

# Smart. Safe. Simple.

The new Hager HW1  
air circuit breaker:  
compact and easy to install.



:hager



# A new era in protection.

As your partner, we consider the safety of your electrical installation to be the highest priority. External factors such as short circuits, ground faults or overloads can cause damage and, in worst-case scenarios, fires. As the size of a building increases, the requirement for protection devices grows with the rise in demand for power. Years of experience, as well as carefully listening to our customers, have allowed us to develop our new air circuit breaker that meets all of your needs.

# Built-in protection.

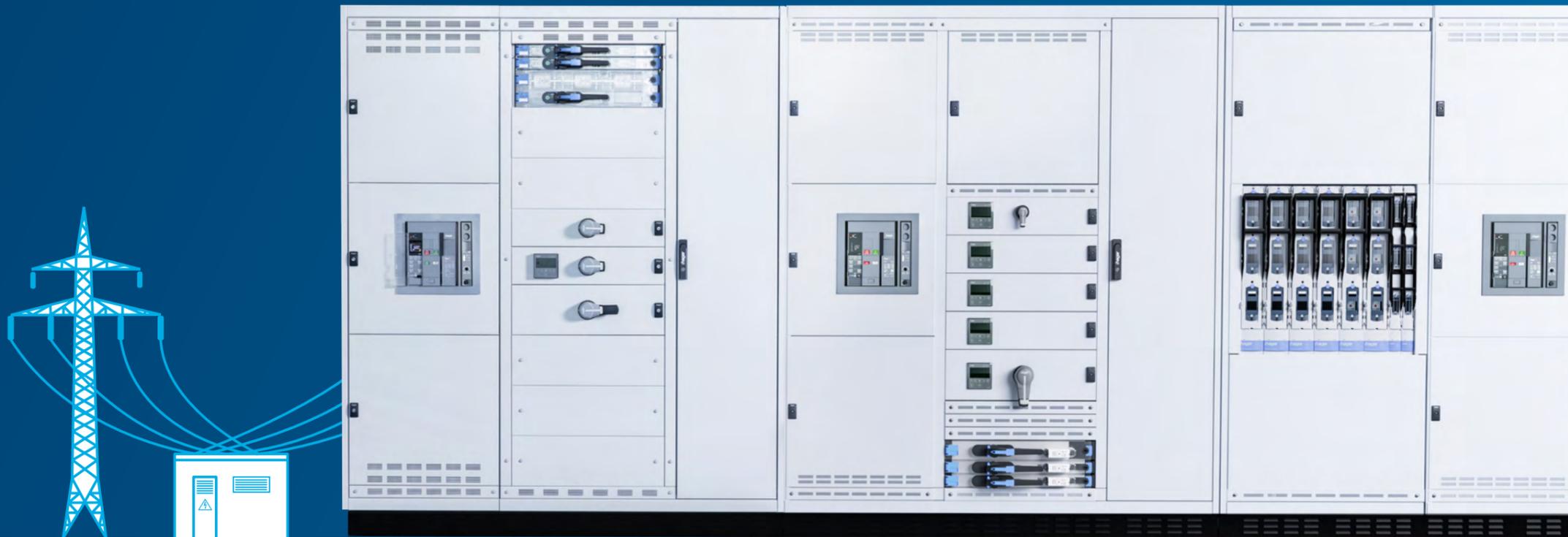
Whether for industry, buildings or infrastructure, every environment requires a reliable electrical power supply. Our power distribution enclosures have demonstrated their efficiency to our customers. The different levels of design and the flexibility of the system are suitable for even the most stringent requirements. Hager always has a solution to offer when it comes to improving safety for people and installations.

Thanks to its compact size, the HW1 air circuit breaker can be easily integrated into our distribution enclosures. Its compact design means that it can be placed right at the heart of your electrical installation. It not only provides protection against overloads, short circuits and other external disruptions, but also allows real-time visualisation of the maximum load passing through the installation.



# A system with many possibilities.

The increasing complexity of electrical installations means more power protection. With the unimes H enclosures system, you can meet all requirements and support currents up to 4000 A. The high-quality assembly offers optimal fitting safety, easy handling and reliable operation that complies with all standards.



- + Applications near transformers
- + Compact air circuit breaker
- + Available as a fixed assembly or as a drawout system
- + Main busbar system up to 4000 A
- + Tested and certified according to SN EN 61439-2/5

## 01 Strong design, quick installation.

Installing a new device is a breeze with the unimes H distribution system. The kits include all the fuses and fuse holders required for a secure and reliable electrical power supply.

## 02 Choose safety.

unimes H is an approved enclosure system that meets the requirements of the IEC 61439-2/5 standard for maximum protection for people and installations. With Hager, you can be sure of total safety!

## 03 High level of planning safety.

Thanks to the level of performance, you can increase the safety of your planning while also saving yourself time. The tried-and-tested hagercad planning software helps you get the best out of your project.

## 04 Modular system.

The unimes H enclosures system allows for easy integration of all electrical devices, thanks to its 25-mm grid.

## 05 Built-in adaptability.

The range of devices includes everything you need for your distribution project with unimes H: switches and air circuit breakers, as well as NH fuse disconnecter strips. Smart measuring devices and meters are also available for smart measurement applications or, on request, an active arc fault detection system.

## 06 Varied busbar systems.

hagercad provides all the information on copper so that the copper can be customised on request, and easily installed in the system from 630 to 4000 A.

# Specially adapted for you.

Whether you're a designer, electrician, installer or operator, our HW1 air circuit breaker offers all the functions you need to optimise the planning, construction and operation of devices in all commercial sites.

01



01 Hotels  
02 Shops  
03 Offices  
04 Hospitals  
05 Educational institutions

02



There's a whole host of applications for circuit breakers, which means they also need to meet a wide range of requirements. The HW1 circuit breaker offers everything you need, for maximum benefit. By using the HW1 circuit breaker, design offices have more scope for their projects, which allows them to develop their projects in a sustainable way. We also support you during the planning phase and assist you throughout configuration, to obtain the best results for you and your customers.

03



**Installers and panel builders** appreciate how easy it is to integrate HW1 circuit breakers into the unimes H enclosures system, as well as the optimised delivery times. Installation and commissioning have also been made easier.

04



The energy trip units can be intuitively and safely set in just a few seconds, either directly on the circuit breaker or via the Hager Power Setup software. HW1 circuit breakers also offer many benefits for the **operator**. For example, the OAC (output alarm contact) module reports alarms and trips.

05



Problems such as overloads or short circuits can therefore be detected very quickly. In addition, the setting values for protection can easily be transferred from the hagercad planning software to the Hager Power Setup commissioning software.

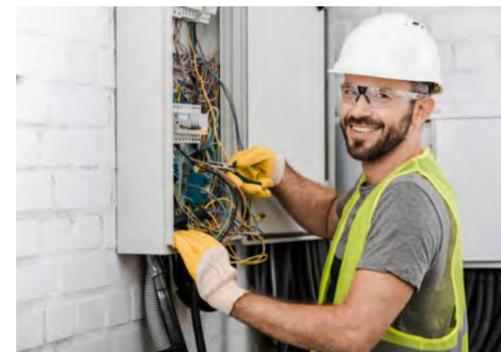
07



08



06



06 Electrician/Installer  
07 Design office  
08 Operator  
09 Panel builder

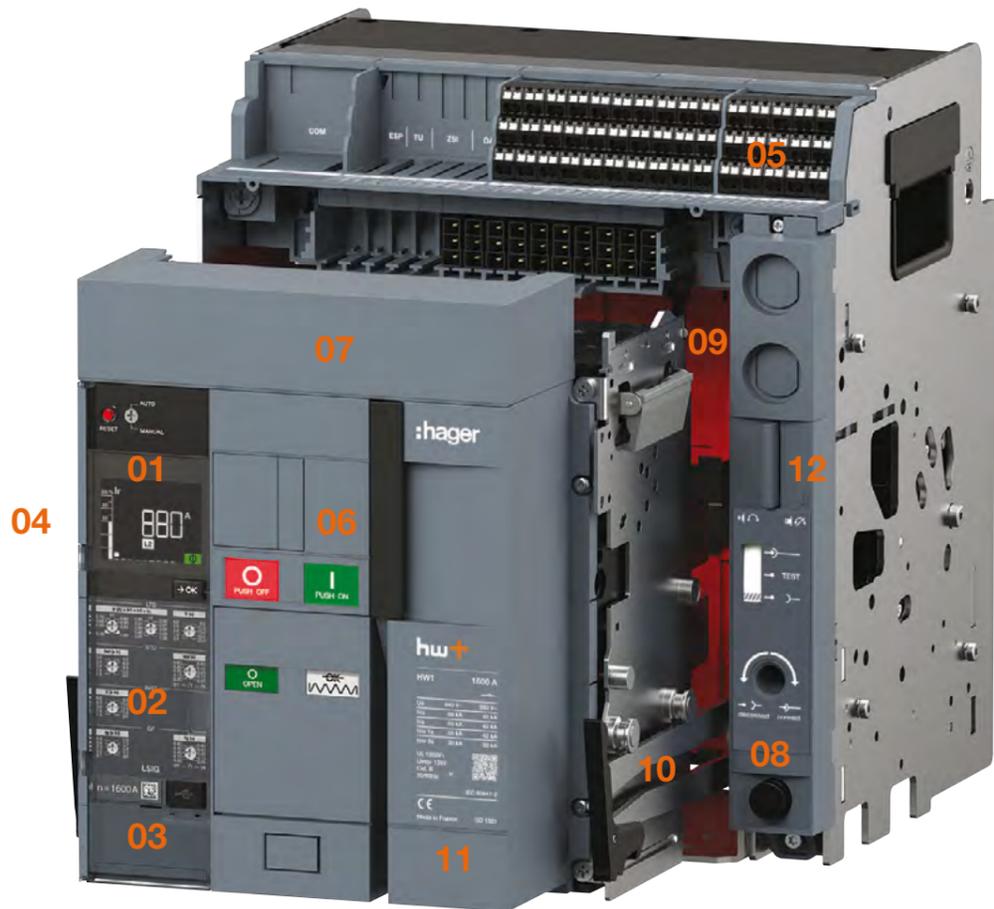
09





# Developed for protection.

The Hager HW1 circuit breaker has one objective: optimise the reliability of your installation. It combines protection, ergonomic functions and a multitude of connections into one extremely strong model, while remaining exceptionally compact.



## Technical specifications

Rated operating voltage	Ue	(AC V — 50/60 Hz)	690
Rated insulation voltage	Ui	(V)	1000
Rated impulse withstand voltage	Uimp	(kV)	12
Pole		3/4	
Versions		fixed/drawout	
Standards		IEC 60947-2/-3	

Icu (kA)	55/66					
In (A)	630	800	800	1000	1250	1600

More information on functions and connection possibilities can be found at [hager.ch/hw1](http://hager.ch/hw1)



## 01 LCD display

A clear LCD display makes it easy to configure and adjust your energy trip unit's settings.



## 02 Sentinel energy trip unit

The sentinel energy trip unit settings can be safely configured using the dials and the LCD display.



## 03 Calibrator

The Plug & Play calibrator makes adapting your system easy.



## 04 OAC-module

Up to five optional output alarm contacts can be added to identify trip causes.



## 05 TB terminal blocks

Easy connection to auxiliaries and coils via quickconnect terminals.



## 11 Data plate and QR code

You can find all the information you need for your circuit breaker, including its specifications, at a glance.



## 06 OLP/OLK locking

This key or padlock device is used to lock the PUSH OFF push button in order to lock the circuit breaker in the OFF position.



## 12 Lockable in position

This feature allows the drawout circuit breaker to be locked in one of three positions: connected, test or disconnected.



## 07 Push & Lock coils

Safe and simple to fit. The coils are simple to fit thanks to the patented lock system.



## 08 Racking and storage

Perfectly and securely built into the chassis.



## 09 Partition blinds

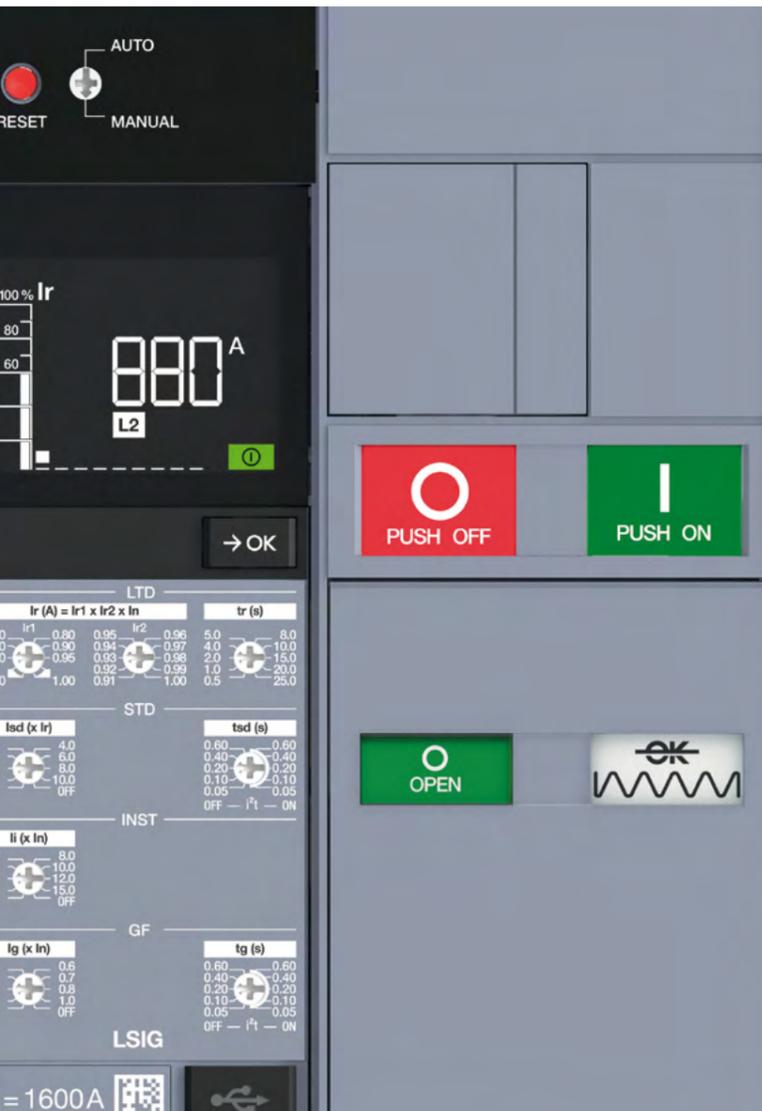
The lockable partition blinds cover the power contacts as soon as the circuit breaker is removed from the chassis.



## 10 Drawout system

The circuit breaker is easy to remove thanks to the guide rails that can be pulled out of the chassis.

# A new high-performance display.



The LCD display shows the setting values in real time.

When developing our products, we're always committed to making sure the application is as easy and ergonomic as possible for our customers, and the colour display is no exception. The operation of this dynamic display is unique to the market, showing the maximum instantaneous load, errors, maintenance pre-alarms, trip alarms and setting values in real time. This makes commissioning and operation intuitive. You can also adjust the settings directly on the energy trip unit or via the Hager Power Setup software.



# Sentinel energy trip unit settings.

The sentinel energy trip unit settings can be configured on the front plate using the dials. Furthermore, the LCD display can be supplied via the USB-C port to view the setting values entered. This allows for a more accurate and dynamic reading of the parameters.

## 01 Activate the display



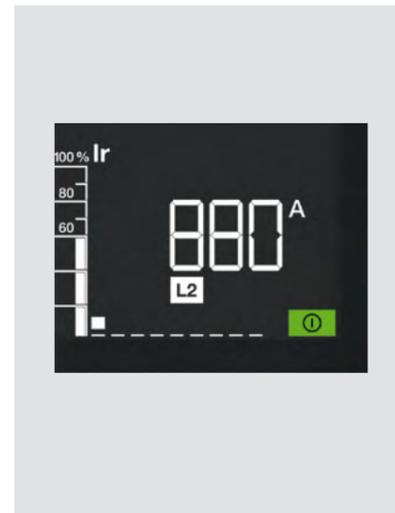
The LCD display can also be activated by an external power supply via the USB-C port (e.g. an external battery).

## 02 Dials



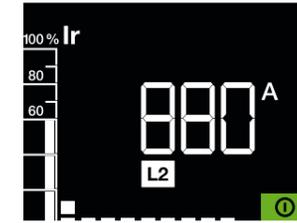
The protection parameters can be configured with the dials, without any conversion, since the actual values can be read directly on the display.

## 03 Protection settings



All settings and measured values are displayed clearly with high contrast on the display. Furthermore, fault notifications and other information are differentiated by their colour to facilitate their reading order.

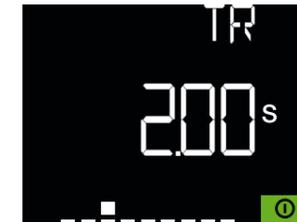
## 04 Settings overview



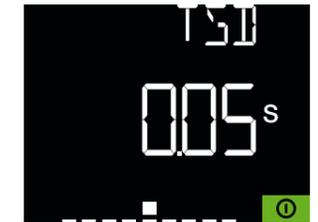
Maximum load recorded on one of the three phases.



Setting of the long time delay, instantaneous trip threshold.



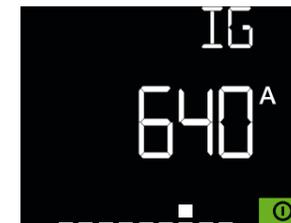
Setting of the long time delay.



Setting of the short time delay.



Setting of the instantaneous trip threshold.



Setting of the trip threshold due to a ground connection fault.



Setting of the trip time delay related to a ground connection fault.



Setting of the neutral conductor protection.

## 05 Neutral conductor protection



Open the battery compartment to access the neutral conductor protection dial. The origin of the trip after a break due to an error is shown on the display thanks to the backup battery.

# Enjoy even more.

The HW1 circuit breaker is compatible with a wide variety of accessories: control and message devices, insulation accessories, closing and lock systems. This means you can configure the circuit breaker according to your individual needs.

All accessories are designed in such a way that they can be very easily fitted retrospectively at any time.

This design allows you to be flexible and react very quickly when the needs for your system change.

## Coils (SH/CC/UV)



- Up to two shunt trip coils
- Up to two undervoltage release coils
- One closing coil

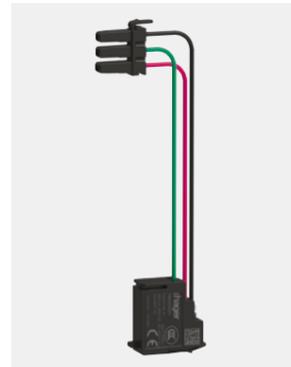
- Safe and easy to fit
- Available for all common power supply voltages

## Charging motor (MO)



- Safe and easy to fit
- Available for all common power supply voltages

## Auxiliary switch (AX)



- Auxiliary switch with standard fitting
- Four factory-fitted contacts

## Key locking in OFF position (OLK)



To lock the OFF button, simply fit a Ronis OLK key lock.

## Push button cover (PBC)



The operation buttons can be locked using a cover to prevent any buttons from being pressed unintentionally. This also mechanically forces the circuit breaker into the OFF position.

# Adapt your circuit breaker.

We are your partner, and as such, our priority is to provide you with the perfect products that meet your wishes and requirements for your application. You can configure your new circuit breaker, for fixed or drawout assembly.

To help you, we are giving you four examples of configurations, which show you how you can set up an HW1 air circuit breaker.

## The HW1 circuit breakers are configured as follows:

### Five catalogue references for fixed-assembly applications:

- Circuit breaker
- Sentinel energy trip unit
- Calibrator
- Top connection
- Bottom connection

### Six catalogue references for drawout applications:

- Circuit breaker
- Sentinel energy trip unit
- Calibrator
- Chassis
- Top connection
- Bottom connection

Other additional accessories and devices are optional and can be added to the desired configuration.

Examples of configurations\*:

## 01

**Example 1** Product code: HW1M310FB2EPAAAAB0AAAA0AA0A00

**HW1 3-pole 55 kA, max. In = 1000 A, for fitting with an LSI sentinel energy trip unit, top and bottom rear horizontal connection**

HW1M310FB	HW1, 3-pole, fixed assembly, 55 kA, max. In = 1000 A
HWW451H	LSI sentinel trip unit
HWW467H	Calibrator: 1000 A
HWY150H	Horizontal top connection
HWY150H	Horizontal bottom connection



## 02

**Example 2** Product code: HW1M412FB2EPAAAAB0AAAA0AA0A00

**HW1 4-pole 55 kA, max. In = 1250 A, for fixed assembly, with LSI sentinel energy trip unit and calibrator In = 1000 A, top rear horizontal connection and bottom vertical connection**

HW1M412FB	HW1, 4-pole, fixed assembly, 55 kA, max. In = 1250 A.
HWW451H	LSI sentinel trip unit
HWW467H	Calibrator: 1000 A
HWY151H	Horizontal top connection
HWY151H	Horizontal bottom connection



## 03

**Example 3** Product code: HW1M410DB2EPAAAAB0AAAA0AA0A00

**HW1 4-pole 55 kA, max. In = 1000 A, drawout application, with LSI sentinel energy trip unit, top and bottom rear horizontal connection**

HW1M410DB	HW1, 4-pole, drawout application, 55 kA, max. In = 1000 A
HW1C4EH	HW1 housing, 4-pole, In = 1600 A
HWW451H	LSI sentinel trip unit
HWW467H	Calibrator: 1000 A
HWY151H	Horizontal top connection
HWY151H	Horizontal bottom connection



## 04

**Example 4** Product code: HW1M312DB2FPAAAAB0AAAA0AA0A00

**HW1 3-pole 55 kA, max. In = 1250 A, drawout application with LSI sentinel energy trip unit, top and bottom rear horizontal connection**

HW1M312DB	HW1, 3-pole, drawout application, 55 kA, max. In = 1250 A
HW1C3EH	HW1 housing, 3-pole, In = 1600 A
HWW451H	LSI sentinel trip unit
HWW468H	Calibrator: 1250 A
HWY150H	Horizontal top connection
HWY150H	Horizontal bottom connection



\*These configurations are only examples of the main catalogue references for the HW1 circuit breaker. For specific integration requests, adaptations will be necessary.





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