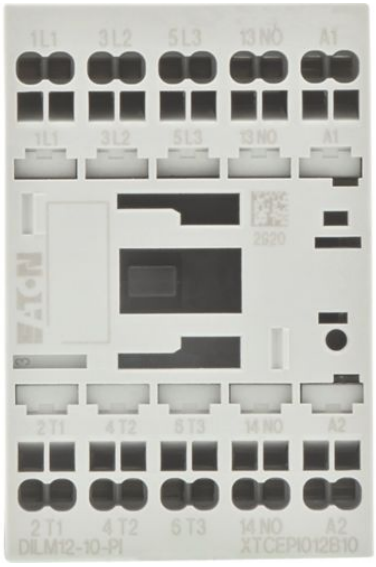
Product specifications

Eaton 199243

Catalog Number: 199243

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 5.5 kW, 1 N/O, 24 V DC, DC operation, Push in terminals



General specifications

Product Name	**Catalog Number**
Eaton Moeller® series DILM contactor	199243
Model Code	**EAN**
DILM12-10(24VDC)-PI	4015081973279
Product Length/Depth	**Product Height**
75 mm	68 mm
Product Width	**Product Weight**
45 mm	0.285 kg
Certifications	**Catalog Notes**
IEC/EN 60947 VDE 0660 UL Listed CSA certified UL Category Control No.: NLDX CE marking UL File No.: E29096 CSA Class No.: 2411-03, 3211-04 CSA File No.: 012528	Also tested according to AC-3e.

Powering Business Worldwide

Product specifications

Terminal capacity (flexible with ferrule)

1 x (1 - 6) mm²

10.11 Short-circuit rating

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

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

5.5 kW

Conventional thermal current ith (3-pole, enclosed)

18 A

Rated operational power at AC-4, 380/400 V, 50 Hz

3 kW

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

7 A

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

0 V

10.4 Clearances and creepage distances

Meets the product standard's requirements.

Number of contacts (normally closed) as main contact

0

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

30/100 kA, Fuse, SCCR (UL/CSA)
16 A, max. CB, SCCR (UL/CSA)
65 kA, CB, SCCR (UL/CSA)
25 A, Class RK5/ 20 A Class J, max. Fuse, SCCR (UL/CSA)

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

21 A

Rated operational power (NEMA)

0 kW

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

Ambient storage temperature - min

40 °C

Rated breaking capacity at 380/400 V

120 A

Short-circuit current rating (basic rating)

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

Resources

Catalogues

Product Range Catalog Switching and protecting motors

Switching and protecting motors - catalog

SmartWire-DT Catalog

Drawings

eaton-contactors-dimensions-007.eps

eCAD model

ETN.DILM12-10(24VDC)-PI.edz

Installation instructions

IL034107ZU

Installation videos

WIN-WIN with push-in technology

mCAD model

dil_m7_15_pi.stp

dil_m7_15_pi.dwg

5 kA, SCCR (UL/CSA)

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

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

0 V

Rated breaking capacity at 660/690 V

70 A

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

15 A

Special purpose rating of elevator control

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

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

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

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

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

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

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

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

Ambient operating temperature - max

60 °C

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

1 HP

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

3.6 kW

Electrical connection type of main circuit

Spring clamp connection

Power consumption (sealing) at DC

4.5 W

Number Of Poles

Three-pole

Ambient operating temperature - min

-25 °C

10.6 Incorporation of switching devices and components

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

Terminal capacity (flexible)

2 x (0.5 - 2.5) mm²

1 x (0.5 - 2.5) mm²

10.2.6 Mechanical impact

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

10.3 Degree of protection of assemblies

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

Application

Contactors for Motors

Operating frequency

9000 mechanical Operations/h (DC operated)

Voltage type

DC

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

35 A gG/gL

Product category

Contactors

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

7 A

Heat dissipation capacity Pdiss

0 W

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

10 HP

Special purpose rating of tungsten incandescent lamps

14 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
14 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

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

6 A

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

4 kW

Operating voltage at AC, 60 Hz - max

690 V

Terminal capacity (solid/stranded AWG)

20 - 14

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

Degree of protection

IP20

Overvoltage category

III

Ambient storage temperature - max

80 °C

Pollution degree

3

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

22 A

Rated impulse withstand voltage (Uimp)

6000 V AC

Connection

Push in terminals

Operating voltage at AC, 60 Hz - min

24 V

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

4.4 kW

Frame size

FS1

Conventional thermal current ith (1-pole, enclosed)

45 A

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

7 A

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.7 Inscriptions

Meets the product standard's requirements.

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

12 A

Number of contacts (normally open contacts)

1

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

20 A gG/gL

Special purpose rating of ballast electrical discharge lamps

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

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

Number of auxiliary contacts (normally open contacts)

1

Special purpose rating of definite purpose rating

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

Shock resistance

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

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

20 A

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

3 HP

Resistance per pole

4.6 mΩ

Ambient operating temperature (enclosed) - min

25 °C

Operating voltage at AC, 50 Hz - max

690 V

10.12 Electromagnetic compatibility

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

Special purpose rating of refrigeration control (CSA only)

10 A, FLA 480 V 60 Hz 3phase; (CSA)
10 A, FLA 600 V 60 Hz 3phase; (CSA)
60 A, LRA 480 V 60 Hz 3phase; (CSA)
60 A, LRA 600 V 60 Hz 3phase; (CSA)

10.2.5 Lifting

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

Stripping length (main cable)

10 mm

Ambient operating temperature (enclosed) - max

40 °C

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)

Rated control supply voltage (Us) at DC - min

24 V

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

25 A, Class RK5/20 A, Class J, max. Fuse, SCCR (UL/CSA)

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

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

25 A, Class RK5/60 A, Class J, max. Fuse, SCCR (UL/CSA)

10.8 Connections for external conductors

Is the panel builder's responsibility.

Number of main contacts (normally open contact)

3

Rated breaking capacity at 220/230 V

120 A

Rated operational current (Ie) at AC-4, 400 V

7 A

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

20 A gG/gL

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

10 HP

Protection

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

Rated breaking capacity at 500 V

100 A

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

7 kW

Climatic proofing

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

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

Emitted interference

According to EN 60947-1

Connection to SmartWire-DT

Yes

In conjunction with DIL-SWD SmartWire DT contactor module

Rated control supply voltage (Us) at DC - max

24 V

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

Utilization category

AC-3: Normal AC induction motors: starting, switch off during running

AC-4: Normal AC induction motors: starting, plugging, reversing, inching

AC-1: Non-inductive or slightly inductive loads, resistance furnaces

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

12 A

10.5 Protection against electric shock

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

Safe isolation

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

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

Operating voltage at AC, 50 Hz - min

24 V

10.13 Mechanical function

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

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

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

12 ms

Switching capacity (auxiliary contacts, general use)

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

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

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

31 ms

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

5 A

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

3 HP

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 AC x Uc

0.8 - 1.1 V DC x Uc

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

Suitable for

Also motors with efficiency class IE3

Terminal capacity (solid)

1 x (0.5 - 0.25) mm²

2 x (0.5 - 2.5) mm², Control circuit cables

Number of auxiliary contacts (normally closed contacts)

0

Interference immunity

According to EN 60947-1

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.

Lifespan, mechanical

10,000,000 Operations (DC operated)

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

25 A gG/gL

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

168 A

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

2.2 kW

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

3.5 kW

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

20 A

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

2 kW

Rated operational voltage (Ue) at AC - max

690 V

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

0 V

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

Power consumption (pick-up) at DC

4.5 W

10.10 Temperature rise

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

Switching capacity (main contacts, general use)

20 A, Maximum motor rating (UL/CSA)

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

10 A

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

2 HP

Screwdriver size

3 x 0.5 mm, Terminal screw
3.0 x 0.5 mm, Terminal screw

Duty factor

100 %

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

12 A

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

50 A

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

0 V

Arcing time

10 ms

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

3.4 kW

Switching capacity (auxiliary contacts, pilot duty)

A600, AC operated (UL/CSA)
P300, DC operated (UL/CSA)

Rated insulation voltage (Ui)

690 V

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