Product specifications

Eaton 276967

Catalog Number: 276967

Eaton Moeller® series DILMP Contactor, 4 pole, AC operation, AC-1: 22 A, 110 V 50 Hz, 120 V 60 Hz, Screw terminals



Photo is representative

General specifications

Product Name
Eaton Moeller® series DILMP 4-pole contactor

Catalog Number
276967

Model Code
DILMP20(110V50HZ,120V60HZ)

EAN
4015082769673

Product Length/Depth
75 mm

Product Height
68 mm

Product Width
45 mm

Product Weight
0.237 kg

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

Catalog Notes
Contacts according to EN 50012

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Number Of Poles

Four-pole

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 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.

Resources

Catalogs

Switching and protecting motors - catalog

SmartWire-DT Catalog

Product Range Catalog Switching and protecting motors

Characteristic curve

eaton-contactors-switching-dilmp-characteristic-curve.eps

eaton-contactors-characteristic-curve-2110dia-3.eps

Declarations of conformity

DA-DC-00004810.pdf

DA-DC-00004792.pdf

Drawings

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

eaton-contactors-dilm-dimensions-013.eps

eaton-contactors-dilmp-dimensions-006.eps

eaton-contactors-mounting-dilm-dimensions.eps

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

eCAD model

DA-CE-ETN.DILMP20(110V50HZ,120V60HZ)

Installation instructions

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

Installation videos

WIN-WIN with push-in technology

mCAD model

DA-CS-dil_m7_15

DA-CD-dil_m7_15

Wiring diagrams

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

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.

Operating frequency

5000 mechanical Operations/h (AC operated)
5000 mechanical Operations/h (DC operated)

Pollution degree

3

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

Conventional thermal current ith (1-pole, enclosed)

54 A

Conventional thermal current ith (3-pole, enclosed)

18 A

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

20.5 A

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

60 A

Equipment heat dissipation, current-dependent Pvid

3 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

1 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)

Electrical connection type of main circuit

Screw connection

Screwdriver size

2, Terminal screw, Pozidriv screwdriver

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

Voltage type

AC

Degree of protection

IP20

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Number of contacts (normally closed) as main contact

0

Number of main contacts (normally open contact)

4

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

110 V

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

110 V

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

120 V

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

120 V

Drop-out voltage

AC operated: 0.6 - 0.4 x UC, AC operated

Overvoltage category

III

Duty factor

100 %

Lifespan, mechanical

10,000,000 Operations (DC operated)

10,000,000 Operations (AC operated)

Pick-up voltage

0.8 - 1.1 V AC x Uc

0.8 - 1.1 V AC/DC x Us

Power consumption, pick-up, 50 Hz

24 VA, Dual-frequency coil in a cold state and 1.0 x Us

Safe isolation

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

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

Power consumption, pick-up, 60 Hz

24 VA, Dual-frequency coil in a cold state and 1.0 x Us

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

Residual current

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

Screw size

M3.5, Terminal screw

Power consumption, sealing, 50 Hz

1.4 W, Dual-frequency coil in a cold state and 1.0 x Us

Power consumption, sealing, 60 Hz

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

1.4 W, Dual-frequency coil in a cold state and 1.0 x Us

Terminal capacity (flexible with ferrule)

1 x (0.75 - 1.5) mm²

2 x (0.75 - 1.5) mm²

1 x (0.75 - 2.5) mm²

2 x (0.75 - 2.5) mm²

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

Terminal capacity (solid)

2 x (0.75 - 2.5) mm²

1 x (0.75 - 4) mm²

Terminal capacity (solid/stranded AWG)

18 - 14

Switching capacity (main contacts, general use)

20 A, Maximum motor rating (UL/CSA)

Tightening torque

1.2 Nm, Screw terminals

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)

144 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, 400 V

10 A

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

22 A

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

6 A

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

22 A

Rated operational current for specified heat dissipation (In)

22 A

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

8 kW

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

9 kW

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

14 kW

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

15 kW

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

16 kW

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

18 kW

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

24 kW

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-4, 380/400 V, 50 Hz

4.5 kW

Rated operational power (NEMA)

0 kW

Rated operational voltage (Ue) at AC - max

690 V

Resistance per pole

2.5 mΩ

Static heat dissipation, non-current-dependent Pvs

1.4 W

Stripping length (control circuit cable)

10 mm

Stripping length (main cable)

10 mm

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

21 ms

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

15 ms

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

18 ms

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

9 ms

Short-circuit current rating (basic rating)

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

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

5 kA, SCCR (UL/CSA)

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

30 kA, Fuse, SCCR (UL/CSA)

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

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

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

30 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

Special purpose rating of ballast electrical discharge lamps

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

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

Special purpose rating of elevator control

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

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

Special purpose rating of refrigeration control (CSA only)

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

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

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

60 A, LRA 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, 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)

Conventional thermal current ith at 40°C (3-pole, open)

22 A

Conventional thermal current ith at 50°C (3-pole, open)

21 A

Conventional thermal current ith at 60°C (3-pole, open)

20 A

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

Actuating voltage

110 V 50 Hz, 120 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

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