Industrial Motors

Commercial & Appliance Motors

**Automation**

Digital & Systems

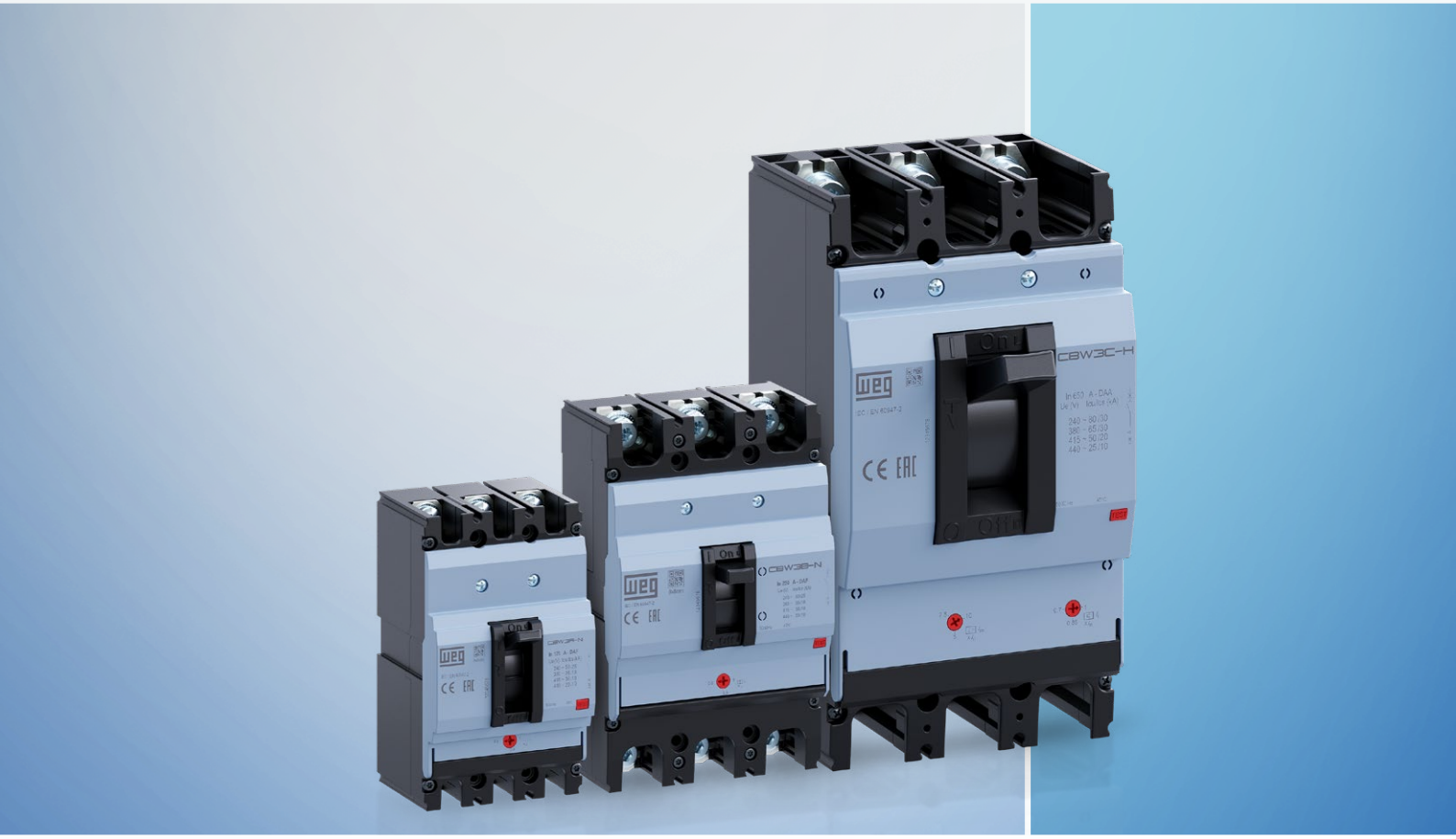
Energy

Transmission & Distribution

Coatings

# CBW Molded-Case Circuit Breakers

**High-performance** protection.
**Trusted** reliability.




**Driving efficiency and sustainability**

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**CIRCUIT** BREAKER **WEG** (CBW)

# High-performance PROTECTION.

## **Trusted reliability.**

# **High-performance** protection. **Trusted** reliability.

Designed for industrial, commercial, and building installations, the new ***CBW molded case circuit breakers*** are developed and manufactured in compliance with international standards IEC 60947-1 and IEC 60947-2, meeting switching and protection requirements for distribution circuits, motors, and generators up to 650 A.

Flexibility:
Allow for versatile use of internal accessories, with full interchangeability among breakers in the same family.

Double protection:
For enhanced operator safety, the breakers feature double insulation between live parts (except terminals) and the front of the device. Internal accessories are fully isolated from the power circuit, eliminating any risk of contact with energized parts.

High performance:
Suitable for a wide range of applications, delivering excellent performance under severe overload and short-circuit conditions.

Circuit breakers are essential for the proper operation of electrical installations, ensuring protection against faults and, consequently, safeguarding people, processes, and assets. Under normal conditions, they ensure safe service continuity without unwanted interruptions.

Both traditional and emerging renewable energy sources demand continuous advancement in electrical protection equipment. Circuit breakers have evolved to deliver precise protection and incorporate features aligned with new energy requirements.

With decades of expertise in electrical protection and circuit breaker technology, ***WEG introduces its latest CBW series of molded case circuit breaker*** — a platform offering multiple versions to meet everything from simplified installations requiring efficient, cost-effective solutions to highly complex systems demanding high breaking capacity and advanced features. The CBW line is synonymous with innovation, efficiency, and safety. Its modular design allows for interchangeable internal accessories, providing flexibility and optimization for different installation configurations.

## Certifications

CE UKCA

# Benefits

- Versatile platform with a wide current range, multiple breaking capacities, and adjustable current settings to ensure the ideal protection for various installations and equipment.
- Single global platform, available in IEC-based versions to serve multiple markets.
- Three-pole or four-pole versions, enabling interruption and/or neutral conductor protection when required.
- Comprehensive protection for low-voltage distribution circuits, motors, generators, and switch-disconnectors - all in the same molded case construction.
- High-performance, cost-competitive thermal-magnetic versions.
- Interchangeable internal accessories across different frame sizes.
- Standardized design, consistent with the WEG product family and aligned with the brand's portfolio.

WEG quality and know-how

In compliance with the main international standards

Easy operation

Reduced size

Guaranteed protection of electrical circuits

Excellent cost-effectiveness

Materials in accordance with environmental legislation

# Global excellence in circuit breakers

With decades of experience in manufacturing molded case circuit breakers, WEG relies on highly qualified engineering and R&D teams, robust testing laboratories, and optimized production processes. The result is a high-performance, reliable, and cost-effective product line, always compliant with international standards.

With a global presence, WEG delivers complete energy solutions from generation to consumption. This strong market position makes the company a leading supplier worldwide in several sectors. Our solutions ensure quality and efficiency, enhancing productivity and safety for a wide variety of processes, installations, and equipment worldwide.

Committed to sustainability, WEG develops its breaker line in strict compliance with environmental and social regulations, valuing people and protecting the environment.

By combining technology with environmental responsibility, WEG creates a positive impact for customers, partners, and communities, reinforcing its commitment to a more sustainable and innovative future.

RoHS

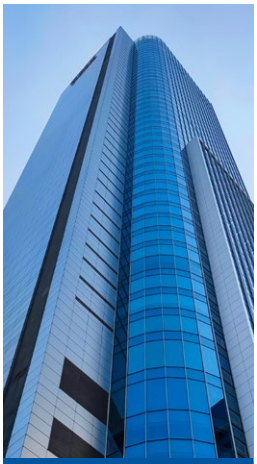
**Environmentally friendly product**

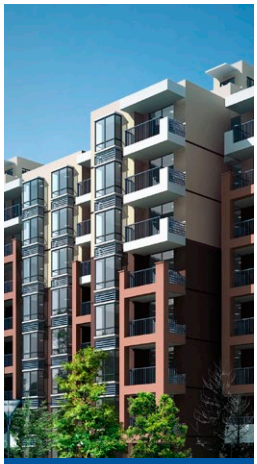
# Applications

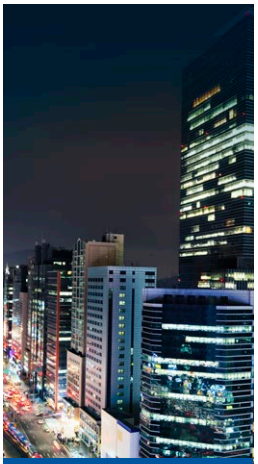
The CBW molded case circuit breaker ensures efficient protection for electrical installations, with applications in low-voltage distribution circuits, motor protection, equipment, and generators.

The product family offers a variety of breaking capacities and trip units, adapting to multiple applications—whether in commercial, building, industrial, machinery, or process environments.

## CBW3


Commercial


Building


Infrastructure


Agribusiness


Industry

## Different protection types to solve specific applications:

**Distribution protection circuit, generators and motors**

**Fixed or adjustable thermomagnetic protection**

**Three-pole or four-pole protection, with or without neutral protection**

# Overview of the line

**CBW3**
IEC 60947-2
Currents: 16 to 650 A
$I_{cu}$: 18 a 65 kA at 380 V
Voltage: 220 to 500 V
Fixed or adjustable trip units
Distribution, motor and generator versions

**CBW5**
IEC 60947-2
Currents: up to 650 A
$I_{cu}$=$I_{cs}$: up to 85 kA at 380 V
Voltage: 220 to 690 V
Double rotary contact
***Coming soon***

**CBW7**
UL 489
Currents: up to 600 A
Interruption: 65 kA at 480 V
Voltage: 240 to 600 V
Double rotary contact
***Coming soon***

# General technical characteristics

| Circuit breaker case | | | CBW3A | | CBW3B | | CBW3C | | |
|---|---|---|---|---|---|---|---|---|---|
| Frame reference current | | | 125 A | | 250 A | | 650 A | | |
| Reference standard | | | IEC 60947-2 | | | | | | |
| Certifications | | | CE, UKCA | | | | | | |
| Number of poles | | | 3, 4 | | 3, 4 | | 3, 4 | | |
| Rated frequency | | Hz | AC: 50/60 or DC | | | | | | |
| Rated operational voltage | $U_e$ | $V_{AC}$ | 500 | | 500 | | 440 | | |
| | | $V_{DC}$ | 250 | | 250 | | 250 | | |
| Rated insulation voltage | $U_i$ | V | 800 | | 800 | | 800 | | |
| Rated impulse withstand voltage | $U_{imp}$ | kV | 8 | | 8 | | 8 | | |
| Utilization category | | | A | | A | | A | | |
| Isolation function | | | Yes | | Yes | | Yes | | |
| Reference temperature | T | °C | 45 | | 45 | | 45 | | |
| Pollution degree | | | 3 | | 3 | | 3 | | |
| **Breaking capacity level** | | | | | | | | | |
| Maximum short-circuit breaking capacity | $I_{cu}$ | kA | B | N | B | N | N | S | H |
| | | 240 V~ | 30 | 50 | 40 | 80 | 50 | 65 | 80 |
| | | 380/400 V~ | 18 | 36 | 18 | 36 | 36 | 50 | 65 |
| | | 415 V~ | 18 | 36 | 18 | 36 | 36 | 40 | 50 |
| | | 440 V~ | 10 | 20 | 10 | 20 | 15 | 20 | 25 |
| | | 500 V~ | 5 | 10 | 5 | 10 | - | - | - |
| | 3 poles in series | 125 $V_{DC}$ | 10 | 10 | 20 | 20 | 20 | 20 | 20 |
| | | 250 $V_{DC}$ | 10 | 10 | 20 | 20 | 20 | 20 | 20 |
| Service short circuit breaking capacity | $I_{cs}$ | kA | B | N | B | N | N | S | H |
| | | 240 V~ | 15 | 25 | 20 | 40 | 30 | 30 | 30 |
| | | 380/400 V~ | 9 | 18 | 9 | 18 | 30 | 30 | 30 |
| | | 415 V~ | 9 | 18 | 9 | 18 | 20 | 20 | 20 |
| | | 440 V~ | 5 | 10 | 5 | 10 | 10 | 10 | 10 |
| | | 500 V~ | 3 | 5 | 3 | 5 | - | - | - |
| **Protection type1[1) 2) 3)]** | | | | | | | | | |
| Distribution - fixed thermal / fixed magnetic | $I_n$ | A | 16, 20, 25, 32, 40, 50, 63, 70,75, 80, 90, 100, 110, 125 | | 125, 150, 160, 175, 200, 225, 250 | | 300, 320, 400, 500, 600, 630, 650 | | |
| Distribution - adjustable thermal / fixed magnetic | $I_n$ | A | 20, 25, 32, 40, 50, 63, 80, 100, 125 | | 125, 160, 200, 250 | | - | | |
| Distribution - adjustable thermal / adjustable magnetic | $I_n$ | A | - | | - | | 320, 400, 500, 630, 650 | | |
| Generator - fixed thermal / fixed magnetic | $I_n$ | A | - | | - | | - | | |
| Generator - adjustable thermal / fixed magnetic | $I_n$ | A | 50, 63, 80, 100, 125 | - | 125, 160, 200, 250 | - | - | | |
| Generator - adjustable thermal / adjustable magnetic | $I_n$ | A | - | | - | | 320, 400, 500, 630, 650 | - | - |
| Motor - fixed magnetic | $I_n$ | A | - | 25, 32, 40, 50, 65, 80, 95 | - | 80, 95, 105, 125, 150, 185 | - | - | 320, 400 |
| Motor - adjustable magnetic | $I_n$ | A | - | | - | | - | - | 150, 185, 250, 320 |
| Switch-disconnector - without thermal and magnetic protection[4)] | $I_n$ | A | 125 | | 250 | | 650 | | |

# General technical characteristics

| Circuit breaker case | | | CBW3A | CBW3B | CBW3C |
|---|---|---|---|---|---|
| **Additional characteristics** | | | | | |
| Mechanical life - C-O cycle | | Number of operations/ operations per hour | 8,000 / 120 | 8,000 / 120 | 5,000 / 120 |
| Electrical life - C-O cycle ($I_n$ @ U_e_max V) | | Number of operations/ operations per hour | 1,000 / 120 | 1,000 / 120 | 1,000 / 120 |
| Degree of protection | | Terminals | IP10 | IP10 | IP10 |
| | | Accessory cover | IP20 | IP20 | IP20 |
| Maximum air relative humidity | | | 95% | 95% | 95% |
| Protection reference temperature (thermomagnetic)[4] | | | 45 °C | 45 °C | 45 °C |
| Minimum operating temperature | | | -25 °C | -25 °C | -25 °C |
| Maximum operating temperature | | | 70 °C | 70 °C | 70 °C |
| Storage temperature | | | -25 to 80 °C | -25 to 80 °C | -25 to 80°C |
| Altitude | | | Up to 2,000 m above sea level or higher according to the current and voltage derating factor table | | |
| Resistance to vibration (IEC 60068-2-6) | | | 2 to 13.2 Hz: amplitude ±1 mm<br>13.2 to 100 Hz: constant acceleration 0.7 g | 2 to 13.2 Hz: amplitude ±1 mm<br>13.2 to 100 Hz: constant acceleration 0.7 g | 2 to 13.2 Hz: amplitude ±1 mm<br>13.2 to 100 Hz: constant acceleration 0.7 g |
| Resistance to mechanical shocks (IEC 60068-2-27 - 1/2 sine) | | | 12 g for 11ms | 12 g for 11ms | 12 g for 11ms |
| Dimensions[5] | Width | mm | 76 (3P)<br>102 (4P) | 105 (3P)<br>140 (4P) | 140 (3P)<br>185 (4P) |
| | Height | mm | 130 | 165 | 255 |
| | Depth | mm | 60 | 60 | 110 |
| Net weight | | Kg | 3 poles: 0.65<br>4 poles: 0.90 | 3 poles: 1.85<br>4 poles: 2.5 | 3 poles: 3.56<br>4 poles: 4.6 |
| Conductor input connection | | | Top or bottom | Top or bottom | Top or bottom |

*Notes: 1) $I_n$ = rated current (fixed thermal release) or maximum setting value (adjustable thermal release). To identify the current adjustable ranges, see the trip units section (page 13).*
*2) Information on thermal dissipation of the circuit breakers available on page 33.*
*3) Thermal and magnetic operation ranges are available on the Time x Current characteristic curves (page 35).*
*4) For ambient temperatures other than 45 °C, consider the correction factors of Table 1 (page 32).*
*5) Product height without terminal shroud or phase barrier. Depth excluding the handle and the protruding part of the front cover with engravings.*

# Coding


**CBW circuit breaker family**

**Circuit breaker line**
3 = Standard line
5 = High capacity line

**Size**
A = 125 A
B = 250 A
C = 650 A

**Reference breaking capacity at 415 V ($I_{cu}$)**
B = 18 kA
N = 36 kA
S = 50 kA
H = 65 kA[1)]

**Rated current (A)**
16, 20, 25, 32, 40, 50, 63, 65, 70, 75, 80, 90, 95, 100, 110, 125 = CBW3A
80, 95, 105, 150, 160, 175, 185, 200, 225, 250 = CBW3B
300, 320, 400, 500, 630, 650 = CBW3C

**Application**
D: Distribution
G: Generator
M: Motor
S: Switch-disconnector

**Trip unit type and settings**
FF: Fixed thermal and fixed magnetic
FT: Fixed thermal, fixed magnetic and neutral protected 100%
AF: Adjustable thermal and fixed magnetic
AA: Adjustable thermal and adjustable magnetic
AT: Adjustable thermal, fixed magnetic and neutral protected 100%
MF: Fixed magnetic (motor protection)
MA: Adjustable magnetic (motor protection)
ND: No protection (switch-disconnector)

**Number of poles**
3 poles
4 poles

*Notes: Check the model table to assess availability of the coded reference-some capabilities are not available for all models.*
*1) Capacity up to 400 V for the CBW3C.*

# Protection and types of trip units

To better match the specific characteristics of different load types within an electrical circuit, CBW circuit breakers are categorized by application, with special versions designed for each load type, as follows:

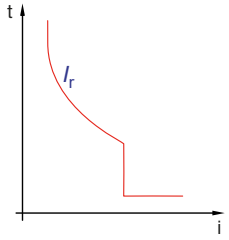
- Distribution circuit breakers: thermal and magnetic protection for general-purpose electrical circuits; short-circuit protection calibrated from 5 to 10 times the breaker's rated current, with trip curves in accordance with NBR IEC 60947-2.
- Generator circuit breakers: short-circuit protection calibrated to trip at up to 5 times the breaker's rated current, protecting the generator against current surges that could damage electronics and affect regulation.
- Motor circuit breakers: only magnetic protection. Short-circuit trip curve calibrated from 7.5 to 15 times the breaker's rated current. This calibration allows motor starting without nuisance tripping of the protection system. An overcurrent relay must be added for motor overload protection.
- Switch-disconnectors: circuit isolation without protection functionality.

## Protection of distribution circuits or generators

### CBW3A, CBW3B and CBW3C

**Fixed thermal and fixed magnetic protection**

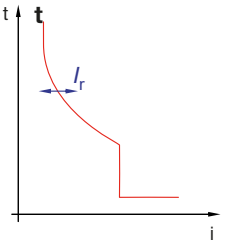
- The circuit breaker trip curve is fixed, with no adjustment capability




### CBW3A, CBW3B

**Adjustable thermal and fixed magnetic protection**

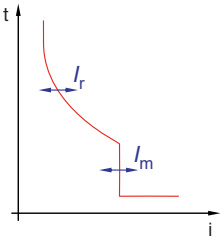
- Adjustable thermal protection
  - The thermal protection curve allows adjustment of the thermal element from 0.8 to 1 x $I_n$


### CBW3C

**Adjustable thermal and adjustable magnetic protection**

- Adjustable thermal protection
  - The thermal protection curve allows adjustment of the thermal element from 0.7 a 1 x $I_n$
- Adjustable magnetic protection
  - 5 to 10 x $I_n$ for distribution
  - 2.5 to 5 x $I_n$ for generators

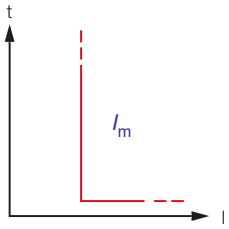
# Protection and types of trip units

## Motor protection: magnetic releases

### CBW3A, CBW3B

**Fixed magnetic protection**

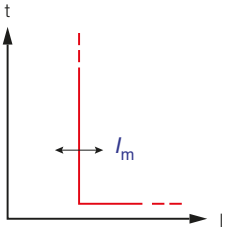
- The circuit breaker trip curve is fixed, with no adjustment capability




### CBW3C

**Adjustable magnetic protection**

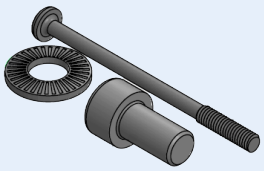
- Adjustable magnetic protection
  - 7.5 to 15 x $I_n$ for motors


# Accessories

## Accessories supplied with the standard product

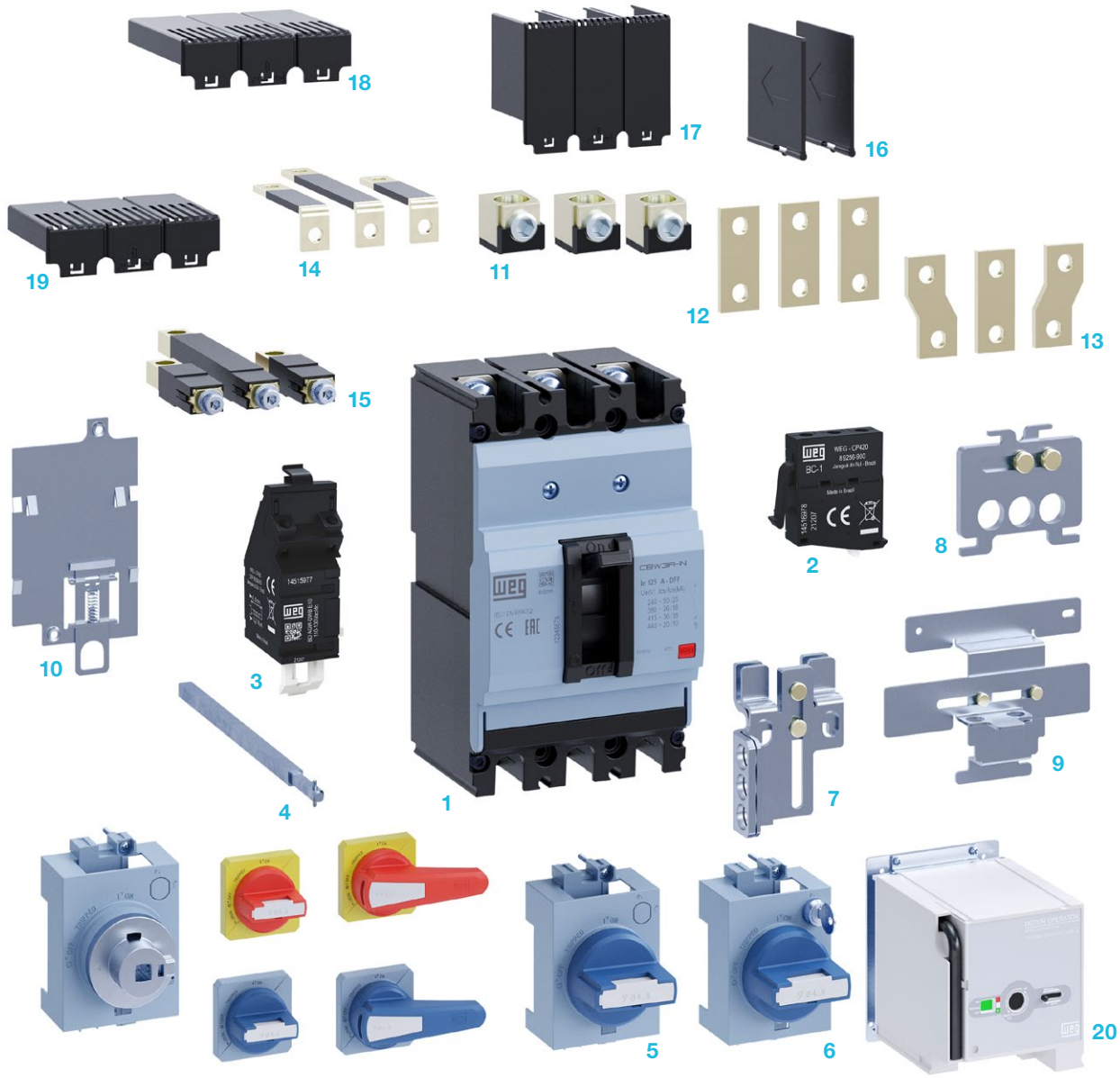
Supplied with input phase barriers, screws, and washers for all electrical connection terminals, which are also used to secure optional accessories that connect to these terminals (cable lugs, extension bars, spacing bars, “L” rear connections, and breaker mounting screws).

| Circuit breaker | Illustration of accessories | Description of accessories | |
|---|---|---|---|
| | | Three-pole | Four-pole |
| CBW3A  |   | - 2 phase barriers<br>- 6 terminal screws and washers<br>- 2 mounting screws | - 3 phase barriers<br>- 8 terminal screws and washers<br>- 3 mounting screws |
| CBW3B  | | - 2 phase barriers<br>- 6 terminal screws and washers<br>- 2 mounting screws | - 3 phase barriers<br>- 8 terminal screws and washers<br>- 3 mounting screws |
| CBW3C  | | - 2 phase barriers<br>- 8 terminal screws and washers<br>- 4 mounting screws | - 3 phase barriers<br>- 8 terminal screws and washers<br>- 6 mounting screws |

# Accessories

## Optional accessories

All internal accessories (trip coils and auxiliary contacts) in the CBW line are compatible with all circuit breaker frame sizes. External accessories vary according to the breaker frame size.
Accessories are optional and sold separately from the circuit breaker, except for those specified in this section, which are supplied as part of the standard product and can also be purchased for expansion or replacement purposes.




1 - CBW3 circuit breaker
2 - BC or AL – auxiliary or alarm contact block
3 - BS or BD – undervoltage release or shunt trip
4 - MRXS or MRXL – external rotary handle (mechanism, shaft and handle)
5 - MRI – internal rotary handle
6 - MRK – internal rotary handle with key
7 - PL – fixed padlock device
8 - TR – removable padlock device
9 - BLIM – mechanical interlock
10 - DIN rail mounting base (CBW3A and 3B)
11 - PC – cable lug
12 - BE – extension bar
13 - BEX – spacing bar
14 - CT – “L” type rear connection (access to front terminals)
15 - CTI – “I” type rear connection (access to terminals through the base)
16 - PB – phase barrier
17 - CB – terminal shroud
18 - CP – long protective cover (protection of front terminals when using CT rear connection)
19 - CPI – short protective cover (protection of front terminals when using CTI rear connection)
20 - Motor operator (from CBW3C upwards)

# Accessories

## General accessories table

| Group | Description | CBW3A (3P) | CBW3A (4P) | CBW3B (3P) | CBW3B (4P) | CBW3C (3P) | CBW3C (4P) |
|---|---|---|---|---|---|---|---|
| Internal: contacts and trip coils | BC-1 - CBW contact block | √ | √ | √ | √ | √ | √ |
| | AL-1 - CBW alarm block | √ | √ | √ | √ | √ | √ |
| | BS - CBW circuit breaker trip coil | √ | √ | √ | √ | √ | √ |
| | BD - CBW circuit breaker trip coil | √ | √ | √ | √ | √ | √ |
| Handles and motor operator | MRXS...BU - external rotary handle | √ | √ | √ | √ | - | - |
| | MRXS...R - external rotary handle | √ | √ | √ | √ | - | - |
| | MRXL...BU - external rotary handle | √ | √ | √ | √ | √ | √ |
| | MRXL...R - external rotary handle | √ | √ | √ | √ | √ | √ |
| | External rotary handle – Supply B (shaft+handle) | √ | √ | √ | √ | √ | √ |
| | Circuit breaker mechanism for external rotary handles | √ | √ | √ | √ | √ | √ |
| | MRI...BU - external rotary handle | √ | √ | √ | √ | √ | √ |
| | MRI...R - external rotary handle | √ | √ | √ | √ | √ | √ |
| | Internal rotary handle with key MRK | √ | √ | √ | √ | √ | √ |
| | AM - CBW motor operator | - | - | - | - | √ | √ |
| Locks and interlocks | PL - CBW fixed padlock device | √ | √ | √ | √ | √ | √ |
| | TR - CBW removable padlock device | √ | √ | √ | √ | √ | √ |
| | BLIM - CBW handle interlock block | √ | √ | √ | √ | √ | √ |
| | BTIM - CBW interlock base | - | - | - | - | √ | √ |
| Mounting | BFR - DIN rail mounting base | √ | √ | √ | √ | - | - |
| Lugs and extension bar kits | CBW cable lug | √ | √ | √ | √ | √ | √ |
| | BE - CBW extension bar | √ | √ | √ | √ | √ | √ |
| | BEX - CBW spacing bar | √ | - | √ | - | √ | √ |
| | CT - "L" type rear connection | √ | - | √ | - | √ | - |
| | CTI - "I" type rear connection | √ | - | √ | - | √ | - |
| Insulation and protection | CBW phase barrier | √ | √ | √ | √ | √ | √ |
| | CB - CBW terminal shroud | √ | - | √ | - | √ | - |
| | CP - CBW long protective cover | √ | - | √ | - | √ | - |
| | CPI - CBW short protective cover | √ | - | √ | - | √ | - |

*Note: options for versions, voltages, colors and sizes are available on the accessories details table.*

## Internal accessories

### Maximum combination of internal accessories

| Description | CBW3A | | CBW3B | | CBW3C | |
|---|---|---|---|---|---|---|
| | 3P | 4P | 3P | 4P | 3P | 4P |
| BC-1 - CBW contact block | 1 | 2 | 1 | 2 | 2 | |
| AL-1 - CBW alarm block | 1 | | 1 | | 1 | |
| BS_CBW or BD_CBW circuit breaker trip coil | 1 | | 1 | | 1 | |

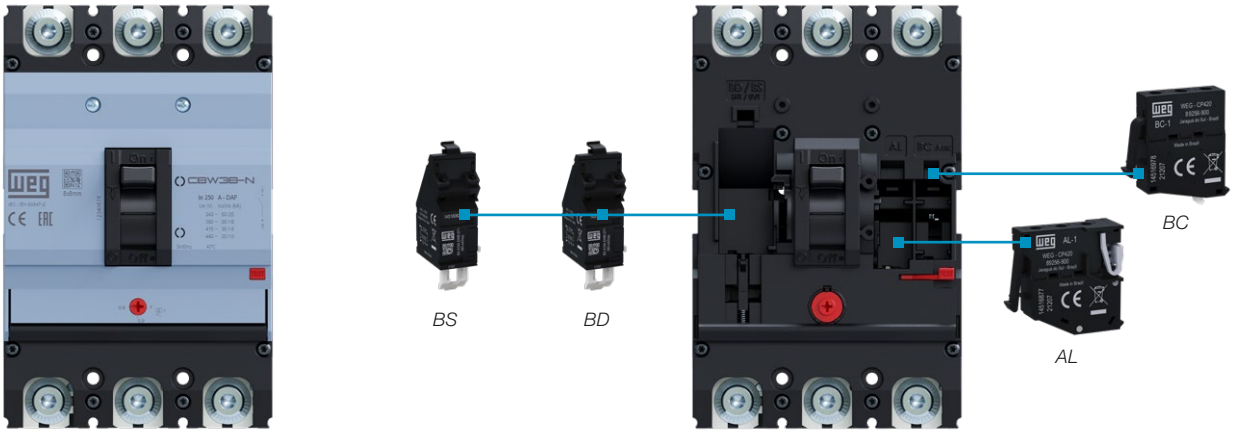
# Accessories

## Internal accessories

### Internal accessory mounting positions (slots)

**CBW3**

Flip-up cover, screw opening located just above the standard handle
Slot to the left of the coil, slots to the right of the contact and alarm blocks.

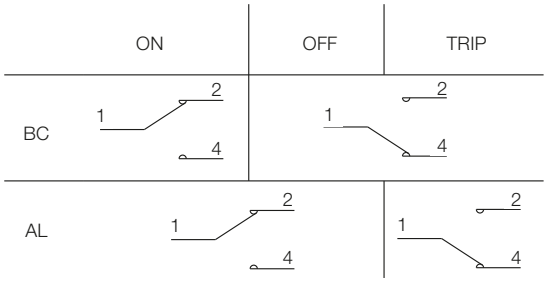



### Auxiliary and alarm contact blocks

- BC – auxiliary contact: signals the open and closed position of the main contacts. Reversing type (1 NOC).
- AL – alarm contact: signals the thermal or magnetic trip of the circuit breaker. Reversing type (1 NOC).

| | Reference | Contacts | Cable connection (mm²) | Tightening torque (Nm) | Cable stripping length (mm) | Recommended fuse |
|---|---|---|---|---|---|---|
|  | BC-1 CBW | 1 NOC | 0.5 to 1.5 | 0.2 | 5 to 7 | 6 A gL/gG |
|  | AL-1 CBW | | | | | |

**Schematic diagram of the contact blocks**




**Conducting capacity of BC and AL contacts:**

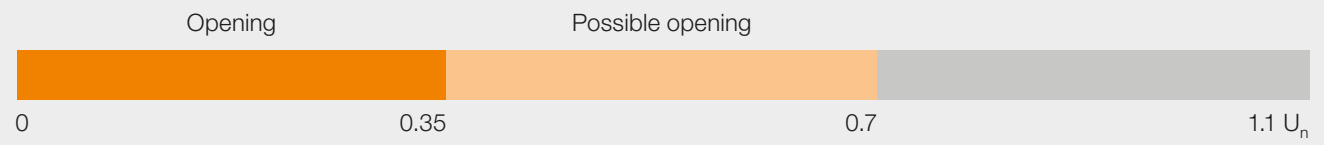
| Voltage | | Resistive load | Inductive load |
|---|---|---|---|
| 125 V | AC | 5 A | 3 A |
| | DC | 0.4 A | 0.2 A |
| 250 V | AC | 3 A | 2 A |
| | DC | 0.2 A | 0.2 A |
| Minimum load 100 mA at 24 Vdc | | | |

# Accessories

## Internal accessories

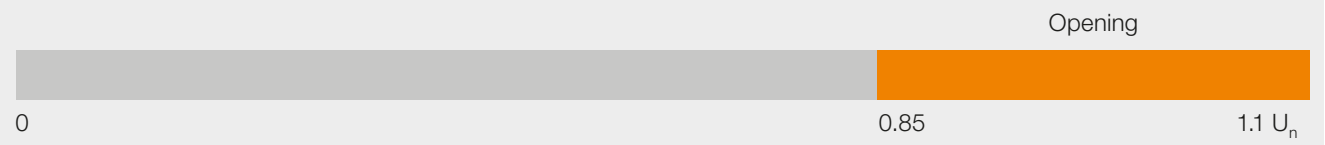
### Undervoltage release and shunt trip

- BS – undervoltage release: trips the circuit breaker when its operating voltage is below 35% of its rated value. That is, when the coil supply voltage is U ≤ 0.35 x U, the breaker opening is ensured. When the voltage is within the range 0.35 < U < 0.7, trip may occur, and above 0.7 x U opening will not occur.




*Note: to close the circuit breaker, BS must be energized.*

- BD – Shunt Trip: when the shunt trip is energized by a voltage pulse, the circuit breaker trips. The trip is guaranteed when the shunt trip command voltage is U > 0.70. That is, when its operating range is 0.85 < U < 1.10 of the rated voltage, the circuit breaker will open.




| Type | Reference with voltage code | Rated voltage ($U_n$) | Consumption (VA (AC) or W (DC)) | Cable connection (mm²) | Tightening torque (Nm) | Cable stripping length (mm) |
|---|---|---|---|---|---|---|
| BS CBW Undervoltage release | BS CBW D71 | 380-440 VAC | 2.6 | 0.5 to 1.5 | 0.2 | 4 to 6 |
| | BS CBW D74 | 440-480 VAC | 2.6 | | | |
| | BS CBW E26 | 24 VAC/VDC | 0.6 | | | |
| | BS CBW E10 | 110-130 VAC/VDC | 1.1 | | | |
| | BS CBW E44 | 220-240 VAC/250 VDC | 1.4 | | | |
| BD CBW Shunt trip | BD CBW E26 | 24 VAC/VDC | 0.9 | | | |
| | BD CBW E10 | 110-130 VAC/VDC | 1.4 | | | |
| | BD CBW E44 | 220-240 VAC/250 VDC | 2.0 | | | |

# Accessories

## External accessories

### Rotary handle for panel door

- Handles with degree of protection IP66
- Handles allow opening the panel door only with the circuit breaker in the OFF position. The door can be opened with the circuit breaker in the ON position if the operator releases the handle safety lock (thermometry)
- Total locking (circuit breaker + panel door) in the OFF position with up to three padlocks
- Handles allow the installation of padlocks from 4 to 8 mm

## Handle coding

**MRX S - A - CBW3A - BU**

**Handle reference**
MRX: panel door rotary operating handle, UL Type 4X and IP66

**Handle size**
S: short style (CBW3A and CBW3B)
L: long style

**Supply**
A: supply of handle + shaft + mechanism
B: supply of handle + shaft

**Compatible CBW circuit breaker**
CBW3A
CBW3B
CBW-C (CBW3C)

**Handle color**
BU: blue
R: red with yellow flush plate

# Accessories

## Rotary handle for panel door

### Supply A: Handle + shaft + mechanism

- Degree of protection of the handle: IP66 / NEMA 4X
- Locking in the OFF position with up to three padlocks
- Handles allow the installation of padlocks from 4 to 8 mm

| Description | 3P or 4P compatible circuit breaker | Extension shaft (mm) | Handle type and length (mm) | Handle color |
|---|---|---|---|---|
| MRXS-A-CBW3A-R | CBW3A | 460 | Selector | Red with yellow flush plate |
| MRXS-A-CBW3B-R | CBW3B | 460 | Selector | Red with yellow flush plate |
| MRXS-A-CBW3A-BU | CBW3A | 460 | Selector | Blue |
| MRXS-A-CBW3B-BU | CBW3B | 460 | Selector | Blue |
| MRXL-A-CBW3A-R | CBW3A | 460 | Grip 105 | Red with yellow flush plate |
| MRXL-A-CBW3B-R | CBW3B | 460 | Grip 105 | Red with yellow flush plate |
| MRXL-A-CBW-C-R | CBW3C | 460 | Grip 158 | Red with yellow flush plate |
| MRXL-A-CBW3A-BU | CBW3A | 460 | Grip 105 | Blue |
| MRXL-A-CBW3B-BU | CBW3B | 460 | Grip 105 | Blue |
| MRXL-A-CBW-C-BU | CBW3C | 460 | Grip 158 | Blue |




*MRXS*


*MRXL*

### Supply B: Handle + shaft

- Degree of protection of the handle: IP66 / NEMA4X
- Locking in the OFF position with up to three padlocks
- Handles allow the installation of padlocks from 4 to 8 mm

| Description | 3P or 4P compatible circuit breaker | Extension shaft (mm) | Handle type and length (mm) | Handle color |
|---|---|---|---|---|
| MRXS-B-1-R | CBW3A<br>CBW3B | 460 | Selector | Red with yellow flush plate |
| MRXS-B-1-BU | CBW3A<br>CBW3B | 460 | Selector | Blue |
| MRXL-B-2-R | CBW3A<br>CBW3B | 460 | Grip 105 | Red with yellow flush plate |
| MRXL-B-4-R | CBW3C | 460 | Grip 158 | Red with yellow flush plate |
| MRXL-B-2-BU | CBW3A<br>CBW3B | 460 | Grip 105 | Blue |
| MRXL-B-4-BU | CBW3C | 460 | Grip 158 | Blue |



*MRXS*


*MRXL*

### MRH – Mechanism only

| Description | 3P or 4P compatible circuit breaker |
|---|---|
| MRH CBW3A | CBW3A |
| MRH CBW3B | CBW3B |
| MRH CBW-C | CBW3C |

# Accessories

## Internal rotary handle

### MRI - Rotary operating handle for direct operation of the circuit breaker

- Allows rotary operation of the circuit breaker
- Locking in the OFF position with up to three padlocks
- Handles allow the installation of padlocks from 4 to 8 mm

| Description | 3P or 4P compatible circuit breaker | Handle type and length (mm) | Handle color |
|---|---|---|---|
| MRI-CBW3A-R | CBW3A | Selector | Red |
| MRI-CBW3B-R | CBW3B | Selector | Red |
| MRI-CBW-C-R | CBW3C | Grip 105 | Red |
| MRI-CBW3A-BU | CBW3A | Selector | Blue |
| MRI-CBW3B-BU | CBW3B | Selector | Blue |
| MRI-CBW-C-BU | CBW3C | Grip 105 | Blue |

## Internal rotary handle with key

### MRK - Rotary operating handle for direct operation of the circuit breaker with key

- Allows rotary operation of the circuit breaker
- Allows the circuit breaker to be locked in the "OFF" position using a Ronis 601 type key
- Locking in the OFF position with up to three padlocks
- Handles allow the installation of padlocks from 4 to 8 mm

| Description | 3P or 4P compatible circuit breaker | Handle type and length (mm) | Handle color |
|---|---|---|---|
| MRK-CBW3A | CBW3A | Selector | Blue |
| MRK-CBW3B | CBW3B | Selector | Blue |
| MRK-CBW-C | CBW3C | Grip 105 | Blue |

## Padlock device

### PL – fixed padlock device

- Allows padlocking the circuit breaker in the OFF position
- Complies with the requirements of Regulatory Standard - NR10
- Allows the use of 1 to 3 padlocks from 4 to 8 mm
- Installation on standard circuit breaker (non-rotary) handle
- Fixed installation requires screw mounting to the circuit breaker

| Description | 3P or 4P compatible circuit breaker |
|---|---|
| PL CBW3A | CBW3A |
| PL CBW3B | CBW3B |
| PL CBW3C | CBW3C |

### Removable padlock device

- Allows padlocking the circuit breaker in the OFF position
- Complies with the requirements of Regulatory Standard - NR10
- Allows the use of 1 to 3 padlocks from 4 to 8 mm
- Installation on standard circuit breaker (non-rotary) handle
- Movable installation, no screws required, providing greater mobility

| Description | 3P or 4P compatible circuit breaker |
|---|---|
| TR CBW | CBW3A |
| | CBW3B |
| | CBW3C |

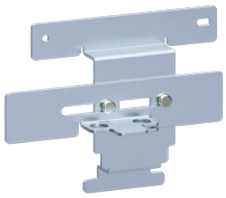
# Accessories

## Interlock

### BLIM – Front mechanical interlock

- Mechanical lock between two circuit breakers, preventing simultaneous closing (ON)
- Allows the use of 1 to 3 padlocks from 4 to 8 mm
- Manual operation

| Description | Compatible circuit breaker |
|---|---|
| BLIM CBW3A 3P | CBW3A 3P |
| BLIM CBW3B 3P | CBW3B 3P |
| BLIM CBW C 3P | CBW3C 3P |
| BLIM CBW3A 4P | CBW3A 4P |
| BLIM CBW3B 4P | CBW3B 4P |
| BLIM CBW-C 4P | CBW3C 4P |



## DIN rail mounting

### BFR – DIN rail base

- Allows fast mounting of the circuit breaker on DIN rail 35 mm

| Description | 3P or 4P compatible circuit breaker |
|---|---|
| BFR CBW3A | CBW3A |
| BFR CBW3B | CBW3B |

## Lugs and extension bar kits

### PC – Lugs for cable connection

- Terminal for fixing cables
- Allows direct connection of cables to the circuit breaker
- Recommended for use with straight ferrule or pin type terminals on cables
- Allows installation of copper or aluminum conductors
- Set with 3 pieces in the three-pole version (3P) and 4 pieces in the four-pole version (4P)

| Description | Compatible circuit breaker | Number of cables per terminal | Cable cross-section (mm²) |
|---|---|---|---|
| PC CBW3A AWG 14 3P | CBW3A 3P | 1 | 2.5 to 16 mm² |
| PC CBW3A AWG 7 3P | CBW3A 3P | 1 | 16 to 50 mm² |
| PC CBW3B 3P | CBW3B 3P | 1 | 25 to 120 mm² |
| PC2 CBW3C 3P | CBW3C 3P | 2 | 95 to 240 mm² |
| PC CBW3A AWG 14 4P | CBW3A 4P | 1 | 2,5 to 16 mm² |
| PC CBW3A AWG 7 4P | CBW3A 4P | 1 | 16 to 50 mm² |
| PC CBW3B 4P | CBW3B 3P | 1 | 25 to 120 mm² |
| PC2 CBW3C 4P | CBW3C 3P | 2 | 95 to 240 mm² |

*Notes: 1) Recommended cross sections for cables with stranding class 2, insulation of PVC 70 °C, (BR NBR 280 and IEC 60228 standards).*
*2) Maximum cross-section for ferrule terminal or bare wire without terminals.*

**PC CBW3A AWG14**

**PC CBW3A AWG7**

**PC CBW3B**

**PC CBW3C**

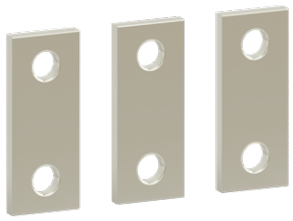
# Accessories

## Lugs and extension bar kits

### BE – Extension bar

- Extends the circuit breaker terminal length and allows connecting busbars or cables with ring-type crimp terminals
- Allows installation of copper or aluminum conductors
- Set with 3 pieces in the three-pole version (3P) and 4 pieces in the four-pole version (4P)

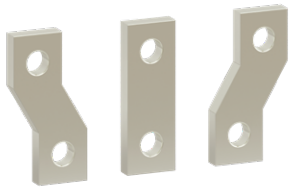
| Description | Compatible circuit breaker | Number of holes available for connection |
|---|---|---|
| BE CBW3A 3P | CBW3A 3P | 1 |
| BE CBW3B 3P | CBW3B 3P | 1 |
| BE CBW C 3P | CBW3C 3P | 1 |
| BE CBW3A 4P | CBW3A 4P | 1 |
| BE CBW3B 4P | CBW3B 4P | 1 |
| BE CBW C 4P | CBW3C 4P | 1 |



### BEX – Spacing bar

- Extends the circuit breaker terminal length and allows connecting busbars or cables with ring-type crimp terminals
- More room for installing conductors or busbars with wider spacing between bars
- Allows installation of copper or aluminum conductors
- Set with 3 pieces in the three-pole version (3P)

| Description | Compatible circuit breaker | Number of holes available for connection |
|---|---|---|
| BEX CBW3A 3P | CBW3A 3P | 1 |
| BEX CBW3B 3P | CBW3B 3P | 1 |
| BEX CBW C 3P | CBW3C 3P | 1 |



*Note: four-pole versions on request.*

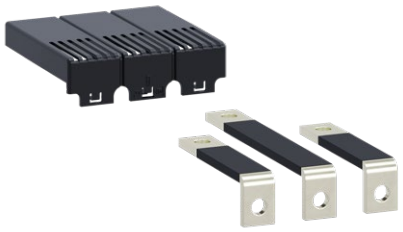
# Accessories

## Lugs and extension bar kits

### CT – Rear connection

- Allows direct connection of bars or cables to the rear of the circuit breaker
- Flat bar in “L” shape connected to the breaker’s front terminals, extending the connection to the rear
- Optimizes installation by occupying less space at the circuit breaker’s front terminals
- Increases the rear busbar separation capacity
- Allows installation of copper or aluminum conductors
- Set with 3 pieces in the three-pole version (3P)
- The item includes the terminal protection cover – CP

| Description | Compatible circuit breaker | Number of holes available for connection |
|---|---|---|
| CT CBW3A 3P | CBW3A 3P | 1 |
| CT CBW3B 3P | CBW3B 3P | 1 |
| CT CBW C 3P | CBW3C 3P | 1 |



*Notas: 1) Package includes the rear connection protection cover, protecting the respective front terminals of the circuit breaker.*
*2) Four-pole versions on request.*

### CTI – “I” type rear connection

- Allows direct connection of bars or cables to the rear of the circuit breaker
- Square bar in “I” shape, installed directly behind the breaker’s terminals, without requiring access to the front terminals, further optimizing space
- Optimizes installation by occupying less space at the circuit breaker’s front terminals
- Increases the rear busbar separation capacity
- Allows installation of copper or aluminum conductors
- Set with 3 pieces in the three-pole version (3P)
- The rear connection item includes the “I” type terminal protection cover – CPI

| Description | Compatible circuit breaker | Number of holes available for connection |
|---|---|---|
| CTI CBW3A 3P | CBW3A 3P | 1 |
| CTI CBW3B 3P | CBW3B 3P | 1 |
| CTI CBW C 3P | CBW3C 3P | 1 |

*Notes: 1) Package includes the “I” type rear connection protection cover, protecting the respective front terminals of the circuit breaker.*
*2) Four-pole versions on request.*

# Accessories

## Terminal insulation and protection

### CB – terminal shroud

- Accessory to increase the insulation of the front terminals
- Improves operator protection against accidental contact with live parts
- Matches the product design with no exposure of live parts
- Single-piece component protecting the respective front terminals on either the upper or lower side of the circuit breaker
- Degree of protection: IP20

| Description | Compatible circuit breaker |
|---|---|
| CB CBW3A 3P | CBW3A 3P |
| CB CBW3B 3P | CBW3B 3P |
| CB CBW C 3P | CBW3C 3P |

*Note: four-pole versions on request.*

### CP – Rear connection protection cover

- Accessory to increase the insulation of the front terminals when using the CT rear connection
- Improves operator protection against accidental contact with live parts
- Matches the product design with no exposure of live parts
- Single-piece component protecting the respective front terminals on either the upper or lower side of the circuit breaker
- Replacement part; already included with the CT – Rear connection
- Degree of protection: IP40

| Description | Compatible circuit breaker |
|---|---|
| CP CBW3A 3P | CBW3A 3P |
| CP CBW3B 3P | CBW3B 3P |
| CP CBW C 3P | CBW3C 3P |

*Note: four-pole versions on request.*

### CPI – "I" type rear connection protection cover

- Accessory to increase the insulation of the front terminals when using the CTI rear connection
- Improves operator protection against accidental contact with live parts
- Matches the product design with no exposure of live parts
- Single-piece component protecting the respective front terminals on either the upper or lower side of the circuit breaker
- Replacement part; already included with the CTI – "I" type rear connection
- Degree of protection: IP40

| Description | Compatible circuit breaker |
|---|---|
| CPI CBW3A 3P | CBW3A 3P |
| CPI CBW3B 3P | CBW3B 3P |
| CPI CBW C 3P | CBW3C 3P |

*Note: four-pole versions on request.*

### PB – Phase barrier

- Accessory to increase insulation between terminals, ensuring circuit breaker performance
- Set with 2 pieces in the three-pole version (3P) or 4 pieces in the four-pole version (4P)
- Cannot be installed together with terminal shrouds or protection covers.
- Replacement part; already included with the CBW circuit breaker as per the "Accessories included in the standard product" section
- Usage recommendations are provided in the "Use of phase barriers and terminals shrouds" section

| Description | Compatible circuit breaker |
|---|---|
| PB CBW3A 3P | CBW3A 3P |
| PB CBW3B 3P | CBW3B 3P |
| PB CBW C 3P | CBW3C 3P |
| PB CBW3A 4P | CBW3A 4P |
| PB CBW3B 4P | CBW3B 4P |
| PB CBW C 4P | CBW3C 4P |

# Remote operation

## AM – motor operator

The motor operator is an electromechanical device with the following main features:

- Remote operation of the circuit breaker via electrical command, or local operation via manual lever in case of power outage
- Control voltage can be different from the power for main power voltage, providing greater safety and comfort during operation
- Limit switch ensures de-energization of the internal motor after completing the operation

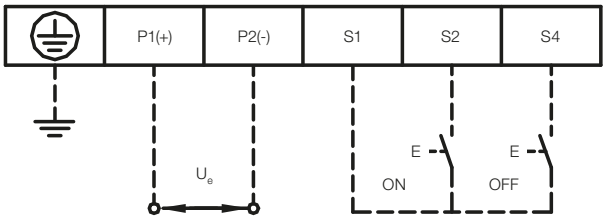
### MANUAL operation procedure:

1 - Set the sliding switch to MANUAL.
2 - Insert the operating handle (located on the side bracket) into the front slot and rotate it 180° clockwise.
Rotate it only 180° to ensure the operation of the internal micro switch.
3 - Store the handle back in the side bracket.

### AUTOMATIC operation procedure:

1 - Set the sliding switch to AUTO. In this position, the circuit breaker can be operated remotely with ON/OFF commands.
2 - Please, do not send ON/OFF signals simultaneously during motor operation.
3 - For circuit breakers equipped with an undervoltage release, energize the coil before commanding the motor operator.
If the breaker trips (overload or short-circuit), to resume manual or automatic operation, perform an OFF command before issuing an ON command.

### Wiring diagram




### Cable connection

| Reference | Cable connection (mm²) | Tightening torque (Nm) |
|---|---|---|
| AM CBW3C | 1.5 a 2.5 | 1.2 |

| Reference | Supply voltage | Applicable breaker | Opening time (ms) | Closing time (ms) | Consumption (W) | Operations per hour (maximum) |
|---|---|---|---|---|---|---|
| AM CBW3C E29 | 110 VAC - 50 and 60 Hz / 110 VDC | CBW3C | 700 | 420 | 35 | 20 |
| AM CBW3C E46 | 230 VAC - 50 and 60 Hz / 220 VDC | | | | | |
| AM CBW3C C03 | 24 VDC | | | | | |
| AM CBW3C C13 | 125 VDC | | | | | |

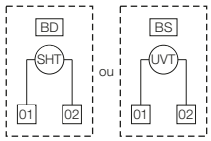
# Remote operation

## CTM – Mechanical changeover

The CTM consists of 2 CBW circuit breakers or switches, with or without motor operators and internal accessories, mounted on a BTIM base with mechanical interlocking between them. The mechanical interlock prevents simultaneous closing of both circuit breakers or switches.

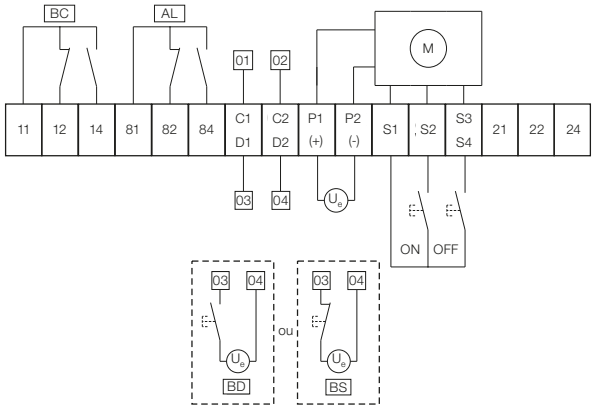
### Advantages of CTM

- Quick installation: supplied assembled, with two terminal blocks for electrical connections
- Safety: all assemblies are factory tested
- Space saving: compact and easy to install set




### Rear mechanical interlock base (BTIM)

- Exclusive base for CTM configuration, not sold separately
- Allows mechanical interlocking between 2 CBW circuit breakers
- Base interlocking allows the use of the motor operator or rotary actuators on the original circuit breaker handle




| Reference | Applicable breakers |
|---|---|
| BASE INTERTRAV BTIM3C 3P | CBW3C 3P |
| BASE INTERTRAV BTIM3C 4P | CBW3C 4P |

### CTM coding

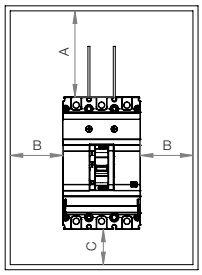
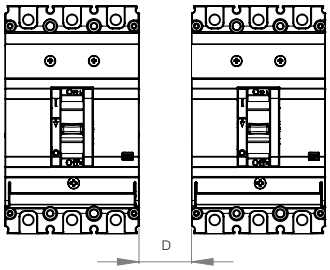
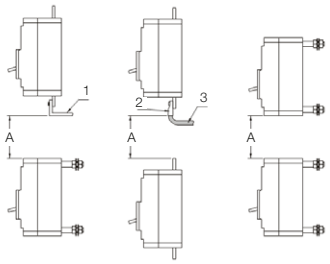
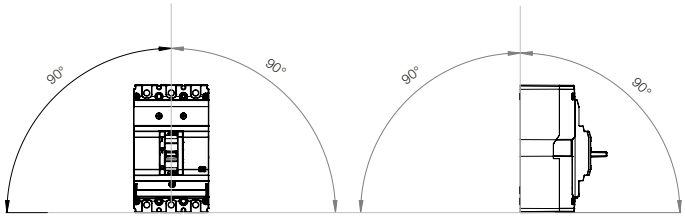
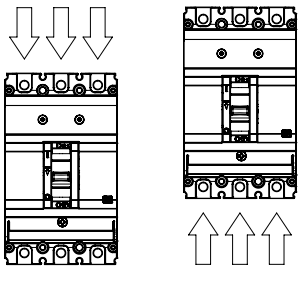
**BTIM base** + **CBW breaker** + **CBW internal accessories** + **Motor operator**

| CTM | 3C | - | N | 630 | FF | N | 630 | FF | 3P | - | 2 | 1 | E26 | 0 | C03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Circuit breaker 1 | | | Circuit breaker 2 | | | | | Contacts | | Coil | | Motorization |
| BTIM base definition | CBW breaker case | | Breaking capacity | Rated current | Trip unit | Breaking capacity | Rated current | Trip unit | Number of poles of 3P or 4P circuit breakers | | Auxiliary contacts | Alarm contact | Shunt trip (voltage code) | Undervoltage release (voltage code) | Motor operator (voltage code) |

- For 2 circuit breakers with the same case and the same number of poles
- Circuit breakers can have different current ratings, breaking capacities and trip units
- The number of accessories applies to each circuit breakers and will be considered the same for both
- Up to 2 auxiliary contacts
- Up to 1 alarm contact
- Up to 1 trip coil

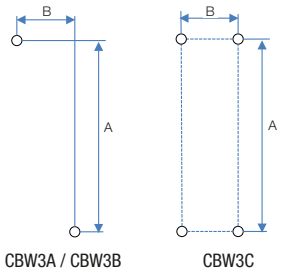
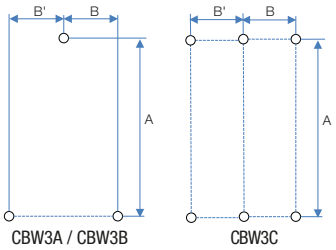
# Installation and application

## Installation of the circuit breakers

| IEC 60947-2 Standard | Unit | CBW3A | CBW3B | CBW3C |
|---|---|---|---|---|
| Recommended mounting distances   | mm | A: 60<br>C: 40<br>D: 45 | A: 60<br>C: 50<br>D: 45 | A: 100<br>C: 30<br>D: 30 |
| Recommended distances between circuit breakers for side by side mount   | mm | ≤ 100 A: 0<br>> 100 A: 10 | ≤ 200 A: 0<br>> 250 A: 10 | 0 |
| Recommended distances between circuit breakers for vertical mount:<br><br>1) Non-insulated connection.<br>2) Insulated cable.<br>3) Cable terminal/Ring terminal.   | mm | 150 | 150 | 200 |
| Mounting positions | - |   | | |
| Power grid input | - |  *Standard supply* *Reverse supply* | | |

# Installation and application

## Installation of the circuit breakers

| IEC 60947-2 Standard | Unit | CBW3A | CBW3B | CBW3C |
|---|---|---|---|---|
| Dimensional drawing and mount - 2P and 3P   | mm | A: 107<br>B: 25 | A: 126<br>B: 35 | A: 200<br>B: 45 |
| Dimensional drawing and mount - 4P   | mm | A: 107<br>B=B': 25 | A: 126<br>B=B': 35 | A: 200<br>B=B': 45 |
| Fixing screw to plate - 2P and 3P | | M4 x 76 x 2 parts | M4 x 76 x 2 parts | M5 x 100 x 4 parts |
| Fixing screw to plate - 4P plate | | M4 x 76 x 3 parts | M4 x 76 x 3 parts | M5 x 100 x 6 parts |
| Protrusion of the fixing screw in relation to the circuit breaker | mm | 8 | 8 | 23.5 |
| Tightening torque – fixation (Nm) | Nm | 1.5 | 1.5 | 5 |

# Installation and application

## Cables and busbar connection at terminals

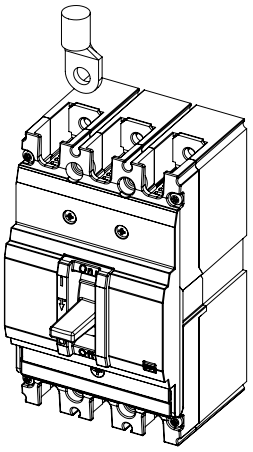
### Cable and busbar connection to terminals

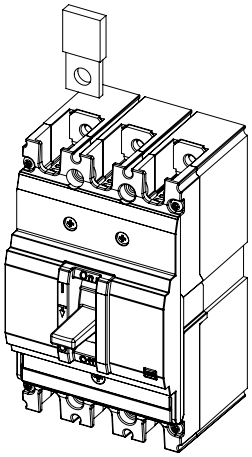
The connections to the circuit breaker terminals must observe the following recommended limit:

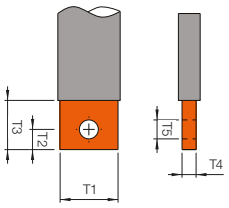
| | | | CBW3A | | CBW3B | | CBW3C |
|---|---|---|---|---|---|---|---|
| Connection with cable | 1 cable | Bare wire/ Wire ferrule | Through cable lug | | Through cable lug | | Through cable lug |
| | | Ring terminal | Direct to the circuit breaker terminal[2] | Through straight extension bar | Direct to the circuit breaker terminal[2] | Through straight extension bar | Through straight extension bar |
| | 2 cables | Bare wire/ Wire ferrule | Not recommended | | Not recommended | | Through cable lug |
| | | Ring terminal | Through straight extension bar | | Through straight extension bar | | Through straight extension bar |
| | 3 and 4 cables | Bare wire/ Wire ferrule | Not recommended | | Not recommended | | Not recommended |
| | | Ring terminal | Through straight extension bar | | Through straight extension bar | | Through straight extension bar |
| | More than 4 cables | Bare wire/ Wire ferrule | Not recommended | | Not recommended | | Not recommended |
| | | Ring terminal | Through straight extension bar | | Through straight extension bar | | Through straight extension bar |
| Connection with bar | | | Direct to the circuit breaker terminal | | Direct to the circuit breaker terminal | | Direct to the circuit breaker terminal |

*Notes: 1) The cross section of cables and bars must be observed, as well as the tightening torque informed in the product catalog.*
*2) Pay attention to the ring terminal size, comparing its dimension to the circuit breaker size. Some ring terminal models are bigger than the opening and depth of the circuit breaker, and it is not possible to connect them directly to the breaker terminal.*

#### Direct connection of bar or cable with ring terminal to the circuit breaker



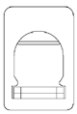





| | T1 mm | T2 mm | T3 mm | T4 mm | T5 mm | Torque N.m | Screw |
|---|---|---|---|---|---|---|---|
| CBW3A | 16 | 7 | 15 | 3.17 máx. | 6.2 | 3.5 | PH3 |
| CBW3B | 20 | 10 | 20 | 4~8 | 8.5 | 8 | Allen #6 |
| CBW3C | 30 | 14 | 30 | 6.35~16 | 10.75 | 20 | Allen #8 |

*Note: bars must be insulated up to the proximity of the terminal. Heat shrink tubing, paint or other suitable means can be used to insulate the bar.*

#### Direct cable connection by round terminal lugs (optional)

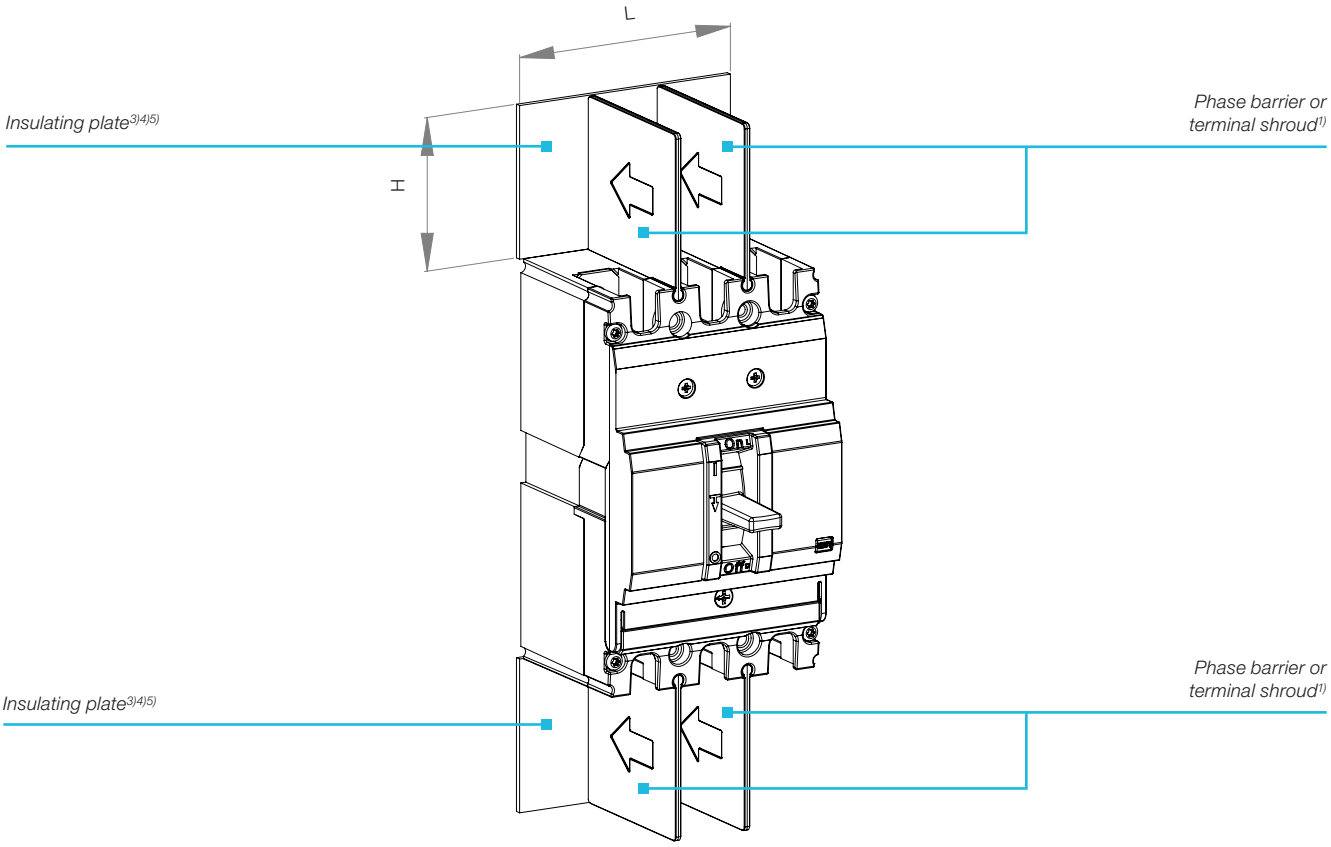
| | | CBW3A | | CBW3B | CBW3C |
|---|---|---|---|---|---|
| Cable lug schematic drawing | |  | |  |  |
| Number of cables | | AWG14 round terminal lugs for 1 cable | AWG7 round terminal lugs for 1 cable | Round terminal lugs for 1 cable | Round terminal lugs for 2 cables |
| Maximum cable cross section (mm²)[1] | Bare wire | 16 | 50 | 120 | 240 |
| | With ferrule terminal | 16 | 50 | 120 | 240 |
| Minimum cable cross section (mm²)[1] | | 2.5 | 4 | 25 | 85 |
| Cable length to be stripped for use in the circuit breaker cable lug (mm) | | 16 | 16 | 25 | 33 / 63 |
| Tightening torque (N.m) | | 6 | 6 | 25 | 40 |

*Note: 1) Recommended cross sections for cables with stranding class 2, insulation of PVC - 70 °C, according to the NM NBR 280 standard (IEC 60228).*

# Installation and application

## Use of phase barriers and terminal shrouds

The connections to the circuit breaker terminals must observe the following recommended limit:




*L ≥ circuit breaker width*
*H ≥ length of the circuit breaker terminal shroud or phase barrier*

| | | $U_e$ <500 V | | $U_e$ ≥500 V | |
|---|---|---|---|---|---|
| | | Input | Output | Input | Output |
| Connection with cable | Bare wire/ferrule terminal using cable lug | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory |
| | Ring terminal | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory |
| Connection with insulated bar | | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory | Use of phase barrier1) or terminal shroud is mandatory |
| Rear connection type2) | | Mandatory use of protection cover | Mandatory use of protection cover | Mandatory use of protection cover | Mandatory use of protection cover |
| Insulating plate3)4)5) | | Optional | Optional | Optional | Optional |

*Notes: 1) Phase barriers are provided with the CBW3A, CBW3B, CBW3C circuit breakers – 2 for three-pole or 3 for four-pole versions. In cases where additional barriers are required for both incoming and outgoing connections, this item is sold as an accessory.*
*2) Protection cover supplied with the rear connections for CWB circuit breakers.*
*3) Not supplied with molded case circuit breakers. The user must produce it.*
*4) Minimum characteristics of the material to be used as insulating plate:*
*- Dielectric strength ≥ 12 kV/mm.*
*- Flame retardant material.*
*- Recommended material: phenolite, polycarbonate.*
*5) Installation according to the figure above.*

# Installation and application

## Current and voltage derating according to altitude

| Altitude (m) | Derating for the rated current $I_n$ | Maximum rated operating voltage $U_e$ |
|---|---|---|
| 2,000 | 1.00 | 1.00 |
| 3,000 | 0.98 | 0.88 |
| 4,000 | 0.93 | 0.78 |
| 5,000 | 0.90 | 0.68 |

## Current derating according to ambient temperature

### CBW3A

| | 10 °C | 15 °C | 20 °C | 25 °C | 30 °C | 35 °C | 40 °C | 45 °C | 50 °C | 55 °C | 60 °C | 65 °C | 70 °C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 A | 1.19 | 1.16 | 1.13 | 1.10 | 1.07 | 1.04 | 1.01 | **1.00** | 0.98 | 0.97 | 0.95 | 0.94 | 0.90 |
| 20 A | 1.17 | 1.14 | 1.12 | 1.10 | 1.07 | 1.05 | 1.02 | **1.00** | 0.98 | 0.95 | 0.94 | 0.92 | 0.90 |
| 25 A | 1.14 | 1.12 | 1.10 | 1.09 | 1.07 | 1.04 | 1.02 | **1.00** | 0.98 | 0.96 | 0.95 | 0.93 | 0.91 |
| 32 A | 1.17 | 1.14 | 1.11 | 1.09 | 1.06 | 1.04 | 1.02 | **1.00** | 0.98 | 0.96 | 0.94 | 0.92 | 0.91 |
| 40 A | 1.17 | 1.14 | 1.12 | 1.10 | 1.07 | 1.05 | 1.02 | **1.00** | 0.99 | 0.97 | 0.95 | 0.94 | 0.92 |
| 50 A | 1.12 | 1.10 | 1.09 | 1.07 | 1.05 | 1.03 | 1.02 | **1.00** | 0.98 | 0.95 | 0.93 | 0.91 | 0.90 |
| 63 A | 1.10 | 1.09 | 1.07 | 1.06 | 1.04 | 1.03 | 1.01 | **1.00** | 0.97 | 0.95 | 0.94 | 0.92 | 0.91 |
| 70 A | 1.18 | 1.16 | 1.13 | 1.10 | 1.07 | 1.05 | 1.02 | **1.00** | 0.98 | 0.97 | 0.95 | 0.93 | 0.90 |
| 75 A | 1.21 | 1.17 | 1.14 | 1.11 | 1.08 | 1.06 | 1.02 | **1.00** | 0.98 | 0.97 | 0.94 | 0.91 | 0.89 |
| 80 A | 1.08 | 1.07 | 1.06 | 1.05 | 1.04 | 1.02 | 1.01 | **1.00** | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 |
| 90 A | 1.07 | 1.06 | 1.05 | 1.04 | 1.03 | 1.02 | 1.01 | **1.00** | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 |
| 100 A | 1.15 | 1.13 | 1.11 | 1.10 | 1.08 | 1.05 | 1.02 | **1.00** | 0.97 | 0.95 | 0.93 | 0.91 | 0.90 |
| 110 A | 1.06 | 1.05 | 1.04 | 1.03 | 1.03 | 1.02 | 1.01 | **1.00** | 0.98 | 0.96 | 0.94 | 0.93 | 0.91 |
| 125 A | 1.05 | 1.04 | 1.04 | 1.03 | 1.02 | 1.01 | 1.01 | **1.00** | 0.98 | 0.96 | 0.94 | 0.93 | 0.91 |

### CBW3B

| | 10 °C | 15 °C | 20 °C | 25 °C | 30 °C | 35 °C | 40 °C | 45 °C | 50 °C | 55 °C | 60 °C | 65 °C | 70 °C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 to 250 A | 1.18 | 1.16 | 1.13 | 1.10 | 1.08 | 1.05 | 1.02 | **1.00** | 0.98 | 0.94 | 0.90 | 0.86 | 0.82 |

### CBW3C

| | 10 °C | 15 °C | 20 °C | 25 °C | 30 °C | 35 °C | 40 °C | 45 °C | 50 °C | 55 °C | 60 °C | 65 °C | 70 °C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 320 to 650 A | 1.18 | 1.16 | 1.13 | 1.10 | 1.08 | 1.05 | 1.02 | **1.00** | 0.98 | 0.94 | 0.90 | 0.86 | 0.82 |

# Installation and application

## Thermal dissipation

### Circuit protection

**CBW3 line**

| | In (A) | 16 | 20 | 25 | 32 | 40 | 50 | 63 | 70 | 80 | 90 | 100 | 110 | 125 | 150 | 160 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CBW3A | Thermal dissipation (W/pole) | 1 | 1 | 2 | 4 | 4 | 5 | 8 | 4 | 5 | 6 | 7 | 7 | 10 | 11 | 12 |
| | mOhm | 3.91 | 2.50 | 3.20 | 3.91 | 2.50 | 2.00 | 2.02 | 0.82 | 0.78 | 0.74 | 0.70 | 0.58 | 0.64 | 0.49 | 0.47 |

| | In (A) | 100 | 125 | 160 | 200 | 250 |
|---|---|---|---|---|---|---|
| CBW3B | Thermal dissipation (W/pole) | 14 | 19 | 17 | 14 | 20 |
| | mOhm | 1.40 | 1.22 | 0.66 | 0.35 | 0.32 |

| | In (A) | 320 | 400 | 500 | 650 |
|---|---|---|---|---|---|
| CBW3C | Thermal dissipation (W/pole) | 12 | 19 | 31 | 50 |
| | mOhm | 0.12 | 0.12 | 0.12 | 0.12 |

## Instantaneous trip current

### Circuit protection

**CBW line**

| | In (A) | 16 | 20 | 25 | 32 | 40 | 50 | 63 | 70 | 75 | 80 | 90 | 100 | 110 | 125 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CBW3A | $I_m$ two-pole (A) | 500 | 500 | 500 | 500 | 500 | 500 | 750 | 750 | 750 | 1,000 | 1,000 | 1,000 | 1,250 | 1,250 |
| | $I_m$ one-pole (A) | 500 | 500 | 500 | 500 | 500 | 500 | 750 | 750 | 750 | 1,000 | 1,000 | 1,000 | 1,250 | 1,250 |

| | In (A) | 125 | 150 | 160 | 175 | 200 | 225 | 250 |
|---|---|---|---|---|---|---|---|---|
| CBW3B | $I_m$ two-pole (A) | 1,250 | 1,500 | 1,600 | 1,750 | 2,000 | 2,250 | 2,500 |
| | $I_m$ one-pole (A) | 1,250 | 1,500 | 1,600 | 1,750 | 2,000 | 2,250 | 2,500 |

| | In (A) | 320 | 400 | 500 | 650 |
|---|---|---|---|---|---|
| CBW3C | $I_m$ two-pole max. (A) | 3,200 | 4,000 | 5,000 | 6,500 |
| | $I_m$ two-pole min. (A) | 1,600 | 2,000 | 2,500 | 3,250 |
| | $I_m$ one-pole max. (A) | 4,160 | 5,200 | 6,500 | 8,450 |
| | $I_m$ one-pole mín. (A) | 2,080 | 2,600 | 3,250 | 4,225 |

*Note: For DC applications:*
*- Thermal release: has the same behavior as AC voltage.*
*- Magnetic release: AC rated value x 1.4142.*

## Performance level

| Product | B10 value | Dangerous failure rate | T1 service life | B10d | n_op [operations/year] | MTTFd,TE [years] | Operations per week | C [operations/hour] | λ_D |
|---|---|---|---|---|---|---|---|---|---|
| CBW3A | 8,000 | 50% | 20 years | 16,000 | 1,040 | 153.8461538 | 20 | 0.119047619 | 7.44048E-07 |
| CBW3B | 8,000 | 50% | 20 years | 16,000 | 260 | 615.3846154 | 5 | 0.029761905 | 1.86012E-07 |
| CBW3C | 3,000 | 50% | 20 years | 6,000 | 260 | 230.7692308 | 5 | 0.029761905 | 4.96032E-07 |

# Type 2 coordination guide, cascading and selectivity

Association of protection with motor starting components and with different protection devices. Operation and protection of motors and electrical circuits – Coordination, Cascading and Selectivity, see at:

**Access the QR code or click here**

*Note: in development for CBW3.*

# TTW01 type-tested assemblies according to IEC 61439

The TTW01 Type-Tested Assembly are manufactured according to the requirements of NBR IEC 61439-1/2/3, ensuring operational and maintenance safety, while also providing production continuity and reliable performance in the event of electrical faults, such as short circuits.

Designed to meet the demands of distribution boards for high-current loads and elevated short-circuit levels, the TTW01 line fulfills the highest standards of quality, safety, and performance.

Its modular design allows expansions without requiring assembly adaptations, and thanks to its modular structure, it can be installed by trained and accredited integrators without compromising the technical requirements of the standard. See more at:

**Access the QR code or click here**

*Note: in development for CBW3.*

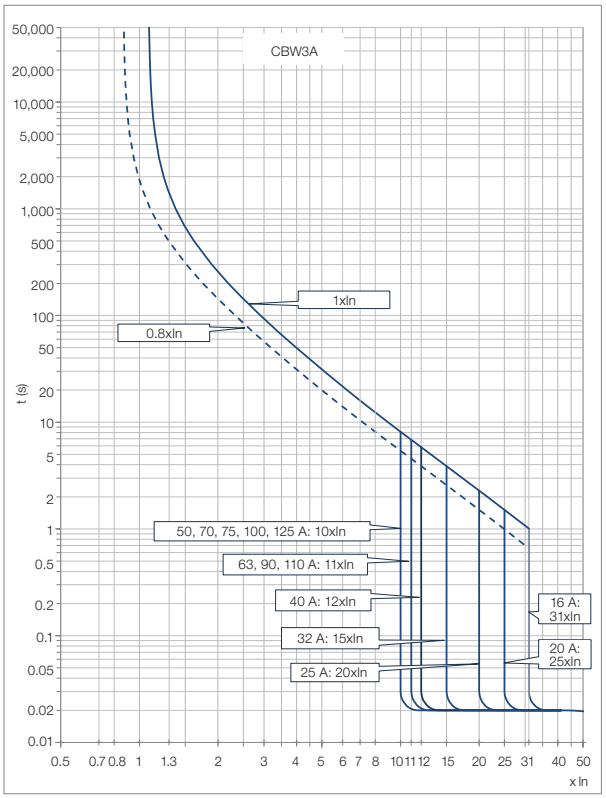
# Curves

## CBW3

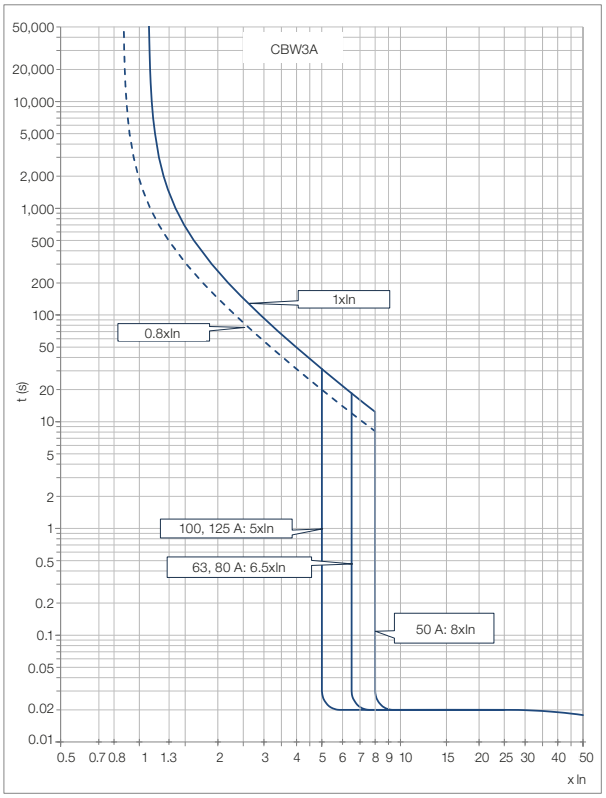
### Characteristic time x current curves (i x t)

#### CBW3A

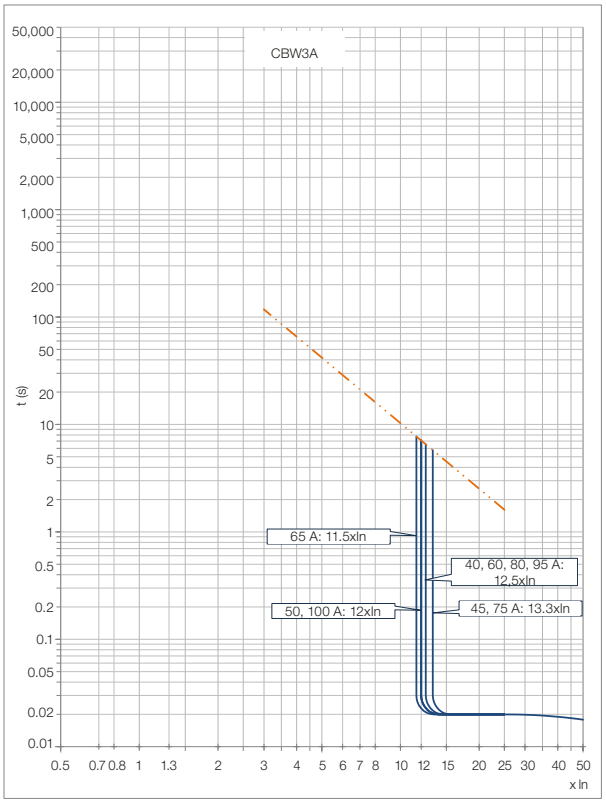
**Distribution protection**




**Generator protection**




**Motor protection**




### General notes on the curves:

- Circuit breakers according to IEC 60947-2 standard
- Solid lines represent the tripping region with adjustments at the maximum value of the circuit breaker
- Dashed lines represent the tripping region with adjustments at the minimum value of the circuit breaker in adjustable versions
- Thermal curves are represented from the cold state
- For the hot state, values are reduced to about 25% of the value represented on the thermal curve
- Magnetic curves show the tripping region considering a tolerance of ±20% relative to the nominal current of the magnetic adjustment in the bipolar trip
- For circuit breakers that only have magnetic tripping, the orange curve represents the thermal limit of the product

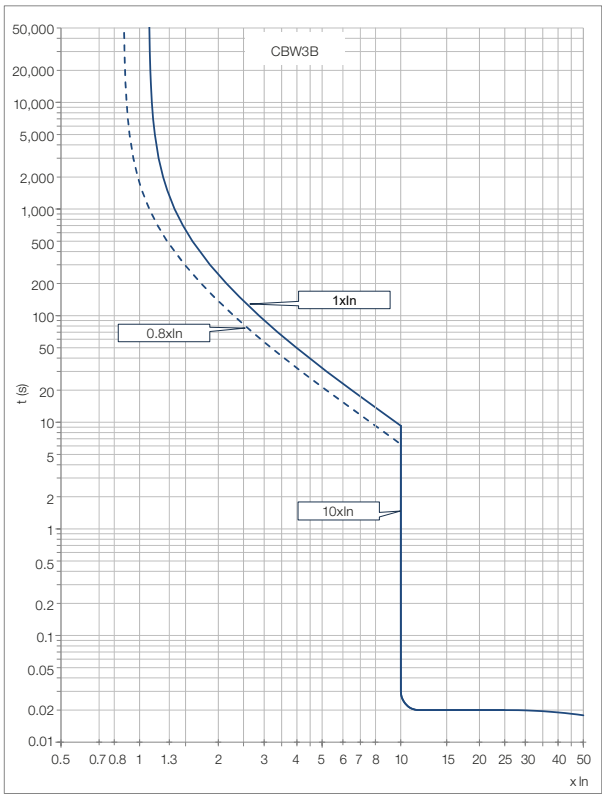
# Curves

## CBW3

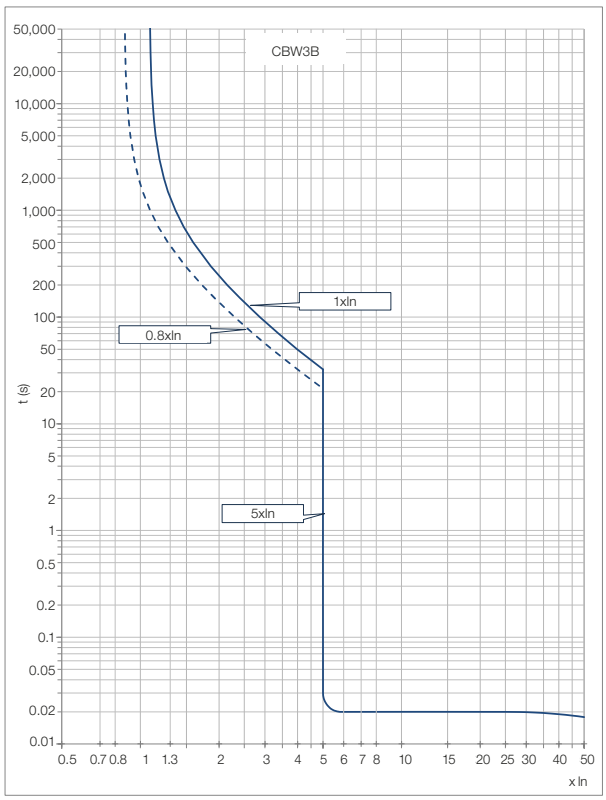
### Characteristic time x current curves (i x t)

#### CBW3B

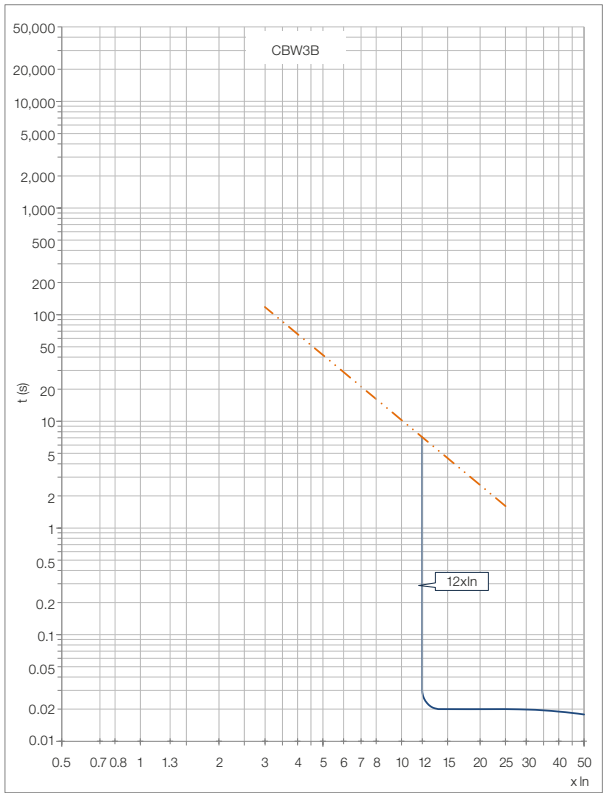
**Distribution protection**




**Generator protection**




**Motor protection**



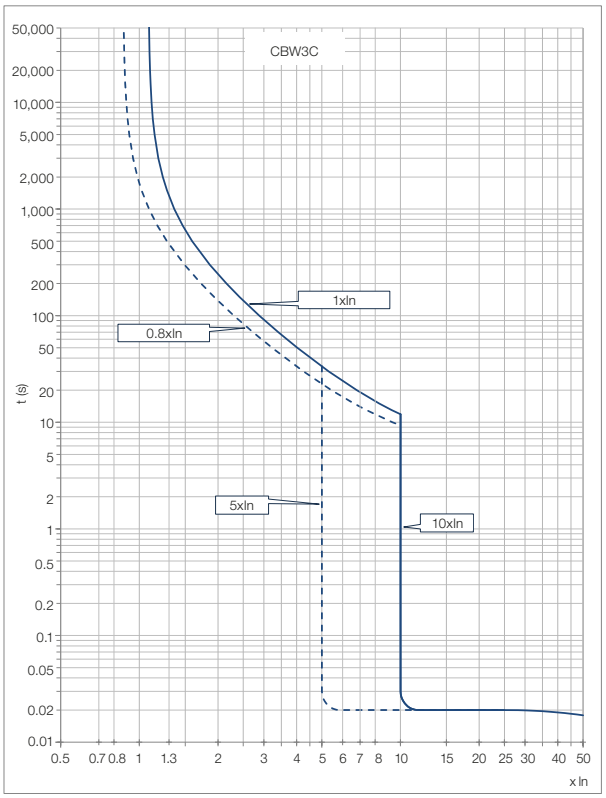
# Curves

## CBW3

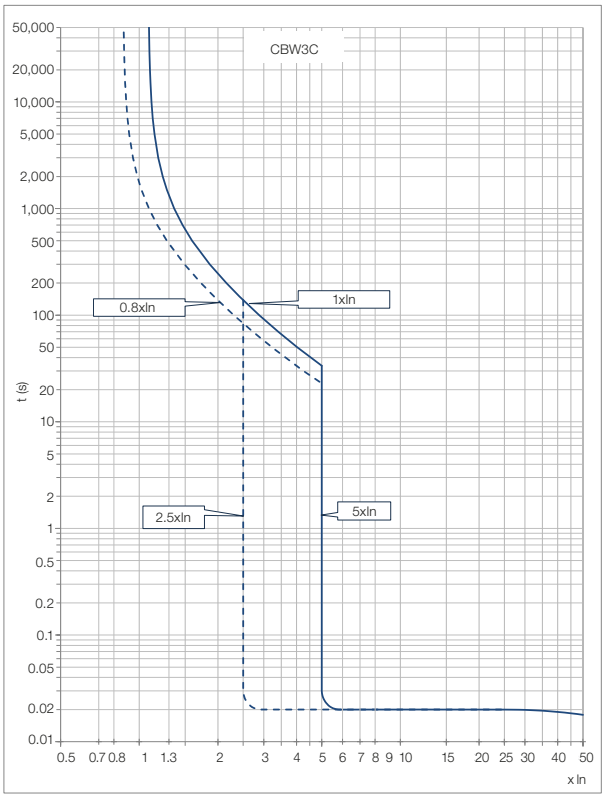
### Characteristic time x current curves (i x t)

#### CBW3C

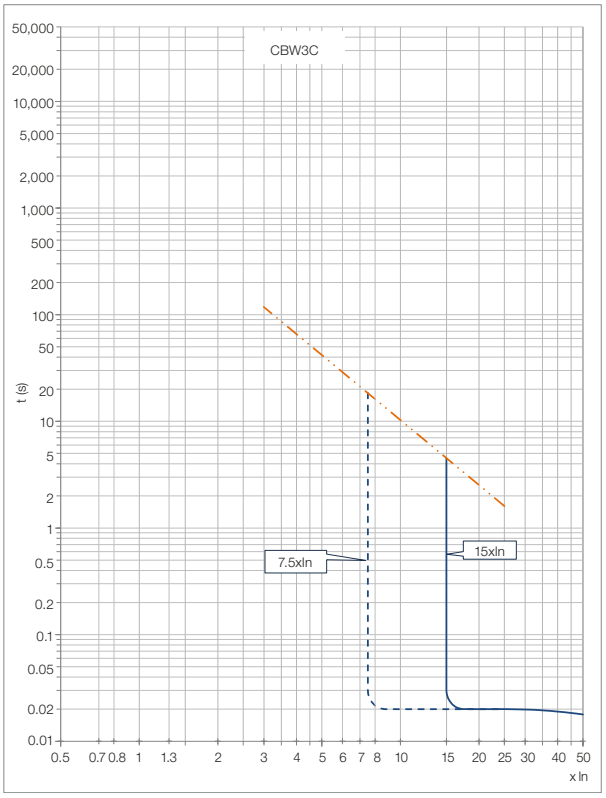
**Distribution protection**




**Generator protection**




**Motor protection**

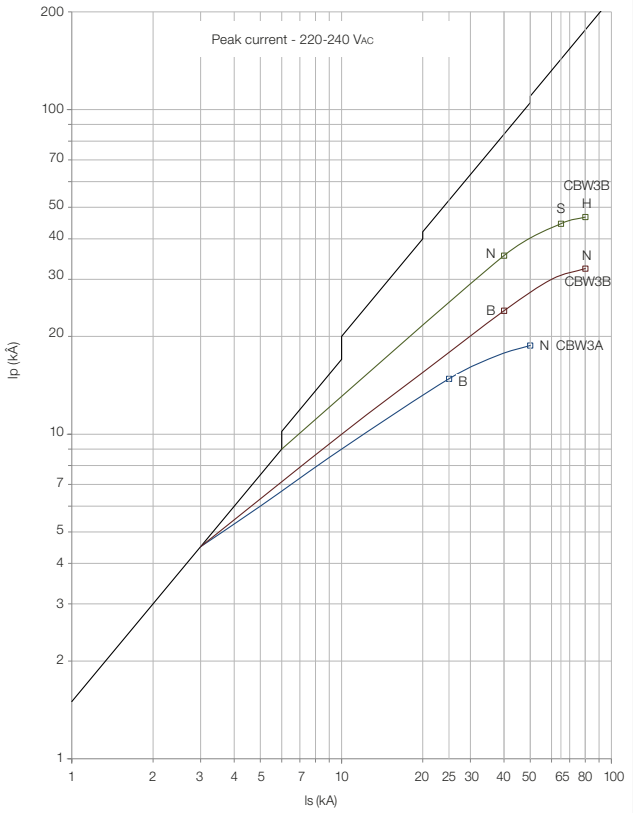


# Curves

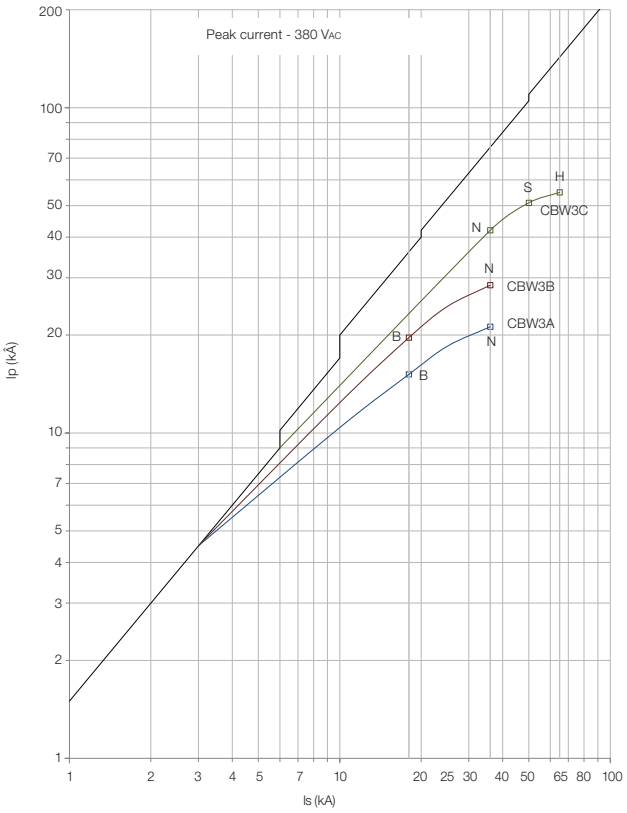
## CBW3

### Short-circuit current limiting curves

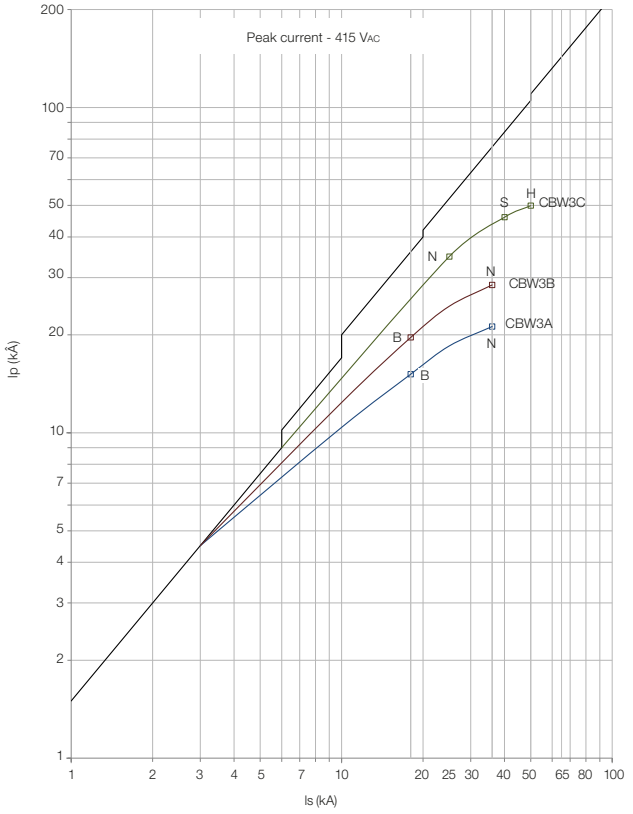
#### 220-240 Vac



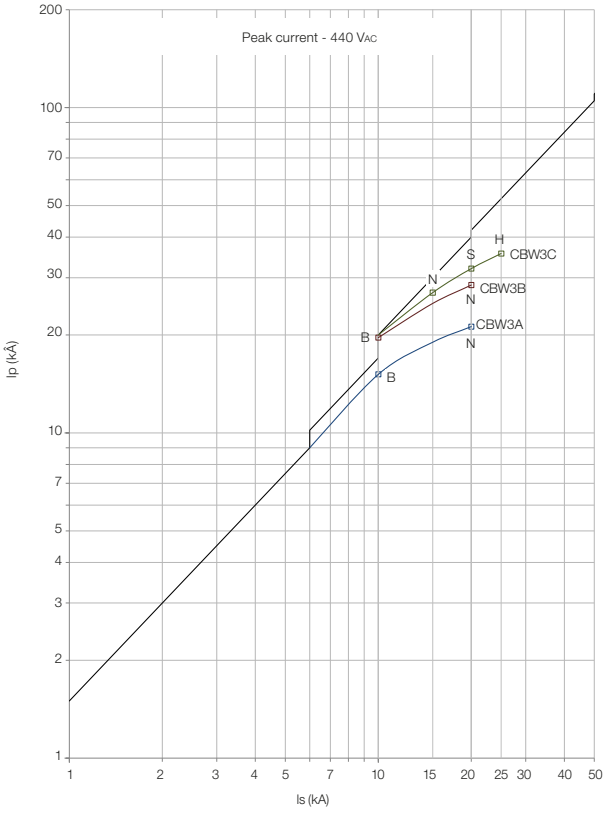

#### 380 Vac




#### 415 Vac




#### 440 Vac

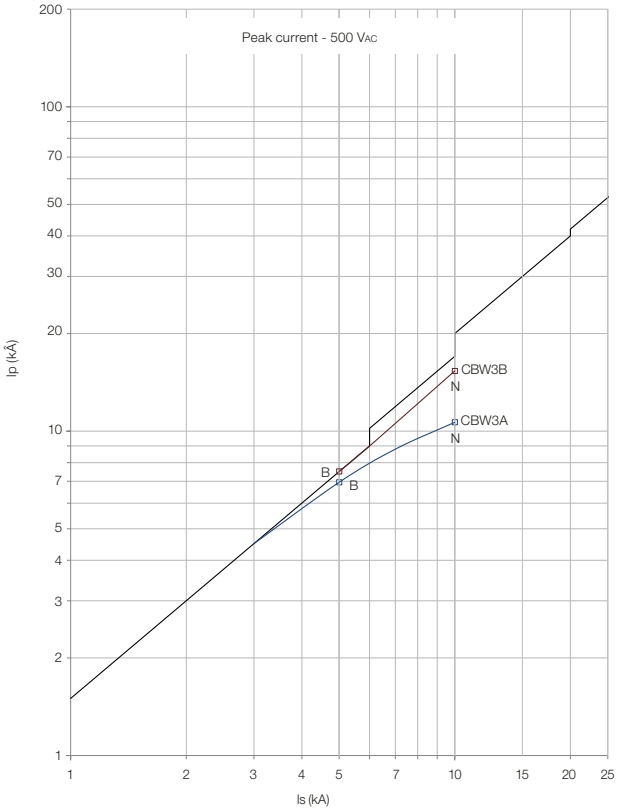


# Curves

## CBW3

### Short-circuit current limiting curves

**500 VAC**

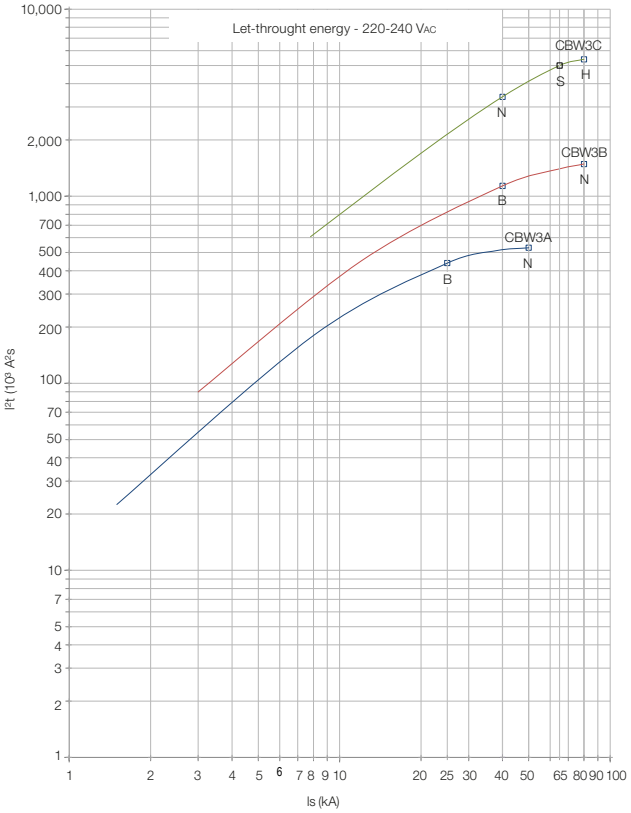


# Curves

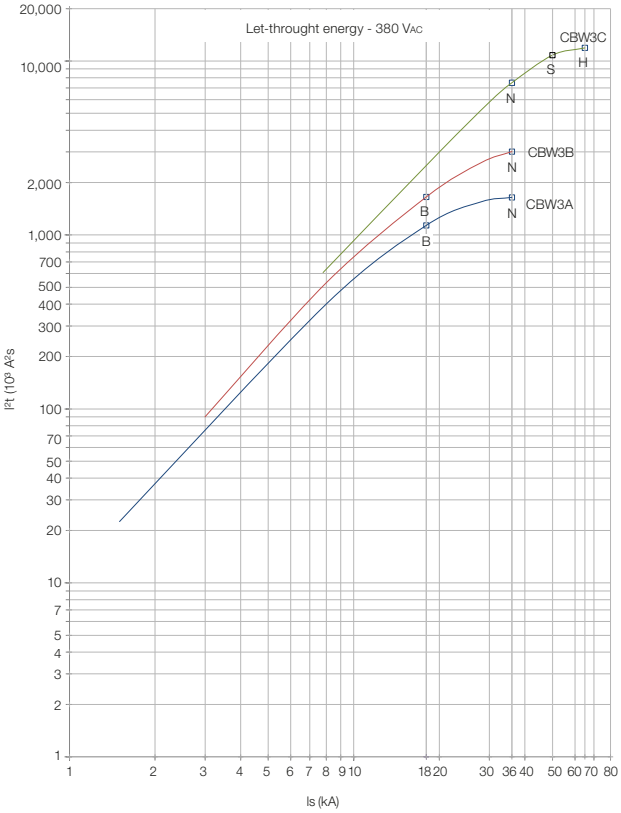
## CBW3

### Let-through energy curves (i².t)

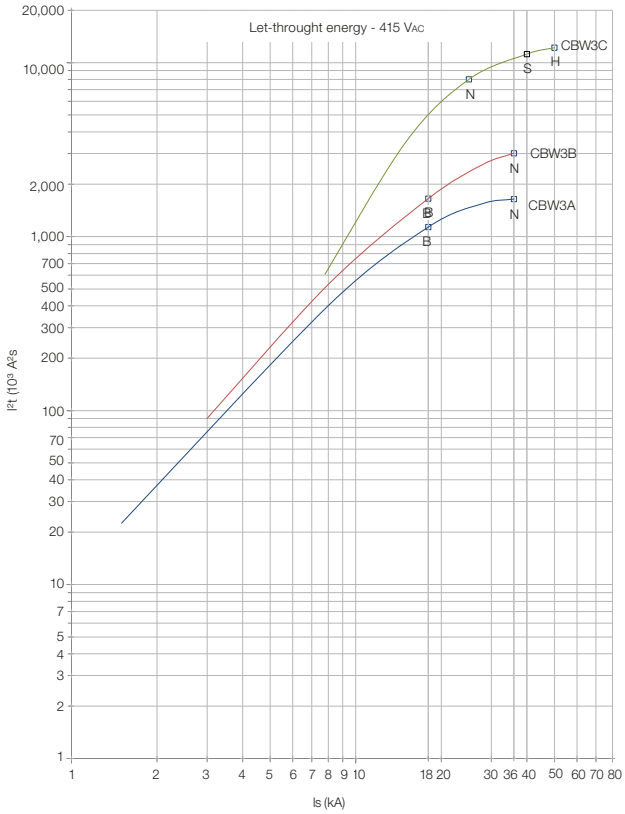
#### 220 VAC



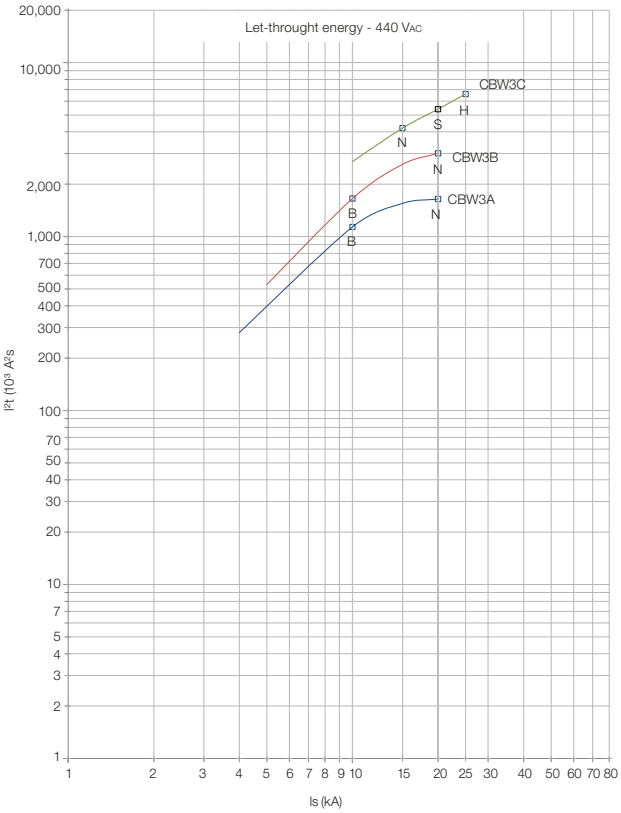

#### 380 VAC




#### 415 VAC




#### 440 VAC

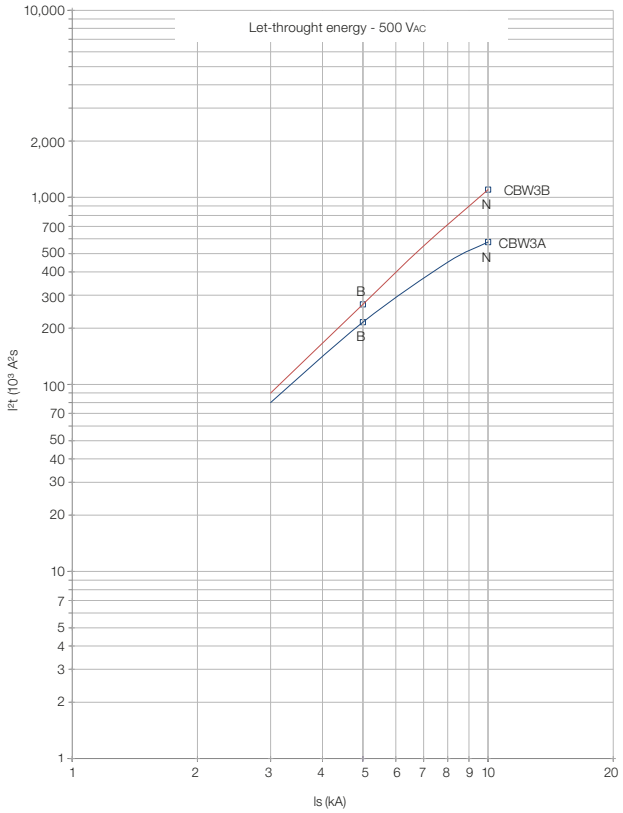


# Curves

## CBW3

### Let-through energy curves (i².t)

**500 VAC**

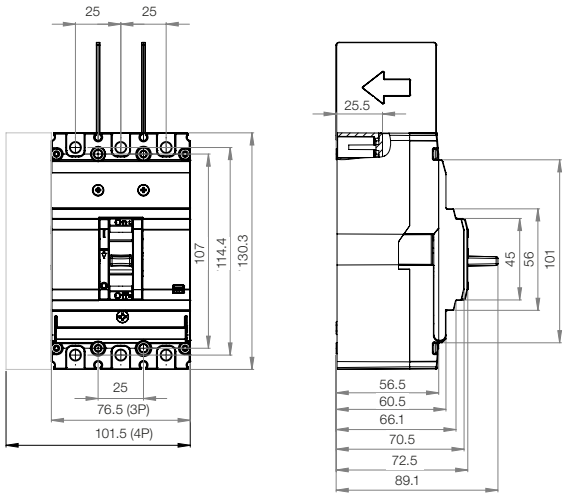


# Dimensional drawings

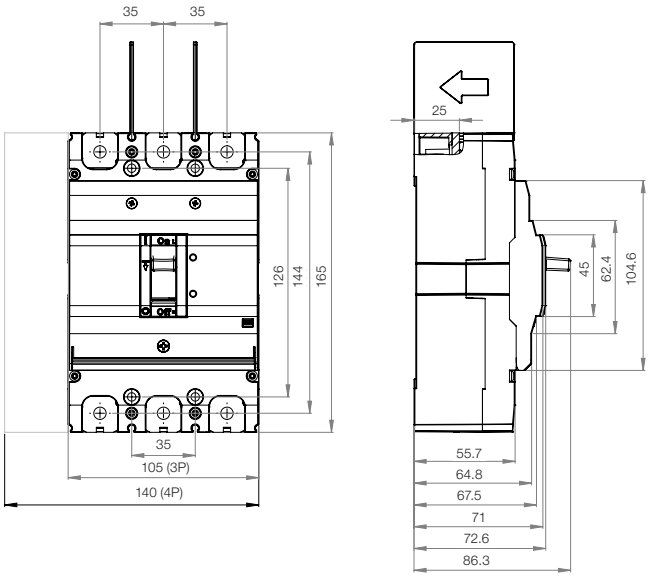
On the product page on the WEG website, it is possible to access the product's dimensional files in 2D and 3D formats, as well as installation guides.

## Circuit breaker with phase barriers

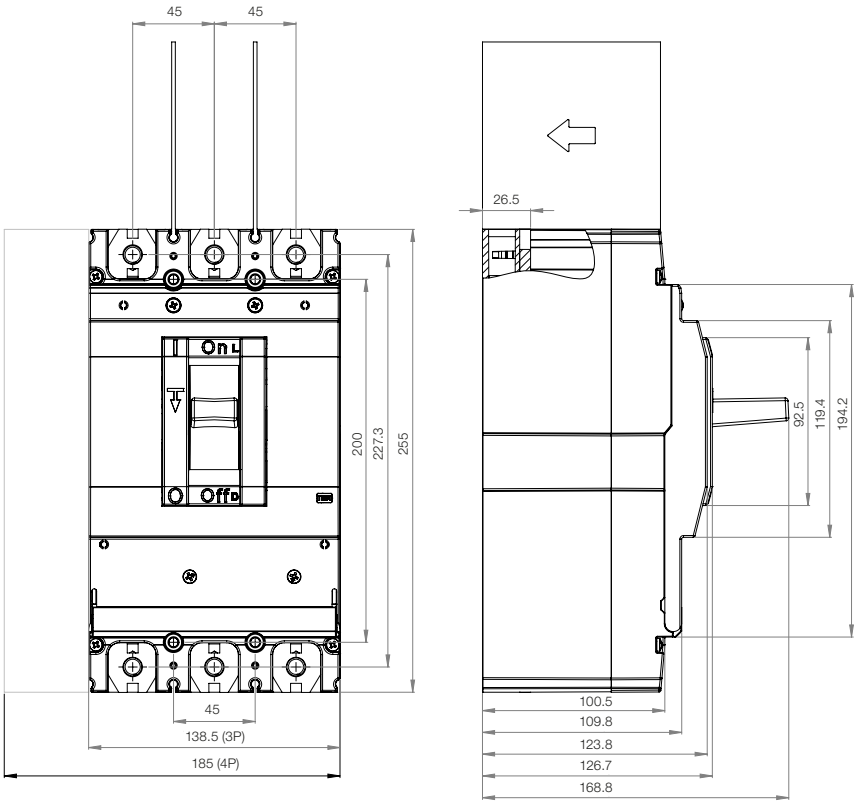
### CBW3A




### CBW3B




### CBW3C



# WEG codes and references

## Distribution circuit protection

| CBW3A $I_{cu}$="B" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 16 | 17784952 | CBW3A-B16DFF3 | 17791082 | CBW3A-B16DFF4 | 17791359 | CBW3A-B16DFT4 |
| | 20 | 17790721 | CBW3A-B20DFF3 | 17791084 | CBW3A-B20DFF4 | 17791360 | CBW3A-B20DFT4 |
| | 25 | 17790984 | CBW3A-B25DFF3 | 17791085 | CBW3A-B25DFF4 | 17791361 | CBW3A-B25DFT4 |
| | 32 | 17790987 | CBW3A-B32DFF3 | 17791087 | CBW3A-B32DFF4 | 17791362 | CBW3A-B32DFT4 |
| | 40 | 17790998 | CBW3A-B40DFF3 | 17791168 | CBW3A-B40DFF4 | 17791364 | CBW3A-B40DFT4 |
| | 50 | 17791002 | CBW3A-B50DFF3 | 17791171 | CBW3A-B50DFF4 | 17791365 | CBW3A-B50DFT4 |
| | 63 | 17791062 | CBW3A-B63DFF3 | 17791173 | CBW3A-B63DFF4 | 17791366 | CBW3A-B63DFT4 |
| | 70 | 17791003 | CBW3A-B70DFF3 | 17791174 | CBW3A-B70DFF4 | 17791408 | CBW3A-B70DFT4 |
| | 75 | 17790995 | CBW3A-B75DFF3 | 17791176 | CBW3A-B75DFF4 | 17791409 | CBW3A-B75DFT4 |
| | 80 | 17791006 | CBW3A-B80DFF3 | 17791177 | CBW3A-B80DFF4 | 17791410 | CBW3A-B80DFT4 |
| | 90 | 17791058 | CBW3A-B90DFF3 | 17791198 | CBW3A-B90DFF4 | 17791411 | CBW3A-B90DFT4 |
| | 100 | 17790997 | CBW3A-B100DFF3 | 17791199 | CBW3A-B100DFF4 | 17791412 | CBW3A-B100DFT4 |
| | 110 | 17791007 | CBW3A-B110DFF3 | 17791200 | CBW3A-B110DFF4 | 17791414 | CBW3A-B110DFT4 |
| | 125 | 17791065 | CBW3A-B125DFF3 | 17791201 | CBW3A-B125DFF4 | 17791415 | CBW3A-B125DFT4 |

| CBW3A $I_{cu}$="B" | In (A) | T-Adjust. - M-Fixed 3P | | T-Adjust. - M-Fixed 4P | | T-Adjust. - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 16...20 | 17791440 | CBW3A-B20DAF3 | 17791500 | CBW3A-B20DAF4 | 17791560 | CBW3A-B20DAT4 |
| | 20...25 | 17791441 | CBW3A-B25DAF3 | 17791501 | CBW3A-B25DAF4 | 17791561 | CBW3A-B25DAT4 |
| | 25...32 | 17791442 | CBW3A-B32DAF3 | 17791502 | CBW3A-B32DAF4 | 17791562 | CBW3A-B32DAT4 |
| | 32...40 | 17791443 | CBW3A-B40DAF3 | 17791503 | CBW3A-B40DAF4 | 17791563 | CBW3A-B40DAT4 |
| | 40...50 | 17791444 | CBW3A-B50DAF3 | 17791504 | CBW3A-B50DAF4 | 17791564 | CBW3A-B50DAT4 |
| | 50...63 | 17791445 | CBW3A-B63DAF3 | 17791505 | CBW3A-B63DAF4 | 17791565 | CBW3A-B63DAT4 |
| | 64...80 | 17791446 | CBW3A-B80DAF3 | 17791506 | CBW3A-B80DAF4 | 17791566 | CBW3A-B80DAT4 |
| | 80...100 | 17791447 | CBW3A-B100DAF3 | 17791507 | CBW3A-B100DAF4 | 17791567 | CBW3A-B100DAT4 |
| | 100...125 | 17791478 | CBW3A-B125DAF3 | 17791528 | CBW3A-B125DAF4 | 17791598 | CBW3A-B125DAT4 |

# WEG codes and references

## Distribution circuit protection

| CBW3A $I_{cu}$="N" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 16 | 17791069 | CBW3A-N16DFF3 | 17791202 | CBW3A-N16DFF4 | 17791416 | CBW3A-N16DFT4 |
| | 20 | 17791004 | CBW3A-N20DFF3 | 17791203 | CBW3A-N20DFF4 | 17791417 | CBW3A-N20DFT4 |
| | 25 | 17791005 | CBW3A-N25DFF3 | 17791204 | CBW3A-N25DFF4 | 17791428 | CBW3A-N25DFT4 |
| | 32 | 17791070 | CBW3A-N32DFF3 | 17791206 | CBW3A-N32DFF4 | 17791429 | CBW3A-N32DFT4 |
| | 40 | 17791063 | CBW3A-N40DFF3 | 17791207 | CBW3A-N40DFF4 | 17791430 | CBW3A-N40DFT4 |
| | 50 | 17791150 | CBW3A-N50DFF3 | 17791299 | CBW3A-N50DFF4 | 17791431 | CBW3A-N50DFT4 |
| | 63 | 17791018 | CBW3A-N63DFF3 | 17791300 | CBW3A-N63DFF4 | 17791432 | CBW3A-N63DFT4 |
| | 70 | 17791020 | CBW3A-N70DFF3 | 17791301 | CBW3A-N70DFF4 | 17791433 | CBW3A-N70DFT4 |
| | 75 | 17791022 | CBW3A-N75DFF3 | 17791302 | CBW3A-N75DFF4 | 17791434 | CBW3A-N75DFT4 |
| | 80 | 17791023 | CBW3A-N80DFF3 | 17791303 | CBW3A-N80DFF4 | 17791435 | CBW3A-N80DFT4 |
| | 90 | 17791024 | CBW3A-N90DFF3 | 17791304 | CBW3A-N90DFF4 | 17791436 | CBW3A-N90DFT4 |
| | 100 | 17791027 | CBW3A-N100DFF3 | 17791305 | CBW3A-N100DFF4 | 17791437 | CBW3A-N100DFT4 |
| | 110 | 17791079 | CBW3A-N110DFF3 | 17791306 | CBW3A-N110DFF4 | 17791438 | CBW3A-N110DFT4 |
| | 125 | 17791080 | CBW3A-N125DFF3 | 17791307 | CBW3A-N125DFF4 | 17791439 | CBW3A-N125DFT4 |

| CBW3A $I_{cu}$="N" | In (A) | T-Adjust. - M-Fixed 3P | | T-Adjust. - M-Fixed 4P | | T-Adjust. - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 16...20 | 17791479 | CBW3A-N20DAF3 | 17791529 | CBW3A-N20DAF4 | 17791599 | CBW3A-N20DAT4 |
| | 20...25 | 17791481 | CBW3A-N25DAF3 | 17791530 | CBW3A-N25DAF4 | 17791600 | CBW3A-N25DAT4 |
| | 25...32 | 17791482 | CBW3A-N32DAF3 | 17791532 | CBW3A-N32DAF4 | 17791601 | CBW3A-N32DAT4 |
| | 32...40 | 17791483 | CBW3A-N40DAF3 | 17791533 | CBW3A-N40DAF4 | 17791602 | CBW3A-N40DAT4 |
| | 40...50 | 17791485 | CBW3A-N50DAF3 | 17791535 | CBW3A-N50DAF4 | 17791603 | CBW3A-N50DAT4 |
| | 50...63 | 17791486 | CBW3A-N63DAF3 | 17791536 | CBW3A-N63DAF4 | 17791604 | CBW3A-N63DAT4 |
| | 64...80 | 17791487 | CBW3A-N80DAF3 | 17791537 | CBW3A-N80DAF4 | 17791605 | CBW3A-N80DAT4 |
| | 80...100 | 17791498 | CBW3A-N100DAF3 | 17791558 | CBW3A-N100DAF4 | 17791606 | CBW3A-N100DAT4 |
| | 100...125 | 17791499 | CBW3A-N125DAF3 | 17791559 | CBW3A-N125DAF4 | 17791607 | CBW3A-N125DAT4 |

# WEG codes and references

## Distribution circuit protection

| CBW3B $I_{cu}$="B" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 125 | 17792693 | CBW3B-B125DFF3 | 17792849 | CBW3B-B125DFF4 | 17792894 | CBW3B-B125DFT4 |
| | 150 | 17792694 | CBW3B-B150DFF3 | 17792850 | CBW3B-B150DFF4 | 17792895 | CBW3B-B150DFT4 |
| | 160 | 17792695 | CBW3B-B160DFF3 | 17792851 | CBW3B-B160DFF4 | 17792896 | CBW3B-B160DFT4 |
| | 175 | 17792696 | CBW3B-B175DFF3 | 17792852 | CBW3B-B175DFF4 | 17792897 | CBW3B-B175DFT4 |
| | 200 | 17792697 | CBW3B-B200DFF3 | 17792853 | CBW3B-B200DFF4 | 17792948 | CBW3B-B200DFT4 |
| | 225 | 17792808 | CBW3B-B225DFF3 | 17792855 | CBW3B-B225DFF4 | 17792949 | CBW3B-B225DFT4 |
| | 250 | 17792809 | CBW3B-B250DFF3 | 17792856 | CBW3B-B250DFF4 | 17792950 | CBW3B-B250DFT4 |

| CBW3B $I_{cu}$="B" | In (A) | T-Adjust. - M-Fixed 3P | | T-Adjust. - M-Fixed 4P | | T-Adjust. - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 100...125 | 17792970 | CBW3B-B125DAF3 | 17793039 | CBW3B-B125DAF4 | 17793109 | CBW3B-B125DAT4 |
| | 125...160 | 17792971 | CBW3B-B160DAF3 | 17793040 | CBW3B-B160DAF4 | 17793110 | CBW3B-B160DAT4 |
| | 160...200 | 17792972 | CBW3B-B200DAF3 | 17793042 | CBW3B-B200DAF4 | 17793112 | CBW3B-B200DAT4 |
| | 200...250 | 17792973 | CBW3B-B250DAF3 | 17793043 | CBW3B-B250DAF4 | 17793113 | CBW3B-B250DAT4 |

| CBW3B $I_{cu}$="N" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 125 | 17792810 | CBW3B-N125DFF3 | 17792857 | CBW3B-N125DFF4 | 17792951 | CBW3B-N125DFT4 |
| | 150 | 17792811 | CBW3B-N150DFF3 | 17792888 | CBW3B-N150DFF4 | 17792952 | CBW3B-N150DFT4 |
| | 160 | 17792813 | CBW3B-N160DFF3 | 17792889 | CBW3B-N160DFF4 | 17792953 | CBW3B-N160DFT4 |
| | 175 | 17792814 | CBW3B-N175DFF3 | 17792890 | CBW3B-N175DFF4 | 17792954 | CBW3B-N175DFT4 |
| | 200 | 17792816 | CBW3B-N200DFF3 | 17792891 | CBW3B-N200DFF4 | 17792956 | CBW3B-N200DFT4 |
| | 225 | 17792817 | CBW3B-N225DFF3 | 17792892 | CBW3B-N225DFF4 | 17792968 | CBW3B-N225DFT4 |
| | 250 | 17792848 | CBW3B-N250DFF3 | 17792893 | CBW3B-N250DFF4 | 17792969 | CBW3B-N250DFT4 |

| CBW3B $I_{cu}$="N" | In (A) | T-Adjust. - M-Fixed 3P | | T-Adjust. - M-Fixed 4P | | T-Adjust. - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 100...125 | 17792974 | CBW3B-N125DAF3 | 17793044 | CBW3B-N125DAF4 | 17793114 | CBW3B-N125DAT4 |
| | 125...160 | 17792975 | CBW3B-N160DAF3 | 17793045 | CBW3B-N160DAF4 | 17793115 | CBW3B-N160DAT4 |
| | 160...200 | 17792976 | CBW3B-N200DAF3 | 17793046 | CBW3B-N200DAF4 | 17793116 | CBW3B-N200DAT4 |
| | 200...250 | 17793038 | CBW3B-N250DAF3 | 17793047 | CBW3B-N250DAF4 | 17793117 | CBW3B-N250DAT4 |

# WEG codes and references

## Distribution circuit protection

| CBW3C $I_{cu}$="N" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 300 | 17793322 | CBW3C-N300DFF3 | 17793428 | CBW3C-N300DFF4 | 17793496 | CBW3C-N300DFT4 |
| | 320 | 17793325 | CBW3C-N320DFF3 | 17793430 | CBW3C-N320DFF4 | 17793497 | CBW3C-N320DFT4 |
| | 400 | 17793326 | CBW3C-N400DFF3 | 17793431 | CBW3C-N400DFF4 | 17793528 | CBW3C-N400DFT4 |
| | 500 | 17793368 | CBW3C-N500DFF3 | 17793433 | CBW3C-N500DFF4 | 17793529 | CBW3C-N500DFT4 |
| | 630 | 17793370 | CBW3C-N630DFF3 | 17793435 | CBW3C-N630DFF4 | 17793531 | CBW3C-N630DFT4 |
| | 650 | 17793372 | CBW3C-N650DFF3 | 17793437 | CBW3C-N650DFF4 | 17793533 | CBW3C-N650DFT4 |

| CBW3C $I_{cu}$="S" | In (A) | T-Fixed - M-Fixed 3P | | T-Fixed - M-Fixed 4P | | T-Fixed - M-Fixed 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 300 | 17793374 | CBW3C-S300DFF3 | 17793488 | CBW3C-S300DFF4 | 17793535 | CBW3C-S300DFT4 |
| | 320 | 17793376 | CBW3C-S320DFF3 | 17793490 | CBW3C-S320DFF4 | 17793560 | CBW3C-S320DFT4 |
| | 400 | 17793379 | CBW3C-S400DFF3 | 17793492 | CBW3C-S400DFF4 | 17793561 | CBW3C-S400DFT4 |
| | 500 | 17793380 | CBW3C-S500DFF3 | 17793493 | CBW3C-S500DFF4 | 17793563 | CBW3C-S500DFT4 |
| | 630 | 17793383 | CBW3C-S630DFF3 | 17793494 | CBW3C-S630DFF4 | 17793564 | CBW3C-S630DFT4 |
| | 650 | 17793386 | CBW3C-S650DFF3 | 17793495 | CBW3C-S650DFF4 | 17793566 | CBW3C-S650DFT4 |

| CBW3C $I_{cu}$="S" | In (A) | T-Adjust. - M-Adjust. 3P | | T-Adjust. - M-Adjust. 4P | | T-Adjust. - M-Adjust. 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 225...320 | 17793579 | CBW3C-S320DAA3 | 17793645 | CBW3C-S320DAA4 | 17793787 | CBW3C-S320DAT4 |
| | 280...400 | 17793580 | CBW3C-S400DAA3 | 17793662 | CBW3C-S400DAA4 | 17793790 | CBW3C-S400DAT4 |
| | 350...500 | 17793583 | CBW3C-S500DAA3 | 17793688 | CBW3C-S500DAA4 | 17793792 | CBW3C-S500DAT4 |
| | 440...630 | 17793584 | CBW3C-S630DAA3 | 17793692 | CBW3C-S630DAA4 | 17793793 | CBW3C-S630DAT4 |
| | 455...650 | 17793586 | CBW3C-S650DAA3 | 17793697 | CBW3C-S650DAA4 | 17793794 | CBW3C-S650DAT4 |

| CBW3C $I_{cu}$="H" | In (A) | T-Adjust. - M-Adjust. 3P | | T-Adjust. - M-Adjust. 4P | | T-Adjust. - M-Adjust. 4P-N100% | |
|---|---|---|---|---|---|---|---|
| | 225...320 | 17793587 | CBW3C-H320DAA3 | 17793736 | CBW3C-H320DAA4 | 17793795 | CBW3C-H320DAT4 |
| | 280...400 | 17793619 | CBW3C-H400DAA3 | 17793762 | CBW3C-H400DAA4 | 17793839 | CBW3C-H400DAT4 |
| | 350...500 | 17793623 | CBW3C-H500DAA3 | 17793766 | CBW3C-H500DAA4 | 17793841 | CBW3C-H500DAT4 |
| | 440...630 | 17793625 | CBW3C-H630DAA3 | 17793780 | CBW3C-H630DAA4 | 17793846 | CBW3C-H630DAT4 |
| | 455...650 | 17793641 | CBW3C-H650DAA3 | 17793785 | CBW3C-H650DAA4 | 17793847 | CBW3C-H650DAT4 |

# WEG codes and references

## Generator circuit protection

| CBW3A $I_{cu}$="B" | In (A) | Im (A) | T-Adjust. - M-Fixed 3P | |
|---|---|---|---|---|
| | 40...50 | 250 | 17791619 | CBW3A-B50GAF3 |
| | 50...63 | 315 | 17791620 | CBW3A-B63GAF3 |
| | 64...80 | 400 | 17791621 | CBW3A-B80GAF3 |
| | 80...100 | 500 | 17791622 | CBW3A-B100GAF3 |
| | 100...125 | 625 | 17791623 | CBW3A-B125GAF3 |

| CBW3B $I_{cu}$="B" | In (A) | Im (A) | T-Adjust. - M-Fixed 3P | |
|---|---|---|---|---|
| | 100...125 | 625 | 17793161 | CBW3B-B125GAF3 |
| | 125...160 | 800 | 17793163 | CBW3B-B160GAF3 |
| | 160...200 | 1,000 | 17793165 | CBW3B-B200GAF3 |
| | 200...250 | 1,250 | 17793166 | CBW3B-B250GAF3 |

| CBW3C $I_{cu}$="N" | In (A) | Im (A) | T-Adjust. - M-Adjust. 3P | | T-Adjust. - M-Adjust. 4P | |
|---|---|---|---|---|---|---|
| | 225...320 | 800...1,600 | 17793858 | CBW3C-N320GAA3 | 17793874 | CBW3C-N320GAA4 |
| | 280...400 | 1,000...2,000 | 17793861 | CBW3C-N400GAA3 | 17793878 | CBW3C-N400GAA4 |
| | 350...500 | 1,250...2,500 | 17793865 | CBW3C-N500GAA3 | 17793884 | CBW3C-N500GAA4 |
| | 440...630 | 3,575...3,150 | 17793869 | CBW3C-N630GAA3 | 17793900 | CBW3C-N630GAA4 |
| | 455...650 | 1,625...3,250 | 17793870 | CBW3C-N650GAA3 | 17793901 | CBW3C-N650GAA4 |

## Motor circuit protection

| CBW3A $I_{cu}$="N" | In (A) | Im (A) | M-Fixed 3P | |
|---|---|---|---|---|
| | 25 | 300 | 17791624 | CBW3A-N25MMF3 |
| | 32 | 384 | 17791625 | CBW3A-N32MMF3 |
| | 40 | 480 | 17791626 | CBW3A-N40MMF3 |
| | 50 | 600 | 17791627 | CBW3A-N50MMF3 |
| | 63 | 780 | 17791658 | CBW3A-N65MMF3 |
| | 80 | 960 | 17791659 | CBW3A-N80MMF3 |
| | 90 | 1,140 | 17791660 | CBW3A-N95MMF3 |

| CBW3B $I_{cu}$="N" | In (A) | Im (A) | M-Fixed 3P | |
|---|---|---|---|---|
| | 80 | 960 | 17793238 | CBW3B-N80MMF3 |
| | 95 | 1,140 | 17793239 | CBW3B-N95MMF3 |
| | 105 | 1,260 | 17793240 | CBW3B-N105MMF3 |
| | 125 | 1,500 | 17793241 | CBW3B-N125MMF3 |
| | 150 | 1,800 | 17793242 | CBW3B-N150MMF3 |
| | 185 | 2,220 | 17793243 | CBW3B-N185MMF3 |

| CBW3C $I_{cu}$="H" | In (A) | Im (A) | M-Adjust. 3P | |
|---|---|---|---|---|
| | 320 | 2,400...3,840 | 17794019 | CBW3C-H320MMA3 |
| | 400 | 3,000...4,800 | 17794023 | CBW3C-H400MMA3 |

# Overview of circuit breakers

| | Dimensions *(frames)* | Currents *(A)* | Protection *Thermomagnetic* | Protection *Electronics* | Breaking capacity $I_{cu}$ @ 380 $V_{AC}$ |
|---|---|---|---|---|---|
| **MDW, MDWP miniature circuit breaker** | | | | | |
|  | Frame 1 (MDWP)<br>Frame 2 (MDW) | 2 to 63<br>70 to 125 | Fixed | - | 3 |
| **MDWS miniature circuit breaker** | | | | | |
|  | Frame 1 | 2 to 63 | Fixed | - | 6 |
| **MDWH miniature circuit breaker[1)]** | | | | | |
|  | Frame 1<br>Frame 2 | 6 to 63<br>70 to 125 | Fixed | - | 10[1)] |
| **CBW3 molded case circuit breaker** | | | | | |
|  | 125<br>250<br>650 | 16 to 125<br>125 to 250<br>300 to 650 | Fixed and adjustable | - | 18 - 36<br>18 - 36<br>36 - 65 |

*Note: 1) MDWH at 220 $V_{AC}$ $I_{cu}$ = 20 kA.*

# Overview of circuit breakers

| | Dimensions *(frames)* | Currents *(A)* | Protection *Thermomagnetic* | Protection *Electronics* | Breaking capacity $I_{cu}$ @ 380 VAC |
|---|---|---|---|---|---|
| **DW molded case circuit breaker** | | | | | |
|  | 160 | 16 to 160 | Fixed and adjustable | - | 18 - 80 |
| | 250 | 100 to 250 | | | 18 - 80 |
| | 400 | 200 to 400 | | | 35 - 65 |
| | 650 | 320 to 650 | | | 50 - 65 |
| | 800/1000 | 320 to 1,000 | | Adjustable | 35 - 65 |
| | 1600 | 1,250 to 1,600 | - | Adjustable | 50 - 65 |
| **ACW high-capacity molded case circuit breaker** | | | | | |
|  | 100/160 | 20 to 160 | Fixed and adjustable | - | 85 - 150 |
| | 101/161/250 | 16 to 250 | | Adjustable | 85 - 150 |
| | 400/630 | 160 to 400 | | | 85 - 150 |
| | 800 | 630 to 800 | | | 100 |
| | 1600 | 800 to 1,600 | | | |
| **ABW/ABWC air circuit breaker** | | | | | |
|  | 800/1600 | 320 to 1,600 | - | Adjustable | 65 |
| | 2000/2500/3200 | 800 to 3,200 | | | 85 |
| | 4000/5000 | 1,600 to 5,000 | | | 100 |
| | 6300 | 2,520 to 6,300 | | | 120 |

# **Global presence** is essential, as much as understanding your needs.

## Global Presence

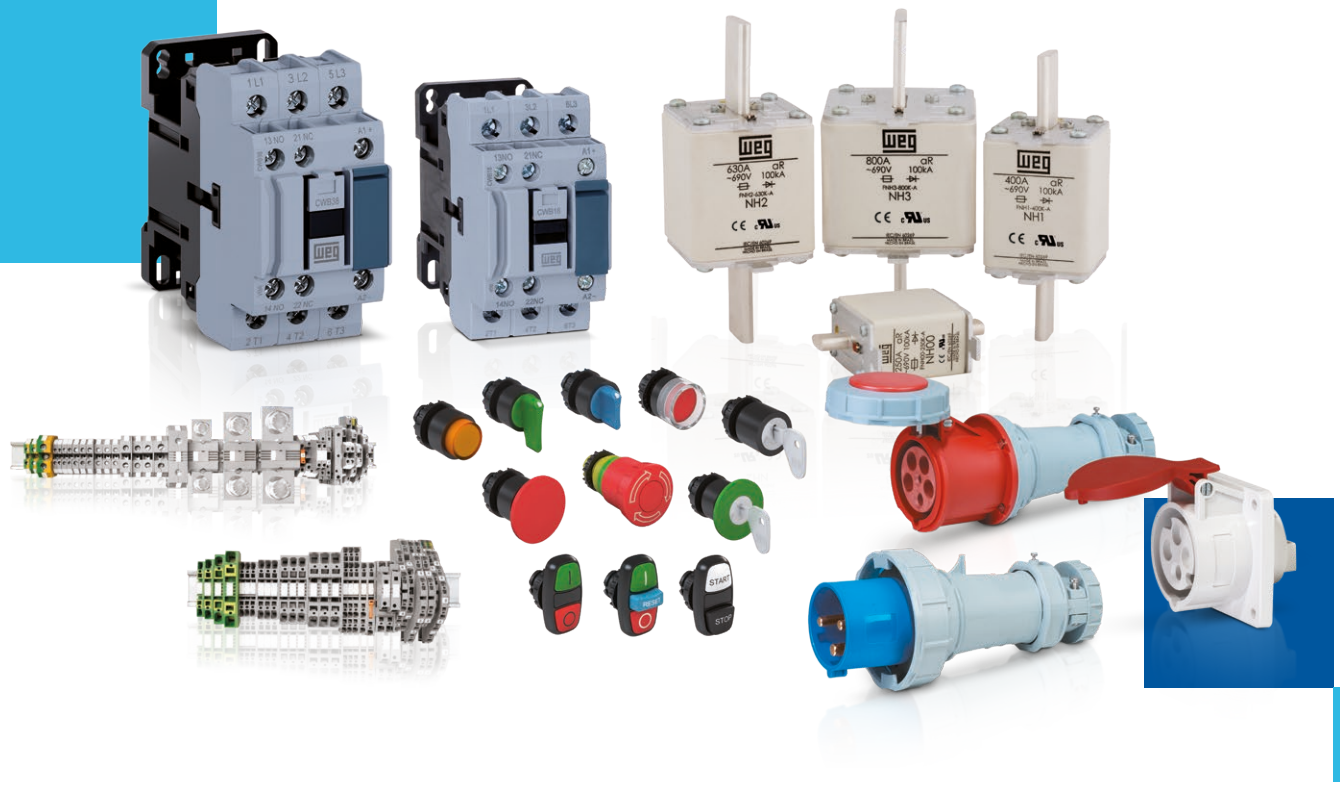
With more than 47,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our ***CBW Molded-Case Circuit Breakers*** are the right choice for your application and business, assuring safety, efficiency and reliability.

- **Availability** is to have a global support network
- **Partnership** is to create solutions that suits your needs
- **Competitive edge** is to unite technology and inovation

# Learn More

## High performance and reliable products to improve your production process.



Excelence is to provide a whole solution in industrial automation that improves our customers productivity.

**Visit:** **www.weg.net**

**youtube.com/wegvideos**

The scope of WEG Group solutions
is not limited to products and solutions
presented in this catalogue.
**To see our portfolio, contact us.**

**For WEG's worldwide**
**operations visit our website**

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