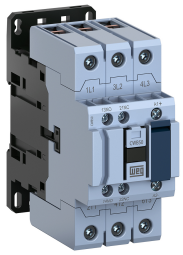
# DATASHEET
## Contactors



## Main Features

| | |
|---|---|
| Reference | : CWB |
| Product code | : 13851363 |
| Rated current Ie AC-3 (Ue ≤ 440 V) | : 50 A |
| Main contacts (power) | : 3 NO |
| Auxiliary contacts | : 1 NO + 1 NC |
| Control voltage | : 24V 50/60Hz |
| Type of terminal | : Screw |

**Basic data**

| | | |
|---|---|---|
| Rated utilization voltage Ue | | |
| - IEC / UL | | : 1000 V / 600 V |
| Isolation voltage Ui (pollution degree 3) | | |
| - IEC / UL | | : 1000 V / 600 V |
| Rated impulse withstand voltage Uimp | | : 6 kV |
| - Frequency limits [1] | | : 25 Hz ... 400 Hz |
| - Mechanical lifespan | | |
| AC-operated contactor | | : 6 million |
| DC-operated contactor | | : 6 million |
| Electrical lifespan - Ie AC3 | | : 1.6 million |
| Number of coil terminals (AC Coil) | | |
| AC coil contactors | | : 2 |
| - DC coil contactors | | : 2 |
| Resistance to vibration (IEC 60068-2-6) | | |
| opened contactor | | : 4 g |
| closed contactor | | : 4 g |
| Resistance to mechanical shock (½ sinusoid = 11ms) | | |
| opened contactor | | : 10 g |
| closed contactor | | : 15 g |
| Installation | | : DIN 35 mm (EN 50022) |
| Degree of protection (IEC 60529) | | |
| Main circuit | | : IP10 |
| Control circuit | | : IP20 |

**Alternating current - control circuit**

| | | |
|---|---|---|
| Isolation voltage Ui (pollution degree 3) | | : 1000 V / 600 V |
| - IEC / UL | | |
| Standard voltages for 50/60 Hz | | : 12...550 V |
| Comand circuit operation limits | | |
| - control circuit 60 Hz | - pick up | : 0,5...0,8xUs |
| | - drop out | : 0,2...0,6xUs |
| - control circuit 50 Hz | - pick up | : 0,5...0,8xUs |
| | - drop out | : 0,2...0,6xUs |
| - Average coil consumption | | |
| - operating at 60 Hz | - closed magnetic circuit | : 14...21 VA |
| | - power factor (cos φ) | : 0.28 |
| | - Thermal power dissipated | : 4...5,5 W |
| | - closing the magnetic circuit | : 148...222 VA |
| - operating at 50 Hz | - closed magnetic circuit | : 22...32 VA |
| | - power factor (cos φ) | : 0.25 |
| | - Thermal power dissipated | : 5.5...7.8 W |
| | - closing the magnetic circuit | : 162...242 VA |
| Average time of operation | | |
| - closing the NO contacts | | : 10...15 ms |
| - opening the NO contacts | | : 8...12 ms |

**Direct current - command circuit**

| | |
|---|---|
| - IEC / UL | |
| Standard voltages | : |
| Comand circuit operation limits | |
| - pick up | : |
| - drop out | : |
| Average consumption | |
| - closed magnetic circuit | : |
| - closing the magnetic circuit | : |
| Thermal power dissipated | : |
| Average time of operation | |
| - closing the NO contacts | : |
| - opening the NO contacts | : |

**Main contacts (power)**

| | |
|---|---|
| Rated utilization current Ie | |
| - AC-3 (Ue ≤ 440 V) | : 50 A |

- AC-4 (Ue ≤ 440 V) : 00042
- AC-1 (θ ≤ 55 °C, Ue ≤ 690 V) : 90 A

Rated utilization voltage Ue
- IEC / UL : 1000 V / 600 V

Number of main contacts : 3 NO
Establishment capacity (IEC 60947) : 1000 A
Breaking capacity (IEC/EN 60947)
- Ue≤400V : 1000 A
- Ue=500V : 880 A
- Ue=690V : 640 A

Temporary permissible current (without previously current conduction during 15 min at θ ≤ 40 ºC)
- 1 sec : 820 A
- 10 sec : 400 A
- 10 sec : 400 A
- 1 min :
- 10 min : 110 A

Protection against short circuit of the contacts main fuse (gL/gG)
- @600V - UL/CSA : 5 kA
- type 1 coordenation : 100 A
- type 2 coordenation : Not available

Average power dissipated per pole
AC-1 (θ ≤ 55 °C, Ue ≤ 690 V) : 13 W
AC-3 (Ue ≤ 440 V) : 4 W

**Utilization category AC-3**

Rated current Ie (θ ≤ 55 ºC)
- Ue ≤ 440V : 50 A
- Ue ≤ 500V : 45 A
- Ue ≤ 690V : 35 A

Maximum percentage (600 ops./h) : 100 %

| Orientative values of power (IEC)-three-phase induction motors (50/60 Hz)-IV poles-1800 rpm | | |
|---|---|---|
| Voltage | kW | cv or HP |
| 220 / 240 V | 15 kW | 20 cv |
| 380 / 400 V | 22 kW | 29 cv |
| 415 / 440 V | 30 kW | 40 cv |
| 500 V | 30 kW | 40 cv |
| 660 / 690 V | 33 kW | 44 cv |

| Orientative values of power (UL) | | |
|---|---|---|
| Voltage | 1 Phase | 3 Phase |
| 120 V | 3 | Not available |
| 200 V | Not applicable | 15 |
| 208 V | Not available | Not available |
| 240 V | 10 | 20 |
| 480 V | Not available | 40 |
| 600 V | Not available | 40 |

**Utilization category AC-4**

Rated current Ie (θ ≤ 55 ºC)
- Ue ≤ 440V : 00042
- Ue ≤ 500V : 23,5 A
- Ue ≤ 690V : 18 A

| Orientative values of power (IEC)-three-phase induction motors (50/60 Hz)-IV poles-1800 rpm | | |
|---|---|---|
| Voltage | kW | cv or HP |
| 220 / 240 V | 5.5 kW | 7.4 HP |
| 380 / 400 V | 11 kW | 14.7 HP |
| 415 / 440 V | 11 kW | 14,7 HP |
| 500 V | 15 kW | 20.1 HP |
| 660 / 690 V | 15 kW | 20.1 HP |

**Utilization category AC-1 (3 P/NA)**

Maximum percentage (600 ops./h) : 1

| Maximum power operation θ ≤ 55ºC (three resistors) | |
|---|---|
| Voltage | Power |
| 220 / 240 V | 34 kW |
| 380 / 400 V | 59 kW |
| 415 / 440 V | 68.5 kW |
| 500 V | 77 kW |
| 660 / 690 V | 100 kW |

**Auxiliary contacts**

Standards compliance : IEC 600947-5-1
Insulation voltage Ui
- IEC / UL : 1000 V / 600 V

| | |
|---|---|
| Rated utilization voltage Ue | |
| - IEC / UL | : 690 V / 690 V |
| Conventional thermal current Ith (θ ≤ 55ºC) | : 10 A |
| Rated current Ie - IEC 60947-5-1/AC-15 | |
| - 220 / 240 V | : 6 A |
| - 380 / 440 V | : 4 A |
| - 500 V | : 2,5 A |
| - 660 / 690 V | : 1,5 A |
| Rated current Ie - IEC 60947-5-1/DC-13 | |
| - 24 V | : 4 A |
| - 48 V | : 2 A |
| - 110 V | : 0,7 A |
| - 220 V | : 0,3 A |
| - 440 V | : 0,15 A |
| Establishment capacity - (AC-15 and Ue ≤ 690V 50/60Hz) | : 10 x Ie |
| Interruption capacity - (AC-15 and Ue ≤ 400V 50/60Hz) | : 1 x Ie |
| Protection against short circuit of the contacts main fuse (gL/gG) | : 10 A |
| Control circuit reliability | : 17/5 V/mA |
| Electrical lifespan | : 1 Million |
| Mechanical lifespan | : 6 million |
| Non-overlapping time between NO and NC contacts | : 1,5 ms |
| Impedance per pole | : 2,5 mΩ |

**Connection**

Main contacts

Type of the screw : M6 internal hexagonal

Section of the conductors

| Type of the conductor | Section (IEC) | Section (UL) |
|---|---|---|
| Rigid cable | 1 x Not available | 1 x |
| | 2 x Not available | 2 x |
| Flexible cable without terminal | 1 x Not available | 1 x |
| | 2 x Not avaliable | 2 x |
| Flexible cable with terminal | 1 x Not contain | 1 x |
| | 2 x Not contain | 2 x |

Tightening torque (IEC/UL) : 5 Nm / 45 lb.in

Control circuit

Type of the screw : M3,5 Flat/Phillips

Section of the conductors

| Type of the conductor | Section (IEC) | Section (UL) |
|---|---|---|
| Rigid cable | 1 x 1...4 mm² | 1 x |
| | 2 x 1...4 mm² | 2 x |
| Flexible cable without terminal | 1 x 1...4 mm² | 1 x |
| | 2 x 1...4 mm² | 2 x |
| Flexible cable with terminal | 1 x 1...4 mm² | 1 x |
| | 2 x 1...2,5 mm² | 2 x |

Tightening torque (IEC/UL) : 1 Nm / 8.8 lb.in

**Direct current application**

Utilization category DC-1 (L/R ≤ 1 ms)

| | Rated utilization current (Ie) | | | |
|---|---|---|---|---|
| | Pole(s) in series | | | |
| Voltage | 1 | 2 | 3 | 4 |
| Ue ≤ 24V | 90 A | 90 A | Not available | Not available |
| Ue ≤ 48V | 90 A | 90 A | Not available | Not available |
| Ue ≤ 60V | 90 A | 90 A | Not available | Not available |
| Ue ≤ 125V | 15 A | 90 A | Not available | Not available |
| Ue ≤ 220V | 2 A | 10 A | Not available | Not available |
| Ue ≤ 440V | 1 A | 2 A | Not available | Not available |
| Ue ≤ 600V | Not available | 1 A | Not available | Not available |

Utilization category DC-3 (L/R ≤ 2.5 ms)

| | Rated utilization current (Ie) | | | |
|---|---|---|---|---|
| | Pole(s) in series | | | |
| Voltage | 1 | 2 | 3 | 4 |
| Ue ≤ 24V | 80 A | 80 A | Not available | Not available |
| Ue ≤ 48V | 00020 | 80 A | 80 A | Not available |
| Ue ≤ 60V | 00021 | 80 A | 80 A | Not available |
| Ue ≤ 125V | 5 A | 64 A | 80 A | Not available |
| Ue ≤ 220V | 1 A | 5 A | 45 A | Not available |
| Ue ≤ 440V | Not available | 1 A | 5 A | Not available |
| Ue ≤ 600V | Not available | Not available | 1 A | Not available |

Operation category DC-5 (L/R ≤ 15ms)

| | Rated utilization current (Ie) | | | |
|---|---|---|---|---|
| | Pole(s) in series | | | |
| Voltage | 1 | 2 | 3 | 4 |
| Ue ≤ 24V | 45 A | 45 A | 45 A | Not available |
| Ue ≤ 48V | 45 A | 45 A | 45 A | Not available |
| Ue ≤ 60V | 45 A | 45 A | 45 A | Not available |
| Ue ≤ 125V | 5 A | 45 A | 54 A | Not available |
| Ue ≤ 220V | 1 A | 5 A | 45 A | Not available |
| Ue ≤ 440V | Not available | 1 A | 5 A | Not available |
| Ue ≤ 600V | Not available | Not available | Not available | Not available |

**Ambient temperature**

Operation : -25 °C ... +55 °C
Storage : -55 °C ... +80 °C
Maximum altitude with no change of rated values [2] : 3000 m

**Dimensions**

Height : 115 mm (4.53 in)
Width : 54 mm (2.13 in)
Depth : 120.7 mm (4.75 in)
Weight : 0.91 kg

**Standards**

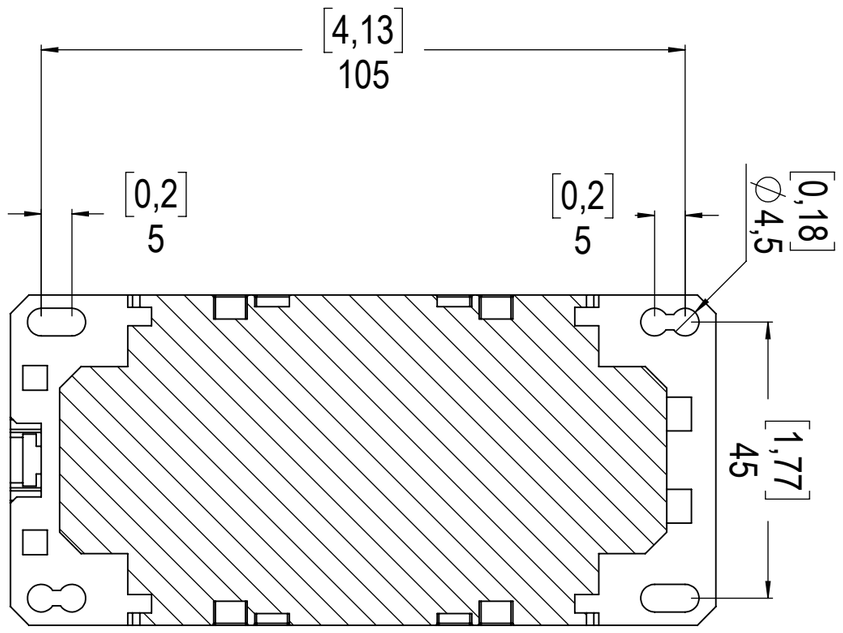
IEC 60947-1
UL 508

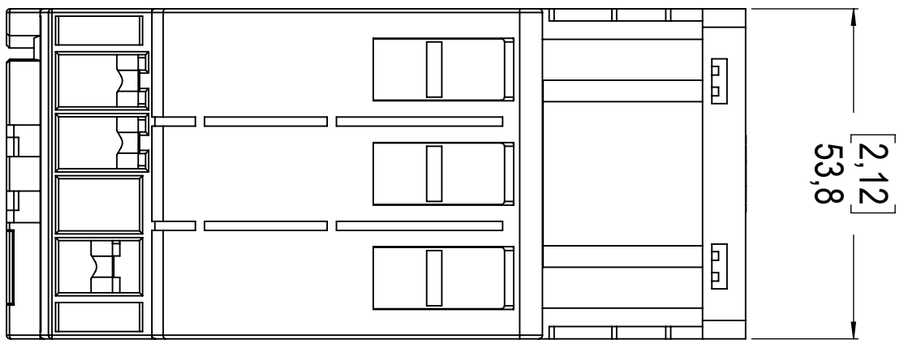
**Certifications**

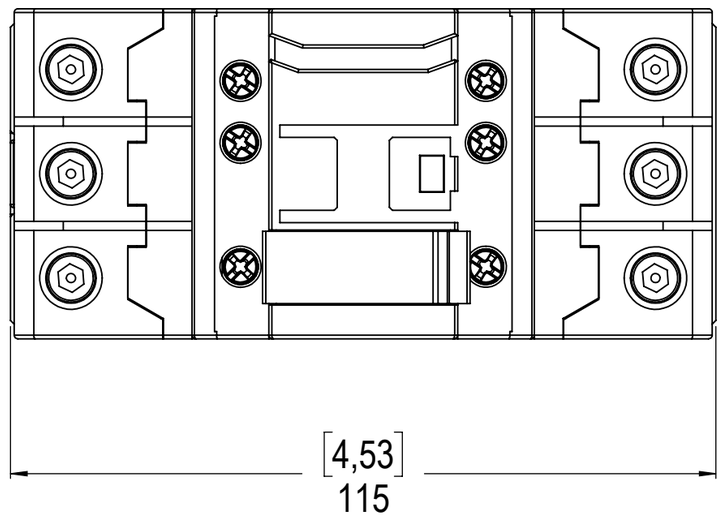
CE, UL and EAC

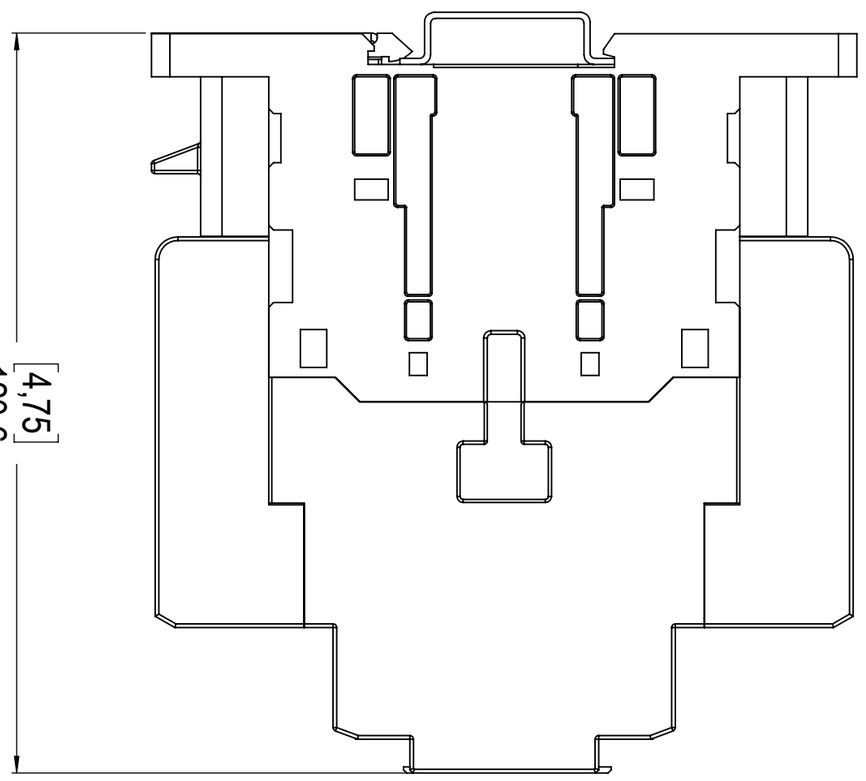
**Notes**

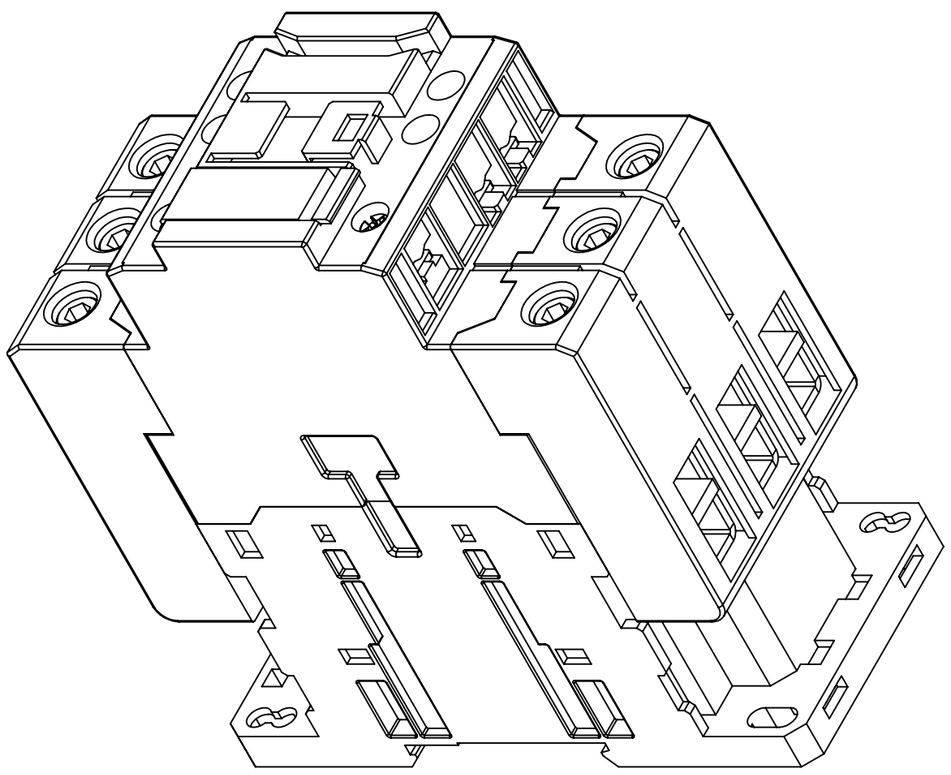
1) Values above 60 Hz should have current reduction;
2) For altitudes of 3000 to 4000 m (0.90 x 0.80 x Ie and Ui) and from 4000 to 5000 m (0.80 x 0.75 x Ie and Ui).



CWB40...80

06/10/2017

1:1

mm [inches]

A4

Sujeito a alteração sem aviso prévio. As informações contidas são valores de referência.
The values shown are subject to change without prior notice. The information is for reference only.

Los valores demostrados pueden ser cambiados sin aviso previo. La información és de referencia solamente.