

### Main Features



|                                    |                       |
|------------------------------------|-----------------------|
| Reference                          | : CWM                 |
| Product code                       | : 10535740            |
| Rated current Ie AC-3 (Ue ≤ 440 V) | : 112 A               |
| Main contacts (power)              | : 3 NO                |
| Auxiliary contacts                 | : 2 NO + 2 NC         |
| Control voltage                    | : 110-130V 50/60Hz-DC |
| 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                       | : 1.1 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                                   | : 3 g              |
| closed contactor                                   | : 3 g              |
| Installation                                       | : Not available    |
| Degree of protection (IEC 60529)                   |                    |
| Main circuit                                       | : IP00             |
| 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            | :                              |
| 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                | : |
| 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)          | : 112 A |

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## Contactors



|                                                                                                            |                  |
|------------------------------------------------------------------------------------------------------------|------------------|
| - AC-4 ( $U_e \leq 440$ V)                                                                                 | : 63 A           |
| - AC-1 ( $\theta \leq 55$ °C, $U_e \leq 690$ V)                                                            | : 180 A          |
| Rated utilization voltage $U_e$                                                                            |                  |
| - IEC / UL                                                                                                 | : 1000 V / 600 V |
| Number of main contacts                                                                                    | : 3 NO           |
| Establishment capacity (IEC 60947)                                                                         | : 1430 A         |
| Breaking capacity (IEC/EN 60947)                                                                           |                  |
| - $U_e \leq 400$ V                                                                                         | : 1290 A         |
| - $U_e = 500$ V                                                                                            | : 1290 A         |
| - $U_e = 690$ V                                                                                            | : 864 A          |
| Temporary permissible current (without previously current conduction during 15 min at $\theta \leq 40$ °C) |                  |
| - 1 sec                                                                                                    | : 3165 A         |
| - 10 sec                                                                                                   | : 1430 A         |
| - 10 sec                                                                                                   | : 1430 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                                                                                      | : Not available  |
| - type 2 coordination                                                                                      | : 224 A          |
| Average power dissipated per pole                                                                          |                  |
| AC-1 ( $\theta \leq 55$ °C, $U_e \leq 690$ V)                                                              | : 16 W           |
| AC-3 ( $U_e \leq 440$ V)                                                                                   | : 6.2 W          |
| <b>Utilization category AC-3</b>                                                                           |                  |
| Rated current $I_e$ ( $\theta \leq 55$ °C)                                                                 |                  |
| - $U_e \leq 440$ V                                                                                         | : 112 A          |
| - $U_e \leq 500$ V                                                                                         | : 95 A           |
| - $U_e \leq 690$ V                                                                                         | : 82 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 | 55 kW | 75 cv    |
| 500 V       | 55 kW | 75 cv    |
| 660 / 690 V | 75 kW | 100 cv   |

Orientative values of power (UL)

| Voltage | 1 Phase        | 3 Phase       |
|---------|----------------|---------------|
| 120 V   | Not available  | Not available |
| 200 V   | Not applicable | 40            |
| 208 V   | Not available  | Not available |
| 240 V   | Not available  | 50            |
| 480 V   | Not available  | 100           |
| 600 V   | Not available  | 100           |

### Utilization category AC-4

Rated current  $I_e$  ( $\theta \leq 55$  °C)

|                    |        |
|--------------------|--------|
| - $U_e \leq 440$ V | : 63 A |
| - $U_e \leq 500$ V | : 57 A |
| - $U_e \leq 690$ V | : 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 | 18.5 kW | 25 HP    |
| 380 / 400 V | 30 kW   | 40 HP    |
| 415 / 440 V | 37 kW   | 50 HP    |
| 500 V       | 37 kW   | 50 HP    |
| 660 / 690 V | 45 kW   | 60 HP    |

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

Maximum percentage (600 ops./h)

: 1

Maximum power operation  $\theta \leq 55$  °C (three resistors)

| Voltage     | Power  |
|-------------|--------|
| 220 / 240 V | 68 kW  |
| 380 / 400 V | 118 kW |
| 415 / 440 V | 130 kW |
| 500 V       | 155 kW |
| 660 / 690 V | 205 kW |

### Auxiliary contacts

Standards compliance : Not available

Insulation voltage  $U_i$

- IEC / UL : Not available / Not available

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|                                                                       |                                 |
|-----------------------------------------------------------------------|---------------------------------|
| Rated utilization voltage Ue                                          |                                 |
| - IEC / UL                                                            | : Not available / Not available |
| Conventional thermal current Ith ( $\theta \leq 55^{\circ}\text{C}$ ) | : Not available                 |
| Rated current Ie - 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 Ie - 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 Ue $\leq$ 690V 50/60Hz)           | : Not available                 |
| Interruption capacity - (AC-15 and Ue $\leq$ 400V 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         | : M6 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) | : 5.4...6 Nm / Not contain |
| 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...1,5 Nm / Not available |
|----------------------------|--------------------------------|

### 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  | 160 A                          | 180 A         | 180 A         | Not available |
| Ue $\leq$ 48V  | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 60V  | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 125V | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 220V | Not available                  | 90 A          | 180 A         | Not available |
| Ue $\leq$ 440V | Not available                  | Not available | 85 A          | Not available |
| Ue $\leq$ 600V | Not available                  | Not available | Not available | 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  | 112 A                          | 112 A         | 112 A         | Not available |
| Ue $\leq$ 48V  | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 60V  | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 125V | Not available                  | Not available | Not available | Not available |
| Ue $\leq$ 220V | Not available                  | 55 A          | 80 A          | Not available |
| Ue $\leq$ 440V | Not available                  | Not available | 27 A          | Not available |
| Ue $\leq$ 600V | Not available                  | Not available | Not available | Not available |

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Operation category DC-5 ( $L/R \leq 15\text{ms}$ )

| Voltage                | Rated utilization current ( $I_e$ ) |               |               |               |
|------------------------|-------------------------------------|---------------|---------------|---------------|
|                        | Pole(s) in series                   |               |               |               |
|                        | 1                                   | 2             | 3             | 4             |
| $U_e \leq 24\text{V}$  | 112 A                               | 112 A         | 112 A         | Not available |
| $U_e \leq 48\text{V}$  | Not available                       | Not available | Not available | Not available |
| $U_e \leq 60\text{V}$  | Not available                       | Not available | Not available | Not available |
| $U_e \leq 125\text{V}$ | Not available                       | Not available | Not available | Not available |
| $U_e \leq 220\text{V}$ | Not available                       | 55 A          | 80 A          | Not available |
| $U_e \leq 440\text{V}$ | Not available                       | Not available | 27 A          | Not available |
| $U_e \leq 600\text{V}$ | 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 :  
Width :  
Depth :  
Weight :

**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 ( $0.90 \times 0.80 \times I_e$  and  $U_i$ ) and from 4000 to 5000 m ( $0.80 \times 0.75 \times I_e$  and  $U_i$ ).