

Main Features



| | |
|------------------------------------|----------------------------------|
| Reference | : CWC0 |
| Product code | : 12681765 |
| Rated current Ie AC-3 (Ue ≤ 440 V) | : 16 A |
| Main contacts (power) | : 3 NO |
| Auxiliary contacts | : 1 NO |
| Control voltage | : 24V DC |
| Type of terminal | : Printed Circuit board terminal |

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 | : 4 kV |
| - Frequency limits [1] | : 25 Hz ... 400 Hz |
| - Mechanical lifespan | |
| AC-operated contactor | : 10 million |
| DC-operated contactor | : 12 million |
| Electrical lifespan - Ie AC3 | : 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 | : 2 g |
| closed contactor | : 3 g |
| Resistance to mechanical shock (½ sinusoid = 11ms) | |
| opened contactor | : 6 g |
| closed contactor | : 6 g |
| Installation | : DIN 35 mm (EN 50022) |
| Degree of protection (IEC 60529) | |
| Main circuit | : IP20 |
| Control circuit | : IP20 |

Alternating current - control circuit

| | |
|---|--------------------------------|
| Isolation voltage Ui (pollution degree 3) | |
| - IEC / UL | : 690 V / 600 V |
| Standard voltages for 50/60 Hz | : |
| Command circuit operation limits | |
| - control circuit 60 Hz | - pick up |
| | - drop out |
| - control circuit 50 Hz | - pick up |
| | - drop out |
| - Average coil consumption | |
| - operating at 60 Hz | - closed magnetic circuit |
| | - power factor (cos φ) |
| | - Thermal power dissipated |
| | - closing the magnetic circuit |
| - operating at 50 Hz | - closed magnetic circuit |
| | - power factor (cos φ) |
| | - Thermal power dissipated |
| | - closing the magnetic circuit |
| Average time of operation | |
| - closing the NO contacts | : |
| - opening the NO contacts | : |

Direct current - command circuit

| | |
|----------------------------------|-----------------|
| - IEC / UL | |
| Standard voltages | : 12...440 V |
| Command circuit operation limits | |
| - pick up | : 0,4...0,7xUs |
| - drop out | : 0,15...0,7xUs |
| Average consumption | |
| - closed magnetic circuit | : 2,6...3,7 W |
| - closing the magnetic circuit | : 2,6...3,7 W |
| Thermal power dissipated | : 2,6...3,7 W |
| Average time of operation | |
| - closing the NO contacts | : 35...45 ms |
| - opening the NO contacts | : 7...12 ms |

Main contacts (power)

| | |
|------------------------------|--------|
| Rated utilization current Ie | |
| - AC-3 (Ue ≤ 440 V) | : 16 A |

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Contactors



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|--|-----------------|
| - AC-4 (Ue ≤ 440 V) | : 5 A |
| - AC-1 (θ ≤ 55 °C, Ue ≤ 690 V) | : 22 A |
| Rated utilization voltage Ue | |
| - IEC / UL | : 690 V / 600 V |
| Number of main contacts | : 3 NO |
| Establishment capacity (IEC 60947) | : 160 A |
| Breaking capacity (IEC/EN 60947) | |
| - Ue≤400V | : 128 A |
| - Ue=500V | : 128 A |
| - Ue=690V | : 96 A |
| Temporary permissible current (without previously current conduction during 15 min at θ ≤ 40 °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 (θ ≤ 55 °C, Ue ≤ 690 V) | : 2,4 W |
| AC-3 (Ue ≤ 440 V) | : 1,3 W |
| Utilization category AC-3 | |
| Rated current Ie (θ ≤ 55 °C) | |
| - Ue ≤ 440V | : 16 A |
| - Ue ≤ 500V | : 13 A |
| - Ue ≤ 690V | : 10 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 | 4 kW | 5,4 HP |
| 380 / 400 V | 7,5 kW | 10 HP |
| 415 / 440 V | 7,5 kW | 10 HP |
| 500 V | 7,5 kW | 10 HP |
| 660 / 690 V | 7,5 kW | 10 HP |

| Orientative values of power (UL) | | |
|----------------------------------|----------------|---------------|
| Voltage | 1 Phase | 3 Phase |
| 120 V | 1 | 2 |
| 200 V | Not applicable | Not available |
| 208 V | 2 | 3 |
| 240 V | 5 | 5 |
| 480 V | Not available | 10 |
| 600 V | Not available | 10 |

Utilization category AC-4

| | |
|------------------------------|-----------------|
| Rated current Ie (θ ≤ 55 °C) | |
| - Ue ≤ 440V | : 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 | 1,1 kW | 1,5 HP |
| 380 / 400 V | 2,2 kW | 2,9 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 θ ≤ 55°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 | |
| - IEC / UL | : 690 V / 600 V |

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Contactors



| | |
|---|-----------------|
| Rated utilization voltage Ue | |
| - IEC / UL | : 690 V / 690 V |
| Conventional thermal current Ith ($\theta \leq 55^\circ\text{C}$) | : 10 A |
| Rated current Ie - 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 Ie - 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 690V 50/60Hz) | : 10 x Ie |
| Interruption capacity - (AC-15 and Ue \leq 400V 50/60Hz) | : 10 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 | : 10 million |
| Non-overlapping time between NO and NC contacts | : Not available |
| Impedance per pole | : Not available |

Connection

| | |
|---------------------------|--------------------|
| Main contacts | |
| 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 |
| 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 ms)

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

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

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

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Contactors



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 : 229 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 x 0.80 x Ie and Ui) and from 4000 to 5000 m (0.80 x 0.75 x Ie and Ui).

1

2

3

4

5

6

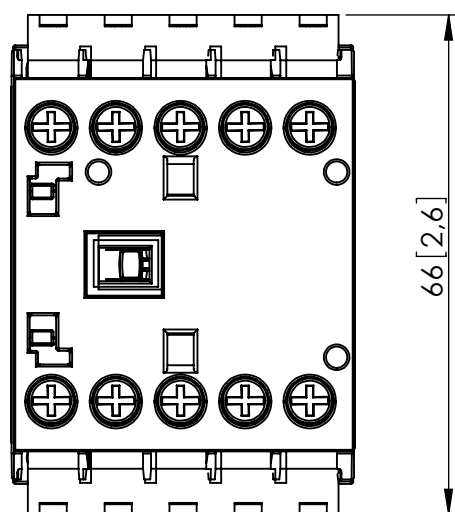
A

B

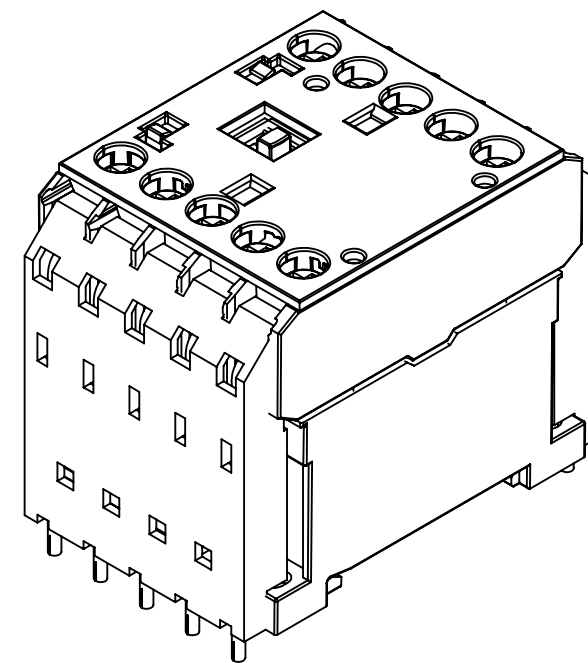
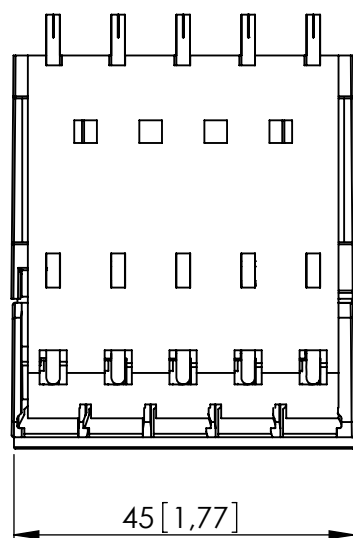
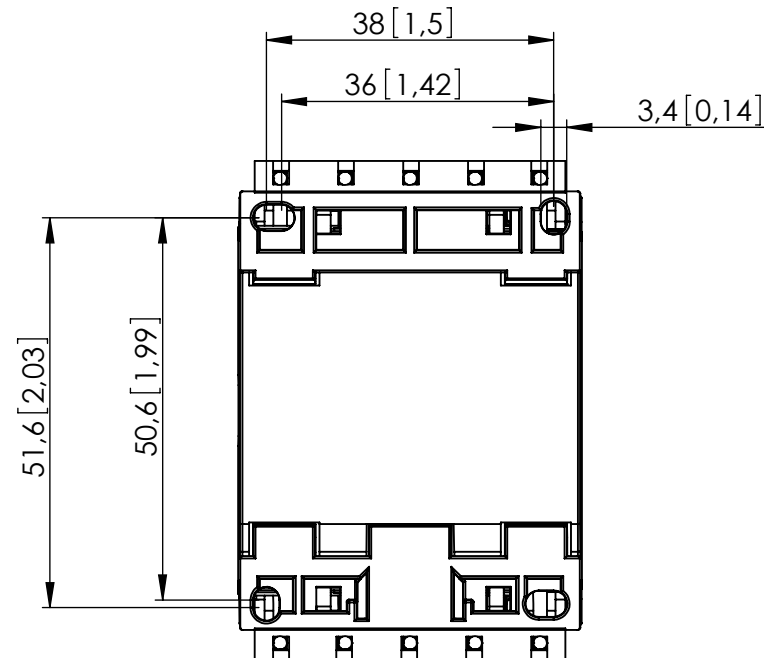
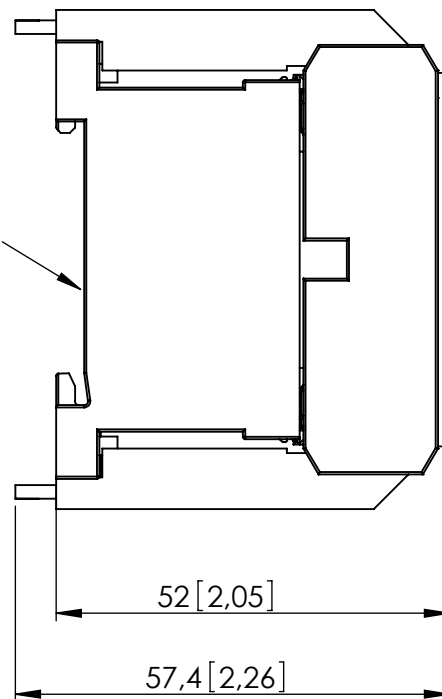
C

D

E



DIN - 35mm
(EN50022)

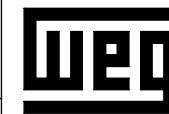


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1:1

mm [inches]



A3