

Eaton 109797

Catalog Number: 109797

Eaton Moeller® series DILMP Contactor, 4 pole, AC operation, AC-1: 32 A, 1 N/O, 230 V 50 Hz, 240 V 60 Hz, Screw terminals



General specifications

Product Name	Catalog Number
Eaton Moeller® series DILMP 4-pole contactor	109797
	Model Code
	DILMP32-10(230V50HZ,240V60HZ)
EAN	Product Length/Depth
4015081093694	97 mm
Product Height	Product Width
85 mm	58 mm
Product Weight	Certifications
0.49 kg	CSA
	CSA File No.: 012528
	UL 60947-4-1
	VDE 0660
	CE
	IEC/EN 60947-4-1
	UL File No.: E29096
	UL Category Control No.: NLDX
	UL
	IEC/EN 60947
	CSA-C22.2 No. 60947-4-1-14
	CSA Class No.: 2411-03, 3211-04

Catalog Notes

Contacts according to EN 50012

Amperage Rating

200A

HP rating - max

2, 5/ 7.5, 10, 15 20 hp (1/3PH @120, 240/ 208, 240, 480, 600 V)

Number Of Poles

Four-pole

Type

Full voltage non-reversing small contactor

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.

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

Catalogs

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

[Product Range Catalog Switching and protecting motors](#)

[SmartWire-DT Catalog](#)

Characteristic curve

[eaton-contactors-characteristic-curve-2110dia-3.eps](#)

[eaton-contactors-switching-dilmp-characteristic-curve.eps](#)

Declarations of conformity

[DA-DC-00004783.pdf](#)

[DA-DC-00004816.pdf](#)

Drawings

[eaton-contactors-mounting-dilm-dimensions-002.eps](#)

[eaton-contactors-mounting-dilm-dimensions.eps](#)

[eaton-contactors-dilmp-dimensions-007.eps](#)

[eaton-contactors-dilmp-dimensions-008.eps](#)

eCAD model

[ETN.109797.edz](#)

Installation instructions

[IL03407049Z](#)

Installation videos

[WIN-WIN with push-in technology](#)

mCAD model

[DA-CS-dil_mp32_45](#)

[DA-CD-dil_mp32_45](#)

PEP Eco-passport

[EATO-00016-V01.01-EN](#)

Specifications and datasheets

[Eaton Specification Sheet - 109797](#)

Wiring diagrams

[eaton-contactors-dilmp-wiring-diagram.eps](#)

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 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.

Frequency rating

50-60 Hz

Operating frequency

5000 mechanical Operations/h (DC operated)

5000 mechanical Operations/h (AC operated)

Pollution degree

3

Used with

DILM32-XHI(C), DILA-XHI(V)(C)

Climatic proofing

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

Damp heat, constant, to IEC 60068-2-3

Connection to SmartWire-DT

No

Rated impulse withstand voltage (Uimp)

8000 V AC

Utilization category

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

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

Connection

Screw terminals

Ambient operating temperature - max

60 °C

Ambient operating temperature - min

-25 °C

Ambient operating temperature (enclosed) - max

40 °C

Ambient operating temperature (enclosed) - min

25 °C

Ambient storage temperature - max

80 °C

Ambient storage temperature - min

40 °C

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

2 HP

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

7.5 HP

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

5 HP

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

10 HP

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

15 HP

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

20 HP

Conventional thermal current ith (1-pole, enclosed)

76 A

Conventional thermal current ith (3-pole, enclosed)

27 A

Conventional thermal current I_{th} at 55°C (3-pole, open)

29 A

Conventional thermal current I_{th} of main contacts (1-pole, open)

84 A

Equipment heat dissipation, current-dependent P_{vid}

6.6 W

Heat dissipation capacity P_{diss}

0 W

Heat dissipation per pole, current-dependent P_{vid}

2.2 W

Application

Contactors for 4 pole electric consumers

Product category

Contactors

Protection

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

Terminals

Screw terminals

Electrical connection type of main circuit

Screw connection

Screwdriver size

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

2, Terminal screw, Pozidriv screwdriver

Voltage type

AC

Degree of protection

IP00

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

1

Number of contacts (normally closed) as main contact

0

Number of contacts (normally open contacts)

1

Number of main contacts (normally open contact)

4

Operating temperature - max

60 °C

Operating temperature - min

-25 °C

Rated breaking capacity at 220/230 V

180 A

Rated breaking capacity at 380/400 V

180 A

Rated breaking capacity at 500 V

180 A

Rated breaking capacity at 660/690 V

120 A

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

230 V

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

230 V

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

240 V

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

240 V

Coil voltage

230-240 Vac, 50/60 Hz

Contact configuration

1 NO

Continuous ampere rating

32 A

Drop-out voltage

AC operated: 0.6 - 0.4 x UC, AC operated

Overvoltage category

III

Duty factor

100 %

Number of contacts

1 NO

Operation

Non-reversing

Interference immunity

According to EN 60947-1

Lifespan, mechanical

10,000,000 Operations (AC operated)

10,000,000 Operations (DC operated)

Pick-up voltage

0.8 - 1.1 V AC x U_c

0.85 - 1.1 V AC/DC x U_s

Power consumption, pick-up, 50 Hz

50 VA, Dual-frequency coil in a cold state and 1.0 x U_s

Safe isolation

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

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

Power consumption, pick-up, 60 Hz

40 W, Dual-frequency coil in a cold state and 1.0 x U_s, at 60 Hz

50 VA, Dual-frequency coil in a cold state and 1.0 x U_s

Residual current

1 mA (with actuation of A1 - A2 by the electronics with "0" signal)

Screw size

M5, Terminal screw, Main cables

M3.5, Terminal screw, Control circuit cables

Power consumption, sealing, 50 Hz

2.1 W, Dual-frequency coil in a cold state and 1.0 x U_s

Power consumption, sealing, 60 Hz

2.1 W, Dual-frequency coil in a cold state and 1.0 x U_s

8 VA, Dual-frequency coil in a cold state and 1.0 x U_s, at 60 Hz

Terminal capacity (stranded)

1 x 16 mm², Main cables

Switching capacity (auxiliary contacts, general use)

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

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

Switching capacity (auxiliary contacts, pilot duty)

P300, DC operated (UL/CSA)

A600, AC operated (UL/CSA)

Terminal capacity (flexible with ferrule)

1 x (0.75 - 16) mm², Main cables

2 x (0.75 - 10) mm², Main cables

1 x (0.75 - 2.5) mm², Control circuit cables

2 x (0.75 - 2.5) mm², Control circuit cables

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

5 g, N/C auxiliary contact, Mechanical, according to IEC/EN

60068-2-27, Half-sinusoidal shock 10 ms

Terminal capacity (solid)

1 x (0.75 - 4) mm², Control circuit cables

2 x (0.75 - 2.5) mm², Control circuit cables

2 x (0.75 - 10) mm², Main cables

1 x (0.75 - 16) mm², Main cables

Terminal capacity (solid/stranded AWG)

18 - 6, Main cables

18 - 14, Control circuit cables

Switching capacity (main contacts, general use)

40 A, Maximum motor rating (UL/CSA)

Power consumption

7.5 kW

Tightening torque

3 Nm, Screw terminals, Main cables

1.2 Nm, Screw terminals, Control circuit cables

Rated control supply voltage (Us) at DC - max

0 V

Rated control supply voltage (Us) at DC - min

0 V

Rated insulation voltage (Ui)

690 V

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

238 A

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

32 A

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

18 A

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

18 A

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

18 A

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

18 A

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

12 A

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

15 A

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

32 A

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

32 A

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

32 A

Rated operational current for specified heat dissipation (I_n)

32 A

Rated operational power at AC-1, 220/230 V, 50 Hz

12 kW

Rated operational power at AC-1, 240 V, 50 Hz

13 kW

Rated operational power at AC-1, 380/400 V, 50 Hz

20 kW

Rated operational power at AC-1, 415 V, 50 Hz

22 kW

Rated operational power at AC-1, 440 V, 50 Hz

23 kW

Rated operational power at AC-1, 500 V, 50 Hz

26 kW

Rated operational power at AC-1, 690 V, 50 Hz

35 kW

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

5.5 kW

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

7.5 kW

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

10 kW

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

7 kW

Rated operational power (NEMA)

11 kW

Rated operational voltage (U_e) at AC - max

690 V

Resistance per pole

2.7 mΩ

Static heat dissipation, non-current-dependent P_{vs}

2.1 W

Stripping length (control circuit cable)

10 mm

Stripping length (main cable)

10 mm

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

22 ms

Switching time (AC operated, make contacts, closing delay) - min

16 ms

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

14 ms

Switching time (AC operated, make contacts, opening delay) - min

8 ms

Short-circuit current rating (basic rating)

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

5 kA, SCCR (UL/CSA)

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

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

125/70 A, Class J, max. Fuse, SCCR (UL/CSA)

10/65 kA, CB, SCCR (UL/CSA)

10/100 kA, Fuse, SCCR (UL/CSA)

50/32 A, max. CB, SCCR (UL/CSA)

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

10/100 kA, Fuse, SCCR (UL/CSA)

125/100 A, Class J, max. Fuse, SCCR (UL/CSA)

50/32 A, max. CB, SCCR (UL/CSA)

10/22 kA, CB, SCCR (UL/CSA)

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

63 A gG/gL

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

50 A gG/gL

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

35 A gG/gL

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

35 A gG/gL

Special purpose rating of ballast electrical discharge lamps

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

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

Special purpose rating of definite purpose rating

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

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

Special purpose rating of elevator control

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

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

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

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

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

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

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

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

Special purpose rating of refrigeration control (CSA only)

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

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

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

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

Special purpose rating of resistance air heating

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

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

Special purpose rating of tungsten incandescent lamps

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

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

Operating temperature

-25° to 60°C

Conventional thermal current i_{th} at 40°C (3-pole, open)

32 A

Conventional thermal current i_{th} at 50°C (3-pole, open)

30 A

Conventional thermal current i_{th} at 60°C (3-pole, open)

28 A

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

10.5 kW

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

12 kW

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

11 kW

Actuating voltage

230 V 50 Hz, 240 V 60 Hz

Altitude

Max. 2000 m

Operating voltage at AC, 50 Hz - min

24 V

Operating voltage at AC, 50 Hz - max

690 V

Operating voltage at AC, 60 Hz - min

24 V

Operating voltage at AC, 60 Hz - max

690 V



Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2024 Eaton. All Rights Reserved.

Eaton is a registered trademark.

All other trademarks are property of their respective owners.



Eaton.com/socialmedia