

### Main Features



|                                    |                           |
|------------------------------------|---------------------------|
| Reference                          | : CWM                     |
| Product code                       | : 10046163                |
| Rated current Ie AC-3 (Ue ≤ 440 V) | : 105 A                   |
| Main contacts (power)              | : 3 NO                    |
| Auxiliary contacts                 | : No auxiliary contacts   |
| Control voltage                    | : 400-415V 50Hz/480V 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               | : 8 kV             |
| - Frequency limits [1]                             | : 25 Hz ... 400 Hz |
| - Mechanical lifespan                              |                    |
| AC-operated contactor                              | : 10 million       |
| DC-operated contactor                              | : 10 million       |
| Electrical lifespan - Ie AC3                       | : 1 million        |
| Number of coil terminals (AC Coil)                 |                    |
| AC coil contactors                                 | : 3                |
| - DC coil contactors                               | : 3                |
| Resistance to vibration (IEC 60068-2-6)            |                    |
| opened contactor                                   | : 3 g              |
| closed contactor                                   | : 3 g              |
| Resistance to mechanical shock (½ sinusoid = 11ms) |                    |
| opened contactor                                   | : 6 g              |
| closed contactor                                   | : 10 g             |
| Installation                                       | : Not available    |
| Degree of protection (IEC 60529)                   |                    |
| Main circuit                                       | : IP10             |
| Control circuit                                    | : IP20             |

### Alternating current - control circuit

|   |  |
|---|--|
| Isolation voltage Ui (pollution degree 3) |  |
| - IEC / UL                                | : 1000 V / 600 V                         |
| Standard voltages for 50/60 Hz            | : 12...660 V                             |
| Command circuit operation limits          |  |
| - control circuit 60 Hz                   | - pick up : 0,5...0,76xUs                |
|   | - drop out : 0,25...0,6xUs               |
| - control circuit 50 Hz                   | - pick up : 0,5...0,76xUs                |
|   | - drop out : 0,25...0,6xUs               |
| - Average coil consumption                |  |
| - operating at 60 Hz                      | - closed magnetic circuit : 16,8...25 VA |
|   | - power factor (cos φ) : 0,32            |
|   | - Thermal power dissipated : 8 W         |
|   | - closing the magnetic circuit : 295 VA  |
| - operating at 50 Hz                      | - closed magnetic circuit : 16,8...25 VA |
|   | - power factor (cos φ) : 0,32            |
|   | - Thermal power dissipated : 8 W         |
|   | - closing the magnetic circuit : 295 VA  |
| Average time of operation                 |  |
| - closing the NO contacts                 | : 15...30 ms                             |
| - opening the NO contacts                 | : 9...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 |         |
| - AC-3 (Ue ≤ 440 V)          | : 105 A |

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## Contactors



|  |                  |
|--|------------------|
| - AC-4 (Ue ≤ 440 V)  | : 50 A           |
| - AC-1 (θ ≤ 55 °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)   | : 1280 A         |
| Breaking capacity (IEC/EN 60947)   |                  |
| - Ue≤400V  | : 1050 A         |
| - Ue=500V  | : 1050 A         |
| - Ue=690V  | : 950 A          |
| Temporary permissible current (without previously current conduction during 15 min at θ ≤ 40 °C) |                  |
| - 1 sec  | : 3300 A         |
| - 1 sec  | : 1050 A         |
| - 1 sec  | : 1050 A         |
| - 1 min  | :                |
| - 10 min   | : Not available  |
| Protection against short circuit of the contacts main fuse (gL/gG)                               |                  |
| - @600V - UL/CSA   | : 10 kA          |
| - type 1 coordination  | : 250 A          |
| - type 2 coordination  | : 200 A          |
| Average power dissipated per pole  |                  |
| AC-1 (θ ≤ 55 °C, Ue ≤ 690 V)   | : 14.9 W         |
| AC-3 (Ue ≤ 440 V)  | : 8.4 W          |
| <b>Utilization category AC-3</b>   |                  |
| Rated current Ie (θ ≤ 55 °C)   |                  |
| - Ue ≤ 440V  | : 105 A          |
| - Ue ≤ 500V  | : 85 A           |
| - Ue ≤ 690V  | : 67 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   | 30 kW | 40 cv    |
| 380 / 400 V   | 55 kW | 75 cv    |
| 415 / 440 V   | 59 kW | 79 cv    |
| 500 V   | 59 kW | 79 cv    |
| 660 / 690 V   | 65 kW | 90 cv    |

| Orientative values of power (UL) |                |               |
|----------------------------------|----------------|---------------|
| Voltage                          | 1 Phase        | 3 Phase       |
| 120 V                            | 10             | Not available |
| 200 V                            | Not applicable | 30            |
| 208 V                            | Not available  | Not available |
| 240 V                            | 20             | 30            |
| 480 V                            | Not available  | 75            |
| 600 V                            | Not available  | 75            |

### Utilization category AC-4

|                              |                 |
|------------------------------|-----------------|
| Rated current Ie (θ ≤ 55 °C) |                 |
| - Ue ≤ 440V                  | : 50 A          |
| - Ue ≤ 500V                  | : Not available |
| - Ue ≤ 690V                  | : 50 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   | 11 kW | 15 HP    |
| 380 / 400 V   | 22 kW | 30 HP    |
| 415 / 440 V   | 30 kW | 40 HP    |
| 500 V   | 30 kW | 40 HP    |
| 660 / 690 V   | 30 kW | 40 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  | 53 kW    |
| 380 / 400 V  | 92 kW    |
| 415 / 440 V  | 106.5 kW |
| 500 V  | 121 kW   |
| 660 / 690 V  | 160 kW   |

### Auxiliary contacts

|                       |                                 |
|-----------------------|---------------------------------|
| Standards compliance  | : Not available                 |
| Insulation voltage Ui |                                 |
| - IEC / UL            | : Not available / Not available |

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## Contactors



Rated utilization voltage  $U_e$   
 - IEC / UL : Not available / Not available  
 Conventional thermal current  $I_{th}$  ( $\theta \leq 55^\circ\text{C}$ ) : Not available  
 Rated current  $I_e$  - IEC 60947-5-1/AC-15  
 - 220 / 240 V : Not available  
 - 380 / 440 V : Not available  
 - 500 V : Not available  
 - 660 / 690 V : Not available  
 Rated current  $I_e$  - IEC 60947-5-1/DC-13  
 - 24 V : Not available  
 - 48 V : Not available  
 - 110 V : Not available  
 - 220 V : Not available  
 - 440 V : Not available  
 Establishment capacity - (AC-15 and  $U_e \leq 690\text{V}$  50/60Hz) : Not available  
 Interruption capacity - (AC-15 and  $U_e \leq 400\text{V}$  50/60Hz) : Not available  
 Protection against short circuit of the contacts main fuse (gL/gG) : Not available  
 Control circuit reliability : Not available  
 Electrical lifespan : Not available  
 Mechanical lifespan : Not available  
 Non-overlapping time between NO and NC contacts : Not available  
 Impedance per pole : Not available

### Connection

Main contacts  
 Type of the screw : M10 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 contain   | 2 x          |
| Flexible cable with terminal    | 1 x Not contain   | 1 x          |
|                                 | 2 x Not contain   | 2 x          |

Tightening torque (IEC/UL) : 5...6.5 Nm / 60 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 0,5...4 mm <sup>2</sup>   | 1 x          |
|                                 | 2 x 0,5...2,5 mm <sup>2</sup> | 2 x          |
| Flexible cable without terminal | 1 x 1...4 mm <sup>2</sup>     | 1 x          |
|                                 | 2 x 1...2,5 mm <sup>2</sup>   | 2 x          |
| Flexible cable with terminal    | 1 x 0,5...4 mm <sup>2</sup>   | 1 x          |
|                                 | 2 x 0,5...2,5 mm <sup>2</sup> | 2 x          |

Tightening torque (IEC/UL) : 0,8...1,1 Nm / Not available

### Direct current application

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

| Voltage                | Rated utilization current ( $I_e$ ) |       |       |               |
|------------------------|-------------------------------------|-------|-------|---------------|
|                        | Pole(s) in series                   |       |       |               |
|                        | 1                                   | 2     | 3     | 4             |
| $U_e \leq 24\text{V}$  | 80 A                                | 140 A | 140 A | Not available |
| $U_e \leq 48\text{V}$  | 70 A                                | 140 A | 140 A | Not available |
| $U_e \leq 60\text{V}$  | 65 A                                | 140 A | 140 A | Not available |
| $U_e \leq 125\text{V}$ | 16 A                                | 110 A | 140 A | Not available |
| $U_e \leq 220\text{V}$ | 2 A                                 | 20 A  | 140 A | Not available |
| $U_e \leq 440\text{V}$ | 0.8 A                               | 2 A   | 15 A  | Not available |
| $U_e \leq 600\text{V}$ | Not available                       | 1 A   | 7.5 A | Not available |

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

| Voltage                | Rated utilization current ( $I_e$ ) |               |       |               |
|------------------------|-------------------------------------|---------------|-------|---------------|
|                        | Pole(s) in series                   |               |       |               |
|                        | 1                                   | 2             | 3     | 4             |
| $U_e \leq 24\text{V}$  | 65 A                                | 105 A         | 105 A | Not available |
| $U_e \leq 48\text{V}$  | 45 A                                | 105 A         | 105 A | Not available |
| $U_e \leq 60\text{V}$  | 35 A                                | 105 A         | 105 A | Not available |
| $U_e \leq 125\text{V}$ | 3 A                                 | 85 A          | 105 A | Not available |
| $U_e \leq 220\text{V}$ | 0.8 A                               | 7 A           | 95 A  | Not available |
| $U_e \leq 440\text{V}$ | Not available                       | 1 A           | 3 A   | Not available |
| $U_e \leq 600\text{V}$ | Not available                       | Not available | 1,5 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  | 65 A                           | 105 A         | 105 A         | Not available |
| Ue ≤ 48V  | 45 A                           | 105 A         | 105 A         | Not available |
| Ue ≤ 60V  | 35 A                           | 105 A         | 105 A         | Not available |
| Ue ≤ 125V | 1.2 A                          | 80 A          | 95 A          | Not available |
| Ue ≤ 220V | 0.5 A                          | 4 A           | 7 A           | Not available |
| Ue ≤ 440V | Not available                  | Not available | 1 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 : 117 mm (4.61 in)  
 Width : 75 mm (2.95 in)  
 Depth : 126 mm (4.96 in)  
 Weight : 1.46 kg

### Standards

IEC 60947-1  
 UL 508

### Certifications

CE, UL, UL-NOM, IRAM, BUREAU VERITAS 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).

