

DATASHEET

Contactors



Main Features



Reference	: CWC0
Product code	: 12487313
Rated current Ie AC-3 (Ue ≤ 440 V)	: 12 A
Main contacts (power)	: 3 NO
Auxiliary contacts	: 1 NO
Control voltage	: 24V 50/60Hz
Type of terminal	: Screw

Basic data

Rated utilization voltage Ue

- IEC / UL : 690 V / 600 V

Isolation voltage Ui (pollution degree 3)

- IEC / UL : 690 V / 600 V

Rated impulse withstand voltage Uimp

- Frequency limits [1] : 4 kV

- Mechanical lifespan

AC-operated contactor : 10 million

DC-operated contactor : 12 million

Electrical lifespan - Ie AC3

: 1,2 million

Number of coil terminals (AC Coil)

AC coil contactors : 2

- DC coil contactors : 2

Resistance to vibration (IEC 60068-2-6)

opened contactor : 2 g

closed contactor : 3 g

Resistance to mechanical shock (½ sinusoid = 11ms)

opened contactor : 6 g

closed contactor : 6 g

Installation

Degree of protection (IEC 60529) : DIN 35 mm (EN 50022)

Main circuit

: IP20

Control circuit

: IP20

Alternating current - control circuit

Isolation voltage Ui (pollution degree 3) : 690 V / 600 V

- IEC / UL

Standard voltages for 50/60 Hz : 12...660 V

Command circuit operation limits

- control circuit 60 Hz : 0,5...0,8xUs

- pick up : 0,2...0,6xUs

- drop out : 0,5...0,8xUs

- control circuit 50 Hz : 0,2...0,6xUs

- pick up

- drop out

- Average coil consumption

- operating at 60 Hz : 2...3 VA

- closed magnetic circuit : 0,28

- power factor ($\cos \varphi$) : 1 W

- Thermal power dissipated : 30 VA

- closing the magnetic circuit : 2,3...3,5 VA

- operating at 50 Hz

- closed magnetic circuit : 0,28

- power factor ($\cos \varphi$) : 1 W

- Thermal power dissipated : 35 VA

- closing the magnetic circuit

Average time of operation

- closing the NO contacts : 8...20 ms

- opening the NO contacts : 5...15 ms

Direct current - command circuit

- IEC / UL

Standard voltages

:

Command 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)

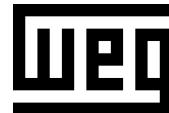
Rated utilization current Ie

: 12 A

- AC-3 (Ue ≤ 440 V)

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- AC-4 (Ue ≤ 440 V)	: 4,5 A
- AC-1 ($\theta \leq 55^\circ\text{C}$, Ue ≤ 690 V)	: 22 A
Rated utilization voltage Ue	: 690 V / 600 V
- IEC / UL	: 3 NO
Number of main contacts	: 120 A
Establishment capacity (IEC 60947)	: 96 A
Breaking capacity (IEC/EN 60947)	: 96 A
- Ue≤400V	: 72 A
- Ue=500V	
- Ue=690V	
Temporary permissible current (without previously current conduction during 15 min at $\theta \leq 40^\circ\text{C}$)	
- 1 sec	: 250 A
- 10 sec	: 95 A
- 10 sec	: 95 A
- 1 min	:
- 10 min	: Not available
Protection against short circuit of the contacts main fuse (gL/gG)	
- @600V - UL/CSA	: 5 kA
- type 1 coordination	: 35 A
- type 2 coordination	: 25 A
Average power dissipated per pole	
AC-1 ($\theta \leq 55^\circ\text{C}$, Ue ≤ 690 V)	: 2,4 W
AC-3 (Ue ≤ 440 V)	: 0,7 W
Utilization category AC-3	
Rated current le ($\theta \leq 55^\circ\text{C}$)	
- Ue ≤ 440V	: 12 A
- Ue ≤ 500V	: 8,8 A
- Ue ≤ 690V	: 6,6 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	3 kW	4 HP
380 / 400 V	5,5 kW	7,4 HP
415 / 440 V	6,3 kW	8,4 HP
500 V	5,5 kW	7,4 HP
660 / 690 V	5,5 kW	7,4 HP

Orientative values of power (UL)

Voltage	1 Phase	3 Phase
120 V	0,5	1,5
200 V	Not applicable	Not available
208 V	1,5	1,5
240 V	2	3
480 V	Not available	7,5
600 V	Not available	7,5

Utilization category AC-4

Rated current le ($\theta \leq 55^\circ\text{C}$)

- Ue ≤ 440V	: 4,5 A
- Ue ≤ 500V	: Not available
- Ue ≤ 690V	: Not available

Orientative values of power (IEC)-three-phase induction motors (50/60 Hz)-IV poles-1800 rpm

Voltage	kW	cv or HP
220 / 240 V	0,75 kW	1 HP
380 / 400 V	1,8 kW	2,4 HP
415 / 440 V	2,2 kW	2,9 HP
500 V	2,2 kW	2,9 HP
660 / 690 V	2,2 kW	2,9 HP

Utilization category AC-1 (3 P/NA)

Maximum percentage (600 ops./h)

: 1

Maximum power operation $\theta \leq 55^\circ\text{C}$ (three resistors)	
Voltage	Power
220 / 240 V	8,3 kW
380 / 400 V	14,5 kW
415 / 440 V	16 kW
500 V	18 kW
660 / 690 V	25 kW

Auxiliary contacts

Standards compliance

: IEC 600947-5-1

Insulation voltage Ui

: 690 V / 600 V

- IEC / UL

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Rated utilization voltage Ue

- IEC / UL : 690 V / 690 V

Conventional thermal current Ith ($\theta \leq 55^\circ\text{C}$) : 10 A

Rated current le - IEC 60947-5-1/AC-15

- 220 / 240 V : 10 A

- 380 / 440 V : 6 A

- 500 V : 4 A

- 660 / 690 V : 2 A

Rated current le - IEC 60947-5-1/DC-13

- 24 V : 6 A

- 48 V : 4 A

- 110 V : 2 A

- 220 V : 0,7 A

- 440 V : Not available

Establishment capacity - (AC-15 and Ue $\leq 690\text{V}$ 50/60Hz) : 10 x le

Interruption capacity - (AC-15 and Ue $\leq 400\text{V}$ 50/60Hz) : 10 x le

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 : 10 million

Non-overlapping time between NO and NC contacts : Not available

Impedance per pole : Not available

Connection

Main contacts

: M3 Flat/Phillips

Type of the screw

Section of the conductors

Type of the conductor	Section (IEC)	Section (UL)
Rigid cable	1 x 0,5...2,5 mm ²	1 x
	2 x 0,5...2,5 mm ²	2 x
Flexible cable without terminal	1 x 0,75...2,5 mm ²	1 x
	2 x 0,75...2,5 mm ²	2 x
Flexible cable with terminal	1 x 0,5...2,5 mm ²	1 x
	2 x 0,5...1,5 mm ²	2 x

Tightening torque (IEC/UL) : 1.1 Nm / 10 lb.in

Control circuit

Type of the screw : M3 Flat/Phillips

Section of the conductors

Type of the conductor	Section (IEC)	Section (UL)
Rigid cable	1 x 0,5...2,5 mm ²	1 x
	2 x 0,5...2,5 mm ²	2 x
Flexible cable without terminal	1 x 0,75...2,5 mm ²	1 x
	2 x 0,75...2,5 mm ²	2 x
Flexible cable with terminal	1 x 0,5...2,5 mm ²	1 x
	2 x 0,5...1,5 mm ²	2 x

Tightening torque (IEC/UL) : 1,1 Nm / 10 lb.in

Direct current application

Utilization category DC-1 (L/R $\leq 1\text{ ms}$)

Voltage	Rated utilization current (le)			
	Pole(s) in series			
	1	2	3	4
Ue $\leq 24\text{V}$	16 A	20 A	22 A	Not available
Ue $\leq 48\text{V}$	13 A	20 A	22 A	Not available
Ue $\leq 60\text{V}$	10 A	18 A	22 A	Not available
Ue $\leq 125\text{V}$	5 A	10 A	16 A	Not available
Ue $\leq 220\text{V}$	0,7 A	6 A	10 A	Not available
Ue $\leq 440\text{V}$	0,3 A	0,7 A	4 A	Not available
Ue $\leq 600\text{V}$	Not available	0,3 A	1,5 A	Not available

Utilization category DC-3 (L/R $\leq 2.5\text{ ms}$)

Voltage	Rated utilization current (le)			
	Pole(s) in series			
	1	2	3	4
Ue $\leq 24\text{V}$	9 A	12 A	15 A	Not available
Ue $\leq 48\text{V}$	8 A	12 A	15 A	Not available
Ue $\leq 60\text{V}$	5 A	10 A	14 A	Not available
Ue $\leq 125\text{V}$	1,5 A	5,5 A	10 A	Not available
Ue $\leq 220\text{V}$	0,4 A	1,5 A	7 A	Not available
Ue $\leq 440\text{V}$	Not available	0,2 A	1 A	Not available
Ue $\leq 600\text{V}$	Not available	Not available	0,6 A	Not available

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Operation category DC-5 (L/R ≤ 15ms)

Voltage	Rated utilization current (Ie)			
	Pole(s) in series			
	1	2	3	4
Ue ≤ 24V	8 A	12 A	15 A	Not available
Ue ≤ 48V	8 A	12 A	15 A	Not available
Ue ≤ 60V	5 A	10 A	14 A	Not available
Ue ≤ 125V	1,5 A	5,5 A	9 A	Not available
Ue ≤ 220V	0,4 A	0,7 A	3 A	Not available
Ue ≤ 440V	Not available	Not available	0,3 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 : 58 mm (2.28 in)
 Width : 45 mm (1.77 in)
 Depth : 52 mm (2.05 in)
 Weight : 194 g

Standards

IEC 60947-1

UL 508

Certifications

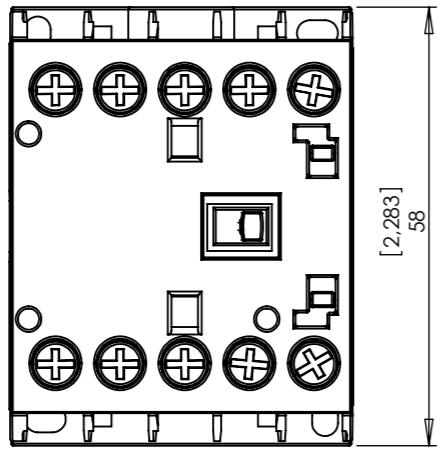
CE, UL, UL-NOM, IRAM and EAC

Notes

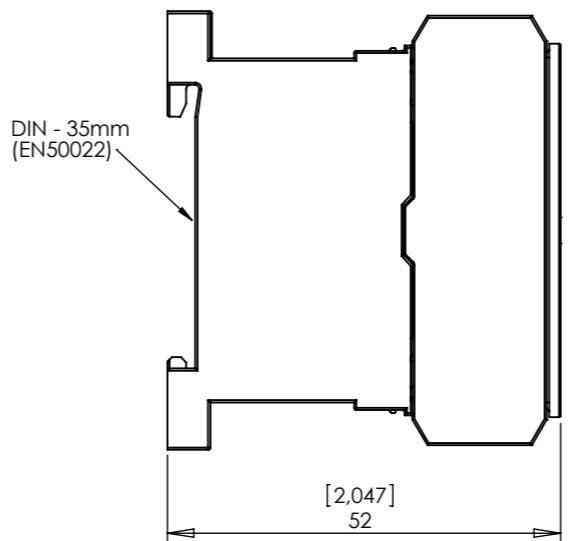
- 1) Values above 60 Hz should have current reduction;
- 2) For altitudes of 3000 to 4000 m ($0.90 \times 0.80 \times I_e$ and U_i) and from 4000 to 5000 m ($0.80 \times 0.75 \times I_e$ and U_i).

1 2 3 4 5 6

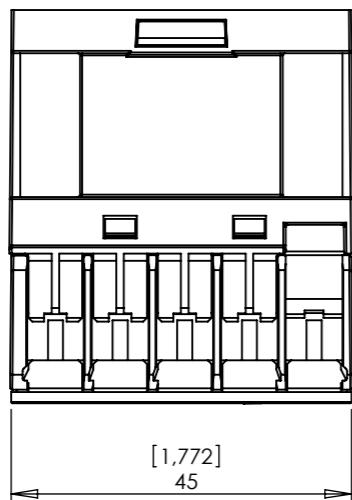
A



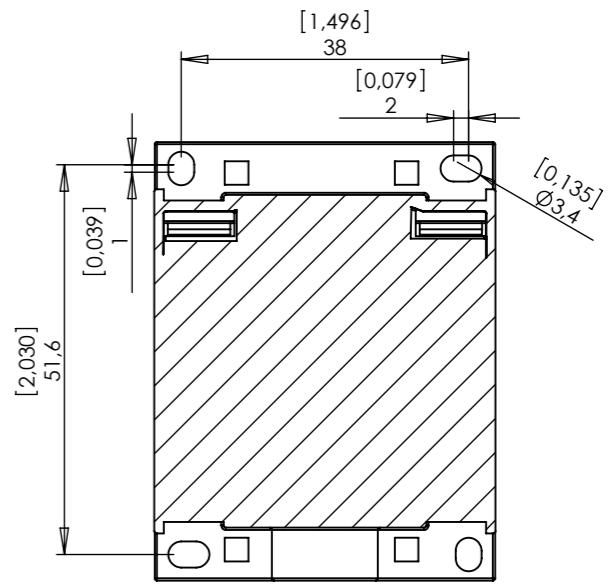
B



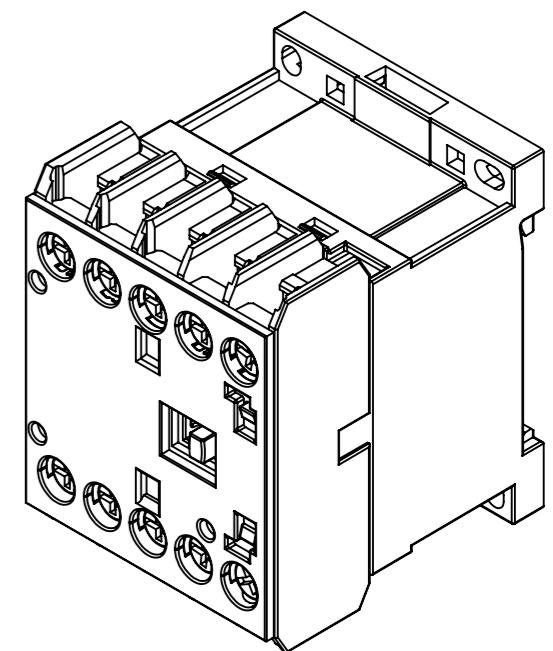
C



D



E



CWC07...16-CWCA0

24/02/2012

1:1

mm [inches]

weg

Los valores denotados pueden ser cambiados sin aviso previo. As informações contidas são valores de referência. The values shown are subject to change without prior notice. The information is for reference only.

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