

h3+ moulded case
circuit breaker

Guaranteed protection



:hager

Protect and measure

Premium performance

Energy efficiency lies at the heart of present and future building construction. Energy performance relies on the quality of the networks transmitting the energy: sizing, maintenance and monitoring. And to guarantee maximum reliability in electrical installations, low voltage panels must incorporate solutions renowned for their simplicity and efficiency.



> 40 %

**of energy consumption
in Malaysia is accounted
for by buildings.**

*data taken from National Energy Balance 2019

Energy is also believed to make up 40 % of the costs generated throughout a building's life cycle. Faced with the inevitable rise in energy costs, the challenge is clear: manage consumption to bring down bills. Creating intelligent buildings means optimising and streamlining their consumption based on usage.

Hager's h3+ anticipates and incorporates the standards governing energy distribution in tertiary buildings.

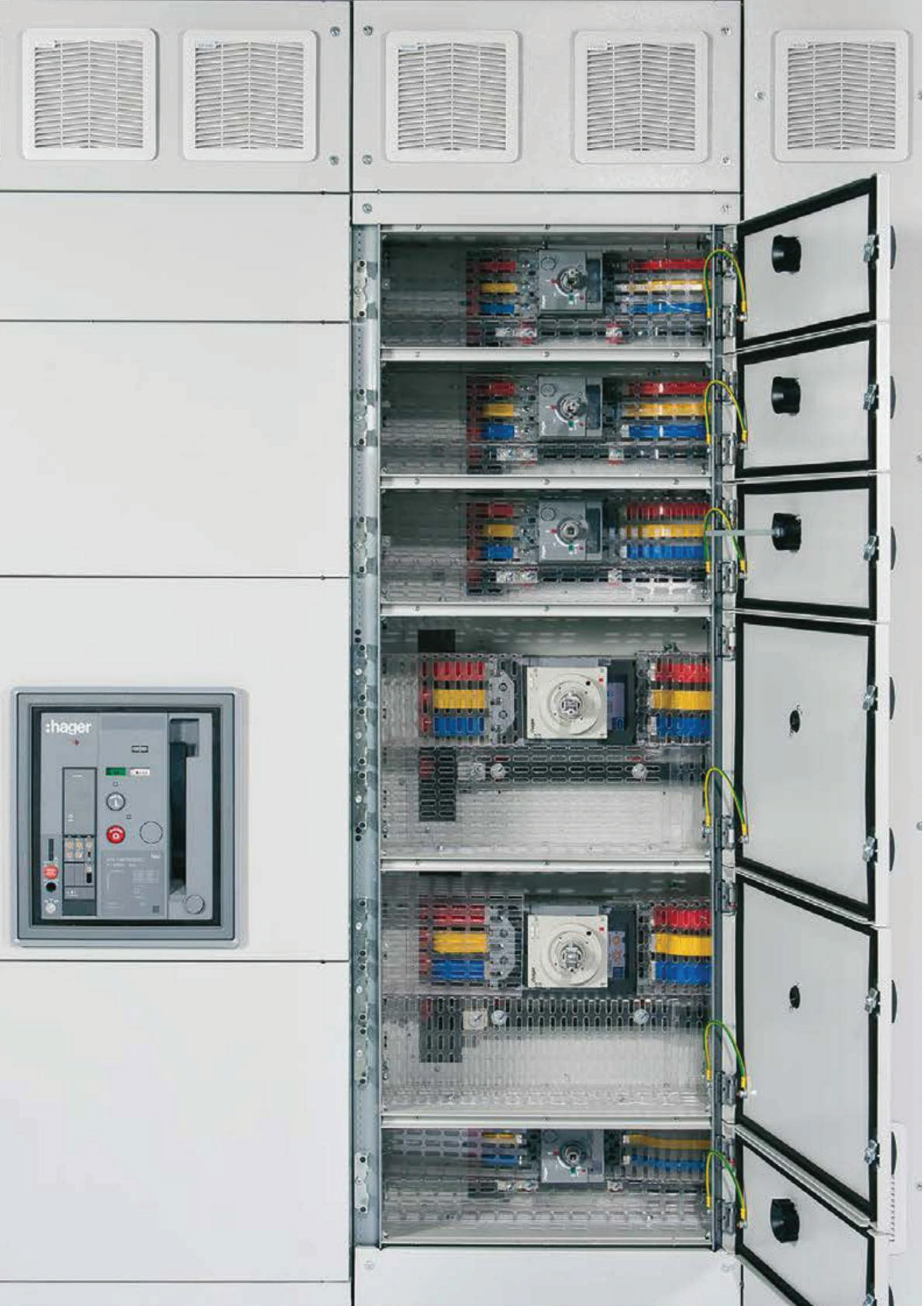
The new IEC 60 364 standard states that energy must be used as efficiently as possible. It also highlights the importance of adopting an energy efficiency approach right from the building design stage, on a par with safety and commissioning rules. It classifies energy performance in new buildings on five levels. The IEC 60 364 standard includes recommendations and a continuous improvement methodology, along with verification steps for the results obtained. It also requires an electrical energy management system to be integrated in the installation. The system must be able to manage various energy sources, monitor energy usage and take account of usage habits within the building. The standard focuses on three points: minimising energy loss, using energy at the right time and at the lowest cost, and maintaining an optimal level of availability and performance.

The Hager solution also addresses buildings involved in the ISO 50001 certification process, which involves the creation of an energy consumption improvement plan. It responds to the applicable decree aimed at reducing energy consumption in existing buildings.

The new generation of Hager h3+ moulded case circuit breakers guarantees reliable protection against overloads and short circuits, as well as targeted, integrated energy monitoring for all low voltage distribution systems.



Performance
Service continuity
Energy management



h3+, the moulded case circuit breaker

Your installation is under control

The size of tertiary buildings determines the energy requirements. Regulations are becoming increasingly strict. You therefore need effective protection suited to your electrical installation.

The new h3+ moulded case circuit breakers meet these requirements, thanks largely to their breaking capacity of up to 110 kA. As its name implies, the h3+ range offers a broader choice, with seven trip units, more smart features, and more reliable protection. Advanced technology for optimal safety.

One range. Three versions



The choice is yours

From the traditional version to the intelligent connected model: Discover the multi-faceted range of h3+ circuit breakers

Featuring the compact frame sizes, available from 25 to 630 A with 3 or 4 poles, the h3+ provides superior protection and a breaking capacity up to 110kA.

Equipped with a thermal magnetic or electronic trip unit, the moulded case circuit breaker range offers an accurate benefit: flexible protection settings for all electrical distribution applications.



NEW

h3+/P160



NEW

h3+/P250



NEW

h3+/P630

The new generation of h3+ moulded case circuit breakers is available in two versions: the traditional range for protecting your electrical installations and the energy model for improving the energy efficiency of your buildings

More choice - over 200 variants

TM, MAG, LSnl, LSI, Energy: five trip unit versions designed to effectively protect your installations and optimize the cost of your switchboards. Designed for professionals, the h3+ moulded case circuit breaker range is without doubt the best adapted to installation requirements. Compact and ergonomic, the h3+ is particularly easy to integrate in switchboards. Easy commissioning, fast wiring: everything to optimise installation.

	Breaking capacity	Ratings	No. of poles (P) & trip units (D)	RCD add-on block	Configuration tool	Panel display	Communicating version
TM P160	25, 50 or 70kA	25 -160 A	3P3D or 4P4D (N: 0 -100%)	No	\	\	\
TM P250	25, 50 or 70kA	50 - 250 A	3P3D or 4P4D (N: 0 -100%)	Yes	\	\	\
MAG P160	50 or 70kA	25 - 160 A	3P3D or 4P4D	No	\	\	\
MAG P250	50 or 70kA	100 - 250 A	3P3D or 4P4D	Yes	\	\	\
LSnl P160	50 or 70kA	40 - 160 A	3P3D or 4P4D (N: 0, 50 or 100%)	No	\	\	\
LSnl P250	50 or 70kA	40 - 250 A	3P3D or 4P4D (N: 0, 50 or 100%)	Yes	\	\	\
LSI P160	50 or 70kA	40 - 160 A	3P3D or 4P4D (N: 0, 50 or 100%)	No	\	\	\
LSI P250	50 or 70kA	40 - 250 A	3P3D or 4P4D (N: 0, 50 or 100%)	Yes	\	\	\
LSI P630	40, 50, 70, 110kA	250 - 630 A	3P3D or 4P4D (N: 0, 50 or 100%)	Yes	\	\	\
Energy P160	50 or 70kA	40 - 160 A	3P3D or 4P4D (N: 0, 50 or 100%)	No	Yes	Yes	Yes
Energy P250	50 or 70kA	40 - 250 A	3P3D or 4P4D (N: 0, 50 or 100%)	Yes	Yes	Yes	Yes
Energy P630	40, 50, 70, 110kA	250 - 630 A	3P3D or 4P4D (N: 0, 50 or 100%)	Yes	Yes	Yes	Yes

h3+ traditional version

Guaranteed protection

The new range of moulded case circuit breakers provides solutions suitable for electrical installations in commercial buildings. It offers reliable protection against overloads and short circuits.

The multiple setting options, created by coordinating the protection systems, offer the best possible combinations. This brings a threefold benefit: guaranteeing user and equipment safety under all conditions, ensuring continuity of service and availability of energy in normal operating situations, and, in case of transient faults, reducing the risks to the installation's components.

All products in the new range can be easily integrated in the hager enclosure systems.



- Most compact product on the market with measurement and communication.
- From 25 to 630 A
- Three frame sizes
- Can be mounted on the DIN rail in option up to 250 A
- TM, MAG, LSnl, LSI, LSIG and Energy trip units
- Breaking capacity of 25, 40, 50, 70 and 110 kA at 415 VAC
- 3P3D or 4P4D
(neutral adjustable to 0, 50 or 100 %)
- Wide range of auxiliaries and accessories
- Horizontal or vertical installation





01 Secure screw

The quarter-turn auxiliary access system saves time when installing the product. The secure screw offers additional comfort.



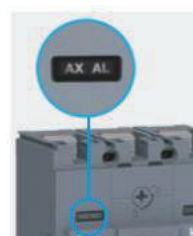
02 Hinged front cover

The front cover offers multiple advantages. It is mounted on hinges. It remains integral with the case once opened, preventing incorrect refitting.



03 Auxiliary window

The type of auxiliaries can be seen directly through the windows on the front panel, without removing the cover.



04 Integrated padlock

The handle can be directly locked with no need for extra accessories.



Greater reliability with electronic trip units



TM

01 Captive screw for front cover

- Quick & easy to open with ¼-turn Rotation screw
- No mix-ups of front covers as fitted on hinges and remain on the MCCB when opened

02 Viewing window for auxiliary contact

- Auxiliary contacts are clearly identifiable without needing to open the front cover
- Quick and simple visual checks

03 Locking the MCCB

- The padlockable toggle available as standard to lock the MCCB in ON or OFF position. (shackle diameter max. 4 mm)
- Locking accessories to extend locking to 3 padlocks available as an option



LsnI

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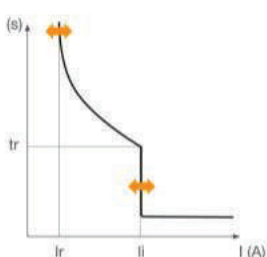
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04 Interface to configuration tool

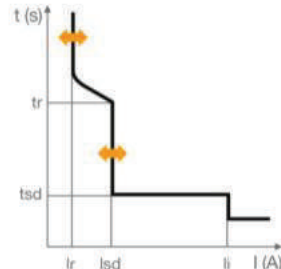
- Configuration of the circuit breaker via tablet or computer
- Status display and test of tripping curve for system documentation

Adjustability of the different trip units

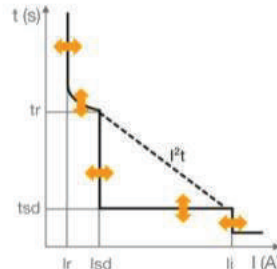
TM



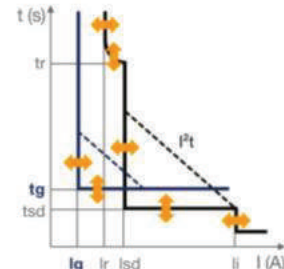
LsnI



Lsl



Energy





LSI

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- Exports imminent cut-off if definable percentage of I_r is reached
- Increases system availability

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06 Configurable alarm contact

- Up to 12 alarms can be configured from measurements
- Flexible and evolutionary
- Extensive parametrising

07 Measurement display

- Measurements: I , U , P , Q , S , E , ΣI , ΣP , f , PF , THD , etc.
- Rotating OLED display with excellent readability in all levels of ambient lighting
- Class 1 accuracy for active powers and energy metering

h3+ energy version

In intelligent and connected mode

Hager is complying with energy efficiency standards by adding new functions to its moulded case circuit breaker range. A Class 1 energy monitoring and communication system compatible with the Modbus RTU protocol can be used to configure the protection parameters, monitor energy consumption and manage alarms.

Energy performance

The h3+ moulded case can be coupled with the agadio.manager multi-energy manager, allowing it to be integrated in an energy efficiency environment.

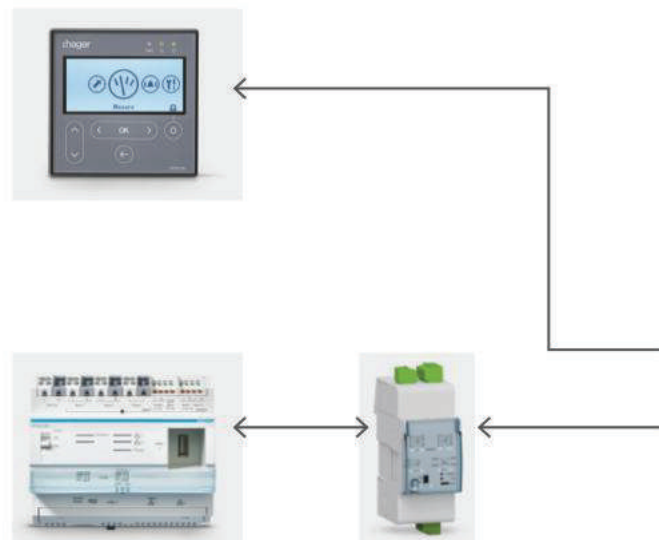
This allows the energy consumption to be displayed centrally, while complying with the IEC 60364, NF 15-100 and ISO 50 001 standards. Class 1 measurement accuracy is guaranteed.

Service continuity

A specific auxiliary is used to trigger a fault alarm. This function helps prevent a total power outage. The user is notified in advance, allowing the appropriate action to be taken.

Secure connection

The functions are pre-wired to connectors. The bus connection uses an RJ45 connector, which means there is no risk of incorrect wiring. The power is supplied from the tool and no external source is required.



- 05 Integrated pre-alarm contact
- 06 OLED screen
- 07 Configurable alarm contact
- 08 Communication port

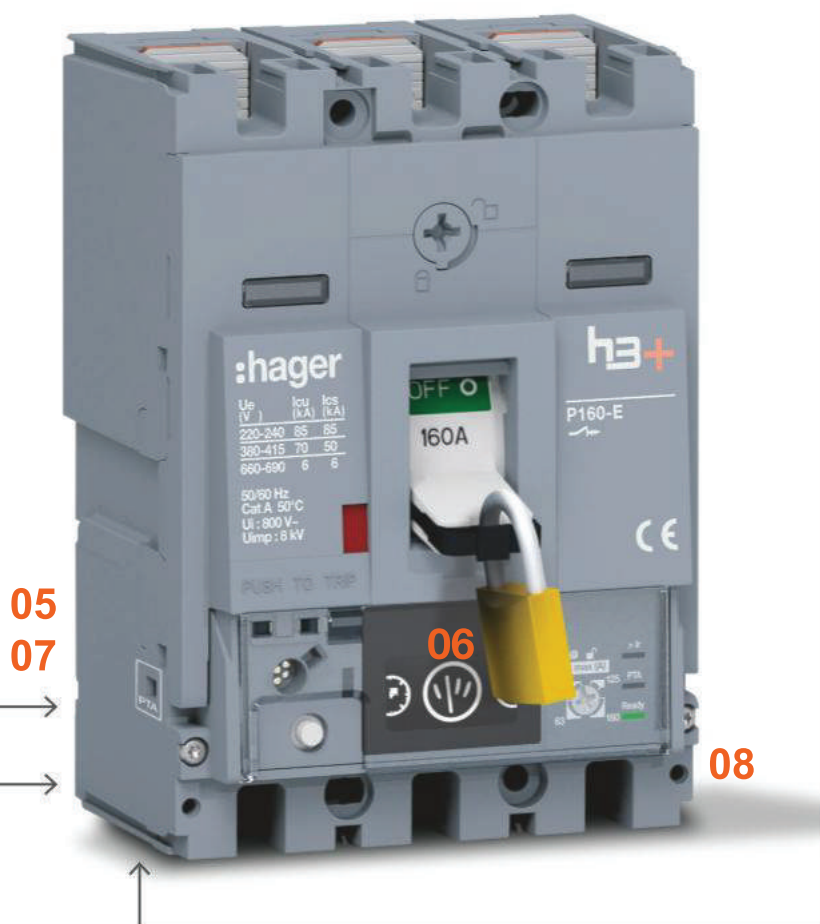


Greater flexibility

The moulded case circuit breaker can be configured via the built-in screen, the panel display or the configuration tool. In the latter case, the interface used for configuration does not need to be installed since the software operates via the Webserver on your phone, tablet or PC.

Greater ease of use

Cut programming times for your installation by up to 80 % with the agardio.manager ecosystem. Pre-addressing is already done: a library of products is available in agardio.manager. There is therefore no need to complete the addressing table: you need only name the products.



Overview

- Over 300 variants
- Intelligent electronic tripping
- Breaking capacity up to 110 kA
- Intelligent programming (h3+ energy only)



hager/h3+

- Variants
- Trip units
- Tutorials
- Configuration
- Energy monitoring
- Auxiliary switch
- FAQ
- Hager recommendation

Greater convenience with unique benefits

More possibilities with h3 + Energy

h3+ circuit breakers offer numerous unique benefits such as Class 1 on active power and ease of Installation and configuration. This makes your job easier when planning or installing low-voltage switchgear.



01

Auxiliary contacts – simply install and they're ready!

No matter whether you are using the new h3+ or the existing h3: Our auxiliaries would fit all circuit breakers. A special auxiliary contact combining Position and Alarm Information is available for the Energy trip unit.



02

Multifunctional measuring device for door installation

A panel display is available for the MCCB fitted with the Energy trip units. It allows the full monitoring of the Energy MCCB including the setting and configuration. The Panel display is mainly intended for visualizing measurements, defining protection settings and managing the alarms



03

Energy monitoring with agardio

Two modules are available for communication via the Modbus RTU, allowing measurements and status information to be available up remotely. In this way, the h3+ circuit breaker can also be used as a multifunction measuring device and can provide measurements via an energy monitoring system such as agardio.manager.

Greater convenience with unique benefits

Configuration via web browser

With the new configuration tool, you can easily configure all h3+ Energy circuit breakers from a PC, tablet or smartphone. No special software is required thanks to the integrated web server. It's as simple as this:



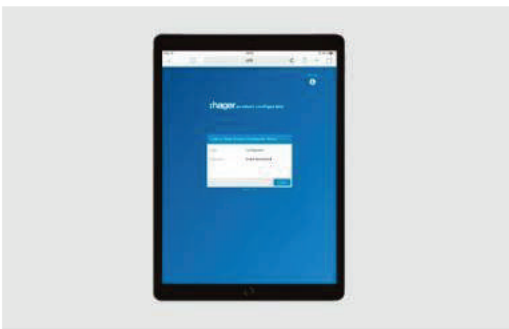
01 Connect the configuration tool

Use a connection cable to connect the configuration tool to the interface on the front of the circuit breaker. The tool can be easily fixed to the housing door using the integrated magnet on the rear of the circuit breaker – leaving you with both hands free for programming.



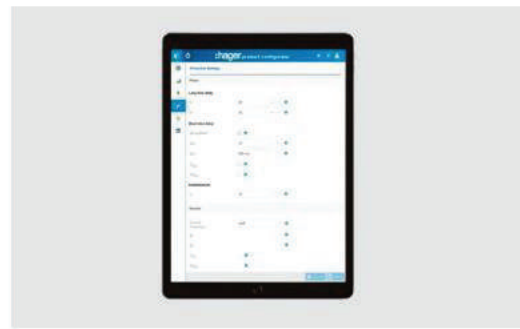
02 Switch on the configuration tool

A battery is integrated into the configuration tool. This provides the trigger unit of the circuit breaker with power as soon as you switch on the tool. In this way, you can configure the new h3+ Energy safely without a mains voltage supply.



03 Log in via web browser

Log in with your password. After login, parameters can be configured and the status can be called up easily via the browser – without special software.



04 Configure the parameters

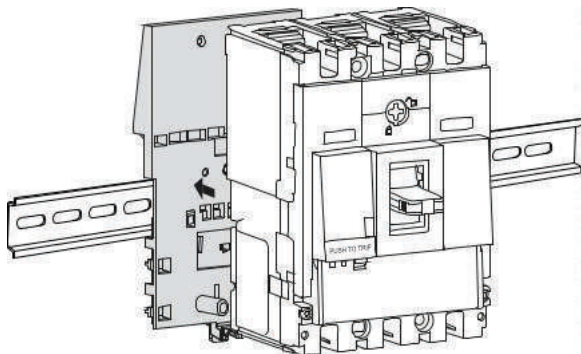
You can now set and check parameters with the configuration tool. During operation, you can also use it for diagnostics and call up all common measurements and the status.



easy to install

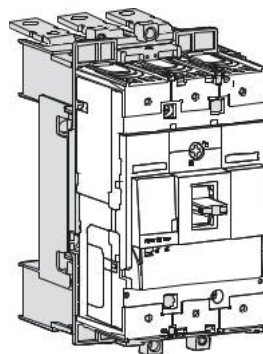
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Horizontal or vertical installation



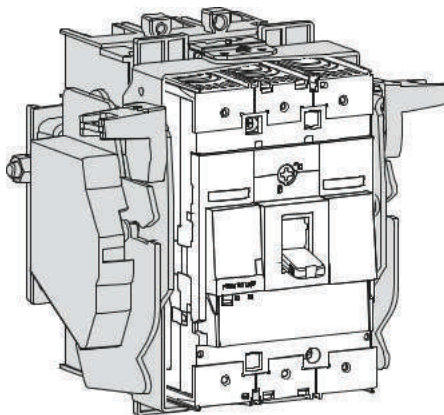
Mounting

P160 and P250 can be mounted on DIN rail



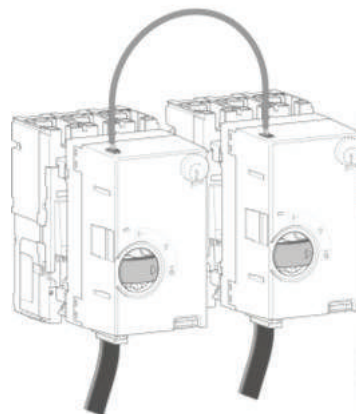
Plug-in

Available for frame P160 and P160, P250 and P630



Withdrawable

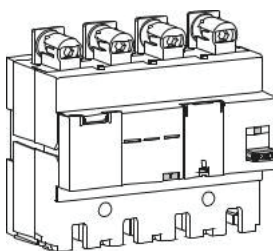
Available for frame P250 and P630



Interlocking

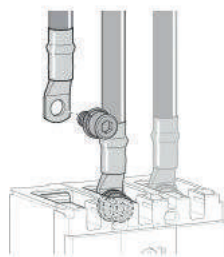
Available for frame P160, P250, P630

1. RCD add-on block

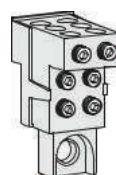


2. Connection accessories

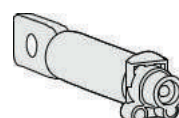
Connection terminals



External



Rear

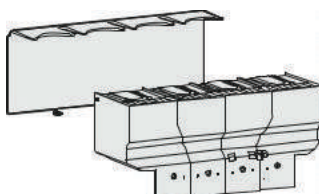


3. Terminal enclosures

For extended connections



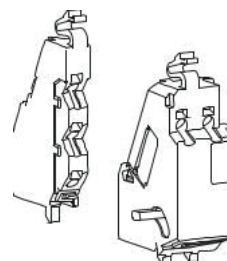
For spreaded connections



For rear connections

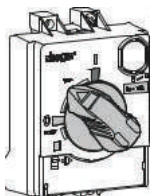


4. Auxiliary contacts

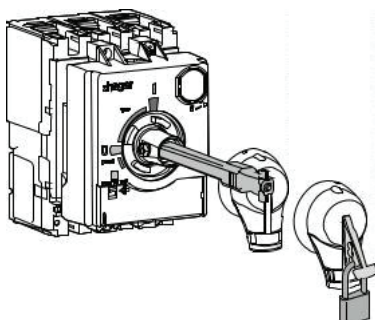


5. Control auxiliaries

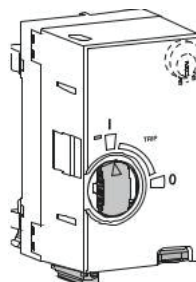
Direct rotary operation



External rotary operation



Motor operator



6. Locking device

Padlocking device accessories

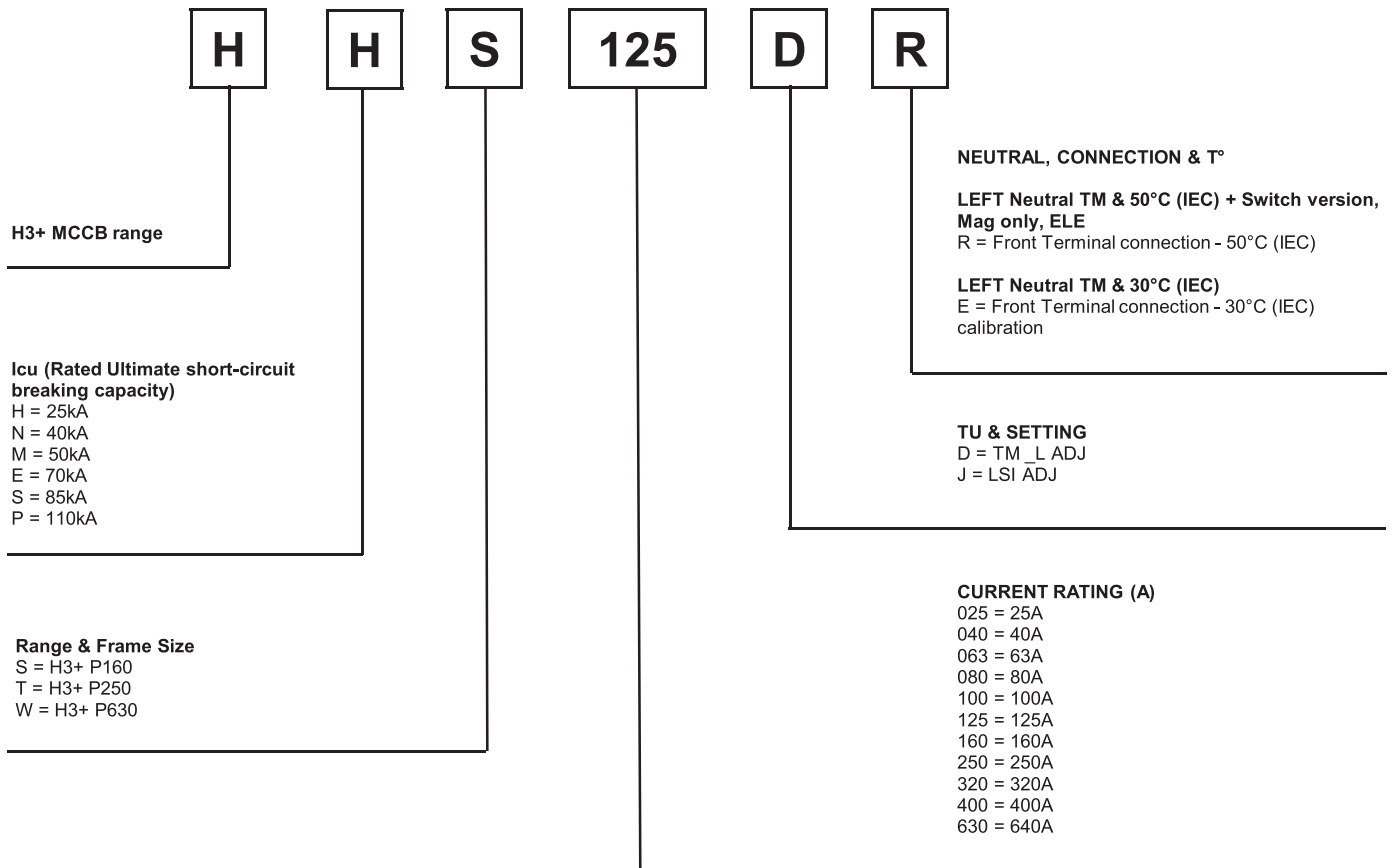


Ronis type key device





selection guide





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