Specificaţii produse

# Eaton 276845

## Catalog Number: 276845

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 5.5 kW, 1 N/O, 24 V DC, DC operation, Screw terminals DILM12-10(24VDC)

Fotografia este reprezentativa

### General specifications

**Product Name**
Eaton Moeller® series DILM contactor

**Catalog Number**
276845

**EAN**
4015082768454

**Product Length/Depth**
75 mm

**Product Height**
68 mm

**Product Width**
45 mm

**Product Weight**
0.296 kg

**Certifications**
VDE 0660
UL
CSA
CSA File No.: 012528
UL Category Control No.: NLDX
CSA Class No.: 2411-03, 3211-04
IEC/EN 60947-4-1
UL File No.: E29096
CE
IEC/EN 60947
UL 508
CSA-C22.2 No. 14-05

**Catalog Notes**
Contacts according to EN 50012

**Model Code**
DILM12-10(24VDC)

Powering Business Worldwide

## Features Functions

Fitted with:

Varistor suppressor circuit

Number Of Poles

Three-pole

## General

Application

Contactors for Motors

Degree of protection

IP20

Frame size

FS1

Lifespan, mechanical

10,000,000 Operations (DC operated)

Operating frequency

9000 mechanical Operations/h (DC operated)

Overvoltage category

III

Pollution degree

3

Product category

Contactors

Protection

Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)

Rated impulse withstand voltage (Uimp)

8000 V AC

Resistance per pole

4.6 m Ω

Suitable for

Also motors with efficiency class IE3

Utilization category

AC-3: Normal AC induction motors: starting, switch off during running
AC-1: Non-inductive or slightly inductive loads, resistance furnaces
AC-4: Normal AC induction motors: starting, plugging, reversing, inching

Voltage type

DC

## Ambient conditions, mechanical

## Climatic environmental conditions

### Shock resistance

7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
5.7 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
3.4 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
3.4 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms

### Altitude

Max. 2000 m

### Ambient operating temperature - min

-25 °C

### Ambient operating temperature - max

60 °C

### Ambient operating temperature (enclosed) - min

25 °C

### Ambient operating temperature (enclosed) - max

40 °C

### Ambient storage temperature - min

40 °C

### Ambient storage temperature - max

80 °C

### Climatic proofing

Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

## Electro magnetic compatibility

### Emitted interference

According to EN 60947-1

### Interference immunity

According to EN 60947-1

## Terminal capacities

### Terminal capacity (flexible with ferrule)

2 x (0.75 - 2.5) mm²
1 x (0.75 - 2.5) mm²

### Terminal capacity (solid)

2 x (0.75 - 2.5) mm²
1 x (0.75 - 4) mm²

### Terminal capacity (solid/stranded AWG)

Single 18 - 10, double 18 - 14

### Stripping length (main cable)

10 mm

### Stripping length (control circuit cable)

10 mm

### Screw size

M3.5, Terminal screw

### Screwdriver size

0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
2, Terminal screw, Pozidriv screwdriver

### Tightening torque

1.2 Nm, Screw terminals

## Electrical rating

Rated breaking capacity at 220/230 V

120 A

Rated breaking capacity at 380/400 V

120 A

Rated breaking capacity at 500 V

100 A

Rated breaking capacity at 660/690 V

70 A

Rated operational current (Ie) at AC-1, 380 V, 400 V, 415 V

22 A

Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V

12 A

Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V

12 A

Rated operational current (Ie) at AC-3, 440 V

12 A

Rated operational current (Ie) at AC-3, 500 V

10 A

Rated operational current (Ie) at AC-3, 660 V, 690 V

7 A

Rated operational current (Ie) at AC-4, 220 V, 230 V, 240 V

7 A

Rated operational current (Ie) at AC-4, 440 V

7 A

Rated operational current (Ie) at AC-4, 500 V

6 A

Rated operational current (Ie) at AC-4, 660 V, 690 V

5 A

Rated operational current (Ie) at DC-1, 60 V

20 A

Rated operational current (Ie) at DC-1, 110 V

20 A

Rated operational current (Ie) at DC-1, 220 V

15 A

Rated insulation voltage (Ui)

690 V

Rated making capacity up to 690 V (cos phi to IEC/EN 60947)

168 A

Rated operational power at AC-3, 240 V, 50 Hz

4 kW

Rated operational power at AC-3, 380/400 V, 50 Hz

5.5 kW

Rated operational power at AC-3, 415 V, 50 Hz

7 kW

Rated operational power at AC-3, 440 V, 50 Hz

7.5 kW

Rated operational power at AC-3, 500 V, 50 Hz

7 kW

Rated operational power at AC-3, 690 V, 50 Hz

6.5 kW

Rated operational power at AC-4, 220/230 V, 50 Hz

2 kW

Rated operational power at AC-4, 240 V, 50 Hz

2.2 kW

Rated operational power at AC-4, 415 V, 50 Hz

3.4 kW

Rated operational power at AC-4, 440 V, 50 Hz

3.6 kW

Rated operational power at AC-4, 500 V, 50 Hz

3.5 kW

Rated operational power at AC-4, 660/690 V, 50 Hz

4.4 kW

Rated operational voltage (Ue) at AC - max

690 V

## Short-circuit rating

Short-circuit current rating (basic rating)

45 A, max. Fuse, SCCR (UL/CSA)

60 A, max. CB, SCCR (UL/CSA)

5 kA, SCCR (UL/CSA)

Short-circuit current rating (high fault at 480 V)

25 A, Class RK5/ 45 A Class J, max. Fuse, SCCR (UL/CSA)

30/100 kA, Fuse, SCCR (UL/CSA)

Short-circuit current rating (high fault at 600 V)

25 A, Class RK5/45 A, Class J, max. Fuse, SCCR (UL/CSA)

30/100 kA, Fuse, SCCR (UL/CSA)

Short-circuit protection rating (type 1 coordination) at 400 V

35 A gG/gL

Short-circuit protection rating (type 1 coordination) at 690 V

25 A gG/gL

Short-circuit protection rating (type 2 coordination) at 400 V

20 A gG/gL

Short-circuit protection rating (type 2 coordination) at 690 V

20 A gG/gL

## Conventional thermal current Ith

Conventional thermal current ith (1-pole, enclosed)

45 A

Conventional thermal current ith (3-pole, enclosed)

18 A

Conventional thermal current ith at 55°C (3-pole, open)

21 A

Conventional thermal current ith of main contacts (1-pole, open)

50 A

## Switching capacity

Switching capacity (main contacts, general use)

20 A, Maximum motor rating (UL/CSA)

Switching capacity (auxiliary contacts, general use)

1 A, 250 V DC, (UL/CSA)

10 A, 600 V AC, (UL/CSA)

## Magnet system

Arcing time

10 ms

Drop-out voltage

0.6 - 0.15 x UC, DC operated

At least smoothed two-phase bridge rectifier or three-phase

Switching capacity (auxiliary contacts, pilot duty)

A600, AC operated (UL/CSA)

P300, DC operated (UL/CSA)

rectifier

Duty factor

100 %

Pick-up voltage

0.7 - 1.3 V DC x Uc (without auxiliary contact module and at ambient air temperature + 40 °C)

0.85 - 1.1 V DC x Uc (only with auxiliary contact module with 3 or more N/C contacts)

0.8 - 1.1 V DC x Uc

Power consumption (pick-up) at DC

4.5 W

Power consumption (sealing) at DC

4.5 W

Rated control supply voltage (Us) at AC, 50 Hz - min

0 V

Rated control supply voltage (Us) at AC, 50 Hz - max

0 V

Rated control supply voltage (Us) at AC, 60 Hz - min

0 V

Rated control supply voltage (Us) at AC, 60 Hz - max

0 V

Rated control supply voltage (Us) at DC - min

24 V

Rated control supply voltage (Us) at DC - max

24 V

Switching time (DC operated, make contacts, closing delay) - max

31 ms

Switching time (DC operated, make contacts, opening delay) - max

12 ms

## Motor rating

Assigned motor power at 115/120 V, 60 Hz, 1-phase

1 HP

Assigned motor power at 200/208 V, 60 Hz, 3-phase

3 HP

Assigned motor power at 230/240 V, 60 Hz, 1-phase

## Communication

Connection

Screw terminals

Connection to SmartWire-DT

Yes

In conjunction with DIL-SWD SmartWire DT contactor module

2 HP

Assigned motor power at 230/240 V, 60 Hz, 3-phase

3 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase

10 HP

Assigned motor power at 575/600 V, 60 Hz, 3-phase

10 HP

## Contacts

Number of contacts (normally closed contacts)

0

Number of contacts (normally open contacts)

1

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

1

## Safety

Safe isolation

400 V AC, Between the contacts, According to EN 61140

400 V AC, Between coil and contacts, According to EN 61140

## Special purpose ratings

Special purpose rating of ballast electrical discharge lamps

20 A (600V 60Hz 3phase, 347V 60Hz 1phase)

20 A (480V 60Hz 3phase, 277V 60Hz 1phase)

Special purpose rating of definite purpose rating

72 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

12 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

Special purpose rating of elevator control

7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA)

7.8 A, 200 V 60 Hz 3-ph, (UL/CSA)

11 A, 480 V 60 Hz 3-ph, (UL/CSA)

2 HP, 240 V 60 Hz 3-ph, (UL/CSA)

6.8 A, 240 V 60 Hz 3-ph, (UL/CSA)

7.5 HP, 600 V 60 Hz 3-ph, (UL/CSA)

2 HP, 200 V 60 Hz 3-ph, (UL/CSA)

9 A, 600 V 60 Hz 3-ph, (UL/CSA)

Special purpose rating of refrigeration control (CSA only)

10 A, FLA 480 V 60 Hz 3phase; (CSA)

60 A, LRA 600 V 60 Hz 3phase; (CSA)

60 A, LRA 480 V 60 Hz 3phase; (CSA)

10 A, FLA 600 V 60 Hz 3phase; (CSA)

Special purpose rating of resistance air heating

20 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)

20 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

Special purpose rating of tungsten incandescent lamps

14 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

14 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)

## Design verification

Equipment heat dissipation, current-dependent Pvid

1.5 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

0.5 W

Rated operational current for specified heat dissipation (In)

12 A

Static heat dissipation, non-current-dependent Pvs

4.5 W

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be

## Resurse

Characteristic curve

eaton-contactors-switch-dilm-characteristic-curve-002.eps

eaton-contactors-switch-dilm-characteristic-curve.eps

Desene

eaton-contactors-module-dilm-dimensions.eps

eaton-contactors-module-dilm-dimensions-002.eps

eaton-contactors-frame-dilm-dimensions.eps

eaton-contactors-dilm-3d-drawing-007.eps

Instrucțiuni de instalare

eaton-contactors-dila-dilm7-15-dilmp20-instruction-leaflet-il03407013z.pdf

Scheme electrice

eaton-contactors-contact-dilm-wiring-diagram.eps

evaluated.

### 10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

### 10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

### 10.8 Connections for external conductors

Is the panel builder's responsibility.

### 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

### 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

### 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

### 10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

### 10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

### 10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

### 10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.



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