

DATASHEET

Contactors



Main Features

Reference	: CWB
Product code	: 15309751
Rated current Ie AC-3 (Ue ≤ 440 V)	: 95 A
Main contacts (power)	: 3 NO
Auxiliary contacts	: 1 NO + 1 NC
Control voltage	: 480V 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

- Frequency limits [1] : 8 kV

- Mechanical lifespan

AC-operated contactor : 6 million

DC-operated contactor : 6 million

Electrical lifespan - Ie AC3 : 1.1 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

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

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

Command 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 : 20...30 VA

- power factor (cos φ) : 0.4

- Thermal power dissipated : 9...11 W

- closing the magnetic circuit : 328...492 VA

- operating at 50 Hz - closed magnetic circuit : 22...32 VA

- power factor (cos φ) : 0.4

- Thermal power dissipated : 11...13.4 W

- closing the magnetic circuit : 341...512 VA

Average time of operation

- closing the NO contacts : 8...12.5 ms

- opening the NO contacts : 4...8 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

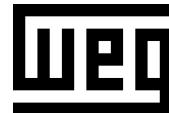
Main contacts (power)

Rated utilization current Ie

- AC-3 (Ue ≤ 440 V) : 95 A

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- AC-4 (Ue ≤ 440 V)	: 52 A
- AC-1 ($\theta \leq 55^\circ\text{C}$, Ue ≤ 690 V)	: 140 A
Rated utilization voltage Ue	
- IEC / UL	: 1000 V / 600 V
Number of main contacts	: 3 NO
Establishment capacity (IEC 60947)	: 1100 A
Breaking capacity (IEC/EN 60947)	
- Ue≤400V	: 1100 A
- Ue=500V	: 970 A
- Ue=690V	: 700 A
Temporary permissible current (without previously current conduction during 15 min at $\theta \leq 40^\circ\text{C}$)	
- 1 sec	: 1200 A
- 10 sec	: 720 A
- 10 sec	: 720 A
- 1 min	:
- 10 min	: 140 A
Protection against short circuit of the contacts main fuse (gL/gG)	
- @600V - UL/CSA	: 8 kA
- type 1 coordination	: 224 A
- type 2 coordination	: Not available
Average power dissipated per pole	
AC-1 ($\theta \leq 55^\circ\text{C}$, Ue ≤ 690 V)	: 15 W
AC-3 (Ue ≤ 440 V)	: 7 W

Utilization category AC-3

Rated current Ie ($\theta \leq 55^\circ\text{C}$)	
- Ue ≤ 440V	: 95 A
- Ue ≤ 500V	: 84 A
- Ue ≤ 690V	: 61 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	22 kW	30 cv
380 / 400 V	45 kW	60 cv
415 / 440 V	55 kW	75 cv
500 V	55 kW	75 cv
660 / 690 V	55 kW	75 cv

Orientative values of power (UL)

Voltage	1 Phase	3 Phase
120 V	7.5	Not available
200 V	Not applicable	25
208 V	Not available	Not available
240 V	15	30
480 V	Not available	60
600 V	Not available	75

Utilization category AC-4

Rated current Ie ($\theta \leq 55^\circ\text{C}$)	
- Ue ≤ 440V	: 52 A
- Ue ≤ 500V	:
- Ue ≤ 690V	:

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

Voltage	kW	cv or HP
220 / 240 V		
380 / 400 V		
415 / 440 V		
500 V		
660 / 690 V		

Utilization category AC-1 (3 P/NA)

Maximum percentage (600 ops./h)	: 1
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Maximum power operation $\theta \leq 55^\circ\text{C}$ (three resistors)

Voltage	Power
220 / 240 V	53 kW
380 / 400 V	92 kW
415 / 440 V	107 kW
500 V	121 kW
660 / 690 V	167 kW

Auxiliary contacts

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

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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	: 4 A
- 500 V	: 2,5 A
- 660 / 690 V	: 1,5 A
Rated current le - 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 $\leq 690\text{V}$ 50/60Hz)	: 10 x le
Interruption capacity - (AC-15 and Ue $\leq 400\text{V}$ 50/60Hz)	: 1 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	: 6 million
Non-overlapping time between NO and NC contacts	: 1,5 ms
Impedance per pole	: 2,5 m Ω

Connection

Main contacts

Type of the screw

: M8 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 available	2 x
Flexible cable with terminal	1 x Not contain	1 x
	2 x Not contain	2 x

Tightening torque (IEC/UL)

: 6 Nm / 53 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 mm ²	1 x
	2 x 1...4 mm ²	2 x
Flexible cable without terminal	1 x 1...4 mm ²	1 x
	2 x 1...4 mm ²	2 x
Flexible cable with terminal	1 x 1...4 mm ²	1 x
	2 x 1...2,5 mm ²	2 x

Tightening torque (IEC/UL)

: 1 Nm / 8.8 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 $\leq 24\text{V}$				
Ue $\leq 48\text{V}$				
Ue $\leq 60\text{V}$				
Ue $\leq 125\text{V}$				
Ue $\leq 220\text{V}$				
Ue $\leq 440\text{V}$				
Ue $\leq 600\text{V}$				

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 $\leq 24\text{V}$				
Ue $\leq 48\text{V}$				
Ue $\leq 60\text{V}$				
Ue $\leq 125\text{V}$				
Ue $\leq 220\text{V}$				
Ue $\leq 440\text{V}$				
Ue $\leq 600\text{V}$				

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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				
Ue ≤ 48V				
Ue ≤ 60V				
Ue ≤ 125V				
Ue ≤ 220V				
Ue ≤ 440V				
Ue ≤ 600V				

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	:
Width	:
Depth	:
Weight	:

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 ($0.90 \times 0.80 \times Ie$ and Ui) and from 4000 to 5000 m ($0.80 \times 0.75 \times Ie$ and Ui).

