



### Main Features

Reference	: CWM
Product code	: 10409933
Rated current Ie AC-3 (Ue ≤ 440 V)	: 25 A
Main contacts (power)	: 3 NO
Auxiliary contacts	: No auxiliary contacts
Control voltage	: 20V 50Hz/24V 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	: 1000 V / 600 V
Rated impulse withstand voltage Uimp	: 6 kV
- Frequency limits [1]	: 25 Hz ... 400 Hz
- Mechanical lifespan	
AC-operated contactor	: 10 million
DC-operated contactor	: 10 million
Electrical lifespan - Ie AC3	: 1,2 million
Number of coil terminals (AC Coil)	
AC coil contactors	: 4
- DC coil contactors	: 3
Resistance to vibration (IEC 60068-2-6)	
opened contactor	: 4.5 g
closed contactor	: 5 g
Resistance to mechanical shock (½ sinusoid = 11ms)	
opened contactor	: 8 g
closed contactor	: 12 g
Installation	: Not available
Degree of protection (IEC 60529)	
Main circuit	: IP20
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...660 V
Command circuit operation limits		
- control circuit 60 Hz	- pick up	: 0,4...0,76xUs
	- drop out	: 0,25...0,65xUs
- control circuit 50 Hz	- pick up	: 0,4...0,76xUs
	- drop out	: 0,25...0,65xUs
- Average coil consumption		
- operating at 60 Hz	- closed magnetic circuit	: 5,5...9,3 VA
	- power factor (cos φ)	: 0,28
	- Thermal power dissipated	: 2,6 W
	- closing the magnetic circuit	: 70 VA
- operating at 50 Hz	- closed magnetic circuit	: 5,5...9,3 VA
	- power factor (cos φ)	: 0,28
	- Thermal power dissipated	: 2,6 W
	- closing the magnetic circuit	: 70 VA
Average time of operation		
- closing the NO contacts		: 8...20 ms
- opening the NO contacts		: 6...13 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)	: 25 A

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## Contactors



- AC-4 (Ue ≤ 440 V)	: 12 A
- AC-1 (θ ≤ 55 °C, Ue ≤ 690 V)	: 45 A
Rated utilization voltage Ue	
- IEC / UL	: 690 V / 600 V
Number of main contacts	: 3 NO
Establishment capacity (IEC 60947)	: 450 A
Breaking capacity (IEC/EN 60947)	
- Ue≤400V	: 350 A
- Ue=500V	: 320 A
- Ue=690V	: 170 A
Temporary permissible current (without previously current conduction during 15 min at θ ≤ 40 °C)	
- 1 sec	: 630 A
- 1 sec	: 200 A
- 1 sec	: 200 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	: 63 A
- type 2 coordination	: 50 A
Average power dissipated per pole	
AC-1 (θ ≤ 55 °C, Ue ≤ 690 V)	: 3.3 W
AC-3 (Ue ≤ 440 V)	: 1 W
<b>Utilization category AC-3</b>	
Rated current Ie (θ ≤ 55 °C)	
- Ue ≤ 440V	: 25 A
- Ue ≤ 500V	: 19 A
- Ue ≤ 690V	: 15 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	6,5 kW	8,7 HP
380 / 400 V	12,5 kW	16,8 HP
415 / 440 V	12,5 kW	16,8 HP
500 V	12,5 kW	16,8 cv
660 / 690 V	12,5 kW	16,8 cv

Orientative values of power (UL)		
Voltage	1 Phase	3 Phase
120 V	2	Not available
200 V	Not applicable	7.5
208 V	Not available	Not available
240 V	5	7.5
480 V	Not available	15
600 V	Not available	15

### Utilization category AC-4

Rated current Ie (θ ≤ 55 °C)	
- Ue ≤ 440V	: 12 A
- Ue ≤ 500V	: Not available
- Ue ≤ 690V	: 12 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	3 kW	4 HP
380 / 400 V	5,5 kW	7,5 HP
415 / 440 V	5,5 kW	7,5 HP
500 V	7,5 kW	10 HP
660 / 690 V	7,5 kW	10 HP

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

Maximum percentage (600 ops./h)	: 1
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Maximum power operation θ ≤ 55°C (three resistors)	
Voltage	Power
220 / 240 V	17 kW
380 / 400 V	29.5 kW
415 / 440 V	34 kW
500 V	39 kW
660 / 690 V	51 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 : M4 Flat/Phillips  
 Section of the conductors

Type of the conductor	Section (IEC)	Section (UL)
Rigid cable	1 x 1...10 mm <sup>2</sup>	1 x
	2 x 1...10 mm <sup>2</sup>	2 x
Flexible cable without terminal	1 x 2,5...10 mm <sup>2</sup>	1 x
	2 x 2,5...10 mm <sup>2</sup>	2 x
Flexible cable with terminal	1 x 1...6 mm <sup>2</sup>	1 x
	2 x 1...4 mm <sup>2</sup>	2 x

Tightening torque (IEC/UL) : 1.6...2.5 Nm / 16 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
$U_e \leq 24\text{V}$	25 A	45 A	45 A	Not available
$U_e \leq 48\text{V}$	20 A	45 A	45 A	Not available
$U_e \leq 60\text{V}$	18 A	45 A	45 A	Not available
$U_e \leq 125\text{V}$	8 A	25 A	32 A	Not available
$U_e \leq 220\text{V}$	0,8 A	8 A	32 A	Not available
$U_e \leq 440\text{V}$	0,4 A	0,8 A	10 A	Not available
$U_e \leq 600\text{V}$	Not available	0,4 A	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
$U_e \leq 24\text{V}$	18 A	25 A	25 A	Not available
$U_e \leq 48\text{V}$	12 A	25 A	25 A	Not available
$U_e \leq 60\text{V}$	10 A	25 A	25 A	Not available
$U_e \leq 125\text{V}$	2 A	18 A	25 A	Not available
$U_e \leq 220\text{V}$	0,6 A	2 A	18 A	Not available
$U_e \leq 440\text{V}$	Not available	0,3 A	1,5 A	Not available
$U_e \leq 600\text{V}$	Not available	Not available	0,8 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	18 A	25 A	25 A	Not available
Ue ≤ 48V	12 A	25 A	25 A	Not available
Ue ≤ 60V	10 A	25 A	25 A	Not available
Ue ≤ 125V	0,8 A	5 A	20 A	Not available
Ue ≤ 220V	Not available	0,8 A	3 A	Not available
Ue ≤ 440V	Not available	Not available	0,5 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 : 81 mm (3.19 in)

Width : 45 mm (1.77 in)

Depth : 87 mm (3.43 in)

Weight : 800 g

### 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).

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