltage decrease or increase out of the correct scale working voltage
- mechanical indicator of faults on the front face

Description	Width in module	Cat. ref.
over and undervoltage auxiliary	17.5 mm	<b>MZ214</b>



MZN175

### Locking kit

- allows locking of the device dolly in the on/off position
- will accept two padlocks with hasps of 4.75 mm diameter max.

Description	Cat. ref.
locking kit	<b>MZN175</b>



MZN177

### Marking strip

Description	Cat. ref.
13 modules for modular devices	<b>MZN177</b>

To ensure localised control and protection of single and three-phase motors. The rated motor current is set on the motor starter units by means of a current dial (in the front).

### Technical data

- Adjustable thermal relay
- AC3 utilisation category
- Connection capacity: conductor cross-sections of the motor cables:
  - flexible 1 to 4 mm<sup>2</sup>
  - rigid 1 to 6 mm<sup>2</sup>

### Options

Undervoltage release: MZ528N, MZ529N  
 Auxiliary contacts: MZ520N, MZ522N  
 Alarm contact: MZ527N  
 Shunt trip: MZ523N

Comply with IEC/EN 60947 for low voltage switchgear.

The motor starter wiring should be implemented in compliance to IEC/EN 60947-1 table 9.

### Breaking capacity

	I <sub>c</sub> (kA) 230V AC	I <sub>c</sub> (kA) 400V AC
0.16 to 10 A	100	100
16 to 25 A	16	16



MM512N

### Motor starters

current range I <sub>e</sub>	Standard power rating of 3 phase motors 50/60 Hz (AC3)		Width in module 17.5 mm	Pack qty.	Cat. ref.
	230 V (kW)	400 V (kW)			
0.1 to 0.16 A	-	-	2.5	1	<b>MM501N</b>
0.16 to 0.25 A	-	0.06	2.5	1	<b>MM502N</b>
0.25 to 0.4 A	0.06	0.09	2.5	1	<b>MM503N</b>
0.4 to 0.63 A	0.09	0.12	2.5	1	<b>MM504N</b>
0.63 to 1 A	0.09	0.12	2.5	1	<b>MM505N</b>
1 to 1.6 A	0.25	0.55	2.5	1	<b>MM506N</b>
1.6 to 2.5 A	0.55	0.8	2.5	1	<b>MM507N</b>
2.5 to 4 A	0.8	1.5	2.5	1	<b>MM508N</b>
4 to 6.3 A	1.5	2.5	2.5	1	<b>MM509N</b>
6.3 to 10 A	2.5	4	2.5	1	<b>MM510N</b>
10 to 16 A	4	7.5	2.5	1	<b>MM511N</b>
16 to 20 A	5.5	9	2.5	1	<b>MM512N</b>
20 to 25 A	7.5	12.5	2.5	1	<b>MM513N</b>
25 to 32 A	7.5	12.5	2.5	1	<b>MM514N</b>



MZ520N

### Auxiliary contact

- indicates ON/OFF position

Description	Width in module 17.5 mm	Pack qty.	Cat. ref.
1NO + 1NC, 3.5 A - 230 V AC / 2 A - 400 V AC	0.5	1	<b>MZ520N</b>

### Front auxiliary contact

- cannot be mounted behind a modular front plate

Description	Width in module 17.5 mm	Pack qty.	Cat. ref.
1NO, 1 A - 230 V AC / 400 V AC	0.5	1	<b>MZ522N</b>

Protection and control of circuits against overloads and short circuits.

### Technical data

- sizes: L31, L38, L51, L58
- poles: 1P, 2P, 3P, 4P
- voltage rating: 500 V AC, 690V AC
- current rating: 25 to 125A
- frequency: 50/60Hz
- climate sealed: T2
- will accept accessories
- short circuit resistance with fuse link 8.5 x 31.5 mm: 280kA – 690V AC
- short circuit resistance with fuse link 10.3 x 38 mm: 80kA – 690V AC / 120kA – 500 V AC
- short circuit resistance with fuse link 14 x 51 mm: 100kA – 690V
- short circuit resistance with fuse link 22 x 58 mm: 100kA – 690V

### Connection capacity

- L31 (8.5x31.5):  
rigid conductors: 25mm<sup>2</sup>  
flexible conductors: 16mm<sup>2</sup>
- L38 (10x38):  
rigid conductors: 25mm<sup>2</sup>  
flexible conductors: 16mm<sup>2</sup>
- L51 (14x51):  
rigid conductors: 35mm<sup>2</sup>  
flexible conductors: 25mm<sup>2</sup>
- L58 (22x58):  
rigid conductors: 50mm<sup>2</sup>  
flexible conductors: 35mm<sup>2</sup>

Comply with IEC 60 269-2 and IEC 60 269-2-1.



LSN401

### L31 fuse carriers 500V - 25A

- compatible with accessories

Description	Width in module 17.5 mm	Pack qty.	Cat. ref.
single pole	1	12	<b>LSN401</b>
two pole	2	6	<b>LSN402</b>
three pole	3	4	<b>LSN403</b>
3 phases + neutral link	4	3	<b>LSN404</b>
1 phase + neutral link	2	6	<b>LSN412</b>
single pole with signal light	1	12	<b>LSN431</b>



LSN504

### L38 fuse carriers 690V - 32A

- compatible with accessories

Description	Width in module 17.5 mm	Pack qty.	Cat. ref.
single pole	1	12	<b>LSN501</b>
two pole	2	6	<b>LSN502</b>
three pole	3	4	<b>LSN503</b>
3 phases + neutral link	4	3	<b>LSN504</b>
1 neutral link	1	12	<b>LSN509</b>
1 phase + neutral link	2	6	<b>LSN512</b>
single pole with signal light	1	12	<b>LSN531</b>



LS601

### L51 fuse carriers 690V - 50A

Description	Width in module 17.5 mm	Pack qty.	Cat. ref.
<b>Fuse carriers compatible with accessories</b>			
single pole	1.5	1	<b>LS601</b>
two pole	3	1	<b>LS602</b>
three pole	4.5	1	<b>LS603</b>
3 phases + neutral link	6	1	<b>LS604</b>
1 phase + neutral link	3	1	<b>LS612</b>
<b>Fuse carriers accessory free</b>			
single pole	1.5	10	<b>LR601</b>
two pole	3	5	<b>LR602</b>
three pole	4.5	3	<b>LR603</b>
3 phases + neutral link	6	2	<b>LR604</b>
1 phase + neutral link	3	5	<b>LR612</b>

# Power, control and signaling interfaces

Power, control and signaling products are the complementary devices of a distribution board.

They allow to control and isolate circuits in residential and commercial installations.



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Modular contactors	124
Latching relays	125
Modular switches	126
Modular changeover switches	129
Indicator lights	131
Earth leakage relays and torroidal transformers	132
Brass distribution terminals	133
Supply busbars	134

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**Characteristics**

Contactors are power devices necessary for the remote switching and control of power circuits like heating circuits, lighting, ventilation, etc. It is recommended to associate them with command and energy management devices (time switches, thermostats, delay timers, etc.

**Complies with IEC 61095**

**Technical data**

- standard contactors range: 1, 2 and 3 module width
- power contacts rating: 230V AC or 400V AC, 50/60Hz
- without manual override control
- ratings: 25A, 40A, 63A
- utilisation categories: AC-7a / AC-1, AC-7b / AC-3








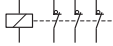
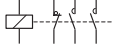
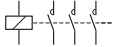
**Recommendations**

- the use of LZ060 (heat dissipation inserts) is strongly recommended every 2 contactors mounted in a row or between contactors and adjacent devices
- the use of the auxiliary contact ESC080 is not compatible with 1 module width low noise contactors

**Connection capacities**

- for 25A contactors:
  - 10mm<sup>2</sup> rigid conductor
  - 6mm<sup>2</sup> flexible conductor
- for 40A, 63A contactors:
  - 25mm<sup>2</sup> rigid conductor
  - 16mm<sup>2</sup> flexible conductor
- for coil connection:
  - 10mm<sup>2</sup> rigid conductor
  - 6mm<sup>2</sup> flexible conductor

**230V AC - 50 Hz control coil voltage**

Contact types	Symbol	Power contact rating	Width in module 17.5 mm	Pack qty	Cat. ref.
1NO		25A	1	12	<b>ESC125</b>
1NC		25A	1	12	<b>ESC126</b>
2NO		25A	1	12	<b>ESC225</b>
		40A	3	4	<b>ESC240</b>
		63A	3	4	<b>ESC263</b>
2NC		25A	1	12	<b>ESC226</b>
		40A	3	4	<b>ESC241</b>
		63A	3	4	<b>ESC264</b>
1NO + 1NC		25A	1	12	<b>ESC227</b>
3NO		25A	2	6	<b>ESC325</b>
		40A	3	4	<b>ESC340</b>
		63A	3	4	<b>ESC363</b>
4NO		25A	2	6	<b>ESC425</b>
		40A	3	4	<b>ESC440</b>
		63A	3	4	<b>ESC463</b>
4NC		25A	2	6	<b>ESC426</b>
		40A	3	4	<b>ESC441</b>
		63A	3	4	<b>ESC464</b>
2NO + 2NC		25A	2	6	<b>ESC427</b>
		40A	3	4	<b>ESC442</b>
		63A	3	4	<b>ESC465</b>
3NO + 1NC		25A	2	6	<b>ESC428</b>
		40A	3	4	<b>ESC443</b>
		63A	3	4	<b>ESC466</b>



ESC225



ESC425

### Characteristics

Permits the remote control of a lighting circuits from several points using push-buttons in private buildings, small industry buildings and administration buildings. Latching relays operate when impulsed by a signal voltage. The impulse can be provided via a push button or switch. The first pulse operates the relay and latches it into its set (opposite) state, the next operation of the push button returns the relay into its reset (original) state.

- nominal voltage of the power circuit: 12V, 24V, 48V and 230 V AC
- nominal voltage of the control circuit: 12V, 24V, 110V DC
- conventional thermal current: 16A AC1
- control and power circuits
- nominal frequency: 50/60Hz
- contact types: 1NO, 2NO, 1NC+1NO, 4NO, 2NO+2NC, 3NO+1NC
- 4 types of auxiliaries

**Complies with IEC 60 669-1 and IEC 60 669-2-2**

### Technical data

- nominal voltage of the power circuit:  $U_n = 250/400$  V AC

### Connection capacity:

- rigid 10 mm<sup>2</sup>
- flexible 6 mm<sup>2</sup>

### Latching relays



EPN510



EPN540



EPS410B



EPS450B

Contact types	Symbol	Coil V AC 50/60 Hz	Coil V DC	Power circuit AC1	Width in module 17.5 mm	Pack qty	Cat. ref.
1NO		230	110	16A-250V	1	12	<b>EPN510</b>
		48	24	16A-250V	1	1	<b>EPN501</b>
		24	12	16A-250V	1	1	<b>EPN513</b>
		12	-	16A-250V	1	1	<b>EPN511</b>
2NO		230	110	16A-250V	1	1	<b>EPN520</b>
		48	24	16A-250V	1	1	<b>EPN526</b>
		24	12	16A-250V	1	1	<b>EPN524</b>
		12	-	16A-250V	1	1	<b>EPN521</b>
1NC + 1NO		230	110	16A-250V	1	1	<b>EPN515</b>
		110	48	16A-250V	1	1	<b>EPN516</b>
		48	24	16A-250V	1	1	<b>EPN503</b>
		24	12	16A-250V	1	1	<b>EPN518</b>
4NO		230	110	16A-400V	2	1	<b>EPN540</b>
		48	24	16A-400V	2	1	<b>EPN548</b>
		24	12	16A-400V	2	1	<b>EPN541</b>
		230	110	16A-250V	2	1	<b>EPN525</b>
2NC + 2NO		24	12	16A-250V	2	1	<b>EPN528</b>
		230	110	16A-400V	2	1	<b>EPN546</b>
3NO + 1NC		230	110	16A-400V	2	1	<b>EPN546</b>

### Electronic latching relay

Contact types	Symbol	Coil V AC 50/60 Hz	Power circuit AC1	Width in module 17.5 mm	Cat. ref.
1NO		230	16A-250V	1	<b>EPS410B</b>

### Electronic latching relay with delay time

Contact types	Symbol	Coil V AC 50/60 Hz	Power circuit AC1	Width in module 17.5 mm	Cat. ref.
1NO		230	16A-250V	1	<b>EPS450B</b>

**Characteristics**

Modular switches are used as general switches in electrical low voltage distribution boards and for the isolation of loads during the interventions of maintenance.

**Complies with IEC 60947-3**

**Technical data**

- voltage: 240/415V
- frequency: 50/60Hz

**Technical features**

- label holder
- IP2X terminals

- bi-connect
- all switches have a green/red indication on the toggle giving positive contact position

**Connection capacity**

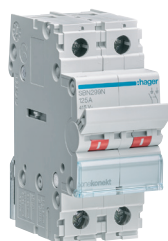
- Size 1: In 16A, 25A
  - 16 mm<sup>2</sup> rigid conductor
  - 10 mm<sup>2</sup> flexible conductor
- Size 2: In 32A
  - 25 mm<sup>2</sup> rigid conductor
  - 16 mm<sup>2</sup> flexible conductor
- Size 3: In 40A, 63A, 80A, 100A, 125A
  - 50 mm<sup>2</sup> rigid conductor
  - 35 mm<sup>2</sup> flexible conductor

**onekonekt modular switches**

Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
<b>Single-pole</b>			
16A	1	12	<b>SBN116N</b>
25A	1	12	<b>SBN125N</b>
32A	1	12	<b>SBN133N</b>
40A	1	12	<b>SBN141N</b>
63A	1	12	<b>SBN164N</b>
80A	1	12	<b>SBN180N</b>
100A	1	12	<b>SBN190N</b>
125A	1	12	<b>SBN199N</b>
<b>Double-pole</b>			
16A	1	12	<b>SBN216N</b>
25A	1	12	<b>SBN225N</b>
32A	2	6	<b>SBN233N</b>
40A	2	6	<b>SBN241N</b>
63A	2	6	<b>SBN264N</b>
80A	2	6	<b>SBN280N</b>
100A	2	6	<b>SBN290N</b>
125A	2	6	<b>SBN299N</b>
<b>Three-pole</b>			
16A	2	6	<b>SBN316N</b>
25A	2	6	<b>SBN325N</b>
32A	3	4	<b>SBN333N</b>
40A	3	4	<b>SBN341N</b>
63A	3	4	<b>SBN364N</b>
80A	3	4	<b>SBN380N</b>
100A	3	4	<b>SBN390N</b>
125A	3	4	<b>SBN399N</b>
<b>Four-pole</b>			
16A	2	6	<b>SBN416N</b>
25A	2	6	<b>SBN425N</b>
32A	4	3	<b>SBN433N</b>
40A	4	3	<b>SBN441N</b>
63A	4	3	<b>SBN464N</b>
80A	4	3	<b>SBN480N</b>
100A	4	3	<b>SBN490N</b>
125A	4	3	<b>SBN499N</b>



SBN116N



SBN299N



SBN364N



SBN464N



### Characteristics

Modular switches are used as general switches in electrical low voltage distribution boards and for the isolation of loads during the interventions of maintenance.

### Technical data

- 3 sizes are available:
  - Size 1: In 16 A, 25 A, 32 A
  - Size 2: In 32 A, 40 A, 63 A
  - Size 3: In 63 A, 80 A, 100 A, 125 A
- 230/400V 50/60 Hz
- utilisation category AC22A from 16A to 125A for mixed alternative load (inductive and resistive)
- version with light indicator in 1 and 2 poles from 16 to 32A
- IP2X with terminal shrouds
- all switches have a green/red indication on the toggle giving positive contact position
- MZN175 padlocking kit allows to lock in the ON and OFF position

### Connection capacity

- Size 1: In 16 A, 25 A, 32 A
  - 16 mm<sup>2</sup> rigid conductor
  - 10 mm<sup>2</sup> flexible conductor
- Size 2: In 32 A, 40 A, 63 A
  - 25 mm<sup>2</sup> rigid conductor
  - 16 mm<sup>2</sup> flexible conductor
- Size 3: In 63 A, 80 A, 100 A, 125 A
  - 50 mm<sup>2</sup> rigid conductor
  - 35 mm<sup>2</sup> flexible conductor

Complies with

- IEC 60 669-1, IEC 60 669-2-4, IEC 60 947-3 for the size 1
- IEC 60 669-2-4, IEC 60 947-3 for the size 2
- IEC 60 947-3 for the size 3



SBN163



### Single pole

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	1	12	<b>SBN116</b>
	25 A	1	12	<b>SBN125</b>
	32 A	1	12	<b>SBN132</b>
2	32 A	1	12	<b>SBN133</b>
	40 A	1	12	<b>SBN140</b>
	63 A	1	12	<b>SBN163</b>
3	63 A	1	12	<b>SBN164</b>
	80 A	1	12	<b>SBN180</b>
	100 A	1	12	<b>SBN190</b>
	125 A	1	12	<b>SBN199</b>



SBN263



### Double pole

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	1	12	<b>SBN216</b>
	25 A	1	12	<b>SBN225</b>
	32 A	1	12	<b>SBN232</b>
2	32 A	2	6	<b>SBN233</b>
	40 A	2	6	<b>SBN240</b>
	63 A	2	6	<b>SBN263</b>
3	63 A	2	6	<b>SBN264</b>
	80 A	2	6	<b>SBN280</b>
	100 A	2	6	<b>SBN290</b>
	125 A	2	6	<b>SBN299</b>



SBN363



### Three pole

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	2	6	<b>SBN316</b>
	25 A	2	6	<b>SBN325</b>
	32 A	2	6	<b>SBN332</b>
2	32 A	3	4	<b>SBN333</b>
	40 A	3	4	<b>SBN340</b>
	63 A	3	4	<b>SBN363</b>
3	63 A	3	4	<b>SBN364</b>
	80 A	3	4	<b>SBN380</b>
	100 A	3	4	<b>SBN390</b>
	125 A	3	4	<b>SBN399</b>



SBN463



### Four pole

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	2	6	<b>SBN416</b>
	25 A	2	6	<b>SBN425</b>
	32 A	2	6	<b>SBN432</b>
2	32 A	4	3	<b>SBN433</b>
	40 A	4	3	<b>SBN440</b>
	63 A	4	3	<b>SBN463</b>
3	63 A	4	3	<b>SBN464</b>
	80 A	4	3	<b>SBN480</b>
	100 A	4	3	<b>SBN490</b>
	125 A	4	3	<b>SBN499</b>



SBB116



### Single pole with indicator light

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	1	1	<b>SBB116</b>
	25 A	1	1	<b>SBB125</b>
	32 A	1	1	<b>SBB132</b>



SBB225



### Double pole with indicator light

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	16 A	1	1	<b>SBB216</b>
	25 A	1	1	<b>SBB225</b>
	32 A	1	1	<b>SBB232</b>



ESC080

### Accessories

Description	Pack qty	Cat. ref.
auxiliary contact compatible with switch disconnectors from 16 to 125 A, 6 A, 230 V AC	1	<b>ESC080</b>
terminal shroud for switches 32 A to 125 A	4	<b>MZN120</b>
phase barrier shield	set of 3	<b>MZN121</b>
padlocking kit	1	<b>MZN175</b>

### Characteristics

The changeover switch range is the solution to guarantee supply of load by controlling 2 power circuits.

### Technical data

- In from 25A to 63A
- use category AC22A from 25A to 40A for mixed alternative load, inductive and resistive (AC21A for 63A)
- IP2X with terminal shrouds
- frequency 50/60 Hz

### Connection capacity

- In 25 A and 40 A
  - 16 mm<sup>2</sup> rigid conductor
  - 10 mm<sup>2</sup> flexible conductor
- In 63A
  - 25 mm<sup>2</sup> rigid conductor
  - 16 mm<sup>2</sup> flexible conductor

Complies with IEC 60 669-1, IEC 60947-3

MZN175 padlocking kit allows to lock in the ON and OFF position.



SFH125



### 1-way changeover switch and common point on top (I-II)

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	25A	1	12	<b>SFH125</b>

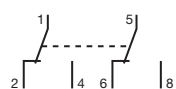


SFM125



### 2-way changeover switch 1NO+1NC (I-II)

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	25A	1	12	<b>SFM125</b>



### 2-way changeover switch and common point on top (I-II)

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	25A	1	6	<b>SFH225</b>

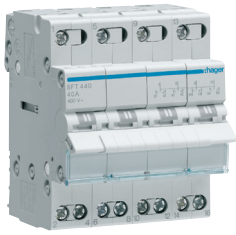


SFT125

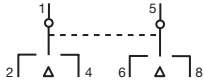


### Single pole centre-off changeover switches and common point on top (I-O-II)

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	25A	1	12	<b>SFT125</b>
	40A	1	12	<b>SFT140</b>



SFT440



**Double pole centre-off changeover switches and common point on top (I-O-II)**

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	25A	1	6	<b>SFT225</b>
	40A	1	6	<b>SFT240</b>
	40A	1	4	<b>SFT340</b>
	40A	1	3	<b>SFT440</b>



SF463



**Changeover switches with centerpoint (I-O-II)**

Size	Characteristics	Width in module 17.5 mm	Pack qty	Cat. ref.
1	63A	4	1	<b>SF263</b>
	63A	8	1	<b>SF463</b>



ESC080

**Accessories**

Description	Pack qty	Cat. ref.
<b>Auxiliary contact</b> compatible with switch disconnectors from 16 to 125 A, 6 A, 230 V AC	1	<b>ESC080</b>
<b>Terminal shroud</b> for switches 32 A to 125 A	4	<b>MZN120</b>
<b>Phase barrier shield</b> set of 3 pieces	3	<b>MZN121</b>
<b>Padlocking kit</b> padlocking kit	1	<b>MZN175</b>

### Characteristics

These products are used for remote controlling signalisation of any event in any electrical installation (domestic, tertiary & industrial).  
LED technology providing longer life, new design, integrated label holder.

### Push buttons

- versions: impulse push buttons and latching push buttons,
- contact types: 1NO, 1NC, 2NO, 2NC, 1NC+1NO

### Indicator lights

- light type: LED technology
- supply voltage: 12/48V AC/DC and 230/415V AC
- colors: green, red, orange, blue, clear

- range: 1,2 and 3 indicators light possibility in the same device

- power consumption: 0.8 watts

- burning hours: up to 100,000h

These versions with indicator lights are equipped with green or red diffuser. (led technology)

### Connection capacity

- 10 mm<sup>2</sup> rigid,
- 6 mm<sup>2</sup> flexible

Comply with IEC 60947-5-1 and IEC 62094-1



SVN122



### Single indicator light

- 230 V AC

Description	Width in module 17.5 mm	Pack qty	Cat. ref.
green LED light	1	12	<b>SVN121</b>
red LED light	1	12	<b>SVN122</b>
orange LED light	1	12	<b>SVN123</b>
blue LED light	1	12	<b>SVN124</b>
clear LED light	1	12	<b>SVN125</b>



SVN126



### Double indicator light

- 230 V AC

Description	Width in module 17.5 mm	Pack qty	Cat. ref.
green and red LED light	1	12	<b>SVN126</b>
clear LED light	1	12	<b>SVN128</b>



SVN127



### Triple indicator light

- 230 V AC

Description	Width in module 17.5 mm	Pack qty	Cat. ref.
red LED light	1	12	<b>SVN127</b>
red/orange/green LED light	1	12	<b>SVN129</b>
green LED light	1	12	<b>SVN221</b>
red/orange/blue LED light	1	12	<b>SVN222</b>



SVN134



### Low voltage indicator lights

- 12 to 48 V AC/DC

Description	Width in module 17.5 mm	Pack qty	Cat. ref.
green LED light	1	12	<b>SVN131</b>
red LED light	1	12	<b>SVN132</b>
orange LED light	1	12	<b>SVN133</b>
blue LED light	1	12	<b>SVN134</b>
clear LED light	1	12	<b>SVN135</b>
green/red LED light	1	12	<b>SVN136</b>

**Earth leakage relays**

- Voltage range : 230V +/- 20%
- Network voltage: 50 to 700 V
- Frequency: 50 / 60 Hz
- Working temperature: -10 to +55°C
- Storage temperature: -25 to +70°C
- Max. cable length to torroids: 25m non-twisted cable 0.5 to 1.5mm<sup>2</sup> 50m twisted cable
- Standards: IEC 60755, IEC 947-2 annex B, IEC 61543, IEC 61008-1, IEC 61000-6, IEC 60755

**Torroids**

- Frequency: 50 / 60 Hz
- Working temperature: - 10 to +55°C
- Storage temperature: - 25 to +70°C
- IP rating: IP 41



HR510

**Earth leakage relays**

Description	Power absorbed	Positive safety contact	Cat. ref.
Earth leakage relays non adjustable			
fixed In: 0.03A instantaneous tripping	3VA		<b>HR500</b>
fixed In: 0.,3A instantaneous tripping	3VA		<b>HR502</b>
Earth leakage relays adjustable			
adjustable In: 0.03-0.1- 0.3-0.5-1-3-10A delay settings: inst. 0-0.1-0.3-0.4-0.5-1-3 s In/drop output: 0.3-10 A/O to 3 s	5VA	1 C/O	<b>HR510</b>
with bargraph display adjustable In: 0.03-0.1-0.3-0.5-1-3-10A delay settings: inst. 0-0.1-0.3-0.4-0.5-1-3 s In/drop output: 0.3-10 A/O to 5 s	5VA	1 C/O	<b>HR520</b>
adjustable In: 0.03-0.1-0.3-0.5-1-3-10A delay settings: inst. 0-0.1-0.2-0.25-0.3-0.4-0.5 s	5VA	1 C/O	<b>HR522</b>
adjustable In: 0.5-1- 3-5-10-20-30A delay settings: inst. 0-0.1-0.2-0.25-0.3-0.4-0.5 s	5VA	1 C/O	<b>HR523</b>
adjustable In: 0.03-0.1- 0.3-0.5-1-3-10A delay settings: inst./sel. 0.02-0.1-0.3-0.4-0.5 s / 0.75-1-3-5-10 s	6VA	1 C/O	<b>HR525</b>
adjustable In: 0.03-0.1-0.3-0.5-1-3-10-30A delay settings: inst./sel. 0.02-0.1-0.3-0.4-0.5 s / 0.75-1-3-5-10 s	6VA	1 C/O	<b>HR534</b>

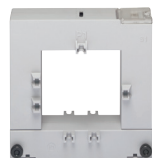
**Circular torroids**



HR741

Description	Cat. ref.
internal 30 mm	<b>HR700</b>
internal 35 mm	<b>HR741</b>
internal 70 mm	<b>HR742</b>
internal 105 mm	<b>HR743</b>
internal 140 mm	<b>HR744</b>
internal 210 mm	<b>HR745</b>

**Open rectangular torroids**



HR822

Description	Cat. ref.
80 x 80 mm	<b>HR822</b>
80 x 120 mm	<b>HR823</b>
80 x 160 mm	<b>HR824</b>

**Rectangular torroids**



HR831

Description	Cat. ref.
75 x 175 mm	<b>HR830</b>
115 x 305 mm	<b>HR831</b>
150 x 350 mm	<b>HR832</b>
200 x 500 mm	<b>HR833</b>

### Brass distribution terminals

- suitable for copper conductors
- for live, neutral or earth distribution
- In : 60A

### Brass distribution terminal on support

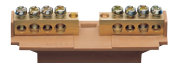
- neutral: blue support
- live: beige support

### Brass distribution terminal without support

- mounting on support (KZ0xx)
- directly on the structure
- delivered with mounting screws



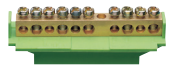
KM04L



KM08L



KM07N



KM10B



KM10E



KM13N



KM11B



K151



KM25N



K158



K159

### Brass distribution terminals

- KM17N and K25N includes 2 supports

Connection capacity (mm <sup>2</sup> )	Number of connections	Length (mm)	.Cat. ref			without support
			with support	neutral	earth	
x 16 + 2 x 10 2	4	30	-	-	<b>KM04L</b>	<b>K140</b>
x 16 + 4 x 10 4	8	30	-	-	<b>KM08L</b>	-
x 16 + 4 x 10 3	7	49	<b>KM07N</b>	<b>KM07E</b>	<b>KM07L</b>	<b>K142</b>
x 16 + 5 x 10 5	10	67	<b>KM10A</b>	<b>KM10B</b>	<b>KM10C</b>	<b>K143</b>
x 16 + 6 x 10 5	11	73	<b>KM11N</b>	<b>KM11E</b>	<b>KM11L</b>	<b>K144</b>
x 16 double tightening + 8 x 10 2	10	69	<b>KM10N</b>	<b>KM10E</b>	<b>KM10L</b>	<b>K145</b>
x 16 + 7 x 10 6	13	85	<b>KM13N</b>	<b>KM13E</b>	-	<b>K148</b>
x 25 + 5 x 16 + 5 x 10 1	11	85	-	<b>KM11B</b>	-	<b>K151</b>
x 25 + 8 x 16 + 8 x 10 1	17	121	<b>KM17N</b>	<b>KM17E</b>	-	<b>K156</b>
x 25 + 11 x 16 + 13 x 10 1	25	169	<b>KM25N</b>	<b>KM25E</b>	-	<b>K158</b>
x 25 + 8 x 16 + 29 x 10 1		242	-	-	-	<b>K159</b>
x 25 + 16 x 16 + 61 x 10 1		482	-	-	-	<b>K160F</b>
x 25 + 33 x 16 + 129 x 10 1		992	-	-	-	<b>K162F</b>



KZ012



KZ013



KZ014

### Support for brass distribution terminals

- for K140 to K162
- insulated support
- delivered with 8 x M4 screws

Description	Cat. ref.
blue support, for neutral	<b>KZ012</b>
green / yellow support, for earth	<b>KZ013</b>
beige support, for live	<b>KZ014</b>

### Insulated universal supply busbars

- blue for neutral,
- brown for phase
- for MCB's and fuse carriers 1 module width

### Single, double, three and four pole busbars

- for multipole MCB from 0,5 to 63A
- for multipole, fuse carriers and SB switches

Comply with IEC 60947-7 and IEC 60439-1.



KB163P

### Single pole prong supply busbars

- 63 A are equipped with protection profiles



KB163N



KB190C

In	Section	Width in module	Pack qty.	Cat. ref.
63 A	10 mm <sup>2</sup>	13	50	<b>KB163P</b>
63 A	10 mm <sup>2</sup>	13	50	<b>KB163N</b>
100 A	20 mm <sup>2</sup>	24	10	<b>KB190C</b>
100 A	20 mm <sup>2</sup>	57 (1m)	10	<b>KB190B</b>

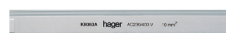
### Double pole prong supply busbars



KB263A

In	Section	Width in module	Pack qty.	Cat. ref.
63 A	10 mm <sup>2</sup>	12	10	<b>KB263A</b>
63 A	10 mm <sup>2</sup>	24	10	<b>KB263C</b>
80 A	16 mm <sup>2</sup>	56 (1m)	10	<b>KB280B</b>

### Three pole prong supply busbars



KB363A

In	Section	Width in module	Pack qty.	Cat. ref.
63 A	10 mm <sup>2</sup>	12	10	<b>KB363A</b>
63 A	10 mm <sup>2</sup>	24	10	<b>KB363C</b>
80 A	16 mm <sup>2</sup>	12	25	<b>KB380A</b>
80 A	16 mm <sup>2</sup>	57 (1m)	10	<b>KB380B</b>

### Four pole prong supply busbars

- equipped with end caps



KB463A

In	Section	Width in module	Pack qty.	Cat. ref.
63 A	10 mm <sup>2</sup>	12	10	<b>KB463A</b>
63 A	10 mm <sup>2</sup>	24	10	<b>KB463C</b>
80 A	16 mm <sup>2</sup>	56 (1m)	10	<b>KB480B</b>



KZ021

### End caps

- to insulate the ends of the busbars

Description	Pack qty.	Cat. ref.
for single busbars KB163P, KB163N	1	<b>KZ021</b>
for double busbars KB263A, KB263C	1	<b>KZ022</b>
for double / three pole busbars KB280B, KB363A, KDN263B, KB363C, KB380B, KDN363B	1	<b>KZ023A</b>
for four pole busbars KB463A, KB463C, KB480B, KDN463B	1	<b>KZ024</b>



KZ059

### Protection profiles

- to insulate the spare prongs

Description	Pack qty.	Cat. ref.
5 modules width protection profile	10	<b>KZ059</b>



### Fork insulated busbars

For modular devices equipped with biconnect terminals  
 - multipolar MCB's from 0.5 to 63A (except Ph+N) and RCCB's

#### Single pole fork supply busbars



KD190B

In	Section	Width in module	Cat. ref.
63 A	10 mm <sup>2</sup>	57	<b>KD163B</b>
80 A	16 mm <sup>2</sup>	57	<b>KD180B</b>
100 A	20 mm <sup>2</sup>	57	<b>KD190B</b>

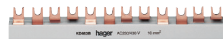
#### Double pole fork supply busbars



KD263B

In	Section	Width in module	Cat. ref.
63 A	10 mm <sup>2</sup>	56	<b>KD263B</b>
80 A	16 mm <sup>2</sup>	56	<b>KDN280B</b>

#### Three pole fork supply busbars



KD363B

In	Section	Width in module	Cat. ref.
63 A	10 mm <sup>2</sup>	57	<b>KD363B</b>
80 A	16 mm <sup>2</sup>	57	<b>KD380B</b>

#### Four pole fork supply busbars



KD463B

In	Section	Width in module	Cat. ref.
63 A	10 mm <sup>2</sup>	56	<b>KD463B</b>
80 A	16 mm <sup>2</sup>	56	<b>KDN480B</b>

#### End caps

- to insulate the ends of the busbars



KZ023A

Description	Pack qty.	Cat. ref.
for single pole busbars KD163B, KD180B, KD190B	1	<b>KZN021</b>
for double pole busbars KD263B	1	<b>KZ022</b>
for double pole busbars KDN280B	1	<b>KZN023</b>
for three pole busbars KD363B, KD380B	1	<b>KZ023A</b>
for four pole busbars KD463B	1	<b>KZ024</b>
for four pole busbars KDN480B	1	<b>KZN024</b>

#### Protection profiles

- to insulate the spare fork



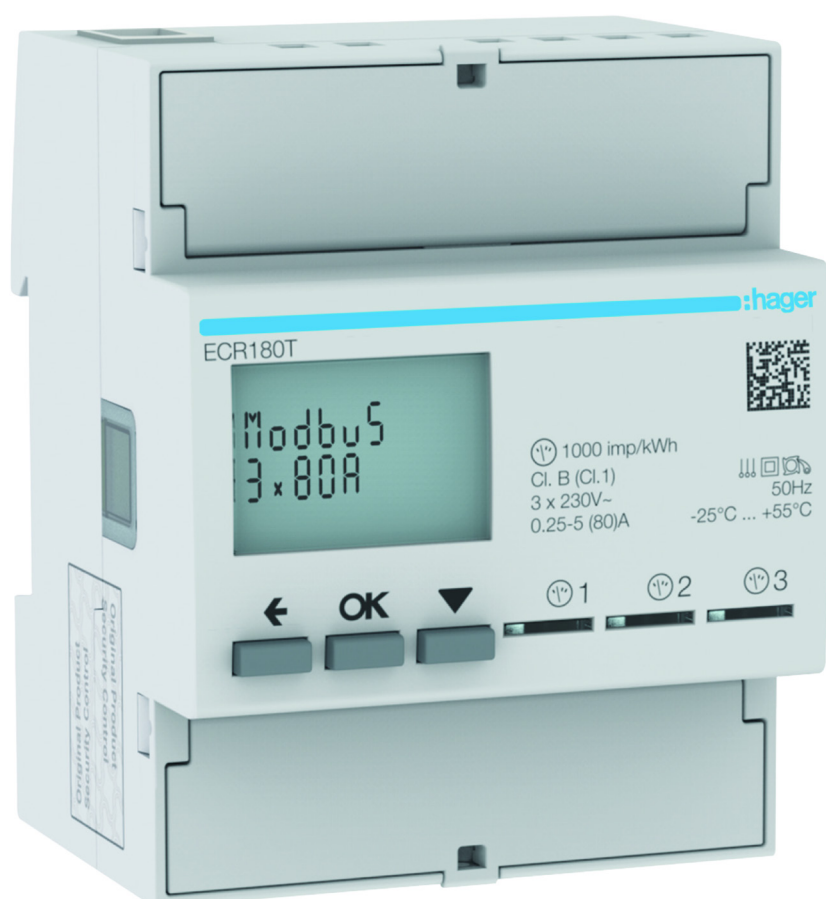
KZ059

Description	Pack qty.	Cat. ref.
5 modules width protection profile	10	<b>KZ059</b>

# Energy monitoring and measurement

In the current market scenario, monitoring and measurement of energy consumption is unavoidable.

We offer solutions to monitor and control the energy consumption.



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Energy meters

138

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Accessories

139

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Metering

140

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## Single Phase Direct Connect kWh Meters - MID Approved

### Description:

- MID approved meter range (except EC...180T)
- A range of both direct connect and CT supplied din rail mounted meters

### Characteristics:

- CT supplied meters compatible with 1 A / 5A CT's (not suitable for use with cables / ct's from page 38) - Choice of communication options – pulse output kWh, Modbus or Mbus



ECN140D

Description	Width	Cat ref.
<b>40A kWh Meters</b>		
1Ph kWh Meter Direct 40A Pulsed Output 1M	1 Mod <span style="color: blue;">■</span>	<b>ECN140D</b>
1Ph kWh Meter Direct 40A 1M Pulsed Output MID	1 Mod	<b>ECP140D</b>
1Ph kWh Meter Direct 40A 1M MBUS MID	1 Mod	<b>ECM140D</b>
1Ph kWh Meter Direct 40A 1M MODBUS MID	1 Mod	<b>ECR140D</b>



ECR180T

<b>3 x 80A kWh Meters - Not MID Approved</b>		
1Ph kWh Meter Direct 3x80A 4M Pulsed Output	4 Mod	<b>ECP180T</b>
1Ph kWh Meter Direct 3x80A 4M MBUS	4 Mod	<b>ECM180T</b>
1Ph kWh Meter Direct 3x80A 4M MODBUS	4 Mod	<b>ECR180T</b>
1Ph kWh Meter Direct 3x80A 4M AGARDIO	4Mode	<b>ECA180T</b>



ECP180D

<b>80A kWh Meters</b>		
1Ph kWh Meter Direct 80A 2M Pulsed Output MID	2 Mod	<b>ECP180D</b>
1Ph kWh Meter Direct 80A 2M MBUS MID	2 Mod	<b>ECM180D</b>
1Ph kWh Meter Direct 80A 2M MODBUS MID	2 Mod	<b>ECR180D</b>
1Ph kWh Meter Direct 80A 2M AGARDIO MID	2Mode	<b>ECA180D</b>

## Three Phase Direct Connect kWh Meters - MID Approved



ECP380D

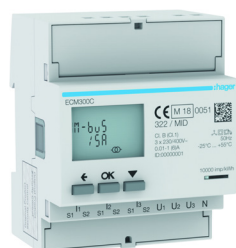
Description	Width (1 Mod=17.5mm)	Cat ref.
<b>80A kWh Meters</b>		
3Ph kWh Meter Direct 80A 4M MID	4 Mod	<b>ECP380D</b>
3Ph kWh Meter Direct 80A 4M MBUS MID	4 Mod	<b>ECM380D</b>
3Ph kWh Meter Direct 80A 4M MODBUS MID	4 Mod	<b>ECR380D</b>
3Ph kWh Meter Direct 80A 4M AGARDIO MID	4Mode	<b>ECA380D</b>



ECM310D

<b>125A kWh Meters</b>		
3Ph kWh Meter Direct 125A 6M S0 MID	6 Mod	<b>ECP310D</b>
3Ph kWh Meter Direct 125A 6M MBUS MID	6 Mod	<b>ECM310D</b>
3Ph kWh Meter Direct 125A 6M MODBUS MID	6 Mod	<b>ECR310D</b>
3Ph kWh Meter Direct 125A 6M AGARDIO MID	6Mode	<b>ECA310D</b>

## Three Phase CT Fed kWh Meters



ECM300C

Description	Width (1 Mod=17.5mm)	Cat ref.
<b>1-5A kWh Meters</b>		
3Ph kWh Meter via CT 1-5A 4M Pulsed Output MID	4 Mod	<b>ECP300C</b>
3Ph kWh Meter via CT 1-5A 4M MBUS MID	4 Mod	<b>ECM300C</b>
3Ph kWh Meter via CT 1-5A 4M MODBUS MID	4 Mod	<b>ECR300C</b>
3Ph kWh Meter via CT 1-5A 4M AGARDIO MID	4 Mod	<b>ECA300C</b>



HTG471H

### Accessories

**Agardio RJ45 + Ground Modbus Cable**  
Modbus connection

2 x RJ45 + earth / 1 m

**HTG471H**

2 x RJ45 + earth / 2 m

**HTG472H**

2 x RJ45 + earth / 3 m

**HTG474H**



HTG472H

**Agardio RJ45 Groundless Modbus Cable**  
Connection between products

2 x RJ45 / 0,2 m

**HTG480H**

2 x RJ45 / 1 m

**HTG481H**

2 x RJ45 / 2 m

**HTG482H**

2 x RJ45 / 5 m

**HTG484H**



HTG480H

### Resistance

End-of-line Resistance 120 Ω

**SMC120R**

RJ45 end-of-line resistance 120 Ω

**HTG467H**



SMC120R



HTG467H

**Functional characteristics of single-phase metering**

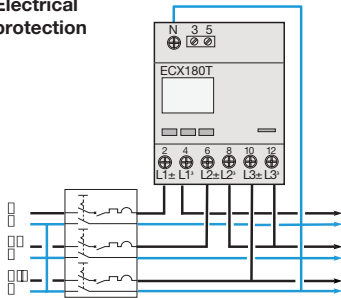
Ref	ECN140D	ECP140D	ECM140D	ECR140D	ECP180D	ECM180D	ECR180D	ECA180D	ECP180T	ECM180T	ECR180T ECA180T
	40 A - 230 V AC				80 A - 230 V AC			3 x 80 A - 230 V AC			
Current Intensity	-	•	•	•	•	•	•	•	•	•	•
Voltage	-	•	•	•	•	•	•	•	•	•	•
Power Factor	-	•	•	•	•	•	•	•	•	•	•
Freequency	-	•	•	•	•	•	•	•	•	•	•
Active Power	-	•	•	•	•	•	•	•	•	•	•
Apparent Power	-	-	via com	via com	•	•	•	•	•	•	•
Reactive Power	-	-	via com	via com	•	•	•	•	•	•	•
Active Energy	•	•	•	•	•	•	•	•	•	•	•
Apparent Energy	-	-	-	-	-	-	-	-	-	-	-
Reactive Energy	-	-	via com	via com	•	•	•	•	•	•	•
Partial Consumption Reset	-	-	-	-	•	•	•	•	•	•	•
Import / Export of Energy	-	•	•	•	•	•	•	•	•	•	•
Tariff Control	-	•	•	•	•	•	•	•	•	•	•
Number of Tariffs Managed (by physical entry / communication)	1/0	1/0	0/2	0/8	2/0	2/2	2/8	0/8	2/0	2/2	2/4
Instrumentation Value	-	•	•	•	•	•	•	•	•	•	•
Input/Output Function	-	•	-	-	•	-	-	-	-	-	-
Configurable I/O Function	-	-	-	-	•	-	-	-	-	-	-
Display of Previous Values	-	-	-	-	-	-	-	-	-	-	-
Programming of Maximum Demand Threshold	-	-	-	-	-	-	-	-	-	-	-
Load Profile	-	-	-	-	-	-	-	-	-	-	-
Harmonics Management	-	-	-	-	-	-	-	-	-	-	-
Alarm Function	-	-	-	-	-	-	-	-	-	-	-
Minimum / Maximum Demand	-	-	-	-	-	-	-	-	-	-	-
Tariff Control via Physical Input	-	-	-	-	•	-	•	-	•	-	•
Tariff Control via Communication System	-	-	•	•	-	•	•	•	-	•	•
Internal Memory Backup	•	•	•	•	•	•	•	•	•	•	•

Functional characteristics of three-phase metering

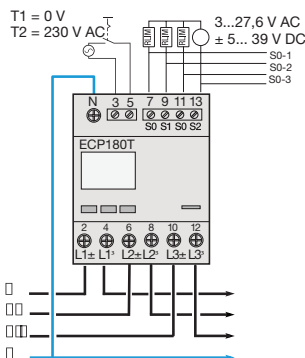
Ref	ECN140D	ECM380D	ECR380D ECA380D	ECP310D	ECM310D	ECR310D ECA310D	ECP300C	ECM300C	ECR300C ECA300C
Current Intensity	•	•	•	•	•	•	•	•	•
Voltage	•	•	•	•	•	•	•	•	•
Power Factor	•	•	•	•	•	•	•	•	•
Freequency	•	•	•	•	•	•	•	•	•
Active Power	•	•	•	•	•	•	•	•	•
Apparent Power	•	•	•	•	•	•	•	•	•
Reactive Power	•	•	•	•	•	•	•	•	•
Active Energy	•	•	•	•	•	•	•	•	•
Apparent Energy	•	•	•	•	•	•	•	•	•
Reactive Energy	-	-	-	-	-	-	-	-	-
Partial Consumption Reset	•	•	•	•	•	•	•	•	•
Import / Export of Energy	•	•	•	•	•	•	•	•	•
Tariff Control	•	•	•	•	•	•	•	•	•
Number of Tariffs Managed (by physical entry / communication)	1/10	1/0	0/2	0/8	2/0	2/2	2/8	0/8	2/0
Instrumentation Value	•	•	•	•	•	•	•	•	•
Input/Output Function	•	-	-	•	-	-	•	-	-
Configurable I/O Function	•	-	-	-	•	-	•	-	-
Display of Previous Values	-	-	-	-	-	-	-	-	-
Programming of Maximum Demand Threshold	-	-	-	-	-	-	-	-	-
Load Profile	-	-	-	-	-	-	-	-	-
Harmonics Management	-	-	-	-	-	-	-	-	-
Alarm Function	-	-	-	-	-	-	-	-	-
Minimum / Maximum Demand	-	-	-	-	-	-	-	-	-
Tariff Control via Physical Input	•	-	•	•	-	•	•	-	•
Tariff Control via Communication System	-	•	•	-	•	•	-	•	•
Internal Memory Backup	•	•	•	•	•	•	•	•	•

Wiring diagrams

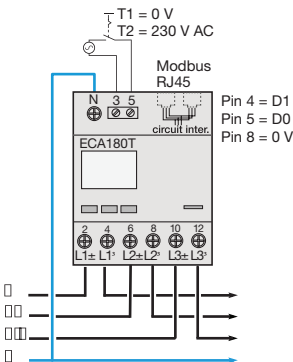
Electrical protection



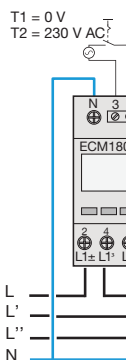
ECP180T



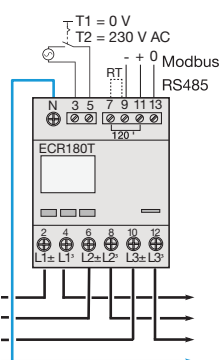
ECA180T



ECM180T



ECR180T



120 Ω Activated by shunt

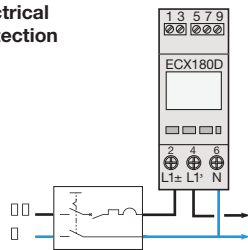
Technical specifications

		Direct single-phase 3 x 80 A, common neutral			
	Ref.	ECP180T	ECM180T	ECR180T	ECA180T
Voltage Nominal		1 x 230 V			
Voltage Range		184V - 276 V			
Frequency		45...65 Hz			
<b>General Specifications:</b>					
Product Certification		-			
Voltage Circuit Consumption		≤2 / ≤1			
Current Circuit Consumption		≤1			
Base Current (Ib)		5 A			
Reference Current (Iref)		5 A			
Transition current		0.5 A			
Maximum Current (Imax)		80 A			
Minimum Current (Imin)		0.25 A			
Start-up Current		0.015 A			
Cable Sections : -rigid		2.5 - 33 mm <sup>2</sup>			
-flexible		2.5 - 33 mm <sup>2</sup>			
Neutral Section		Auxiliary power supply: 2.5 mm <sup>2</sup>			
Torque for Power Terminals		1 Nm			
Accuracy Class		Active Cl.1 / Reactive Cl.2			
Measurement accuracy in %		Active 1% / Reactive 2%			
Display Type		LCD (backlit)			
Material		Plastic			
Protection		Fuse protection 80A single phase (x3 meters)			
<b>Input characteristics</b>					
Number of Inputs		1			
Voltage		230 V AC			
OFF=T1		0 V			
ON=T2		230 V AC			
Cable Sections		0.8 - 2.5 mm <sup>2</sup> (both rigid and flexible)			
Torque		0.5 Nm			
<b>Impulse Output Characteristics:</b>					
Number of Outputs		3	-	-	-
Max Impulse Current: 39 VDC		90 mA	-	-	-
Voltage AC / DC		3-27.6/±5-39	-	-	-
Output frequency		1-1000 p/kWh	-	-	-
Pulse Duration		30-100 ms	-	-	-
Cable Sections : - rigid		0.8 - 2.5 mm <sup>2</sup>	-	-	-
flexible		0.8 - 2.5 mm <sup>2</sup>	-	-	-
Torque		0.5 Nm	-	-	-
<b>Communication Output Characteristics:</b>					
Protocol		-	M-Bus	Modbus RTU	
Connector type		-	Terminal screws	RJ45	
Cable Sections		-	0.8 - 2.5 mm <sup>2</sup>	-	
Torque		-	0.5 Nm	-	
<b>Front Panel Impulse Indicator (LED)</b>					
Impulse Frequency		1000 p/kWh			
<b>EMC Compatibility:</b>					
Voltage Shock Test		6 kV			
Overvoltage Test		4 kV			
<b>Environmental Data:</b>					
Operating Temperature		-25...+55 °C			
Storage Temperature		-25...+70 °C			
Humidity		≤ 95% at 20°C			
Fire/Heat Resistance		V0			
Water/Dust Resistance Installed / Not installed		IP51/IP20			
Mechanical Environment		M1			
Electromechanical Environment		E2			
Dimensions L x H x D		72 x 92 x 60			
Number of DIN Modules		4			
Standards		EN 50470-1/3, CEI 62053-21/23, CEI 61557-12, DIN 43880, EN 60715, EI 62053-31	-	-	-

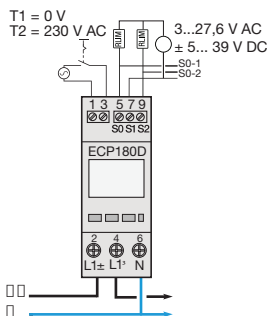


Wiring diagrams

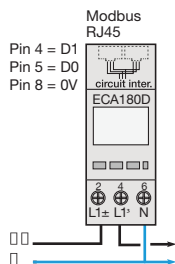
Electrical protection



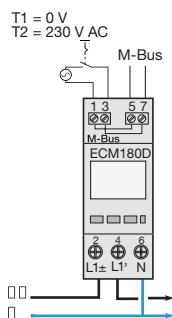
ECP180D



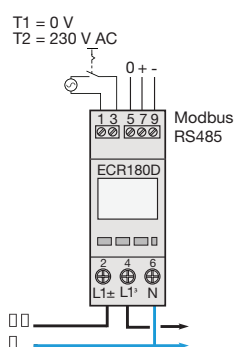
ECA180D



ECM180D



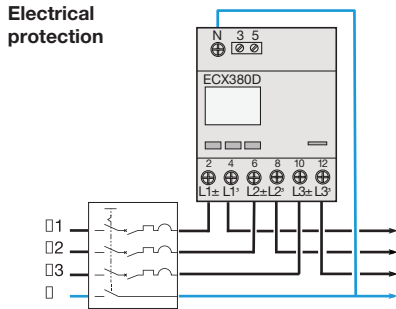
ECR180D



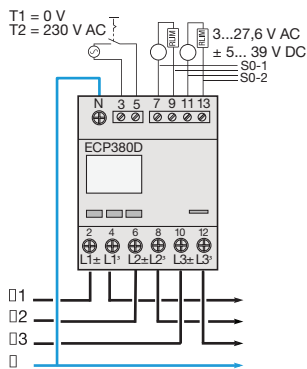
Technical specifications

		Direct single-phase 80 A			
	Ref.	ECP180D	ECM180D	ECR180D	ECA180D
Voltage Nominal		1 x 230 V			
Voltage Range		92 V - 276 V			
Frequency		45...65 Hz			
<b>General Specifications:</b>					
Product Certification		MID, Classe B			
Voltage Circuit Consumption		≤2 / ≤1			
Current Circuit Consumption		≤1			
Base Current (Ib)		5 A			
Reference Current (Iref)		5 A			
Transition current		0.5 A			
Maximum Current (Imax)		80 A			
Minimum Current (Imin)		0.25 A			
Start-up Current		0.015 A			
Cable Sections : -rigid		2.5 - 33 mm <sup>2</sup>			
-flexible		2.5 - 33 mm <sup>2</sup>			
Torque for Power Terminals		2 Nm			
Accuracy Class		Active Cl.1 / Reactive Cl.2			
Measurement accuracy in %		Active 1% / Reactive 2%			
Display Type		LCD (backlit)			
Material		Plastic			
Protection		Fuse protection 80 A single phase (x1 meters)			
<b>Input characteristics</b>					
Number of Inputs		1			-
Voltage		230 V AC			-
OFF=T1		0 V			-
ON=T2		230 V AC			-
Cable Sections		1 - 4 mm <sup>2</sup> (both rigid and flexible)			-
Torque		1 Nm			-
<b>Impulse Output Characteristics:</b>					
Number of Outputs		2	-	-	-
Max Impulse Current: 39 VDC		90 mA	-	-	-
Voltage AC / DC		3-27.6/±5-39	-	-	-
Output frequency		1 - 1000 p/kWh	-	-	-
Pulse Duration		30 - 100 ms	-	-	-
Cable Sections : -rigid		0.8 - 2.5 mm <sup>2</sup>	-	-	-
-flexible		0.8 - 2.5 mm <sup>2</sup>	-	-	-
Torque		0.5 Nm	-	-	-
<b>Communication Output Characteristics:</b>					
Protocol		-	M-Bus	Modbus RTU	
Connector type		-	Terminal screws	RJ45	
Cable Sections		-	0.8 - 2.5 mm <sup>2</sup>		-
Torque		-	0.5 Nm		-
<b>Front Panel Impulse Indicator (LED)</b>					
Impulse Frequency		1000 p/kWh			
<b>EMC Compatibility:</b>					
Voltage Shock Test		6 kV			
Overvoltage Test		4 kV			
<b>Environmental Data:</b>					
Operating Temperature		-25...+55°C			
Storage Temperature		-25...+70°C			
Humidity		≤ 95% at 20°C			
Fire/Heat Resistance		V0			
Water/Dust Resistance		IP51/IP20			
Installed / Not installed					
Mechanical Environment		M1			
Electromechanical Environment		E2			
Dimensions L x H x D		36x92x60			
Number of DIN Modules		2			
Standards		EN 50470-1/3, CEI 62053-21/23, CEI 61557-12, DIN 43880, EN 60715, EI 62053-31			

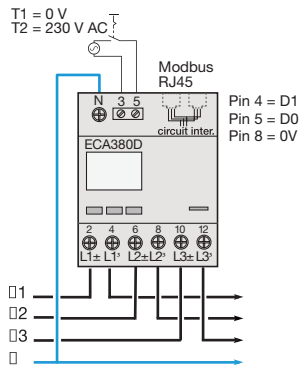
Wiring diagrams



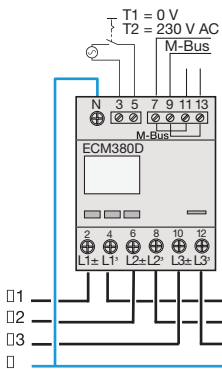
ECP380D



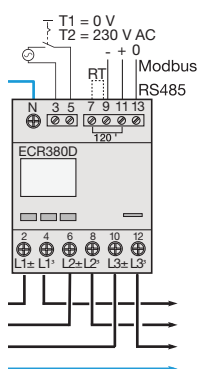
ECA380D



ECM180D



ECR180D

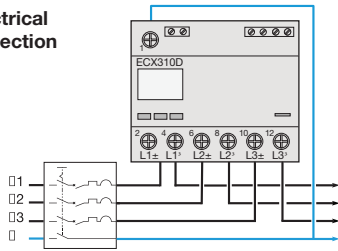


Technical specifications

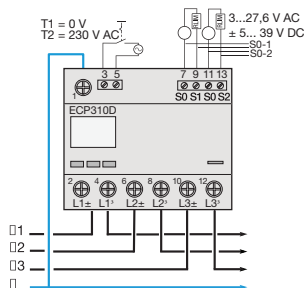
	Direct three-phase 80 A			
Ref.	ECP380D	ECM380D	ECR380D	ECA380D
Voltage Nominal	1 x 400 V			
Voltage Range	160 V - 480 V			
Frequency	45...65 Hz			
<b>General Specifications:</b>				
Product Certification	MID, Class B			
Voltage Circuit Consumption	≤2/ ≤0.6			
Current Circuit Consumption	≤0.7			
Base Current (Ib)	5 A			
Reference Current (Iref)	5 A			
Transition current	0.5 A			
Maximum Current (Imax)	80 A			
Minimum Current (Imin)	0.25 A			
Start-up Current	0.015 A			
Cable Sections	2.5 - 33 mm <sup>2</sup>			
Neutral Section	Auxiliary power supply: 2.5 mm <sup>2</sup>			
Torque for Power Terminals	2 Nm			
Accuracy Class	Active Cl.1 / Reactive Cl.2			
Measurement accuracy in %	Active 1% / Reactive 2%			
Display Type	LCD (backlit)			
Material	Plastic			
Protection	Fuse protection 80 A single phase (x1 meters)			
<b>Input characteristics</b>				
Number of Inputs	1			
Voltage	230 V AC			
OFF=T1	0 V			
ON=T2	230 V AC			
Cable Sections	0.8 - 2.5 mm <sup>2</sup> (both rigid and flexible)			
Torque	0.5 Nm			
<b>Impulse Output Characteristics:</b>				
Number of Outputs	2	-	-	-
Max Impulse Current: 39 VDC	90mA	-	-	-
Voltage AC / DC	3-27.6/±5-39	-	-	-
Output frequency	1-200 p/kWh	-	-	-
Pulse Duration	30 - 200 p/kWh	-	-	-
Cable Sections : - rigid	0.8 - 2.5 mm <sup>2</sup>	-	-	-
flexible	0.8 - 2.5 mm <sup>2</sup>	-	-	-
Torque	0.5 Nm	-	-	-
<b>Communication Output Characteristics:</b>				
Protocol	-	M-Bus	Modbus RTU	
Connector type	-	Terminal screws	RJ45	
Cable Sections	-	0.8 - 2.5 mm <sup>2</sup>	-	
Torque	-	0.5 Nm	-	
<b>Front Panel Impulse Indicator (LED)</b>				
Impulse Frequency	1000 pulses / kWh			
<b>EMC Compatibility:</b>				
Voltage Shock Test	6 kV			
Overvoltage Test	4 kV			
<b>Environmental Data:</b>				
Operating Temperature	-25...+55 °C			
Storage Temperature	-25...+70 °C			
Humidity	≤ 95% at 20°C			
Fire/Heat Resistance	V0			
Water/Dust Resistance	IP51/IP20			
Installed / Not installed				
Mechanical Environment	M1			
Electromechanical Environment	E2			
Dimensions L x H x D	72 x 92 x 60			
Number of DIN Modules	4 ■			
Standards	EN 50470-1/3, CEI 62053-21 / 23, CEI 61557-12, DIN 43880, EN 60715, CEI 62053-31			

Wiring diagrams

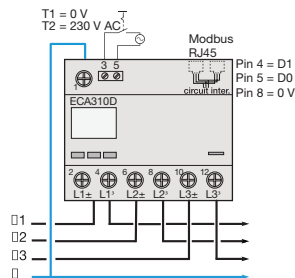
Electrical protection



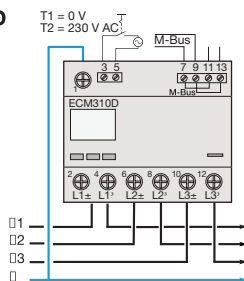
ECP310D



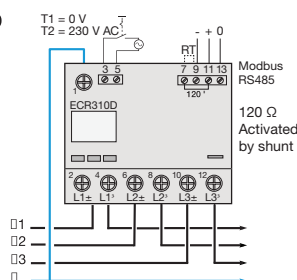
ECA310D



ECM310D



ECR310D

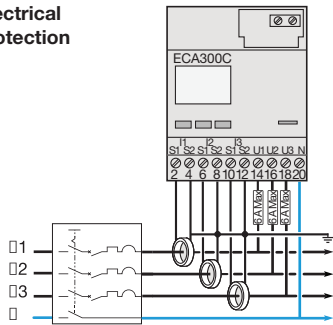


Technical specifications

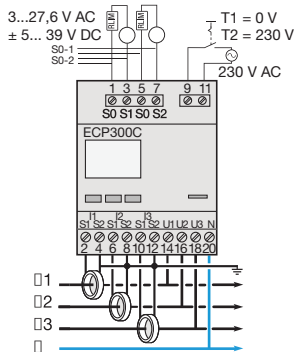
Ref.	Direct three-phase 125 A			
	ECP310D	ECM310D	ECR310D	ECA310D
Voltage Nominal	1 x 400 V			
Voltage Range	160 V 480 V			
Frequency	45...65 Hz			
<b>General Specifications:</b>				
Product Certification	MID. Classe B			
Voltage Circuit Consumption	≤2/ ≤0.6			
Current Circuit Consumption	≤0.7			
Base Current (Ib)	5 A			
Reference Current (Iref)	5 A			
Transition current	0.5 A			
Maximum Current (Imax)	125A			
Minimum Current (Imin)	0.25 A			
Start-up Current	0.02 A			
Cable Sections : - rigid	2.5 - 50 mm <sup>2</sup>			
flexible	2.5 - 50 mm <sup>2</sup>			
Neutral Section	Auxiliary power supply: 2.5 mm <sup>2</sup>			
Torque for Power Terminals	5 Nm			
Accuracy Class	Active Cl.1 / Reactive Cl.2			
Measurement accuracy in %	Active 1% / Reactive 2%			
Display Type	LCD (backlit)			
Material	Plastic			
Protection	Fuse protection 125 A three phase (x1 meters)			
<b>Input characteristics</b>				
Number of Inputs	1			
Voltage	230 V AC			
OFF=T1	0 V			
ON=T2	230 V AC			
Cable Sections	0.8 - 2.5 mm <sup>2</sup> (both rigid and flexible)			
Torque	1 Nm			
<b>Impulse Output Characteristics:</b>				
Number of Outputs	2	-	-	-
Max Impulse Current: 39 VDC	90 mA	-	-	-
Voltage AC / DC	3-27.6/±5-39	-	-	-
Output frequency	1-200 p/kWh	-	-	-
Pulse Duration	30-100 ms	-	-	-
Cable Sections : - rigid	0.8 - 2.5 mm <sup>2</sup>	-	-	-
flexible	0.8 - 2.5 mm <sup>2</sup>	-	-	-
Torque	0.5 Nm	-	-	-
<b>Communication Output Characteristics:</b>				
Protocol	-	M-Bus	Modbus RTU	
Connector type	-	Terminal screws	RJ45	
Cable Sections	-	0.8 - 2.5 mm <sup>2</sup>	-	
Torque	-	0.5 Nm	-	
<b>Front Panel Impulse Indicator (LED)</b>				
Impulse Frequency	1000 pulses / kWh			
<b>EMC Compatibility:</b>				
Voltage Shock Test	6 kV			
Overvoltage Test	4 kV			
<b>Environmental Data:</b>				
Operating Temperature	-25...+55°C			
Storage Temperature	-25...+70°C			
Humidity	≤ 95% at 20°C			
Fire/Heat Resistance	V0			
Water/Dust Resistance Installed / Not installed	IP51/IP20			
Mechanical Environment	M1			
Electromechanical Environment	E2			
Dimensions L x H x D	90 x 92 x 60			
Number of DIN Modules	6			
Standards	EN 50470-1/3, CEI 62053-21/23, CEI615557-12, DIN 43880, EN 60715			
	EI62053-31	-	-	-

Wiring diagrams

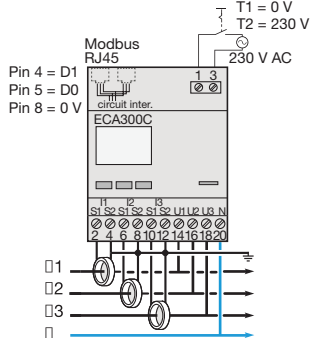
Electrical protection



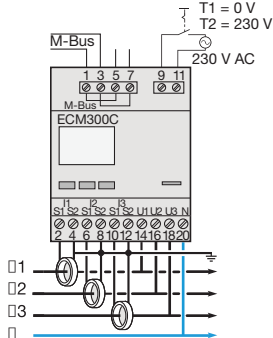
ECP300C



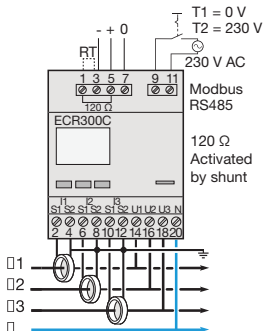
ECA300C



ECM300C



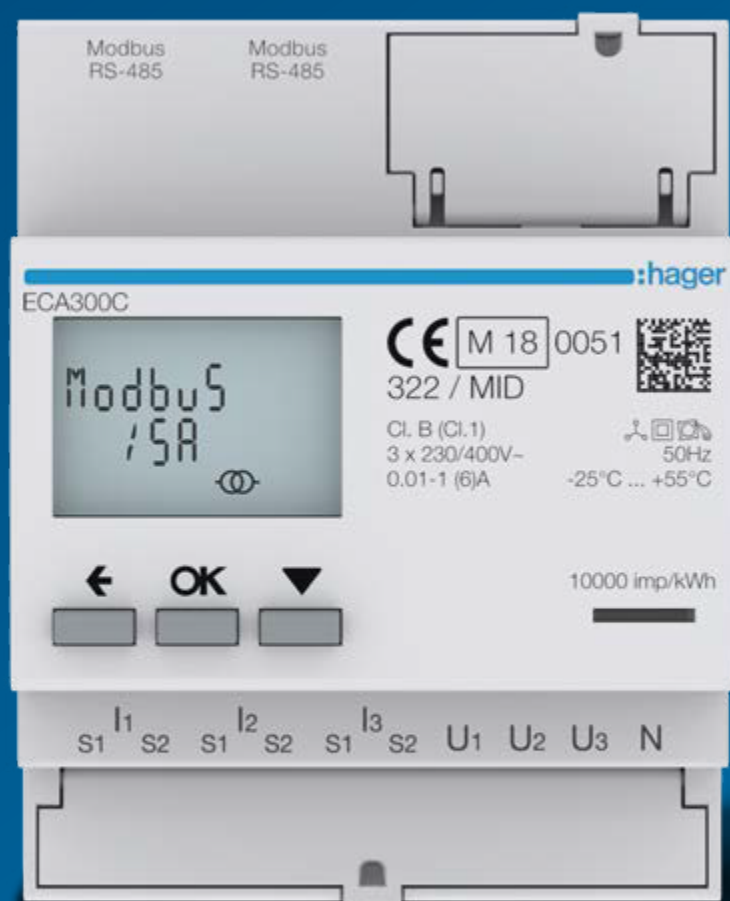
ECR300C



Technical specifications

	Ref.	Indirect three-phase 1/5 A			
		ECP300C	ECM300C	ECR300C	ECA300C
Voltage Nominal		1 x 400 V			
Voltage Range		160 V - 480 V			
Frequency		45...65 Hz			
<b>General Specifications:</b>					
Mid certified product MID		MID			
Consumption of voltage circuits VA/W		≤2 / ≤0.6			
Consumption of voltage in VA		≤0.7			
Base Current (Ib)		1(6) A			
Reference Current (Iref)		1A			
Transition current		0.05 A			
Maximum Current (Imax)		6 A			
Minimum Current (Imin)		0.01 A			
Startup current		0.001 A			
Cable Sections : - rigid		0.5 - 4 mm <sup>2</sup>			
flexible		0.5 - 4 mm <sup>2</sup>			
Neutral section		Auxiliary power supply: 2.5 mm <sup>2</sup>			
Torque for Power Terminals		0.5 Nm			
Accuracy Class		Active Cl.1 / Reactive Cl.2			
Measurement accuracy in %		Active 1% / Reactive 2%			
Display type		LCD (backlit)			
Material		Plastic			
Protection		fuse protection 6A single phase (x3 meters)			
<b>Measurement input characteristics</b>					
Number of inputs		Adjustable from 1 to 6000 (at 5 A, or 1200 at 1 A)			
<b>Input characteristics</b>					
Number of entries		1			
Voltage		230 V AC			
OFF=T1		0 V			
ON=T2		230 V AC			
Cable Sections		1.5 - 4 mm <sup>2</sup> (both rigid and flexible)			
Torque		1 Nm			
<b>Impulse Output Characteristics:</b>					
Number of out put		2	-	-	-
Max pulse current. 39 VDC		90 mA	-	-	-
Voltage AC / DC		3-27.6/±5-39	-	-	-
Output frequency		1 - 1000 p/kWh	-	-	-
Pulse Duration		30 - 100 ms	-	-	-
Cable Sections : - rigid		0.8 - 2.5 mm <sup>2</sup>	-	-	-
flexible		0.8 - 2.5 mm <sup>2</sup>	-	-	-
Torque		0.5 Nm	-	-	-
<b>Communication output Characteristics</b>					
Protocol		-	M-Bus	Modbus RTU	-
Connector type		-	Terminal screws		RJ45
Cable Section		-	0.8 - 2.5 mm <sup>2</sup>		-
Torque		-	0.5Nm		-
<b>Front Panel Impulse Indicator (LED)</b>					
Impulse Frequency		1000 pulses / kWh			
<b>EMC Compatibility</b>					
Voltage Shock Test		6 kV			
Overvoltage Test		4 kV			
<b>Enviromental data</b>					
Operating temperature		-25...+55°C			
Storage temperature		-25...+70°C			
Humidity		≤ 95% at 20°C			
Fire/Heat Resistance		V0			
Water/Dust Resistance		IP51/IP20			
Installed / Not installed		IP51/IP20			
Mechanical environment		M1			
Electromechanical		E2			
Dimensions L x H x D		72x92x60			
Number of DIN moduls		4			
Standards		EN 50470-1/3, CEI 62053-21/23, CEI 61557-12, DIN 43880, EN 60715, EI 2053-31			

# Track, communicate, optimise



:hager

# Energy and lighting control

Energy and lighting control product range, includes automatic management of lighting, timers, dimmers and time switches. They allow to optimise energy consumption while increasing comfort in residential and commercial premises.



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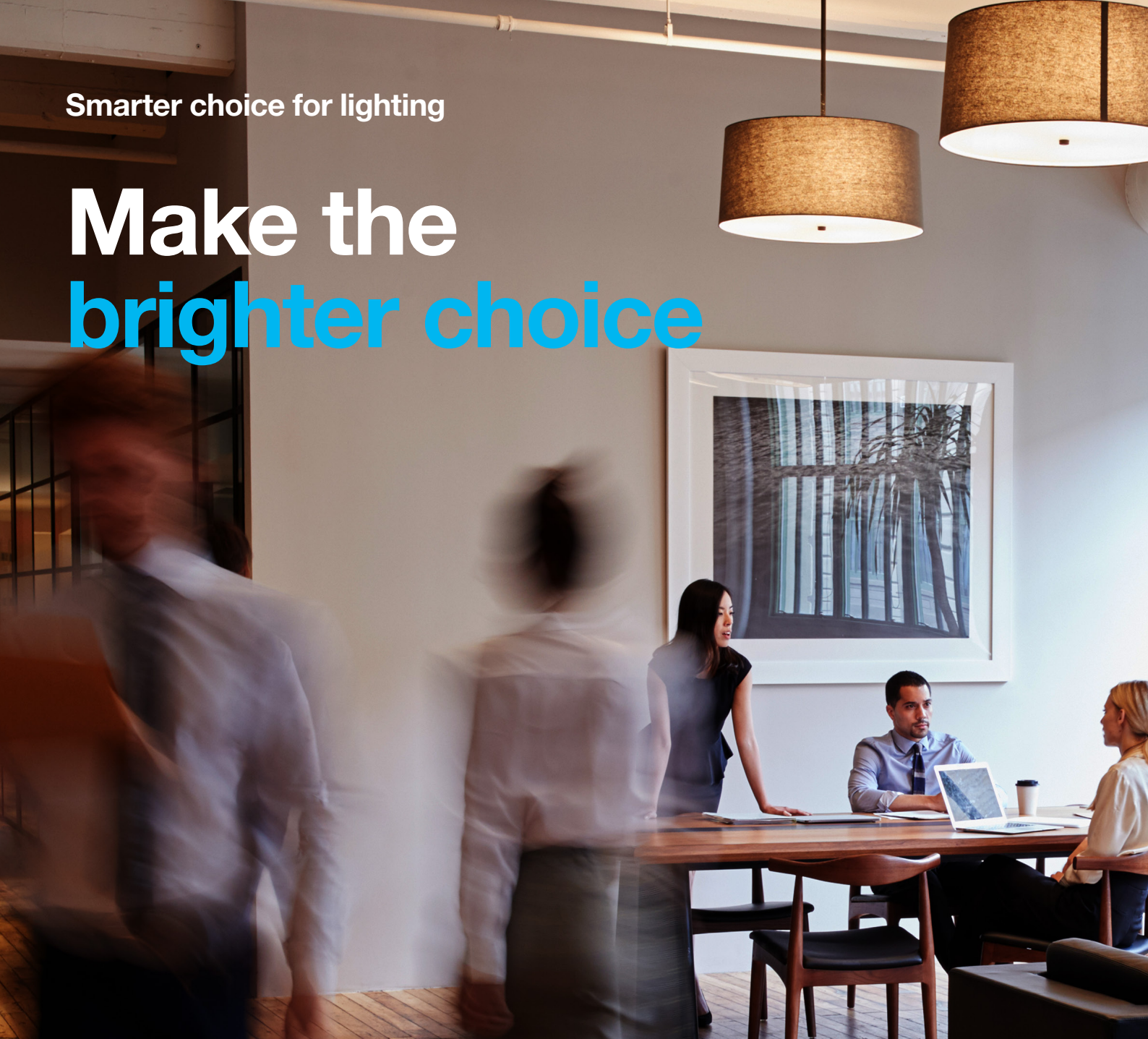
Motion & presence detectors	151
Time lag & analogue time switches	154
Modular delay timers	155
Twilight switches	156
Digital time switches	158
Digital Time Switches With Bluetooth	159

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Smarter choice for lighting

# Make the brighter choice



## Motion detectors

are best for spaces where people pass through, such as hallways and car parks.



## Presence detectors

are designed for areas such as offices and waiting rooms, where people sit still for long periods.

Lighting control plays an important role in modern homes & buildings. It is not only to produce ideal living and working conditions

but also to achieve the best possible energy balance. On-demand lighting solutions from hager helps users to reduce energy costs for lighting.



For more info scan here:



### Characteristics:

Our range of motion & presence detectors are the perfect solution for cost-effective lighting control and energy efficiency in buildings. These detectors switch On/Off lights according to human movement & ambient light levels. They provide a simple and effective solution for increasing comfort, safety, security and energy saving in commercial, residential & industrial buildings.

They are suitable for both indoor and outdoor environments making them ideal for diverse applications such as parking areas, lift lobbies, corridors, hotel rooms, conference rooms, offices, homes and public buildings. Matching with different detection applications and installation specifications, the detectors are available with a mounting set for wall, ceiling and corners.



EE840

### Motion detectors IP55

- 230V AC (50/60 Hz)
- output: 10A AC1 relay
- IP55
- for indoor or outdoor use
- IP55 reinforced waterproofing
- 140/220/360° frontal detection zone

- can be mounted on walls, in corners or to ceilings utilizing the relevant mounting accessory
- response brightness adjustable
- delay time adjustable
- adjustment achieved locally via potentiometers
- Complies with EN 60669-1 & EN 60669-2-1

Description

Cat. ref.

140° white

**EE820**

200° white

**EE840**

360° white

**EE860**



EE804A



EE805A

### Motion + presence detectors IP21

- 230V AC (50/60 Hz)
- output: 10A AC1 relay
- IP21
- combination of presence and motion detector with enhanced detection sensitivity in the central presence-detection area

- Available for surface(EE804A) and flush (EE805A)
- response brightness adjustable
- delay time adjustable
- adjustment achieved locally via potentiometers
- factory presets: Lux = 200, Time = 3 Minutes
- Coverage 360°, Diameter 6m @ 2.5m (motion), enhanced detection area 4m Diameter (presence) @ 2.5m
- Complies with EN 60669-1 & EN 60669-2-1

Description

Cat. ref.

360° surface mounting, white

**EE804A**

360° flush mounting, white, 75mm Ø

**EE805A**



EE883

### HF motion detector (hyper frequency) IP54

- 230V AC (50/60 Hz)
- output: 10A AC1 relay
- IP54
- detection zone of 8m
- detection area 360°

- response brightness adjustable
- delay time adjustable
- adjustment achieved locally via potentiometers
- hyper frequency (HF) detection, independent of temperature detection
- Complies with EN 60669-1, EN 60669-2-1, EN 301489-1 & 3, EN 300440-1 & 2

Description

Cat. ref.

surface mounting, white

**EE883**



EE815

### Presence detector flush mounting

- 230V AC
- output: 16A AC1 relay
- IP41
- programmable for absence or presence
- range 7m diameter for large

- movements, 5m diameter for small movements
- lux level and ON delay setting via potentiometers or remote control
- factory presets, lux = 400, time = 20 min, presence detection
- complies with EN 60669-1 & EN 60669-2-1

Description

Cat. ref.

360° white

**EE815**



EE807



EE808

### Infra-red remote control

- for EE81x

Description

Cat. ref.

for the installer (settings)

**EE807**

for the customer (lighting control)

**EE808**

# More capabilities Less consumption

## Reliable detection

The new motion and presence detectors are equipped with sensitive passive infrared (PIR) technology. They react to differences in temperature and motion and can detect body movements as well as smaller movements. The area of motion detection comprises 6 m in diameter, while the presence detection covers a diameter of 4 m at an installation height of 2.5 m. The recommended installation height is between 2.5 and 3.5 m, with 4 m as an absolute maximum.

## Quick installation

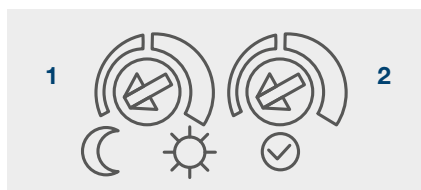
The EE804A mounted device consists of a detachable lower section with screw-fit connection terminal. It can be attached to any standard socket or mounted directly on the ceiling. The upper section, in which the detection optics are located, is then plugged in and screwed into place. Once that's done, it's all ready to use!

The EE805A installed device is equipped with a rapid mounting system consisting of spring clamps – robust enough to keep the detector resistant to vibration on the suspended ceiling, yet flexible enough that it can be taken out to adjust the settings on the potentiometer. To link it up, simply connect the cables via a plug-in terminal. Strain relief with cable ties ensures long-term secure contact.

## Easy to set up

The user can set up and adjust all major lighting parameters via two easily accessible potentiometers:

- **Potentiometer 1** adjusts the response brightness (between 5 and 1000 lux), allowing the lighting to be optimally adapted to the daylight.
- **Potentiometer 2** controls the duration of the luminescence (between 2 sec and 30 min).



## Long-term energy savings

Modern lighting fixtures such as LEDs and halogen lamps often have high inrush currents, sometimes up to 1000 times your nominal current. This puts a strain on the contacts of the connected motion and presence detectors and can lead to premature wear of the relay. To prevent this, the new detectors from Hager have been equipped with zero-cross switching for the first time. This calculates the zero-crossing of the AC voltage and keeps the inrush current to a minimum – thus sparing the relay contacts and extending durability, even in high switching occurrence.

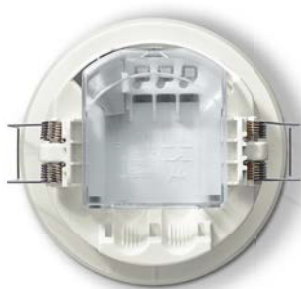
## Long-term savings

The electricity prices for private households have risen by 56% over the last ten years. It's therefore a good idea to install motion and presence detectors, as they save up to 90% of lighting energy by switching on lights strictly when they are needed. Not only that, but the new devices by Hager will win over your customers with an extremely low standby consumption of just 0.3 W. So now they have two good reasons to invest in a detector!

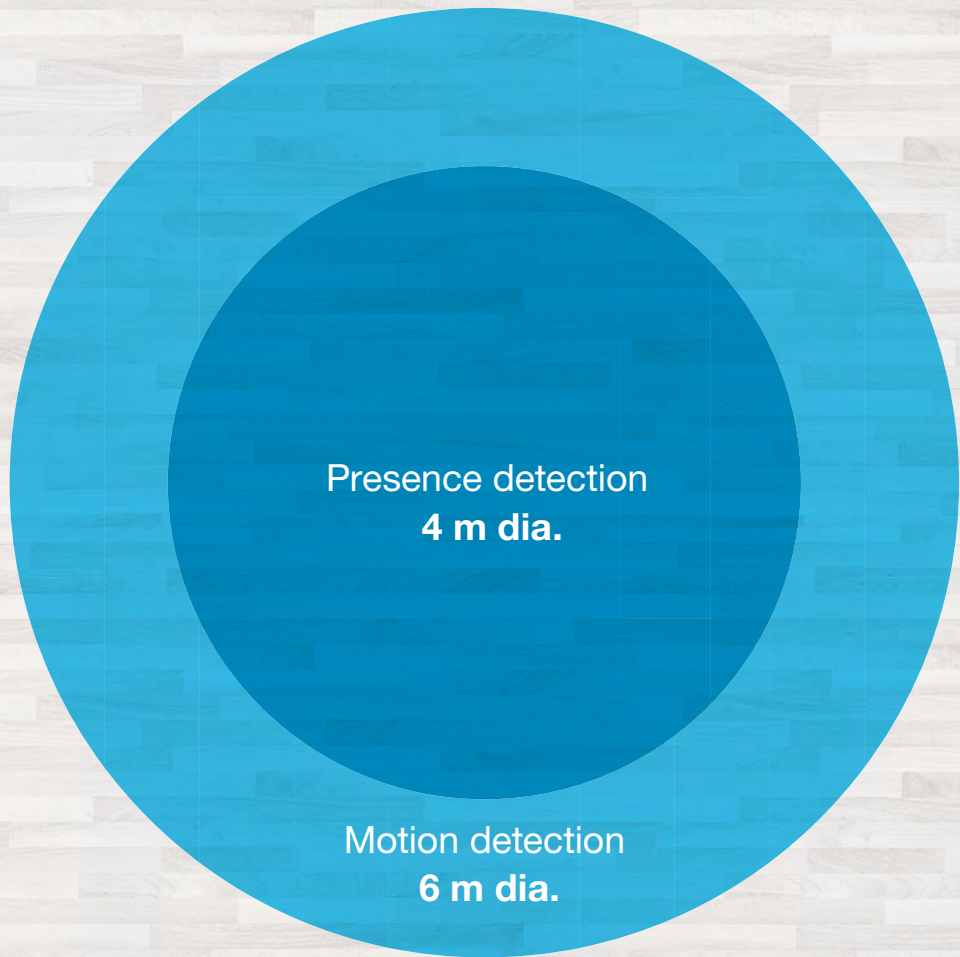
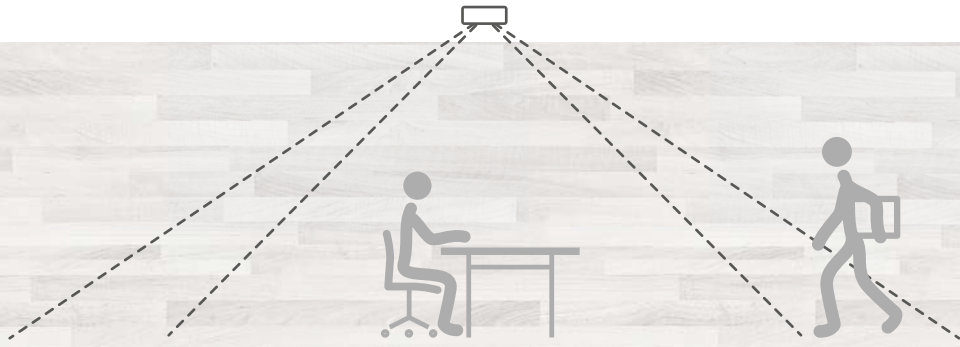
## Energy savings

of up to 90%

Standby consumption  
of only 0.3 W



EE805A installed device,  
rear view



**Characteristics:**

Time lag switches are designed to save energy and ensure safety. For example: for building stair-case or cellar lighting, ventilation, pumping, etc... these devices provide control of lighting circuits with automatic switch-off after a pre-set time (e.g. for staircase, corridors lighting). Compact design with a 2 position switch permanent/timed lighting implementation facility

**Complies with EN 60 669**

**Technical data**

- supply voltage: 230V 50/60Hz
- cut-off power: 16A - 250V AC1
- consumption: 1VA
- time delay: 30 s to 10 min
- protection degree: IP20
- current limiting: 100mA EMN001
- connection capacity:
  - 6mm2 flexible
  - 10mm2 rigid



EMN001

**Standard stair case time lag switch**

- press shortly a push button to switch ON the light
- after an adjustable time "T", the light switch OFF automatically

Description	Width in modules	Pack qty.	Cat. ref.
standard stair case time lag switch	1	6	<b>EMN001</b>



EMN005

**Multifunction stair case time lag switch**

Description	Width in modules	Pack qty.	Cat. ref.
multifunction stair case time lag switch 4 functions: - basic mode - prewarning mode - double delay mode - double delay + prewarning mode	1	1	<b>EMN005</b>

**Analogue time switches**

**Characteristics:**

Time switches allows users to set programs for switching loads On and Off. These switches are ideal for both domestic and commercial applications and can be used to control various electrical devices such as lighting, household appliances, signboards, shop windows, and more. Not only do they provide convenience, but they also help save energy and improve overall comfort.

**Complies with IEC 60730-2-7**

**Technical data**

- supply voltage: 230V AC, 50Hz
- battery reserve: for 24h and 7 days versions
- output: 1 NO voltage free changeover contact 16A, 250V AC1
- programming by captive segments
- manual override on 1 module devices: automatic and permanent ON
- manual override on 3 module devices: automatic, permanent ON and permanent OFF

**Connection capacity**

- 1.5 mm<sup>2</sup> max, rigid



EHN010



EHN110

Description	Cycle	Width in modules	Cat. Ref.
<b>Compact modular version</b>			
24h cycle, without battery reserve,	24h	1	<b>EHN010</b>
24h cycle, with battery reserve	24h	1	<b>EHN011</b>
<b>Standard modular version</b>			
24h cycle, without battery reserve	24h	3	<b>EHN110</b>
24h cycle, with battery reserve	24h	3	<b>EHN111</b>
7 day cycle, with battery reserve	7d	3	<b>EHN171</b>

*EHN010 & EHN110 – suitable for 50Hz operation only.*

To provide all types of automatic control i.e. lighting, ventilation, watering, machine pre-heating, automatic door and visual audible indication, cycle control etc. For timing and automation in domestic and commercial premises. The input signal can be via various switching devices (pushbutton, latching switch, timeclock etc) and the timed output used to control the application.

6mm<sup>2</sup> max rigid  
1.5 - 10mm<sup>2</sup> flexible

Complies with - EN 60669-1, EN 60669-2-1

### Technical data

- voltage supply range:
  - 12 and 24 to 48V DC
  - 12 and 24 to 230V AC
- adjustable time delay: from 0.1s to 10hrs
- LED indicator frequency: 50/60 Hz
- 1 potential free changeover contact
- breaking capacity: 8A / 230V AC

### Connection capacity



EZN001



EZN006

### Modular delay timers

Description		Width in module 17.5 mm	Pack qty	Cat. ref.
delay on		1	1	<b>EZN001</b>
delay off		1	1	<b>EZN002</b>
adjustable time on		1	1	<b>EZN003</b>
timer		1	1	<b>EZN004</b>
symmetrical flasher		1	1	<b>EZN005</b>
multifunction 6 individual functions including: delay on, delay off, timer,...		1	1	<b>EZN006</b>

**Characteristics:**

There are 3 solutions to control automatic lighting for night lighting such as neon signs, showcase, exterior surroundings, public lighting (streets, monuments):

- modular twilight switches,
- surface mounting compact twilight switches,
- astronomical time switches.

The twilight switches control light systems according to natural illumination. A photoelectric cell measures the light level and in conjunction with the relay provides ON/OFF control of a circuit.

Astronomical time switches are electronic weekly programming clocks designed to control various loads automatically according to sunrise and sunset times to optimized the energy saving.

**Technical data**

- supply voltage: 230V AC  $\pm$ 15%
- frequency: 50/60Hz
- maximum load: 16A / 250V AC1,
- loads: incandescent, halogen, and fluorescent lamps,
- max length between 2 modular devices: max. 50 m.

Connection capacity:  
rigid: 1.5 to 10mm<sup>2</sup>  
flexible: 1 to 6mm<sup>2</sup>

Complies with IEC 60669-1, IEC 60669-2-1, IEC 60730-2-7



EEN100

**Twilight switches 1 channel**

- light sensitive switch with photoelectric cell with 2 ranges of sensitivity 5 to 100 lux and 50 to 2000 lux

Description	Width in modules	Pack qty.	Cat. ref.
with surface mounting photoelectric cell EEN003	1	1	<b>EEN100</b>
with flush mounting photoelectric cell EEN002	1	1	<b>EEN101</b>



EE702

**Compact light switches**

- IP55 integrated cell

Description	Pack qty.	Cat. ref.
basic 8A (without settings) - 1000W incandescent - fix lux: 10...30 lux - fix ON delay: 40s/OFF delay: 120s	1	<b>EE701</b>
enhanced 16A (with settings) - 2300W incandescent - adjustable lux: 2 to 1000 lux - time settings: from 1s to 120s	1	<b>EE702</b>

**2 channels light sensitive switches for cascading**

- like EE200, it integrates 2 inputs for 2 operating modes  
- the selected mode always applies to both outputs



EE202

Description	Width in modules	Pack qty.	Cat. ref.
2 channels light sensitive switches for cascading	4	1	<b>EE202</b>
kit 2 channels light sensitive switch for cascading + surface cell EE003	4	1	<b>EE203</b>



### Accessories

- max length between cell and modular device: 50 m



EEN002

Description

Pack qty.

Cat. ref.

#### Flush cells IP54

for EEN100 and EEN101

1

**EEN002**

#### Surface cells IP54

for EEN100 and EEN101

1

**EEN003**



EEN003

#### Programming key

for EE180 and EE181

1

**EG005**



EGN103

**Digital Weekly Time Switch**

Description	Characteristics	Width	Cat. ref.
-1 channel 3M digital time switch -Weekly cycle	Daily, weekly Voltage rating: 230V AC 50/60Hz Output: 1 changeover and 1 NO contact No pulse function	2 mod	<b>EGN103</b>
No Pulse function			



EG004

Description	Pack qty.	Cat. ref.
<b>Locking key</b> For EGN103	1	<b>EG004</b>



EG005

Description	Pack qty.	Cat. ref.
<b>Programming key</b> For EGN103	1	<b>EG005</b>





EGN100

Description	Characteristics	width	Cat. ref.
1 channel - Integrated bluetooth - Capacity: 100 program steps	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 1 changeover and 1 NO contact	1 mod	<b>EGN100</b>
	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 2 changeover and 2 NO contacts	2 mod	<b>EGN200</b>



EGN200

2 channels  
- Integrated bluetooth  
- Capacity: 200 program steps



EGN400

4 channels - Integrated bluetooth - Capacity: 400 program steps	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 4 changeover and 4 NO contacts	4 mod	<b>EGN400</b>
<b>Programming Bluetooth key</b>		4 mod	<b>EGN003</b>
For EGN103			

# Weatherproof Range

Our range of weatherproof solutions are engineered to withstand the tough environmental conditions that Middle East weather can demand.



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IP 55 switches & sockets	162
IP66 switches & sockets	163
IP66 isolator	164

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**Characteristics:**

The IP55 range of switches and sockets are perfect for both indoor and outdoor use. They are specially designed for areas frequently exposed to dust and splashing water like gardens, balconies, car parking and swimming pool areas.

These switches and sockets provide some dust ingress protection and are safeguarded against low-pressure water jets from any direction, making them an ideal choice for all your electrical needs. The clear membrane cover allows visible indication of the switch status (on/off).

**IP55 Wall switches**

**Technical features**

- Available in 1, 2 and 3 gang
- Clear silicon gasket allows operation of switch without lifting cover
- Clear silicon gasket is replaceable
- Large switch rocker allows easy operation
- Mounting screw locations are segregated from the back box by gaskets for improved IP installations
- IP rated cable gland included

**Complies to the standard :**  
**IEC / BS EN 60529: IP 55**  
**BS EN 60669-1: switches**

**Technical data**

- protection category: IP55
- 250V 10AX rated switches
- 1 way and 2 way switches
- 20mm<sup>2</sup> conduit entries available on all sides

**Connection capacity**

- Switch terminals capable of taking 3 x 1.5mm<sup>2</sup> or 2 x 2.5mm<sup>2</sup> cables
- Earth terminal mounted in back box



XPW5120 / 5110

Description	Cat. ref.
10AX 1 gang 1 way switch	<b>XPW5110</b>
10AX 1 gang 2 way switch	<b>XPW5120</b>
10AX 2 gang 1 way switch	<b>XPW5210</b>
10AX 2 gang 2 way switch	<b>XPW5220</b>
10AX 3 gang 1 way switch	<b>XPW5310</b>
10AX 3 gang 2 way switch	<b>XPW5320</b>
20AX 1 gang double pole switch	<b>XRW5200</b>
1 gang bell press	<b>XPW5910</b>

**IP55 Socket Outlets**

**Technical features**

- Available in 1 and 2 gang
- Clear silicon gasket allows operation of switch without lifting cover.
- Clear silicon gasket is replaceable.
- Large switch rocker allows easy operation.
- Mounting screw locations are segregated from the back box by gaskets for improved IP installations.
- IP rated cable gland included.

**Complies to the standard :**  
**IEC / BS EN 60529: IP 55**  
**BS 1363 : sockets**

**Technical data**

- protection category: IP55
- 250V 13A sockets
- 1 gang and 2 gang versions
- 20mm<sup>2</sup> conduit entries available on all sides

**Connection capacity**

- Socket terminals capable of taking 3 x 2.5mm<sup>2</sup> or 2 x 4mm<sup>2</sup> cables
- Earth terminal mounted in back box.



XSW5213

Description	Cat. ref.
13A 1 gang unswitched socket	<b>XSW5113</b>
13A 2 gang unswitched socket	<b>XSW5213</b>
13A 1 gang DP switched socket	<b>XSW5114</b>
13A 2 gang DP switched socket	<b>XSW5214</b>



XPW5114

## Characteristics:

The IP66 range of switches and sockets are suitable for use in both indoor and outdoor environments, and in areas where there is a potential risk of dust or water penetration. These IP66 rating provides complete protection against dust and high-pressure jets of water from all directions.

Constructed from a UV stabilized & chemically resistant polycarbonate material, they are designed to endure the most challenging outdoor conditions.

## IP66 wall switches

### Characteristics:

- Complies to IEC / BS EN 60529 for IP66 rating
- Switches comply to BS EN 60669-1, a.c.
- Robust and rugged enclosures designed to withstand harsh weather

- Box size: 90 x 90 mm
- Cable entries :  
side: 4 x 20 mm  
back: 1 x 20 mm and 1 x 25 mm



WXPPS12

Description	Pack qty.	Cat. ref.
10AX 1 gang 2 way switch	1	<b>WXPPS12</b>
10AX 2 gang 2 way switch	1	<b>WXPPS22</b>
20AX double pole 1gang 1 way switch	1	<b>WXPDP84</b>
20AX double pole 1 gang 1 way switch with neon	1	<b>WXPDP84N</b>
20AX double pole 2 gang 1 way switch	1	<b>WXPDP842</b>
10A 1 gang bell push switch	1	<b>WXPPS12B</b>

## IP66 socket outlets

### Characteristics:

- Complies to IEC / BS EN 60529 for IP66 rating
- 13A socket outlets comply to BS1363-2, a.c.
- 15A socket outlets comply to BS 546, a.c.
- Robust and rugged enclosures designed to withstand harsh weather
- Unique double hinge allows lid to open a full 180°
- Fixing point for padlock

- Box size :
- Single : 103 x 116.5
- Twin : 164 x 116.5
- Cable entries : Single  
side: 4 x 20 mm  
back: 1 x 20 mm and 1 x 25 mm
- Cable entries : Twin  
side: 6 x 20 mm  
back: 1 x 20 mm and 1 x 25 mm



WXPSS82

Description	Dimensions H x W (mm)	Pack qty.	Cat. ref.
13A 1 gang unswitched socket	103 x 116.5	1	<b>WXPS81</b>
13A 1 gang double pole switched socket	103 x 116.5	1	<b>WXPSS81</b>
13A 1 gang double pole switched socket with neon	103 x 116.5	1	<b>WXPSS81N</b>
13A 2 gang unswitched socket	164 x 116.5	1	<b>WXPS82</b>
13A 2 gang double pole switched socket	164 x 116.5	1	<b>WXPSS82</b>
13A 2 gang double pole switched socket with neon	164 x 116.5	1	<b>WXPSS82N</b>
15A 1 gang double pole switched socket	103 x 116.5	1	<b>WXPSS115</b>

## IP66 fused connection units

### Characteristics:

- Complies to IEC / BS EN 60529 for IP66 rating
- Complies to BS 1363-4
- Robust and rugged enclosures designed to withstand harsh weather

- Unique double hinge allows lid to open a full 180°
- Fixing point for padlock
- Box size: 103 x 116.5 mm
- Cable entries :  
side: 4 x 20 mm  
back: 1 x 20 mm and 1 x 25 mm



WXPSSU83FO

Description	Pack qty.	Cat. ref.
13A DP switched fused connection unit with flex outlet	1	<b>WXPSSU83FO</b>
13A unswitched fused connection unit with flex outlet	1	<b>WXPSU83FO</b>

**Characteristics:**

The range of IP66 isolators are designed to be used in outdoor applications with IP66 degree of protection. They are rated at AC23A and offer options of 2, 3 poles and 4 poles with switched neutral. They are compact and easy to install with 2 screw quick release top cover.

**Complies with BS EN 60947-3, IEC 60947-3**

**Technical data**

- Rated voltage:  
250 V AC  
440 V AC
- Material: polycarbonate – UV grade.
- Utilisation category: AC23A
- For switching of motor loads or other highly inductive loads
- Protection category: IP66
- Poles :  
2P : 20A - 63A  
3P & N : 20A - 40A  
4P (3P & SW N) : 20A - 63A



JG320IN

Description	Pack qty.	Cat. ref.
<b>2 pole</b>		
20A 2 pole IP66	1	<b>JG220IN</b>
32A 2 pole IP66	1	<b>JG232IN</b>
40A 2 pole IP66	1	<b>JG240IN</b>
63A 2 pole IP66	1	<b>JG263IN</b>
<b>3 pole</b>		
20A 3 pole IP66	1	<b>JG320IN</b>
32A 3 pole IP66	1	<b>JG332IN</b>
40A 3 pole IP66	1	<b>JG340IN</b>
<b>4 pole + switched neutral</b>		
20A 4 pole IP66	1	<b>JG420IN</b>
32A 4 pole IP66	1	<b>JG432IN</b>
40A 4 pole IP66	1	<b>JG440IN</b>
63A 4 pole IP66	1	<b>JG463IN</b>





# Robust & Safe

Manufactured from a tough, durable thermoplastic, the IP66 range is ideal for indoor and outdoor applications where wiring accessories may be vulnerable to the potentially harmful effects of dust or water ingress.

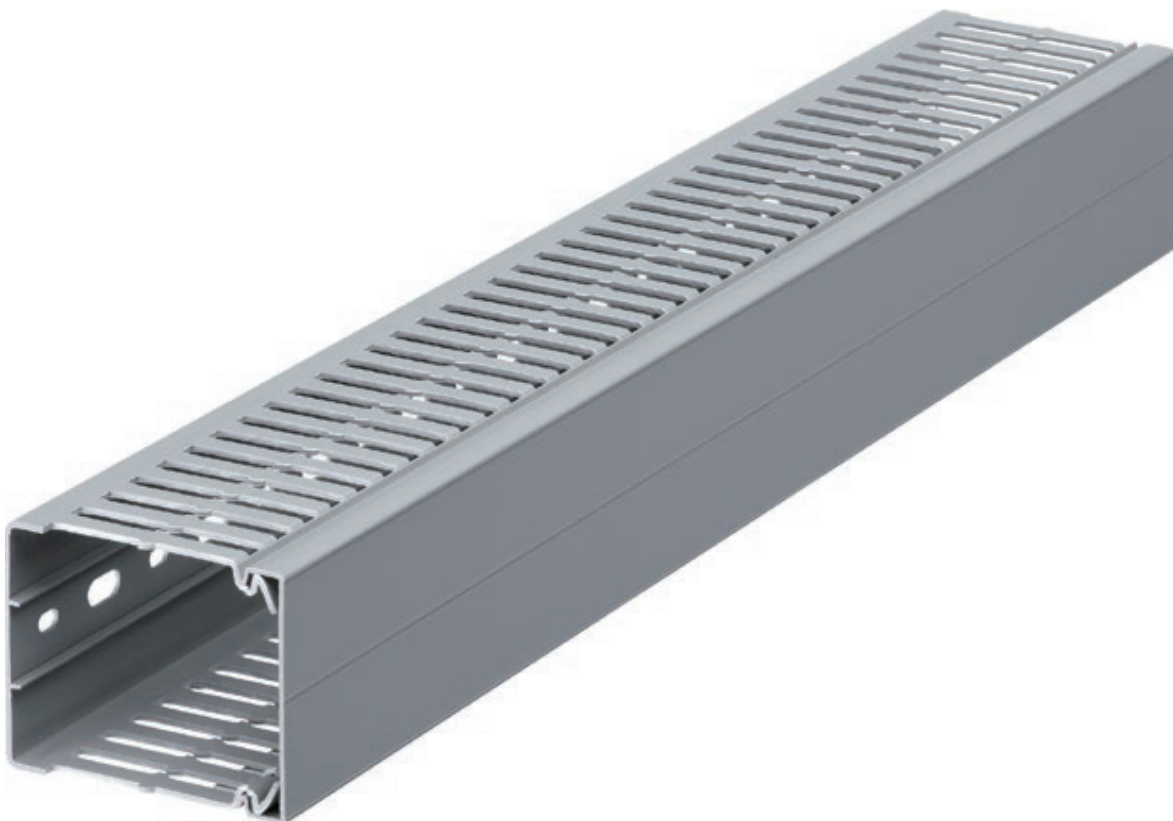
See more about IP66 on our website [www.hager.com/middle-east](http://www.hager.com/middle-east)



# Cable management

For easy and safe cabling:

The slotted trunking products and under floor systems provide versatile solutions for various kinds of applications from electrical distribution to automation panels.



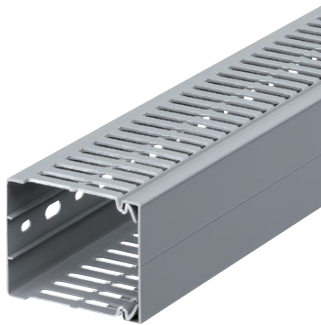


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tehalit.BA7A slotted trunking	168
Underfloor systems	170

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- wide-slot/web design for a wide range of wire bundle sizes
- temperature range from -5 °C to +60 °C
- flame-retardant according to UL94-V0, UL-recognized and CSA-certified
- EN3-2-50085-approved, VDE and CE marking
- slot 6 mm, web 6.5 mm
- colours: grey RAL 7030
- material: PVC rigid
- wiring duct length: 2 meters

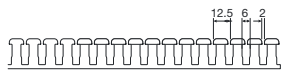


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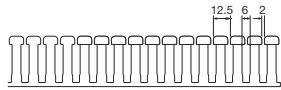
### Bases and covers BA7A

Base and cover		1 mm <sup>2</sup> H05V-U/K 6.16 mm <sup>2</sup>	1.5 mm <sup>2</sup> H07V-U/R 8.55 mm <sup>2</sup>	2.5 mm <sup>2</sup> H07V-U/R 11.95 mm <sup>2</sup>	2.1 mm <sup>2</sup> No 14 AWG 11 mm <sup>2</sup>	3.3 mm <sup>2</sup> No 12 AWG 14 mm <sup>2</sup>	Pack qty.	Cat. ref.
Depth x width (mm)	Area (mm <sup>2</sup> )							
25 x 25	220	14	10	7	8	6	50	<b>BA7A25025</b>
25 x 40	375	24	18	13	14	11	48	<b>BA7A25040</b>
25 x 80	642	42	30	21	23	18	24	<b>BA7A25080</b>
40 x 25	462	30	22	15	17	13	48	<b>BA7A40025</b>
40 x 30	535	35	25	18	19	15	40	<b>BA7A40030</b>
40 x 40	749	49	35	25	27	21	50	<b>BA7A40040</b>
40 x 60	1155	75	54	39	42	33	40	<b>BA7A40060</b>
40 x 80	1557	101	73	52	57	44	30	<b>BA7A40080</b>
40 x 100	1956	127	91	65	71	56	20	<b>BA7A40100</b>
60 x 25	836	54	39	28	30	24	60	<b>BA7A60025</b>
60 x 30	1060	69	50	35	39	30	48	<b>BA7A60030</b>
60 x 40	1404	91	66	47	51	40	40	<b>BA7A60040</b>
60 x 60	2184	142	102	73	79	62	24	<b>BA7A60060</b>
60 x 80	2970	193	139	99	108	85	20	<b>BA7A60080</b>
60 x 100	3746	243	175	125	136	107	16	<b>BA7A60100</b>
60 x 120	4519	294	211	151	164	129	12	<b>BA7A60120</b>
80 x 25	1202	78	56	40	44	34	20	<b>BA7A80025</b>
80 x 30	1533	100	72	51	56	44	24	<b>BA7A80030</b>
80 x 40	2071	135	97	69	75	59	20	<b>BA7A80040</b>
80 x 60	3243	211	152	109	118	93	20	<b>BA7A80060</b>
80 x 80	4412	287	206	148	160	126	12	<b>BA7A80080</b>
80 x 100	5577	362	261	187	203	159	12	<b>BA7A80100</b>
80 x 120	6737	438	315	226	245	192	16	<b>BA7A80120</b>
100 x 30	1875	122	88	63	68	54	24	<b>BA7A100030</b>
100 x 40	2663	173	125	89	97	76	20	<b>BA7A100040</b>
100 x 60	4239	275	198	142	154	121	16	<b>BA7A100060</b>
100 x 80	5815	378	272	195	211	166	16	<b>BA7A100080</b>
100 x 100	7391	480	346	247	269	211	12	<b>BA7A100100</b>

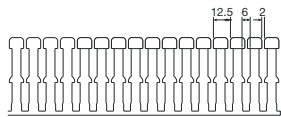
### BA7A lateral punched openings



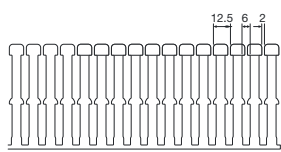
for duct height 25 mm



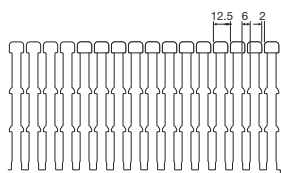
for duct height 40 mm



for duct height 60 mm

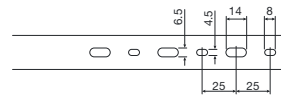


for duct height 80 mm

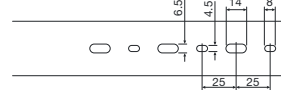


for duct height 100 mm

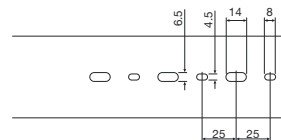
### BA7A bottom holes EN50085



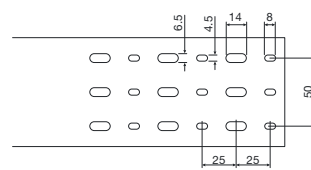
for duct width 25 mm



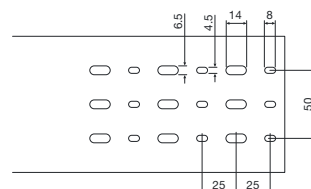
for duct width 40 mm



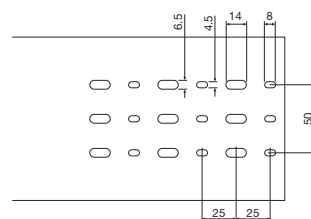
for duct width 60 mm



for duct width 80 mm

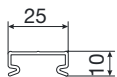


for duct width 100 mm

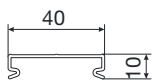


for duct width 120 mm

### Cover BA7 for duct height 25 mm

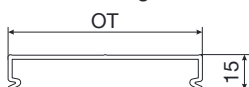


BA70252K for BA7 25 x 25 mm



BA70402K for BA7 25 x 40 mm

### Cover BA7 from duct height 40 mm



- BA70252 for duct BA7A, width 25 mm
- BA70402 for duct BA7A, width 40 mm
- BA70602 for duct BA7A, width 60 mm
- BA70802 for duct BA7A, width 80 mm
- BA71002 for duct BA7A, width 100 mm
- BA71202 for duct BA7A, width 120 mm

**Characteristics:**

Screed floor system offers you great functionality, as it is the most frequently used technology for floor installation. The floor boxes are interconnected via conduits or trunkings, allowing an optimized supply of the building as well as a direct access from the floor to electrical power, data and telecommunication.

**Technical data**

- Galvanised steel
- Rust protection
- Adapted for conduits with a diameter of 25mm
- Special plate adapted for trunking installation (25 or 38 mm height)
- Supply unit made of polyamide according to EN 50085-2-2

**Application**

- 3 compartments
- Mounting in screed
- Height adjustable by lid and frame, 80 - 110 mm

**Plates:**

- Function as an outlet box to install power and data

**Lid:**

- For dry rooms with dry cleaned floors
- Carpet or tile flooring height of 8 mm

	Description	Characteristics	Cat. ref.
 UDBSQ06	Service outlet box (outlet and lid)	dimensions: 268 x 268 mm	<b>UDBSQ06</b>
 GTVPB00	Blank plate	sheet steel for service outlet box	<b>GTVPB00</b>
 GTVBS25	13A BS twin switched socket outlet	plate and module	<b>GTVBS25</b>
 GTVDP4M	Data outlet plate	2 x 2 gang (without data module) sheet plate 45x45 mm	<b>GTVDP4M</b>
 GTVSP452	Socket modules plate	2 x 2 gang (without data module) sheet plate 45x45 mm	<b>GTVSP452</b>
 WGMRJ456	RJ45 data module	keystone 8 pin cat6 data dimen- sions: 22.5 x 45 mm	<b>WGMRJ456</b>
 WGMRJ11	RJ11 data module	keystone 4 pin cat6 telephone dimensions: 22.5 x 45 mm	<b>WGMRJ11</b>
 WGMV1	Blank module	white plastic dimensions: 22.5 x 45 mm	<b>WGMV1</b>
 WGSM113	BS module	13A BS socket dimensions: 45 x 45 mm	<b>WGSM113</b>





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